# Information Technology outsourcing by large Australian organisations

A Dissertation Presented in Fulfilment of the Requirements for the Doctor of Philosophy

by

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# ABSTRACT

Outsourcing of Information Technology (IT) is a well-established part of Australian business. Offshore outsourcing of IT support and development is a critical and widespread part of the globalised Australian and other nations' economies. In Australia, national organisations such as the National Australia Bank (NAB) and Australia's largest telecommunication company, Telstra, continue to outsource work to outsourcing vendors – that is, obtaining goods and services from outside suppliers.

It has long been thought that IT outsourcing is motivated primarily by cost cutting in the IT department but the latest trends suggest that outsourcing is more about improving usage of internal resources and service satisfaction. Authors Lee, J-N (2000) and Loh & Venkatraman (1992) argue that outsourcing IT functions to external service providers is done in order to acquire economic, technological and strategic advantage. In this thesis, it is proposed that the main driver for outsourcing IT has matured from being purely cost driven to one of strategic business practice. Reasons to outsource, as proposed by various authors such as Dahlberg & Nyrhinen (2006), Beaumont & Sohal (2004) and Olson (2006), include:

- competitive pressures;
- core business activities; and
- strategic, economic and technological benefits.

This thesis looks at the primary reason for outsourcing from an Australian perspective and the relationship between satisfaction and service quality from the outsourcer's perspective. Researchers such as Dahlberg & Nyrhinen (2006), Whitten (2004), Han et al. (2006) and Goles (2001) clearly demonstrate that satisfaction and service quality are important factors in outsourcing and have each proposed different factors that contribute to a decision to back source, change vendor or continue an outsourcing contract.

The primary thrust of this thesis is to build on existing research by identifying issues specific to Australian outsourcers, providing an analysis of current academic literature on IT outsourcing in relation to major systems, and investigate current attitudes within Australian corporate culture towards outsourcing, including offshoring parts of a company's business.

This thesis uses exploratory research to determine suitable research design, data collection methods and selection of subjects. The study collected data from various sources including literature, exploratory research, interviews, a survey and questionnaire, and then

combined them for analysis. Several hypotheses are proposed and tested against the collected data using quantitative methods; a causal method was employed to investigate relationships between the variables of outsourcing and satisfaction among Telstra users.

The research hypotheses are based on different personnel within an organisation having different criteria for success in the context of outsourcing, and that the overall satisfaction with outsourcing is strongly associated with a perception that it is working. Satisfaction with outsourcing is related to outsourcing being seen as successful and working well but various organisational parties may still be dissatisfied with the arrangement. Some of the factors found to affect the degree of satisfaction with outsourcing are service quality, the relationship developed between the outsourcing company and vendor, and the costs involved in switching vendors.

This thesis proposes that the main reason for outsourcing IT has changed from cost considerations to various factors involving better management of resources. The proposal that senior management, middle managers and employees have different criteria for assessing whether or not outsourcing is working proved to be a negative hypothesis. In the Telstra case study, it was shown that satisfaction is strongly associated with the perception of whether or not outsourcing is working.

# DOCTOR OF PHILOSOPHY DECLARATION

I, Brian Edward Haveckin, declare that the PhD thesis entitled Information Technology Outsourcing by Large Australian Organisations is no more than 100,000 words in length including quotations and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

**Signature:**                                          **Date:**

# ACKNOWLEDGEMENTS

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# PUBLICATIONS AND AWARDS

## Publications

Haveckin, B. 2007. Evolution of the Chief Information Officer. *In:* McGrath, M. (ed.) *International We-B (Working for E-Business) Conference (8th : 2007 : )* Melbourne, Vic. Australia: Victoria University.

Haveckin, B. 1995. Integrated Management for ATM and SDH network. *In:* Truyen, D. N. N. (ed.) *Australian Telecommunication Network and Application Conference.* Melbourne, Vic. Australia Victoria University.

## Awards

Masters in Engineering (Telecommunications), Victoria University, 1994.

Master of Business Administration (Technology Management), Deakin University, 1999.

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## 1.1   Research background

In simple terms, it is widely accepted that businesses regard Information Technology (IT[1]) services as an overhead cost (Cullen, Seddon & Willcocks, 2005; Hirschheim & Lacity, 2000). IT outsourcing[2] is the classic make-or-buy decision — are you going to do it yourself, or are you going to buy it from a supplier?  Hira & Ferrante (2005) noted that it is a question of whether to build or buy information services.

These services can be performed in offshore locations and delivered by internet, in concept, no different from products being manufactured abroad and being shipped to Australia physically. As noted by  Chakraborty and Remington (2005), economists generally  believe that offshore outsourcing of business services is not significantly different from international "trade in service" leading to gains from trade for both countries.

Offshore and onshore outsourcing of IT support and development is a critical part of a globalised Australian economy and other world economies. Australian businesses have to manage the strategic implications of IT offshore outsourcing and organisations are viewing IT as a commodity that can be outsourced to the lowest bidder (Hirschheim, George & Wong, 2004). Baloh, Jha, Awazu (2008), Grimshaw & Miozzo. (2006) and Wang et al. (2008) point to the impact of IT outsourcing on the outsourcer's knowledge assets, performance and satisfaction.

Authors including  Roberts (2005) consider that businesses wishing to reduce their costs by laying off onshore workers may not be acting in the best interests of their organisation in the long term – by doing so, the business could lose professional skills, intellect, creativity and organisation based know-how. Similarly, outsourcing could lead to erosion of the outsourcer's knowledge, which implies that outsourcing can be sacrificing long-term knowledge assets for short-term gains.

Customers' assessment of satisfaction, highlights the degree to which a product or service meets the customer's expectations or perception of success. The Association

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[1] Information Technology (IT) is used as a generic term that encompasses Information Systems (IS).

[2] Outsourcing: obtaining (goods or a service) from an outside supplier.

for Computing Machinery (ACM) [3] has identified categories of IT work being outsourced to offshore locations (Aspray, Mayadas & Vardi, 2006). These include:

- IT research and development process outsourcing;

- high-end jobs such as software architecture;

- product design;

- project management; and

- independent IT consulting and business strategy.

Companies, organisations and Government departments may consider a number of options to handle the IT that supports their business, including:

- in-house support and development;

- setting up or owning an IT company;

- outsourcing the various functions locally and buying the service; and

- outsourcing the various functions to offshore providers and buying the service from them.

When the decision to buy or outsource has been made, then the decision-makers must address the question of what services they actually require and which service provider is best positioned to deliver the required need(s). With regard to service providers, the decision-makers will consider strategic factors such as whether the vendor is a local service provider or one based in an offshore location.

It is estimated that the 'Big Four' vendors (IBM Global Services, Electronic Data Systems – a division of Hewlett-Packard (EDS/HP), Computer Sciences Corporation (CSC) and Accenture) earned a combined US$15.39 billion in 2007 from single-vendor outsourcing deals alone (Khan & Bhambal, 2008). Outsourcing is a significant business tool.

The Australian Bureau of Statistics estimated that total expenditure on information technology and telecommunications (IT&T) by government organisations during 1999-2000 was AU$4.3 billion, or 5% of total government operating

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[3] Association for Computing Machinery (http://www.acm.org) works to advance computing as a science and a profession.

expenditure. IT&T outsourcing expenses were AU$1.168 billion, or 27% of the total IT&T expenditure by government organisations in 1999-2000 (Australian Bureau of Statistics (8119.0), 2002). In 2006 the Australian IT outsourcing industry was estimated by Gartner[4] to be worth AU$17.4 billion (Woodhead, 2007). In 2007, Gartner estimated the worldwide IT service industry to be worth about USD$748 billion with a 10.5% increase from 2006 (Gartner, 2008).

The increasing trend to outsource is accompanied by the surge in the number of articles on the subject in business publications, scholarly journals and the popular press. Many researchers including Intriligator 2001; Gartner (2003), Lacity & Willcocks (2000), Sparrow et al. (2004) and Yourdon (2005) have highlighted the benefits of globalisation stemming from competition.

According to Robinson and Kalakota (2004), 'If done well, offshore outsourcing can improve your bottom line and streamline the structure of your organisation'. The need to improve efficiency and effectiveness in organisations is one of the main driving forces for the development of IT outsourcing services ( Dahlberg & Nyrhinen, 2006). The following factors have been proposed to explain outsourcing to offshore locations:

- lower cost (Bourbeau 2004; Carmel & Agarwal, 2002);

- centres of excellence and specialisation or the division of labour (Aspray, Mayadas & Vardi, 2006; Djavanshir, 2005; Miles & Metcalfe, 2000);

- globalisation of the World Economy (Friedman, 2005; Intriligator, 2001);

- liberal world trading system (Intriligator, 2001; Mankiw & Swagel, 2005);

- technological advances (Intriligator, 2001; Stiglitz, 2006); and

- economies of scale and scope (Gilbert, Yusen & Gang, 2006).

Outsourcing benefits can increase productivity and/or efficiency so that both the vendor and outsourcing company mutually benefit.

Existing research has shown a limited direct or positive effect of outsourcing IT on company performance and competitive advantage (Wang et al., 2008 Gorg &

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[4] Gartner Dataquest is a private US market research company (http://www.gartner.com)

Hanley, 2004; Hall, 2000).Yet companies choose to outsource their IT functions even though important questions on outsourcing still remain unsettled, such as:

- How should a business manage outsourcing?

- Why do organisations change vendors or bring IT back in-house?

- Does outsourcing add value  (Koh, Ang & Yeo, 2007)?

Industry sources such as the consulting firm Deloitte suggest that 34% of outsourcing is brought back-in house  (Deloitte, 2005). The challenge for organisations is about how they might better manage the outsourcing process  (Pai & Basu, 2007).

Enterprise Resource Planning (ERP) systems have managed to integrate end-to-end business processes into a seamless and synchronous supply chain   (Pairat & Jungthirapanich, 2005). Over the last decade businesses have taken to standardised processes and standardised systems such as SAP and Peoplesoft impose generic processes that allow centralised support which can then be conveniently outsourced. Growth in ERP and other IT systems, together with globalisation, have resulted in a marked increase in offshore outsourcing of major corporate systems  (Lehrer, 2006; Shao & David, 2007).

Numerous authors such as Intriligator (2001), Lin et al. (2001), Chalson (2001) and Yourdon (2005) have examined the problems that may occur with offshore outsourcing. Potential issues include:

- who gains from the potential benefits of outsourcing;

- control of national economies is moving away from sovereign governments to other entities;

- local economic fluctuations or a fiscal crisis in one nation could produce regional or even global impacts;

- unemployment in the high-wage, industrialised economies;

- fragility and fluctuations in the international economy; and

- intellectual property issues, including:

  o laws that guard an off-shoring company's intellectual assets; and

  o foreign legislative systems may not provide proper protection.

The economic impact of globalisation is but one minor component of the potentially hazardous after-effects which may affect governments and society on a small scale but can prove catastrophic to an organisation (Goles & Chin, 2005; Intriligator, 2001; Pai & Basu, 2007). Some of the issues that may affect an organisation are:

- loss of control to the outsource partner;

- loss of mission and business values in the organisation;

-  loss of service quality;

- longer response times;

- loss of employee morale, productivity and skills; and

- loss of business knowledge.

## 1.2  Research objectives

This dissertation will focus on IT application outsourcing with special emphasis on how Australian businesses are taking advantage of voluntary outsourcing and partnerships. The study will build on the knowledge and research of Lee (2000), Lin et al. (2001), Goles (2001) and Whitten (2004) by examining in detail the themes of outsourcing satisfaction and benefits realisation, processes and practices as they relate to Australia. The aim of this thesis is to build on the current research into IT outsourcing in the Australian context, in particular the reasons for IT outsourcing being considered successful or not. It is important to note that this study is primary concentrated with satisfaction of outsourcing rather than drivers of outsourcing. Independent of this study is the understanding that the competencies of outsourcing partners are integral to the eventual success of an outsourcing relationship. Based on previous literature research and information gathered from initial interviews, the following hypotheses were formulated:

**Hypothesis 1:**

*The reasons to outsource can be multi-tiered. Senior management has different criteria for outsourcing from the criteria considered by middle management and lower-level employees, and the success of outsourcing will be assessed differently by all these groups.*

**Hypothesis 2:**

*Satisfaction with outsourcing is strongly associated with the perception of whether or not outsourcing is working. Satisfaction with outsourcing is a function of the outsourcer's customer service quality and the quality of the information being provided by outsourcers for the processes implemented. The relationships between service quality, satisfaction and switching costs[5] are important factors in the outsourcing process.*

**Hypothesis 3:**

*The primary reason for outsourcing IT functions has changed from cost-cutting to an attempt to better manage the client's internal resources.*

## 1.3 Research approach

Principles from Yin's (2003) case study research, Leedy & Ormrod (2009) and Zikmund's (1997) Business Research Process are the basis of the research methodology for this study.

In order to review IS outsourcing from an Australian perspective, a comprehensive literature review was undertaken of topical articles written in the English language. These included research papers, conferences and selected journals which have been systematically read, reviewed and classified to provide background information and knowledge of the topic.

Initial interviews were then conducted with key personnel in one of Australia's major companies, Telstra[6], with the objective of identifying themes.

A conceptual model based on the work of Goles (2005) and Whitten (2004) was developed to examine outsourcing by Australian companies. An in-depth questionnaire comprising 178 questions was developed based on the literature review, the previous works of Goles et al. (2005) and Whitten (2004) and the initial interviews. The questionnaire was then distributed to key personnel within Telstra. The responses were tabulated using qualitative research with data analysis and analysed using qualitative methods – analytical tools including Structural Equation Modelling (SEM) and software

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[5] Switching cost not part of research model but is covered in questionnaire

[6] Telstra: the largest Australian telecommunication company.

SPSS[7] (originally Statistical Package for the Social Sciences) were used to statistically compare the two groups  (Kinnear & Gray, 2008).

## 1.4  Organisation of this dissertation

This dissertation comprises:

- Chapter 1 provides an overview of the research and methodology;

- Chapter 2 outlines the history of outsourcing based on appropriate research literature, journal articles and relevant theses. This chapter synthesises several research theories relating to service quality, satisfaction and relationship quality;

- Chapter 3 provides an overview of research theory, methodologies and scale development for conducting this research project;

- Chapter 4 provides an overview of qualitative approaches to data analysis (for the interviews component) and background to the organisation studied;

- Chapter 5 provides data and statistical analysis relating to the quantitative research of the survey data collected and presents a theoretical background to the analysis of that data; and

- Chapter 6 contains a summary of the research, its limitations, the author's conclusions and recommendations for future research.

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[7] Originally Statistical Package for the Social Sciences, it then became 'SPSS: An IBM Company'.

# CHAPTER 2   Literature Review

## 2.1   Introduction

This chapter provides definition of specific terms, a review of the history of outsourcing and a discussion of trends in IT.

## 2.2   Definitions

As a prelude to the literature survey, it is necessary to define some frequently used terms. In most examinations of outsourcing, the discussion turns to offshore outsourcing. However, any discussion of offshore outsourcing would not be complete without an understanding of the history and implications of globalisation, which has provided both the framework and drivers for outsourcing.

As defined by Princeton University, the term 'Information Systems' is used as a generic term that encompasses Information Technology (Miller, 2009):

- Information Technology (IT), the branch of engineering that deals with the use of computers and telecommunications to retrieve, store and transmit information; and

- Information System (IS), a system consisting of the network of all communication channels used within an organisation.

In this thesis Information Technology is used as a generic term that encompasses Information Systems.

The following terms are used:

- service provider — a company whose business is providing services to others;

- outsourcer — a company contracting for services performed by a *service provider*; and

- customer — a company or individual purchasing from an *outsourcer*.

### 2.2.1   Globalisation

It should be noted that outsourcing is not a new concept. In 1776, Adam Smith (1776) formulated a theory of competitive advantage, expounding on the notion of outsourcing

as a way of cutting costs by hiring cheaper labour in less developed countries. However, modern globalisation has rendered outsourcing much more prevalent. *Globalisation* is now a major part of the world economy and has produced both positive and negative effects. Intriligator (2001) and Sharma et al. (2005) have catalogued the positive aspects of globalisation, while the negative aspects have been documented by Drucker (1997), Greene (2006) and Kelly (2004).

Of course, the concept of 'globalisation' is an old one. The term became popular in the 1980s as a generic description of the increased economic, political and security aspects of the world economy (Davis, 2004; Kohler, 2000; Beulen & Ribbers, 2002; Friedman, 2005; Intriligator, 2001; Kohler, 2000; Buehler & Haucap, 2003). Other authors have discussed pre-World War 1 economies, where free trading systems already existed (Davis, 2004; Intriligator, 2001). Most experts accept that the current wave of globalisation is being driven by international capital flow and multinational enterprises, mass migration both voluntary and involuntary, internet and computer technology, and trade liberalisation (Bhagwati et al., 2004). This thesis will discuss modern globalisation as it came about in the late 1980s. Even though globalisation and outsourcing are old concepts, the modern version of globalisation is unique in its broad scope and ease of access. All discussion of outsourcing in this thesis will be in the context of modern globalisation. Since globalisation is the standard term for the modern version, whereas older versions went under the nomenclature of 'international trading', the term 'globalisation' will be used when referring to modern globalisation. Based on Intriligator (2001), 'globalisation' will be understood here to mean major increases in worldwide trade and exchanges in an increasingly open, integrated and borderless international economy.

### 2.2.2 IT outsourcing

In the early 1980s, '*outsourcing* typically referred to the situation where firms expanded their purchases of manufactured physical inputs' Bhagwati et al. (2004) but by the 2000s outsourcing was best explained as follows: 'Outsourcing of professional services is a prominent example of a new type of trade' ((Bhagwati et al., p.2 2004). Gregory Mankiw, past Chairman of the USA President's Council of Economic Advisers, aptly described offshore outsourcing as 'simply an element of international trade' (Dobbs, p2. 2004). Kirkegaard p.3 (2005) offered the following definition of IT outsourcing: 'Outsourcing refers to the purchasing of intermediate inputs by companies (or

governments) at arm's length'. For the purpose of this thesis the definition used by Smith (2005) will be used: outsourcing is transferring a good or service by either contracting out or selling an organisation's IT assets to a third party supplier. The supplier may be a systems consulting firm, contractor, or hardware vendor.

### 2.2.3 *Offshoring*

The book *Offshore Outsourcing* by Robinson & Kalakota (2004) defines offshore outsourcing as 'the delegation of administration, engineering, research, development, or technical support processes to a third-party vendor in a lower-cost location'. Among the examples used in this book, the best is that of the San Francisco–based firm Embarcadero Technologies, which is a leading provider of database and application lifecycle-management solutions in the USA. Embarcadero relies on Aztec Software, another firm with headquarters in California. Aztec Software has an offshore development centre in Bangalore, India, that develops the new integration product, Embarcadero DT/Studio. The entire product lifecycle − from development to maintenance − takes place in India. Aztec's work on the DT/Studio tool helped Embarcadero to quickly establish a competitive market position for this particular product.

There are many definitions of offshoring as outlined below, but most accept that it generally refers to the process of an organisation replacing services obtained from domestic providers with imported services (Greene 2006; Bhagwati et al. 2004). Offshoring refers to the acquisition of intermediate inputs by companies (or governments) from locations outside the consumer country. "It is the crossing of international borders that distinguishes it from outsourcing in general' (Kirkegaard, p.4 2005).

Offshore outsourcing can have far-reaching implications beyond those associated with onshore outsourcing. Various authors have made the assumption that the countries that send work offshore are primarily developed nations (Intriligator, 2001; Aspray, Mayadas & Vardi, 2006; Rajan 2004, Kedia & Lahiri, 2007). Most definitions assume that offshoring is directed to developing countries in the interest of saving costs; it was possible to shift the actual production location of services to low-cost countries in a manner theoretically transparent to end-users (Kirkegaard, 2005 ; Chakraborty & Remington, 2005).

The World Trade Organisation (WTO) in its General Agreement on Trade in Services used the following parameters to define offshore outsourcing (Chakraborty & Remington, 2005):

- suppliers and buyers remain in their respective locations;

- moving the service recipient to the location of the service provider;

- commercial presence of service provider in a foreign country; and

- temporary migration — seller moves to the location of the service buyer.

All definitions are compelling but for the purpose of this thesis, the previously stated definition of offshore outsourcing as 'the delegation of administration, engineering, research, development, or technical support processes to a third-party vendor in a lower-cost location' will be used (Robinson & Kalakota 2004). The WTO parameters will also be respected as they expand upon that definition.

## 2.3  History of IT outsourcing

The history of IT outsourcing is part of IT in that the early time-share systems were a form of outsourcing.
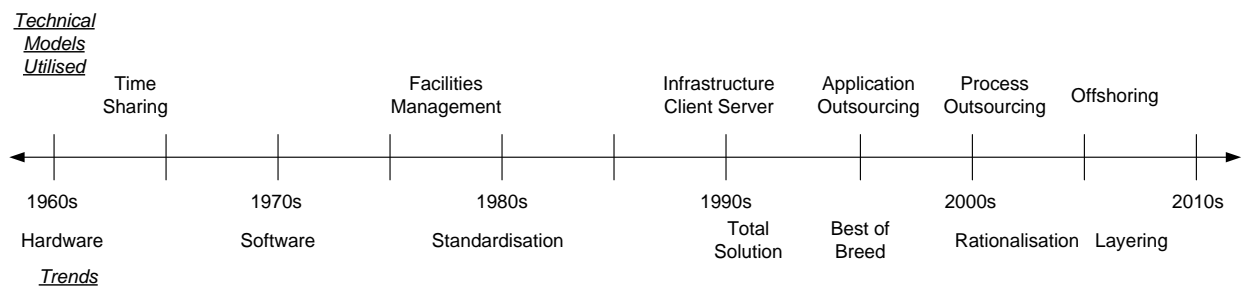


*Figure 2.1:  Technical Models and Trends*

Figure 2.1 gives an indication of the timeline for technical models and trends by combining charts and information (Willcocks & Feeny, 2006; Zongbin et al., 2006;, Wagner et al., 2006; Lee et al., 2003; A12, 2007 and A9, 2007).

In the early 1970s software programming was first moved offshore as software production was easily moveable, since it seldom needed to be committed to a physical medium (Dossani & Kenney, 2004). However, offshore outsourcing as a trend didn't begin until relatively recently. Since Kodak's initial decision to outsource the bulk of

their IT functions in October 1989, they have outsourced the bulk of their data centre operations to IBM in an initial US$250 million deal that was originally scheduled to run for a 10-year span (Lacity & Willcocks, 2000; Dibbern, et al., 2004; Patton, 2005). It was a momentous occasion for Kodak and dozens of other large companies would soon follow the film giant's lead. Kodak's deal set the stage for massive outsourcing negotiations with vendors such as IBM and EDS, and brought about a basic change in the way corporate America approached IT. Suddenly CEOs were paying more attention to core competencies, cost saving and strategic partnerships with their IT vendors. Service quality was also an important factor (EBS, 2006; Patton, 2005). Because of the success of the Eastman Kodak outsourcing agreement of 1989, 'multi-sourcing' has become an integral part of the IT industry.

General Electric (GE) was a business leader in the offshore outsourcing arena. In the early 1990s Jack Welch, then CEO of GE, introduced a new rule that governed GE's offshore actions called 'the 70:70:70 rule' (EBS, 2006). In an e-mail to GE employees, Welch mandated that 70% of GE's IT work would be outsourced. Out of this, 70% of that work would be completed from offshore development centres and from that, about 70% would be sent to India. This has resulted in a total of about 30% of GE's work being outsourced to India (Sople, 2009;  Aspray et al., 2006).

Currently, offshore outsourcing to India receives the most press but other countries such as Poland, Ireland (sometimes referred to as the Celtic Tiger) and Israel are just as prominent. Emerging countries such as China, the Philippines, Russia, Mexico and South Africa should also be included in any discussion about major offshore outsourcing venues. The strong growth in IT outsourcing can be attributed to the tight US labour market caused by the dot.com boom and the year 2000 problem (Y2K) (Friedman, 2005; Willcocks, & Feeny, 2006). In Australia, national organisations such as National Australia Bank (NAB) and Telstra continue to outsource to offshore IT groups (Dibbern et al., 2004). BHP-Billiton and Shell Australia have transferred data centres and IT support to Malaysia and Singapore from Melbourne (Bhagowati, 2005).

In the late 1990s and early 2000s outsourcing maintained a growth rate of 20% per year, although recent figures indicate that it appears to be slowing. 'In 2005, the total contract value of such mega-deals was just under US$27 billion − the lowest such

total since 1996. TPI[8] predicts that the first absolute decline in commercial IT outsourcing revenue could occur between 2006 and 2007' (Gibson, 2006). Some authors argue that this was due to more focused outsourcing deals i.e. multi-sourcing and tighter IT budgets which may have lessened the prevalence of long-term mega deals.

Wagner et al., (2006) highlighted 'best of breed' in their study and linked it to ERP systems that are responsible for the current trend of 'layering' in which existing ERP systems that replaced 'best of breed' as part of the rationalisation are being enhanced with specialised systems. In interviews conducted at Telstra, a new terminology of 'layering' was used to describe current systems (Herzberg & Marburger, 2001; A9, 2007; A12, 2007; Pairat & Jungthirapanich, 2005; Pereira, 1999). A typical example is NAB, which uses SAP as core ERP but layers speciality systems such as Bank Analyser on top of ERP/SAP. Although not following a best of breed concept in special circumstances, this methodology does leave room for exceptions in strategic requirements. Table 2.1 gives a timeline for relevant outsourcing literature.

| TimeLine for Outsourcing Literature | Related Articles |
|---|---|
| 1776: Adam Smith, in *The Wealth of Nations*, formulates a theory of competitive advantage, expounding the notion of outsourcing as a way to cut costs by hiring cheaper labour in less developed countries. | (Smith, 1776) |
| 1963: Electronic Data Systems signs an agreement with Blue Cross of Pennsylvania to handle its data-processing services − the first time that a large corporation has turned over its entire data-processing department to a third party. | (Electronic Data Systems, 2008) |
| 70s and 80s: Cost reduction pressure and need for better communications. | (Lacity, Willcocks & Feeny, 1995; Costa & Beaumont, 2001). |
| 1989: Total outsourcing of Kodak's IT function with the anticipation of about 50% savings in cost. | (Hirschheim & Lacity, 1996; Kelly, 2004; Lee, 2000) |
| Cost containment as well as reduction and the need to hire IS professionals are proposed as the reasons behind outsourcing. | (Sobol & Apte, 1995) |
| Improved cost predictability focus on strategic use of IS, resulting in Transaction Cost Theory (TCT) being proposed as a measure of outsourcing. | (Williamson, 1979) |
| General framework of procurement strategies for IS development. | (Saarinen & Vepsäläinen, 1994) |

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[8] TPI is a sourcing advisory company; refer: www.tpi.net

| TimeLine for Outsourcing literature | Related Articles |
|---|---|
| Contingency framework for analysing economically efficient relationships after the outsourcing decision. | (Klepper, 1993) |
| Transaction Cost Theory (TCT) is disproved and fails to explain outsourcing experience and contradiction of TCT. TCT is fraught with imprecise constructs that are difficult in operationalism. | (Lacity & Willcocks, 1995; Aubert & Weber, 2001) |
| Risks and benefits of outsourcing lost in rhetoric | (Bhagwati, Panagariya & Srinivasan, 2004; Meyer, 1994) |
| Loss of control over the quality of the software. | (Foxman, 1994) |
| Reduced flexibility and loss of strategic alignment are linked as drawbacks of outsourcing. | (Walker, 1985) |
| Analysis of pitfalls and potential risks of outsourcing — gives guidelines for successful contracts, costs of negotiating, monitoring outsourcing contracts and cost of insourcing. | (Dibbern et al., 2004; Lacity & Hirschheim, 1995) |
| Conduct in-depth interviews with firms and executives in order to understand the forces that drive outsourcing decisions and how these decisions are made. | (Clark, Zmud & McCray, 1995) |
| Analysis of advantages and disadvantages of outsourcing based on 11 risks. | (Earl, 1996) |
| Observation that major driver for outsourcing is disparity in the salary levels between developed and Third World countries. | (Apte & Mason, 1995) |
| Studies find that some strategic applications are not (and are unlikely to be) outsourced to foreign countries in the future due to issues of communication and coordination, potential violation of intellectual property rights, concerns on unclear government rules, cross-border dataflow and trade in service. | (Patane & Jurison, 1994) |
| Hidden cost of outsourcing from users' perception. | (Barthélemy, 2001) |
| Literature identifies service quality (SERVQUAL) as an important instrument used to measure the service actually experienced by customer due to outsourcing. | (Wrigley, Drury & Farhoomand, 1997) |
| Changes in reasons for outsourcing:<br>• Improved quality of service;<br>• Access to new technology;<br>• Flexible and responsive systems;<br>• Focus on business competencies; and<br>• Improvement in cash flow. | (Al-Qirim, 2003; Kakabadse & Kakabadse, 2003) |

**...cont'd**

| TimeLine for Outsourcing literature | Related Articles |
|---|---|
| Attempts to provide a complete guide to the complex issue of outsourcing and strategies:<br>• 'Don't Outsource Core Competencies'; and<br>• Start Small. | (Yourdon, 2005) |
| Globalisation seen as a part of the world economy with both positive and negative aspects. | For positive aspects see (Robinson & Kalakota, 2004; Patterson, 2006; Unterweger, 2005) and negative aspects (Drucker, 1997; Greene, 2006; Intriligator, 2001). |
| Examines how counties provide and implement IT outsourcing services e.g. China. 'Drivers and obstacles of outsourcing practices in China'. | (Lau & Zhang, 2006) |

Table 2.1: Timeline of Major Outsourcing Literature

Most of the current literature is based on the American offshore outsourcing experience, with the remaining literature primarily concerned with European experiences in this field.

### 2.3.1 ERP offshore outsourcing

Fortune 500 companies have implemented ERP systems such as SAP, PeopleSoft and Oracle (Snyder & Basel, 2010). ERP systems were originally embraced because they promised the power of enterprise-wide, interfunctional coordination and integration. ERP technology has moved from mainframe-based, batched operations to the client-server architecture and Internet-enabled, real-time operations (Lendrum, 2000). Currently, Accenture, IBM and Price Waterhouse Coopers dominate the field of ERP systems implementation consultancy. ERP are a rapidly growing segment of the IT market. In 1996 ERP IT outsourcing was estimated at around US\$86 billion gross (DiRomualdo & Gurbaxani, 1998), while in 2008 Gartner[9] estimated that the world outsourcing market for IT services had grown to US\$748 billion in 2007 (Gartner, 2008; Richtel, 2008).

Studies have indicated that for every dollar spent on ERP systems such as SAP, an expense of \$10 in consultancy can be expected (Perez, Wen & Mahatanankoon, 2004). As defined by Pairat & Jungthirapanich (2005), ERP functional development and deployment have been classified into four main areas, namely:

- markets;

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[9] Gartner is a major IT research company; refer www.gartner.com

- key operations;

- indicators; and

- research.

This standardisation in corporate systems has also allowed standardisation in processes, procedures and support. This then brings into question the need for internal business IT support for generic processes and development, as individual resources are better able to focus on value adding (MacDonald, 1996).

### 2.3.2 IT organisation workings

Organisations are becoming increasingly complex with multiple business units and various IT departments, both internal and external, combined in strategic partnerships. One of the problems for management is achieving a reduction of internal and external boundaries so that diverse groups can work with better coordination. There are several ways in which an outsourced IT group can work with users to reduce the 'us' versus 'them' boundary. Authors such as Gefen & Ridings (2003) suggest reduction of the inter-group boundaries in order to increase the perception of responsiveness and thus increase their acceptance of the IT work by creating shared goals, user education and joint work activity.

In a typical Australian IT project, 'touch points', direct and indirect lines of communications exist between:

- internal business unit users;

- corporate business units;

- the head office;

- the IT department for application and hardware support;

- specialised project teams;

- vendors; and

- outsourcing partners.

These various teams are split into a multitude of roles that include business experts and analysts, developers, managers, functional experts and testers. In essence this means that outsourcing adds another dimension to a complex situation.

The lines of communication are complex, in that service chains within a corporation's structure and with outside customers and vendors are all interlinked in one way or another as demonstrated in Figure 2.2.
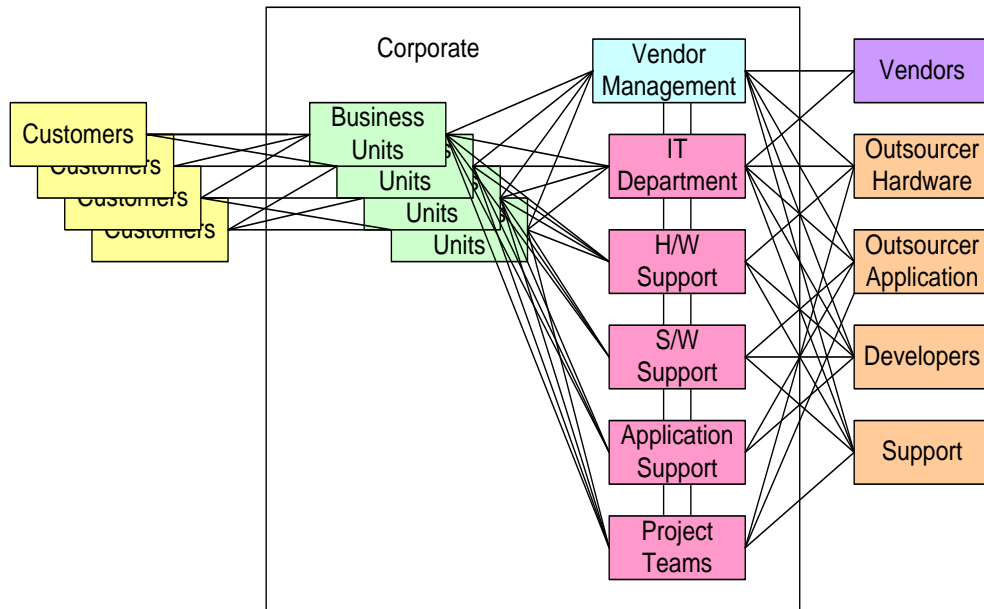


Figure 2.2:  Typical Touch Points in an IT Organisation

### 2.3.3  Trends in IT

The current trend is for organisations to view IT as a commodity that can either be managed with alliances or outsourced. An increased reliance on software giants such as Oracle or SAP to provide end-to-end solutions and the move away from 'best of breed' has been replaced by a layering concept. For example, at Telstra the major Human Resources systems are provided on the primary SAP ERP system (with Organisation Structure as the source of truth) but they utilise specialised systems, each from different vendors, as 'layers' to meet specified requirements such as training, portals and wages comparison (A9 2007; Nordin 2006). This results in different outsourcing contracts with hardware vendors, system vendors and applications support. A hierarchy of support is employed from low-level (i.e. help desk) to high-level vendor support for strategic and complex problems. The result is a combination of a vertical, horizontal and matrix organisation of relationships and partnerships. The role of the internal IT department has changed from one of a service provider with skills in systems development to one of facilitating a partnering model that provides the social glue to hold diverse systems and support together (A4 2006; ).

Based on the research of Zongbin et al. (2006), Wagner et al., (2006) Lee et al. (2003) A12 (2007), A9 (2007) and the researchers experience, Figure 2.1 was constructed to give the timeline of IT trends in relationship to the technical models in use.

The change towards layering has resulted in software giants buying out smaller specialist software providers whose products they then add or layer onto existing products (Ellis, 2007; Snyder & Basel, 2010). 'A software company's assets are all inside people's heads' ((Philipson, 2007).. Examples of this are Peoplesoft buying J.D. Edwards, then Oracle purchasing both Peoplesoft and Hyperion and attempting to integrate them. The combining of Oracle Financials, Hyperion, Business Object, Peoplesoft and J.D. Edwards allows the combined entities to compete with ERP market leader SAP, which in turn has purchased Business Objects in the late 2000s (Philipson, 2007; Wailgum, 2007).

## 2.4    IT outsourcing: success or failure

Authors such as Intriligator (2001) argue that globalisation and the free trade system have been the catalysts that have helped to make offshore outsourcing the success that it is today. Outsourcing has been the result of the global agreement on ideology, with a convergence of beliefs in the value of a market economy, trade liberalisation and a movement toward a borderless world (Rajan, 2004). It can be argued that the emergence of off-the-shelf software such as SAP for corporate usage has helped develop a system for standardising software applications, making the landscape suddenly more conducive to IT outsourcing (Levina & Ross, 2003). The drivers of outsourcing can be summarised as in Table 2.2.

| Drivers of Outsourcing | Identified by |
|---|---|
| Improved productivity | (DiRomualdo & Gurbaxani, 1998) |
| Centralised IT delivery model | (Currie & Seltsikas, 2001) |
| Flexibility in staffing levels | ( Looff, 1996) |
| Increase in cost-efficient foreign competition | (Chakraborty & Remington, 2005) |
| Focus on core business | (Dahlberg & Nyrhinen, 2006 Lin & Pervan, 2001) |
| Organisation structure | (Yourdon, 2005) |
| IT sourcing partnerships | (Welch 1999; Ye, 2005) |
| Competitive advantage | (Dahlberg & Nyrhinen, 2006) |
| World Best Practice | (Barr, 2005) |

Table 2.2: Drivers of Outsourcing

Authors such as Gottschalk & Solli-Sæther (2005) have attempted to rank critical success factors and link them to the management theory used in managing the outsourcing relationship. These are outlined in Table 2.3.

| Rank | Critical success factors | Theory |
|------|--------------------------|--------|
| 1 | Core competency management | Theory of core competencies |
| 2 | Stakeholder management | Stakeholder theory |
| 3 | Production cost reduction | Neoclassical economic theory |
| 4 | Social exchange exploitation | Social exchange theory |
| 5 | Transaction cost reduction | Transaction cost theory |
| 6 | Vendor resource exploitation | Resource-based theory |
| 7 | Contract completeness | Contractual theory |
| 8 | Relationship exploitation | Relational exchange theory |
| 9 | Vendor behaviour control | Agency theory |
| 10 | Demarcation of labour | Theory of firm boundaries |
| 11 | Alliance exploitation | Partnership and alliance theory |

Table 2.3: Ranking of Critical Success Factors in IT Outsourcing Relationships

### *2.4.1 Considerations in the outsourcing process*

The decision to outsource IT is a variant of the classic make/buy decision — an organisation can invest in the non-core activity of supporting IT infrastructure, or they can contract out (Lehrer, 2006; Fine & Whitney, 1999). The considerations and factors relating to outsourcing are many and varied but may be based on skill requirements, privacy of information, quality and strategic direction of organisations. Factors such as the quality of service rather than labour arbitrage, is emerging in European countries as a factor in the outsourcing decision (Kediaa & Mukherjee, 2008). Anecdotal evidence from Deloittes[10] (2005) reveals that 30% of the staff say their outsourcing partner has not met expectations and Gartner Group's Dataquest[11] states that more than half (53%) of all outsourcing customers are dissatisfied and report having renegotiated a contract (James 2000). However, in studies in the UK and US only 7% of outsourcing customers indicated 'problems that were difficult to resolve' (Lacity & Willcocks, 2000)

Recently, Asian countries have become more globalised. China has joined the World Trade Organisation (WTO) and countries such as Malaysia, Vietnam and the

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[10] Deloitte is a leading IT and Accounting consulting firm

[11] Gartner Dataquest is a leading IT research and consulting company

Philippines are all competing for a market share. Poland and Romania's IT industries are rapidly growing because of an increase in an educated multilingual labour force, common time zones with European countries and government subsidies (Abott 1997). This means that additional competition in the market place will continue.

In research by Frost & Sullivan (2004) examining low-cost countries India, China, Brazil, Mexico, Malaysia, Poland, Romania and Russia, India emerged as the single largest recipient of IT job imports, followed by China. The gap between India and China (which currently receives less than half the number of jobs that India does) is expected to narrow over the course of the next decade due to various IT-friendly initiatives undertaken by the Chinese government (Frost & Sullivan, 2004).

### 2.4.2 Conclusion on IT outsourcing: success or failure

The latter part of the 20<sup>th</sup> century saw massive development in new technologies with the concomitant globalisation of the world's economies. A wide range of new technology development occurred in Europe and USA and these innovations have penetrated the developing world as well. Low wages have become the bottom line in many different industries, software support and the apparel industry being two examples (Rosen, 2002).

Various factors have facilitated the ability to outsource IT functions. Popularity is proven by the growth figures over the past decade, yet questions persist on the effectiveness and service quality of the vendor. The critical success factors outlined in Table 2.3 give a good overview of items that are both advantages and disadvantages of outsourcing that require management.

A country like India that has a large population of educated, English-speaking people who are willing to work for less money than their western counterparts has been able to create a new service industry. Consulting companies such as Tata Consulting Services (TCS), Accenture and CapGemini have utilised cheaper offshore labour to provide a full complement of services. Companies such as Telstra and National Australia Bank have taken advantage of cheaper service offerings to outsource both software development and support for major IT projects.

Outsourcers will continue to look for the next cheapest supplier. Developing countries are drawn into export-led development; they compete for foreign investment, outbidding each other to offer concessions to investors. The slightest change in

government policy or in the political situation of a developing country can lead to a massive flight of capital when companies relocate elsewhere (Abott, 1997). This 'race to the bottom' reduces the price paid by organisations for IT services, so that IT has followed globalisation trends in other industries and moved work to the cheapest location.

Outsourcing IT functions such as the implementation of large and complex ERP systems and software has consequences for the company outsourcing. Outsourcing can lead to erosion of the outsourcer's business and system knowledge. Then organisations must spend additional resources in knowledge retainment. Further, managing the outsourcing partner and changing vendors or outsourcing partners when necessary all take valuable resources. These productivity costs incurred in knowledge-gathering maintenance and the cost of relearning lost knowledge, combined with costs in transferring contracts, is borne by the whole business, not necessarily by the department managing the contracts. Outsourcing is successful but can result in sacrificing long-term knowledge assets for short-term gains.

## 2.5    Outsourcing advantages

Currently outsourcing is limited to large projects, because a myth exists that outsourcing is cheap. This is a myth because although skilled developers are cheaper offshore, an organisation incurs additional costs including for travel and management in order to utilise the outsourcing agreement. It should be noted that IT jobs cover low, medium and highly skilled occupations and that in most cases offshoring has targeted the lower skilled range of jobs (Ross & Bamber 2000; Aubert, Patry & Rivard, 1998; Gottschalk & Solli-Saether, 2006).

Many consultancies such as Design Group CDA (2005) have a vested interest in promoting outsourcing and make claims which need to be substantiated. The main factors that are touted as advantages of outsourcing include:

- reduces and controls operating costs;

- improves the company focus;

- provides access to world class talent and capabilities;

- frees internal resources for other purposes;

- allows access to resources that are not available internally;

- accelerates re-engineering benefits;

- helps to handle functions that are difficult to manage or are out of control;

- makes capital funds available;

- distributes the risk factors; and

- brings in a cash infusion.

### 2.5.1 Empirical evidence on offshore outsourcing

The projected savings from outsourcing and offshoring have the potential to be reflected in an organisation's bottom line. Based on the results of case studies conducted by Intriligator in 2001, 'the average cost saving delivered to organisations in this survey is 12.1% but for the top 50% of the best performing contracts, the average was 17.9%.

During the case studies, best practice organisations managed a ten-element total cost model to achieve best results, usually working in an alliance type contract'.

Many economic arguments have been made that the overall amount of cost savings can range between 20% and 60% (Greene, 2006). Savings from reduced costs can be translated into lower prices for consumers, thus making an organisation more competitive. Consultancy companies such as McKinsey Global Institute tout the benefit that 'offshore outsourcing, like other forms of trade, creates enormous value in terms of profits for both companies and the economy as a whole' (Baily & Farrell, 2004).

Articles in the popular press have highlighted the issue that currency fluctuation and increased salary claims in offshoring countries, in particular India, are forcing outsourcers to develop the ability to nimbly shift tasks and labour around different countries providing global resources (Lei, 2006).

Consulting service companies such as CapGemini are offering offshore outsourcing as part of their service. CapGemini uses 'Right sourcing' as a major marketing initiative, which means that a global delivery model with centres of excellence located around the world, based on individual organisational requirements, is utilised for outsourcing (Gaston-Breton, 2007). Typically CapGemini North America will use Canada or South America for high-tech support if same time zone is necessary; or India or China if price is a major concern. The CapGemini internal IT support is

operational 24 hours, seven days a week and is being handled within the global company base in Poland.

This highlights the flexibility and ability of vendors to provide what the market demands and change in order to meet market needs. In CapGemini (based on their global delivery model), the outsourcing of service accounted for 39% of the worldwide revenue of US$11.9 billion in 2007 with operating margins of between 8% and 9%. The figures for exact revenue and profit from outsourcing by CapGemini worldwide and by regional breakdown are confidential, but outsourcing services make up a significant and integral part of their business as highlighted in Figure 2.3 (CapGemini, 2009).
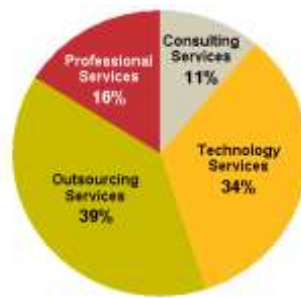


*Figure 2.3: CapGemini Global Revenue Model 1*

Outsourcing allows organisations to add value to products by allowing them to focus on critical business processes (DiRomualdo & Gurbaxani, 1998). This can create a competitive advantage that forces other companies to follow the leader. Organisations are dynamic with external influences controlling their fate, yet outsourcing contracts seal relationships for a set period of time. 'Business value from outsourcing is increasingly dependent on how well the relationship between the client and its service provider(s) is managed' (Han, Lee & Seo, 2007).

IBM and HP are hardware giants and it is a difficult task to compare hardware and software companies. It is estimated that about 45% of IBM's revenue comes from services and nearly 20% from software, hence IBM has shown that services are more profitable than hardware (Philipson 2007). It is worth noting that EDS (Electronic Data Systems) was purchased by HP (Hewlett-Packard) in 2008 (Richtel, 2008).

**Worldwide IT Services Vendors by Revenue (Millions of US Dollars)**

| Company | 2007 Revenue | 2007 Market Share (%) | 2006 Revenue | 2006 Market Share (%) | Growth (%) |
|---|---|---|---|---|---|
| IBM | 54,148 | 7.2 | 48,247 | 7.1 | 12.2 |
| EDS | 22,130 | 3.0 | 21,396 | 3.2 | 3.4 |
| Accenture | 20,616 | 2.8 | 17,228 | 2.5 | 19.7 |
| Fujitsu | 18,620 | 2.5 | 17,918 | 2.6 | 3.9 |
| HP | 17,252 | 2.3 | 15,963 | 2.4 | 8.1 |
| CSC | 16,306 | 2.2 | 15,136 | 2.2 | 7.7 |
| Others | 598,953 | 80.0 | 541,169 | 79.9 | 10.7 |
| Total market | 748,025 | 100.0 | 677,057 | 100.0 | 10.5 |

*Source: Gartner (May 2008)*

Table 2.4: IT Services Vendors by Revenue 2006 and 2007

It is interesting to compare Table 2.4 with Table 2.5, which highlight differences between IT services and outsourcing companies.

**Rank Company (Leaders) Key Strengths (*Global Outsourcing* 2008)\*^**

| Company | Strengths | Net revenue for fiscal year 2008 $US | Employees 2008 |
|---|---|---|---|
| 1. Accenture | Customer Testimonials | $23.39 billion $19.70 billion (2007) | 186,000 + |
| 2. IBM | Size & Growth Revenue | $98.8 billion | 386,558 (2007) |
| 3. Infosys Technologies | Outsourcing | $4 billion | 80,000 (India) |
| 4. Sodexo | Global Presence | $2.6 billion | 308,385 |
| 5. CapGemini | Achievement Recognition | $12.63 billion | 59,000 (France) |
| 6. Data Consultancy Services | Employee Management Recognition | $5.7 billion | 116,000 |
| 7. Wipro Technologies | Employee Management | $150 million (2007) | 10,000 + |
| 8. Hewlett-Packard | Outsourcing Experience | $18 billion *(16% HP Services) | 140,000 (2007) |
| 9. Genpact | Executive Leadership | $822 million | 28,000 (2006) (Bermuda) |
| 10. Tech Mahindra | Outsourcing Experience | $934 million | 23,000 (2007) (India) |

\* Source: 2007 Fiscal Yearly Reports

^Number compiled from corporation websites as indication as no direct linkage to corporate sensitive information as to who is working on outsourcing.

Table 2.5: Major Outsourcing Companies 2008

In a report by Khan & Bhambal (2008) for Global Services, it is noted that with single-vendor deals the Big Four of IBM Services, EDS, Accenture and ACS in 2007 accumulated US$15.39 billion with 28 deals and the other 22 major players US$31.19 billion with 36 deals.

| Provider | Value (US$ bn) | No. of deals |
|---|---|---|
| IBM Global Services | 7.41 | 11 |
| EDS | 4.97 | 8 |
| CSC | 2.01 | 5 |
| Accenture | 1.00 | 3 |
| ACS | 0.00 | 0 |
| HP | 0.00 | 0 |

*Compiled by Global Services[12]*

*Using parameters: 2007 IT services deal; integrated IT and BPO deals;*

*>US$200 million; excludes multi-vendor deals.*

Table 2.6: Major Outsourcing Companies' Deals 2008

The figures outlined in Table 2.5 have been compiled from corporate reports and websites but give an indication of the size and scope of outsourcing deals. According to Bhambal (2007), 'excluding multi-vendor deals, the Big Four concluded deals worth US$15.39 billion in 2007, while the rest (22 service providers combined) took home US$31.19 billion. In terms of the number of deals signed, the Big Four concluded 28 out of the 64 single-vendor deals signed in 2007' (Khan & Bhambal, 2008). It is very clear that IT outsourcing is an important business tool.

Business process outsourcing (BPO) is definitely a rising sector in India with bright prospects in the long term, but with a challenge to retain its competitive advantage as a preferred offshoring destination. The latest research by McKinsey reveals that India gets only 22% of the BPO pie. Offshoring brings substantial benefits to the global economy and the lion's share is contributing to the US economy. By offshoring, for every US$1 of US labour costs, US$1.45 to US$1.47 of value is created globally. The USA captures US$1.12 to US$1.14 of this, whereas a receiving country like India gains only 33 cents (McKinsey, 2003 and Sharma et. al., 2005). Nobel

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[12] Global Services is a media platform. Global Services is owned by CyberMedia (India) Limited. Headquartered in Gurgaon, India, CyberMedia is a specialty media and services house with five subsidiaries and two associate companies, which, as a group, are engaged in publishing, market research, content outsourcing, multimedia, gaming and media education.

laureate Lawrence R. Klein[13] has stridently argued that raising barriers to worldwide outsourcing will have adverse impacts on USA workers and firms. Outsourcing helps a company and a country in many ways: cost savings in wages, new revenues through capital assets, repatriated earnings and redeployed labour (Sharma, Saxena & Aanand, 2005). This is supported by a 2008 report by the European Economic Advisory Group (EEAG) that globalisation is more likely, in the end, to raise rather than to reduce employment because it will help make labour markets more flexible (Calmfors et al., 2008).

In a report by Gartner[14] (2009) (as outlined in Table 2.7), US$805.9 billion was forecast to be spent worldwide in 2008 for IT services. It is impossible to give a definitive example of a major outsourcing vendor's business profit from outsourcing due to the sensitivity of company data; however, it is widely accepted that major diverse companies would not participate in outsourcing unless good profits or strategic benefits were expected. Table 2.5 was compiled as an indicator of the size of organisations involved. The list is based on Outsourcing Professionals list of the top 10 outsourcing companies, with data compiled from company reports (*The 2008 Global Outsourcing 100 Sub-lists,* 2008).

**Worldwide IT Spending Forecast (Billions of U.S. Dollars)**

|  | 2008 Spending | 2009 Spending | 2010 Spending |
|---|---|---|---|
| Computing Hardware | 379.5 | 317.8 | 317.7 |
| Annual Growth (%) | 2.5 | -16.3 | 0.0 |
| Software | 221.9 | 218.3 | 225.3 |
| Annual Growth (%) | 10.3 | -1.6 | 3.2 |
| IT Services | 805.9 | 761.0 | 784.0 |
| Annual Growth (%) | 8.2 | -5.6 | 3.0 |
| Telecom | 1,945.2 | 1,855.9 | 1,898.7 |
| Annual Growth (%) | 5.7 | -4.6 | 2.3 |
| **All IT** | **3,352.5** | **3,152.9** | **3,225.7** |
| **Annual Growth (%)** | **6.2** | **-6.0** | **2.3** |

Source: Gartner (June 2009)

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[13] Lawrence R. Klein — 'for the creation of econometric models and the application to the analysis of economic fluctuations and economic policies'; the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1980.

[14] Gartner, Inc. (NYSE: IT) is a leading information technology research and advisory company; refer www.gartner.com

Table 2.7: Worldwide IT Spending Forecast 2009

### 2.5.2  Types of outsourcing models

As outsourcing has evolved, so too have the types of models developed. Authors such as Lacity (1997) have identified emerging sourcing options such as value-added outsourcing, co-sourcing, multi-sourcing and flexible sourcing. Offshoring suppliers, however, have made strong efforts to move up the value chain and provide services that have a higher value-added component because this is where there is the greatest opportunity for profit (Aspray, Mayadas & Vardi, 2006).

Outsourcing is evolving to fulfil different business requirements based on changing circumstances. Outsourcing relationships between organisations could be one of the following types or a mixture, depending on requirements:

- total;

- value adding;

- equity;

- offshore;

- multi-sourcing;

- co-sourcing;

- spin-offs;

- smarter contracting; and

- business processing.

Outsourcing is an important part of the business process that encompasses both strategic processes and business services strategies (Doh, 2005). What is new is that IT and cheap communications help companies to outsource most things that can be produced or conducted in digital form, including IT support, back office (payroll, administration and accounting), call centres, software programming and some research and design functions (Lewin & Peeters, 2006).

A review of the available literature resulted in the 'linkage map' shown in Figure 2.4 that illustrates the various aspects and relationships in the outsourcing model;

this is then linked to Table 2.8, which shows relevant articles in each area of outsourcing.

The drivers for outsourcing can be summarised as contracting specialisation, market discipline, flexibility, and cost saving. Although such estimates should be taken with a pinch of salt, they are indicative of the static gains that can be reaped from offshoring (Lacity, Willcocks & Feeny, 1996).
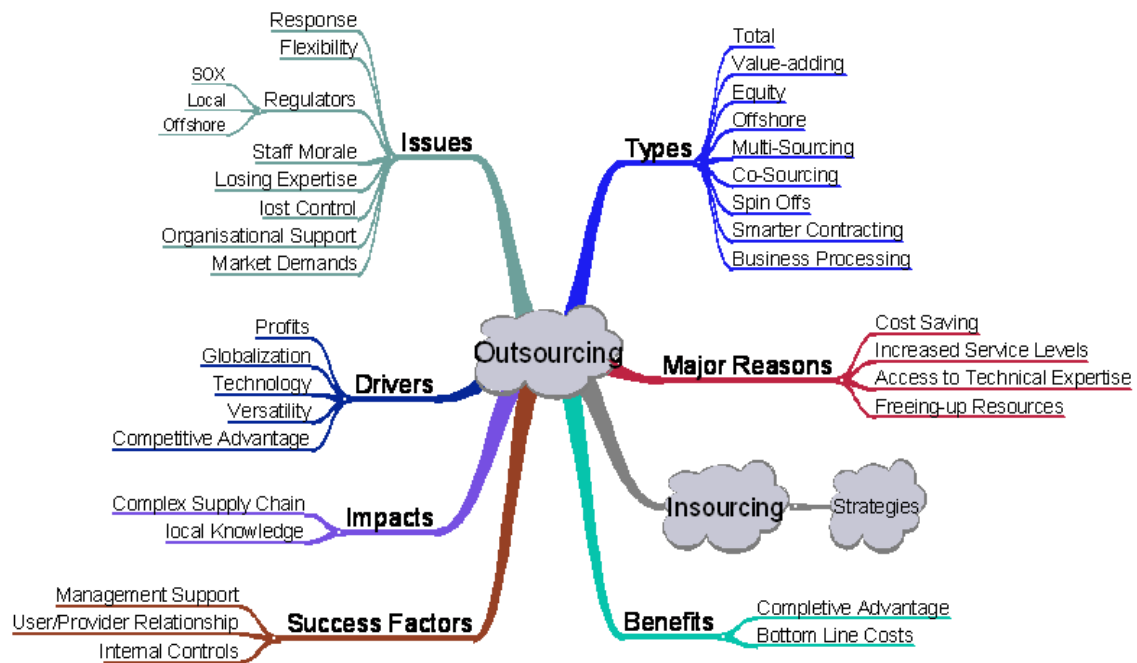


*Figure 2.4:  Linkage Map for Outsourcing*

| Type | Linkage Map | Reference |
|------|-------------|-----------|
| Issues | Response | (Aspray, Mayadas & Vardi, 2006) |
| Issues | Flexibility | (Wang, Gwebu, Wang & Zhu, 2008; Goles & Chin, 2005) |
| Issues | Regulators | (Yourdon, 2005) |
| Issues | Staff morale | (Cullen, Seddon & Willcocks, 2005) |
| Issues | Losing expertise | (Bourbeau, 2004) |
| Issues | Lost control |  (Thomsett, 1997) |
| Issues | Organisational support | (Sriwongwanna, 2009) |
| Issues | Market demands | (King, R. 2008) |
| Drivers | Profits | (Aspray, Mayadas & Vardi, 2006) |

**...cont'd**

**...cont'd**

| Type | Linkage Map | Reference |
|---|---|---|
| Drivers | Globalisation | (Intriligator, 2001) |
| Drivers | Technology | (Hirschheim, Porra & Parks, 2003) |
| Drivers | Versatility | (A.T. Kearney[15], 2009) |
| Drivers | Competitive advantage | (Burdon, 2004) |
| Impacts | Complex supply chain | (Fine & Whitney, 1999; Willcocks & Feeny, 2006) |
| Impacts | Local knowledge | (Day, Mckay, Ishman & Chung, 2004) |
| Success Factors | Management support | (Lee & Kim, 1999) |
| Success Factors | User/Provider relationship | (Clemons & Hitt, 1997) |
| Success Factors | Internal controls | (Pai & Basu, 2007) |
| Types | Total | (Beaumont & Sohal, 2004; Lacity & Willcocks, 2000) |
| Types | Value-adding | (Lacity & Willcocks, 2000; Dibbern, Goles, Hirschheim & Jayatilaka, 2004) |
| Types | Equity | (DiRomualdo & Gurbaxani, 1998; Dibbern, Goles, Hirschheim & Jayatilaka, 2004) |
| Types | Offshore | (Chakraborty & Remington, 2005) |
| Types | Multi-sourcing | (Lacity, 1997) |
| Types | Co-sourcing | (Lacity, 1997; Strom, Zhang & Tapper, 2008) |
| Types | Spin-offs | (Pai & Basu, 2007; Mathews, 2001) |
| Types | Smarter contracting | (Hirschheim George & Wong, 2004) |
| Types | Business processing | (Diromualdo & Gurbaxani, 1998; Pai & Basu, 2007; Hirschheim, George & Wong, 2004) |
| Major Reasons | Cost saving | (Intriligator, 2001) |
| Major Reasons | Increased service levels | (Sobol & Apte, 1995; Olson, 2006) |
| Major Reasons | Access to technical expertise | (Dibbern, Goles, Hirschheim & Jayatilaka, 2004; DiRomualdo & Gurbaxani, 1998; Sobol & Apte, 1995; Olson, 2006) |
| Major Reasons | Freeing-up resources | (Goles & Chin, 2005) |
| Major Reasons | Strategies | (Beaumont & Sohal, 2004; Dahlberg & Nyrhinen, 2006) |
| Benefits | Competitive advantage | (Lin & Pervan, 2001; Burdon, 2004) |
| Benefits | Bottom line costs | (Lin & Pervan, 2001; Smith, 2005) |

Table 2.8: Linkage Table for Outsourcing

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[15] A.T. Kearney is a leading management company, refer www.atkearney.com.

The latest research studies show that clients are increasingly eager to adopt selective outsourcing models where they outsource specific IT and back office functions to specialist outsourcing vendors, rather than hand over their entire IT department to a single supplier (Infosys, 2005). Lee, Miranda and Kim (2004, p.110) talk of 'coherent clusters of characteristics and behaviours' and propose a hypothesis that 'selective outsourcing will be more successful than comprehensive or minimal outsourcing'. Organisations are promoting outsourcing for change to reshape the organisation (Mathrani, 2004). Authors such as Linder (2004, p.65) and Bhagwati (2004) promote outsourcing as a way to provide a 'wake-up call' to organisations and to serve as a mechanism for change. Researchers such as Lacity and Willcocks (2000), Willcocks and Feeny (2006) and DiRomualdo & Gurbaxani (1998) have highlighted selective outsourcing: believe that such deals, in which vendors take over lower value-added IT tasks while companies manage higher value-added IT applications internally, are bellwethers of IT outsourcing's future (Lacity, Willcocks & Feeny, 1996). The result is various outsourcing models such as Infosys Technologies Ltd, which has a global delivery model involving a mixed model of client-site, near-site and offshore locations (Hirschheim & Lacity, 1996).

As outsourcing becomes enmeshed in globalisation and offshore work, it will become a major political issue. Authors such as Drucker (2002) and Intriligator (2001) argue that this will lead to protectionism and trade barriers as sovereign states attempt to hold back the winds of globalisation. Other authors such as Bhagwati (2004) argue that the demand for skilled workers has exploded; in rich countries 'all kinds of services are being supplied from overseas'. He also makes the point that 'proximity of personnel is often indispensable' Bhagwati p. 213 (2004).

The Information Technology Association of America (ITAA) claimed in reports that by 2008, IT offshoring annually would account for roughly US$125 billion in additional US gross domestic product. This is a US$9 billion jump in real US exports and, most importantly, 317,000 net new jobs in the USA (Jeffery & Leliveld, 2004). However, it should be noted that ITAA is an industry alliance that supports outsourcing. Furthermore, its claims have yet to be proven or quantified.

A number of studies focus on changes that result from outsourcing in the IT environment (Seddon, Willcocks & Cullen, 2002). They examine issues such as major reasons to outsource, drivers of outsourcing and success factors (Olson, 2006). These

studies are important because of the direct relationship between outsourcing and the capacity of companies to be competitive in a globalised economy. For example, one study identifies the implications of changes on employees and the strategies necessary to avoid employee dissatisfaction (Sim, 2010). Australians have always known the relationship between employee morale and a successful organisation. However, behaviour that is directly caused by organisational outsourcing has not been fully examined. An organisation's ability to retain knowledge as well as the effects on its customers and employees also need further research.

Organisations such as Xerox Research Centre, Europe (Lacity & Willcocks, 2001) have started to highlight  hidden issues and the delivery of ongoing value. An organisation needs to ensure that information can be shared and used in 'communities' of practice. Communities are recognised to be the hidden engine that keeps an organisation creative and competitive.

IT is an integral function of an organisation's business processes and a selective IT outsourcing model is the market's way of balancing competition. Recently there has been a distinct change in outsourcing literature which initially championed profits Deloitte (2005b) and competitive advantage Goodridge (2001) as the major drivers  for outsourcing. There is now less emphasis on cost savings. Studies such as Domberger's theory of the Contracting Organization by Seddon et al.p.9 (2002) have concluded that 'cost savings were not important in explaining organisational satisfaction with IT outsourcing'.

Despite the popularity of outsourcing, articles in the popular press are discussing its failure. McCue (2005) highlight the failures of the managing process: 'A failure to involve the IT department in outsourcing decisions is fuelling cynicism which contributes to project failure, according to a research done in UK firms'.

When specific information on the medium to long-term Australian outsourcing experience is sought, little is available. Recent research has highlighted the matter of unforeseen costs. For example, Goles & Chin (2005) point out that the average outsourcing customer now spends around 15 per cent of its IT budget on legal fees related to litigation of the contract. Australian researchers such as Beaumont (2001), Lacity & Willcocks (2000) and Lin et al. (2001) have concentrated on initial outsourcing requirements. With the focus shifting to the reasons to outsource, authors

such as Lacity et al. (2000) and Lee et al. (2004) imply that serious problems have persisted for outsourcing. Lacity et al. (2000) estimated that more than a quarter of organisations that opted for outsourcing deals have serious problems, but they fail to explain why. Industry sources including the consulting firm Deloitte suggest that 34% of outsourcing is brought back in-house. 'Calling a Change in the Outsourcing Market', reveals that 70 percent of participants have had significant negative experiences with outsourcing projects, (Deloitte, 2005). Outsourcing books are focused on the outsourcing process and tend to mention issues only as a subset. A research and knowledge gap exists in the Australian marketplace regarding the after-effects and results of outsourcing of ERP systems, and the reasons for Australian offshore outsourcing also require further research. This thesis will look at satisfaction as a factor in outsourcing, although a broad discussion of the results of outsourcing of ERP systems is outside the scope of this study.

## 2.6    Outsourcing: obstacles and problems

Both academics and outsourcing partners continue to trumpet the advantages of outsourcing. Vendors such as IBM Global Services boast of utilising 'robust statistical methods' to prove that 'outsourcing IT is a strategic business decision that is likely to boost a firm's performance' (IBM Global Services p.10 2006). Yet various sources such as Wang & Yang (2007) quote only a 33% satisfaction rate with outsourced IT services. Loh & Venkatraman. (1992) suggest a negative relationship between IT performance and outsourcing that was also empirically supported. Low economic returns on IT investment appear to affect the propensity of firms to outsource more of their IT infrastructure to vendors. Organisations have failed to document substantial productivity improvements and those productivity statistics that do exist have yet to prove that offshore outsourcing works.

Without firm evidence proving that outsourcing earns substantial returns, most conclusions are not definitive. Research studies were done by Brynjolfsson & Yang (1996) and Hirschheim & Lacity (2000) on the fact that 'unmeasurable' factors are not recorded in official statistics; yet managers continue to expect benefits such as improved service, higher product reliability and quality, support for re-engineering efforts and more flexibility from IT  investment (Aubert & Weber, 2001) .

Information on outsourcing can enter the public arena from different sources. The internet has facilitated this by transmission of information from various sources such as trade magazines, associations, business directories and periodicals. Various market research firms such as Gartner, Cross-tab and Everest Research Institute sell research on IT outsourcing, as independent research and analysis organisations. This information then moves to the public arena via the internet, trade magazines and wire services where a summarised version is reported as fact without scrutiny. This is not to say that information is not well researched, correct or factual. An example of this is a report which states, 'outsourcing market drops in 2009' but goes on to also contain the line 'potential near-term risk issues arose in Mexico, El Salvador, Poland and Thailand' (Tims & Cook, 2009). What does this actually mean and has this been a factor in the market drop? The 'Market Drops' quote was widely reported by various online and business services such as *Cybermedia News* and *Euroinvestor* (Business Wire, 2009; Global Services, 2009; Reuters, 2009) but the 'Risk Issues' quote was ignored. This selective reporting then flows to the public arena without explanation or qualification. This flow of information provides real opportunity for incomplete and unreliably cited sources and unsubstantiated so-called facts to be reported and repeated. It has been argued that the internet and the media are riddled with half-truths, untruths, cover-ups and propaganda.

NASSCOM[16], the public body that represents outsourcing organisations based in India, has estimated that the Indian technology sector would increase by 27% in the financial year 2006–07, whereas in fact it rose by 30% to about US$40 billion. For the fiscal year 2007–08, NASSCOM predicted a rise of between 24% and 27%, equivalent to the staggering sum of US$50 billion in revenue. Yet a search of the NASSCOM website fails to mention Satyam, a major India-based IT outsourcing company that has been involved in scandals resulting in arrests (CNN Money, 2009; Kahn & Panchal, 2009).

Vendors and outsourcing partners have diametrically opposite requirements in any organisation. Vendors are looking to increase profits but the buyer is looking for lower costs. Therefore vendors are not partners, because profit motives are not shared

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[16] www.nasscomfoundation.org

(Pai & Basu, 2007; Hirschheim, 1996). Bourbeau (2004) points out that outsourcing still has the following considerations to deal with:

1. The trend to outsource continues to grow.

2. The amount of evidence regarding the effectiveness of outsourcing is minimal, confusing, and highly subjective.

3. Outsourcing saves money but at the expense of quality, or at least without improving it.

4. Contracting out can be a solution but is not the only solution to government funding and service quality shortfalls.

5. Successful outsourcing has been implemented in certain ways.

6. Outsourcing does not spell the end of public administration.

The term 'productivity paradox' has come to mean that despite large IT investment, it is difficult to determine where benefits have actually occurred. There is a need for better productivity measures because existing measures fail to reveal the gains from IT investments — particularly of intangible benefits (Bendoly & Schultz, 2003). Authors such as Rouse & Corbett (2001) talk about disaffection with outsourcing but appear to be caught in the 'can't go back' bind.

Various authors such as Mahnke et al. (2003) point out that 'there is a lack of quantitative empirical research examining outsourcing processes' When Wang et al. (2008) conducted an empirical study of outsourcing firms compared to control firms, they observed that there was improved process efficiency in sales per employee, depreciation in expenses per sales dollar and expenses per sales dollar but there were lower firm-level returns. Wang et al. p. 125 (2008) concluded that, 'firms with superior core IT capability were found to enjoy an advantage in leveraging their outsourcing initiatives to enhance firm value'. The conclusion that can be drawn is that even with outsourcing IT, superior in-house IT expertise is still required to manage IT and that reducing the operational cost does not reflect in a firm's overall efficiency, share price or bottom line.

Sociologist, Robert K. Merton (1996) listed five possible causes of unanticipated consequences based on original work by Adam Smith (1723–1790):

1. *Ignorance* — It is impossible to anticipate everything, thereby leading to incomplete analysis).

2. *Error* — Incorrect analysis of the problem or following habits that worked in the past but may not apply to the current situation).

3. *Immediate interest* — which may override long-term interests.

4. *Basic values* — which may require or prohibit certain actions even if the long-term result might be unfavourable (these long-term consequences may eventually cause changes in basic values).

5. *Self-defeating prophecy* — fear of some consequence drives people to find a solution before the problem occurs, thus the non-occurrence of the problem is unanticipated.

Organisations are complex with multi-dimensional requirements made up of different personnel and groups which have complex relationships with different agendas and drivers. So, while management and analysts point to outsourcing, the paradox exists. It is wrong to assume that outsourcing is about low-cost offshoring to exploit the low-cost labour of other countries; it is outsourcing work which can be best performed by other specialised groups and which will provide the greatest benefit to the organisation. CapGemini, a major international IT consultancy organisation, strongly markets a 'rightshore delivery structure' whereby a tailored outsourcing solution is designed, which may involve a number of different worldwide locations (Patterson, 2006).

### 2.6.1  Obstacles and problems in outsourcing

Some of the undesirable consequences of IT outsourcing have been identified by authors such as Beaumont & Sohal (2004), Koh, Ang & Yeo (2007), Dabholkar, Shepherd  & Thorpe (2000) and Hirschheim, George & Wong (2004).   These authors have cited the following issues:

- hidden costs;

- transition costs;

- management costs;

- service costs;

- security of data;

- privacy of information;

- working in different time zones;

- culture gap between it and business;

- contractual difficulties;

- contractual amendments;

- disputes and litigation;

- insufficient protection of intellectual property (i.e. foreign countries);

- renegotiating contracts;

- lock-in;

- service debasement;

- diminished quality of service;

- increase in cost of service;

- business responsibility for ownership of process and data;

- loss of organisational competencies;

- loss of IT expertise;

- loss of innovative capacity;

- loss of control of business activity;

- loss of competitive advantage; and

- loss of flexibility.

Outsourcing continues to be popular even with cost blowouts, poor quality of work, inadequate technical skills in offshore locations and poor management. After outsourcing, some client organisations have experienced subsequent performance losses due mainly to associated problems in coordinating service quality with human resource policy in the partner IT firms, which in turn has fostered worker resistance and loss of knowledge assets (Grimshaw & Miozzo, 2006).

It should be noted that the laws of many countries do not prohibit practices that may be illegal and punishable by stiff civil and criminal penalties in countries where offshoring has originated. Information security is becoming an issue with the dangers involved in moving databases offshore to countries that have different legislative systems (Sparrow et al., 2004). A classic example of this is Satyam, a major Indian outsourcing partner in Australia to major organisations such as Telstra, Qantas and NAB, that has been involved in allegedly fraudulent behaviour (CNN Money, 2009; Kahn & Panchal, 2009; Lekakis & Easdown, 2009). This has necessitated the review and in some cases the changing of outsourcing arrangements.

Problems in the USA with company financial reports have resulted in the introduction of the Sarbanes-Oxley Act of 2002 (SOX). To comply with SOX requirements, companies listed on the USA stock exchange, including foreign companies, must maintain an effective system of internal control over financial reporting. This means that the responsibility for compliance with SOX laws cannot be transferred to external entities (Pedersen & Stålbäck, 2005). It remains to be seen what effect the SOX regulations have on outsourcing and offshoring in the longer term.

### 2.6.2 Government policy

As a consequence of outsourcing and the government policy of allowing holders of skilled temporary visas (457 visas) into the Australian workplace, there has been a drop in the percentage of Australian IT graduates (The Australian (IT import scheme slammed) 24 July 2006). The perceived lack of IT opportunities has meant that students are opting for other career fields, which has further contributed to a local skills shortage which once again fuels outsourcing and offshoring of IT work. The situation has resulted in both academics and unions calling for suspension of such schemes for the nation's good  (Bachelard 2006).

Articles in the popular press are stressing that when choosing careers people must look at options that can't be outsourced easily (Costlow, 2006). This has helped to create a political environment which authors such as Drucker (2002) warn will 'inevitably bring about a new protectionism'. In the USA, the H-1B visa was intended to be used to capture the brightest and best talent, but currently it is being used to bring lower-wage foreign workers into the USA (Hira & Ferrante, 2005). Forrester Research[17]

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[17] Forester Research, Inc. (Nasdaq: FORR) is an independent technology and market research company.

McCarthy (2002)) estimates that as a result of offshoring, 3.3 million US jobs will be lost by the year 2015 and Parker (2004) projects the loss of 750,000 United Kingdom jobs to offshoring by the same year.

Human management aspects of outsourcing also need to be evaluated. As pointed out by Hurley (2001), organisations need to retain staff and high morale. Outsourcing studies tend to evaluate tangible indicators that can be easily measured while ignoring factors such as process improvement and the staff who have a vested interest in the process. Execution of strategic outsourcing can be hampered by culture and language mismatches, as well as causing damage to staff morale as a result of lay-offs. Outsourcing becomes more of a problem if it is done for the wrong reasons. It cannot absolve organisations of their responsibility, which means that you can't outsource your problems (Intriligator 2001; Lacity & Willcocks 2000). Successful projects have detailed processes for definition and specification and this fact does not change with outsourcing.

Countries such as Ireland and India have been riding the IT outsourcing wave based on government tax incentives. Yet even with India's booming IT sector, the Bharatiya Janata Party (BJP), who championed the move, lost the most recent elections. Booming IT companies aren't paying taxes, yet they require world-class infrastructure. Those resources still have to be paid for and this affects other parts of the economy (Mitra, 2007). Thus government policy can create artificial economic growth and productivity that may not be supportable in the long term. One emerging trend is the propensity for companies to move to the next cheap outsourcing location and countries such as China, Russia, Pakistan and Vietnam are all looking to compete for a share of the outsourcing market (Chakraborty & Remington, 2005; Mankiw & Swagel, 2005). The average salary of a computer programmer in India is anywhere between US$6,000 and US$11,000 and in the Philippines it is US$6,564, whereas in the USA it is $60,000 to $80,000 (McKinsey 2003). This has resulted in India experiencing a shortage of skilled and employable workers as skilled professionals are moving between organisations, resulting in up to 20% attrition between organisations (Mankiw & Swagel, 2005).

The US Bureau of Labour's *displaced workers survey* for the 2003−2005 period shows that IT workers' employment has declined. Outsourcing in the manufacturing industry resulted in the loss of two million blue-collar jobs in the USA but, with the

revolution in digital technology and reductions in telecommunication costs, an increase in the offshore outsourcing and growth in numbers of foreign workers has led to IT workers being displaced (Matloff, 2004; Chakraborty & Remington, 2005).

International trade has a long history of vigorous debates between protectionist policies versus free trade, with vested interests and political parties each proposing plans to protect jobs or to promote the economy. These are complex issues and the advent of the Internet has led to a diversity of views and debate. A typical example is the blog written by Senator Fritz Hollings (2008), a US Senator from South Carolina who lobbies for support against outsourcing. He wrote in his blog that 'Globalization is nothing more than a trade war' (Hollings, 2008).

Issues of offshore outsourcing are related to the impact of international influences on the domestic economy, while economists see outsourcing as a form of international trade that creates winners and losers but imparts overall gain to productivity and income (Kirkegaard, 2005). Mankiw & Swagel (2005) argue that the number of jobs lost to outsourcing has been blown out of proportion in relation to their economic magnitude, if one takes the size of the USA labour market into account. Mankiw & Swagel (2005) also quote a McKinsey report that projects a cost-benefit calculation to the United States of US$1.12 for every dollar of work offshored to India and a similar calculation for India estimates a gain of US$0.33 for every dollar of USA outsourcing. This McKinsey report is widely cited in US policy circles, despite the fact that it is based on a cost-benefit analysis rather than on research by an academic economist (McKinsey 2003).

The business world continues to evolve and, should any unforeseen events occur, a provision for change or renegotiation of contracts in certain cases is necessary. As Jensen and Stonecash (2004) observe, private-sector firms with their incentive to maximise profit may take this as an opportunity to increase their prices during the course of a contract.

### 2.6.3  Quality hypothesis and redistribution hypothesis

Service quality and service costs are two major issues faced by providers of service, who wish to meet contract requirements at minimum cost in order to maximise profit. 'The amount of evidence regarding outsourcing effectiveness is minimal, confusing and

highly subjective' (Bourbeau p.2, 2004). The quality hypothesis states that quality may deteriorate when service and support are transferred and outsourced offshore.

The outsourcing provider may attempt to increase profit levels at the expense of delivery time, timeliness and/or quality of output. If service quality is difficult to measure, it is impossible to guarantee with a contract and it can be lowered without detection. Service quality is considerably harder to quantify and measure when compared to goods. It may be identified in terms of performance characteristics, but the assessment requires subjective judgment rather than mere accumulation of data (Canfora et al., 2003). If properly conceived and implemented, offshore outsourcing can fuel revenue growth, enhance operational effectiveness and enable organisations to better manage their intangible assets and redefine their market. As enterprises continue to adopt varying operating models for outsourcing agreements, Pai & Basu (2007) assert that they must evaluate and weigh the importance of four key factors:

- cost savings;

- service quality/delivery;

- level of control/governance; and

- risk tolerance.

Management consultants such as Deloitte no longer believe that companies have to render end-to-end service to provide value with outsourcing (Bender et. al., 2010). Analysts argue that a network company would act as a utility, trading at far higher multiples and able to utilise higher debt. The retail arm of companies could then be selling in a market where virtual communications companies regard branding — not assets — as the key to success (Lynch, 2007; Worthington, 1997).

The 'redistribution hypothesis' as proposed by Milanovic (1999) and as put forward by the World Bank and various authors shows where savings from outsourcing are transferred to managers. There is a reduction in local wages to workers but an increase in manager wages to manage processes (Brynjolfsson, 1993). The outsourcing of these jobs to other countries limits growth in employment, as illustrated by the US Department of Labour forecast that jobs such as computer programming will grow more slowly than the average for all occupations. Viewed from another perspective, enrolments in Australia are highlighted with the IT Education Bubble: An analysis of

university student statistics 2002–2005, which shows an 18% decline in enrolments for IT courses at Australian universities between 2002 and 2005, at a time when overall university enrolments increased by about 7% (Dobson, 2007). This indicates a belief by students that the IT sector cannot provide a professional future. This trend creates an IT shortage with the loss of new talent, which in turn makes offshore outsourcing even more attractive.

### 2.6.4  Reasons for rejecting outsourcing

According to Lacity & Willcocks (2000), the top reason for rejecting outsourcing is that the outsourcing option was deemed to be more expensive than insourcing. This finding makes sense because respondents cite cost savings as the number one expected IT outsourcing benefit. Thus, if cost savings cannot be expected, then outsourcing is likely to be rejected. The next most common reason for rejecting outsourcing is that a supplier appears to provide no additional benefits over insourcing — presumably such benefits would not be limited to costs, but would apply to service as well. Authors Hirschheim & Lacity (2000) contended that outsourcing evaluations are triggered from the frustrations caused by different expectations and perceptions of IT performance by each stakeholder. They offered a sobering thought: 'Even if insourcing is chosen over outsourcing and the expected cost savings are realised, there is no guarantee that it will be perceived as successful due to the very different expectations held by the various stakeholders. Success is related to who is doing the evaluating' Hirschheim & Lacity, p.107 (2000).

Harry Glasspiegal[18] stated that 'When the contract no longer fits the user's needs, both sides will need to sit down and renegotiate the contract. Very few users exercise the termination clause of the contract because they're too dependent on the outsourcer' — reported in Menagh (1995) and widely quoted, for example by Lacity & Willcocks (2000). Futurists such as Cullen Murphy, the *Vanity Fair* US editor, point to a loss of faith in government organisations regarding the adoption of outsourcing and dangers of privatisation. He predicts that lines of responsibility will become blurred or non-existent, resulting in a gradual decline of responsibility (Murphy, 2008). This reasoning can be applied equally to large organisations.

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[18] Partner at international, full-service law firm Shaw, Pittman, Potts, and Trowbridge (Shaw Pittman).

An important ingredient in business is the human resources within an organisation and the culture of the organisation. Outsourcing and lay-offs can seriously affect employee morale. Articles in the popular press often berate the damage companies do to the companies themselves, by undermining the productivity and teamwork of survivors of the lay-offs caused by outsourcing (Uchitelle, 2006). Some authors such as Bendoly & Schultz  (2003) talk of factors in behavioural theory as a key element in empirical models of operational dynamics and performance. Authors such as Baines (2004) point to the eroded competitive edge that can undermine a business. However, these human factors or 'soft' key performance indicators are normally not part of  outsourcing business cases due to difficulties in quantification. Personnel within an organisation typically belong to different organisational units with different objectives and values (Gefen & Ridings, 2003).

Some organisations struggle to demonstrate business gains from information technology investments because their IT portfolio management is inadequate (Gupta, 2007). Moving IT functions to third parties does not remove the need to manage IT. Some companies such as BAE Systems[19] are implementing moves to reverse outsourcing back to in-sourcing as this serves their strategic business direction to further business capability and business direction with the British Government (Farber, 2008).

Laplante et al (2004) noted that outsourcing is not cheap and that in most cases offshore outsourcing is less accessible to smaller organisations, due to the costs involved in setting up offshore locations, management of the relationship and ongoing overhead costs. The major consideration is the loss of control over data or 'intellectual property at risk' (Butcher, 2007). Laws and the judiciary in different countries have differing practices, and the levels of remedy and vindication when problems arise vary from nation to nation.

Verbal communication and data communications are considered to be major disadvantages for offshore outsourcing (Apte et al., 1997). Geographical obstacles can be overcome with modern tools such as email, video conferencing and collaboration software, yet offshore firms typically station some members onshore. The physical proximity in IT development allows for rapid interaction, better communication and serendipitous work from casual meetings — a factor seldom evaluated which should not

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[19] BAE Systems is a British defence logistics consulting and engineering services company.

be underestimated. However, outsourcers claim that quality certification, rigidity in process and procedures with quality standards negate this requirement for physical proximity (Mitra, 2007).

As organisations lose expertise to outsourcing partners, the situation often leads to compounded dependence. A key ingredient for sustaining industry initiative is a continual learning and development of new sources of the knowledge and skills needed to develop next-generation products and technologies (Lei, 2006; Dibbern, et al. 2004; Lacity & Willcocks, 2000). A major concern is discussed by Apte et al. (1997) with regard to the monitoring of performance and the explanation of the business specifications to the outsourcing partner. The effect of limited outsourcing can lead to additional costs. Organisations outsource more functions and services which compounds the situation, increasing reliance on the outsourcing partner and the loss of internal expertise (Olson, 2006; Goles, 2001; Lonsdale & Cox, 2000). An example of this is when IBM helped to create a 'virtual organisation' in the 1980s by outsourcing PC development. A happy ending failed to materialise when suppliers such as Intel and Microsoft started selling their products to a number of IBM's competitors (Lonsdale & Cox, 2000). As a result, IBM no longer possessed the internal skills needed to bring new PCs to the market. By 1995 IBM accounted for only 7% of the PC market share and finally in 2004 they sold the PC group to former rivals Lenovo (Spooner & Kanellos, 2004).

Questions arise about ethics and unique foreign laws, as has been highlighted in India with the disclosure that in 2008 Satyam, the fourth-largest Indian outsourcing company, had been inflating its balance sheet by more than US$1 billion. Satyam included one-third of the Fortune 500 companies among its clients including Australian clients such as Qantas, NAB and Telstra. Satyam's auditing firm, PricewaterhouseCoopers (PwC) was not affected due to laws in India whereby individual auditors are held liable and face disciplinary action, rather than Pricewaterhouse as an organisation. The fact that two auditors signed off the accounts means that compensation is claimed against the individuals, requiring Courts to apportion blame (Satyam April, 2009; CNN Money, 2009; Lekakis & Easdown, 2009). With Satyam's situation comes uncertainty as to the cost of changing service, the loss of business knowledge and business intelligence.

Authors such as Brigham (2005), Konana (2004) and Waheed & Molla (2004) have proposed that moving jobs away from advanced countries is unsustainable, because

these jobs can and will leave outsourcing countries such as India for the same reasons they came to the country in the first place (lower cost and wages). Consultancies such as Frost & Sullivan (2004) consulting company estimate that in 2004 a 'total of 826,540 IT jobs were expected to be exported by France, Germany, Hong Kong, Japan, the United Kingdom and the United States to lower-cost countries, amounting to a combined value of US$51.6 billion'. In a newspaper article from 2008 Giridharadas (2008) points out that IT outsourcing makes up a paltry 3.2% of India's overall Gross Domestic Product (GDP). Day by day, most of the organisations that perform outsourcing work are further outsourcing this work to ever lower-cost countries.

India remains in China's shadow. Because of relatively weak infrastructure, a fractious political climate and other factors, India's foreign trade and investment figures are dwarfed by those of China. In China direct foreign investment amounted to nearly US$70 billion in 2006 (Timmons, 2008). Because of increasing business travel demand to India, American Express predicts that hotel room rates in India will increase more than anywhere else in the world next year, with predicted increases of 34−38% for mid-range hotels and 38−41% for the best hotels (Timmons, 2008). This demonstrates the rising cost of doing business offshore.

## 2.7    Measuring service quality

Organisations are complex with numerous touch points existing between various parts of the organisation. Figure 2.1 and Figure 2.4 are based on Telstra, which utilises a matrix management organisational structure to demonstrate the typical touch points and requirements for IS and/or IT departments (A1, 2006; A4, 2006; A13, 2007). Transactional cost theories by Coase (1937) and elaborated upon by Aubert & Weber (2001) and Williamson (1979) are based on vertical integration but they highlight the economic significance of social structure. Due to the complexity of the relationships within an organisation and the often intangible nature of the service provided, a suitable framework of service quality is required.

Since it was first developed in 1983, User Information Satisfaction (UIS) (a process developed with mainframe systems in mind) has been used as a surrogate for a variety of information systems' quality measures in many research projects (Van Iwaarden et al., 2003). The UIS instrument is a 17-item questionnaire, which employs the use of semantic differential scales to assess the user's level of satisfaction with an

information system. The instrument includes 13 specific items split into three factors: Information Systems Personnel (five items), Information Product Quality (five items) and Knowledge and Involvement (three items). The UIS also includes three factor summary questions (one each for Information Systems Personnel, Information Product Quality, and Knowledge and Involvement) and a global satisfaction measure.

Quality of service measurement has normally been carried out within the framework of the widely accepted service quality model referred to as the SERVQUAL instrument developed by Parasuraman et al. (Zeithaml, Berry & Parasuraman, 1984, 1988; Parasuraman, Zeithaml & Malhotra, 2005). Many researchers have used this 22-item scale, or variations of it, to study service quality in different sectors of the services industry including outsourcing (Chakrabarty, Whitten & Green, 2007; Myerscough, 2002; Tahir & Bakar, 2007).
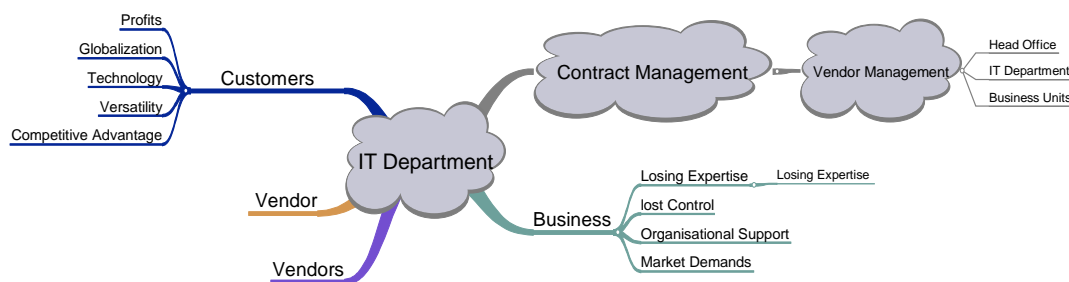


*Figure 2.5: Typical IT Networking*

### 2.7.1 Service quality and outsourcing

Many factors influence the success of IT outsourcing. IT outsourcing frequently fails, but what measures should be monitored and when is IT outsourcing regarded as a success or a failure? Various researchers have identified gaps between 'expected benefits' and 'actual benefits' (Parasuraman, Zeithaml & Berry, 1988; Myerscough, 2002). Enterprise systems coordinate activities, decisions and knowledge across many different functions, levels and business units in a company, including ERP systems, supply chain management systems, customer relationship management systems and knowledge management systems (Lai, 2006; Das, Soh & Lee, 1999). As discussed by Wagner et al. (2001) and Lai (2006), enterprise systems are becoming increasingly complex and integrated into corporate systems, making management and the evaluation of support for internal customers complex.

Authors such as Lacity, Willcocks & Feeny (1996), Costa & Beaumont (2001) and Dahlberg & Nyrhinen (2006) point out that the industry's ability to measure success precisely is hampered by the scarcity of studies concerning success factors — in contrast to the numerous anecdotal suggestions for success. They have emphasised the need to research the comparison of performance factors, such as profitability or sales in order to judge success or failure of outsourcing. Authors such as Parasuraman et al. (1994) have discussed the connection between the quality–intentions link across different dimensions of behavioural intentions.

Quality of service is important in outsourcing and is linked to outsourcing success (Parasuraman et al., 2005; Whitten, 2004; Landrum & Prybutok, 2001). The SERVQUAL instrument was based on Parasuraman et al. (1988) using two dimensions that related to outsourcing. Authors such as Van Iwaarden et al. (2003), Parasuraman et al. (1988), Lacity et al. (1996) and Bolton et al. (1994) have attempted to provide guidelines and frameworks on how to clarify what, why, and how to outsource. There appears to be no recognised method for measuring the success of IT outsourcing, nor any system for businesses to ensure that it is working correctly. Parasuraman et al. (1984) developed the original 22-item SERVQUAL scale with questions intended to assess five specific dimensions. The five generic dimensions, factors or attributes of SERVQUAL service are given below (Dahlberg & Nyrhinen, 2006; Lai, 2006):

- tangibles: physical facilities, equipment, and the appearance of personnel;

- responsiveness: willingness to help customers and provide prompt service;

- reliability: ability to perform the promised service dependably and accurately;

- assurance: knowledge and courtesy of employees and ability to inspire trust and confidence; and

- empathy: caring, individualised attention that the service provider gives its customers.

The SERVQUAL instrument utilises a 'gap [or difference] score' analysis methodology, wherein the user's expectations for service quality are assessed at the same time as their perception of the actual system performance. The difference between the two scores (performance minus expectation) is used as the basis of analysis

Hochstein 2004; Myerscough 2002). The SERVQUAL instrument, as used for the measurement of service quality, has been modified, developed and refined to assist IT with this process. From this point of view, service quality is founded on a comparison between the expected and realised levels of five attributes of service as highlighted in Figure 2.6 (Das, Soh, & Lee, 1999; Dahlberg & Nyrhinen, 2006; Lai, 2006; Hochstein, 2004).



*Figure 2.6: Five Generic Dimensions of Service Quality*

Several models of service gaps have emerged based on the research of Parasuraman et al. (1984) by various focus groups as outlined in Figures 2.7 and 2.8. (Lai, 2006; Chakrabarty, Whitten & Green, 2007) The expanded major propositions of service quality gaps highlighted by Parasuraman et al. and Shahin can be summarised as follows:

Gap1: Customer expectations versus management perceptions: Caused by lack of resources, market conditions, layers of management or management indifference.

Gap 2: Management perceptions versus service specifications: Inadequate commitment to service quality, unrealistic performance goals and inability to adhere to set standards.

Gap 3: Service specifications versus service delivery: Poor employee-job or technology-job fit, perceived control and lack of teamwork.

Gap 4: Service delivery versus external communication: Inadequate horizontal communication and propensity to over-promise.

Gap 5: Discrepancy between customer expectations and their perceptions of the service delivered: Customer expectations are influenced by the extent of personal needs, word of mouth and previous service experiences.

Gap 6: Discrepancy between customer expectations and employee perceptions: Lack of understanding of customer expectations by front line service providers.

Gap 7: Discrepancy between employees' perceptions and management perceptions: Differences in understanding of customer expectations between managers and service providers.

The gap model identifies seven key discrepancies or gaps relating to managerial perceptions of service quality. Six gaps (Gap 1, Gap 2, Gap 3, Gap 4, Gap 6 and Gap 7) are identified as functions of the way service is delivered. The SERVQUAL methodology is based on Gap 5 (Berry & Parasuraman, 1992). Some authors point out that Gaps 1 to 4 affect the way in which service is delivered and these four gaps lead to Gap 5 (Bailey & Pearson, 1983; Tahir & Bakar, 2007). Various authors have developed conceptual 'gap models' of IT service quality utilising SERVQUAL (Lai, 2006).

Many experts regard the SERVQUAL methodology as too complicated and various attempts have been made to improve the SERVQUAL model and modify it for use in different disciplines. (Reynoso & Moores 1995). For example, Kang & Bradley (2000) and Lai (2006) introduced an additional three levels of service:

- an ideal level of IT service;

- the acceptable level of IT service; and

- a perceived level of IT service.
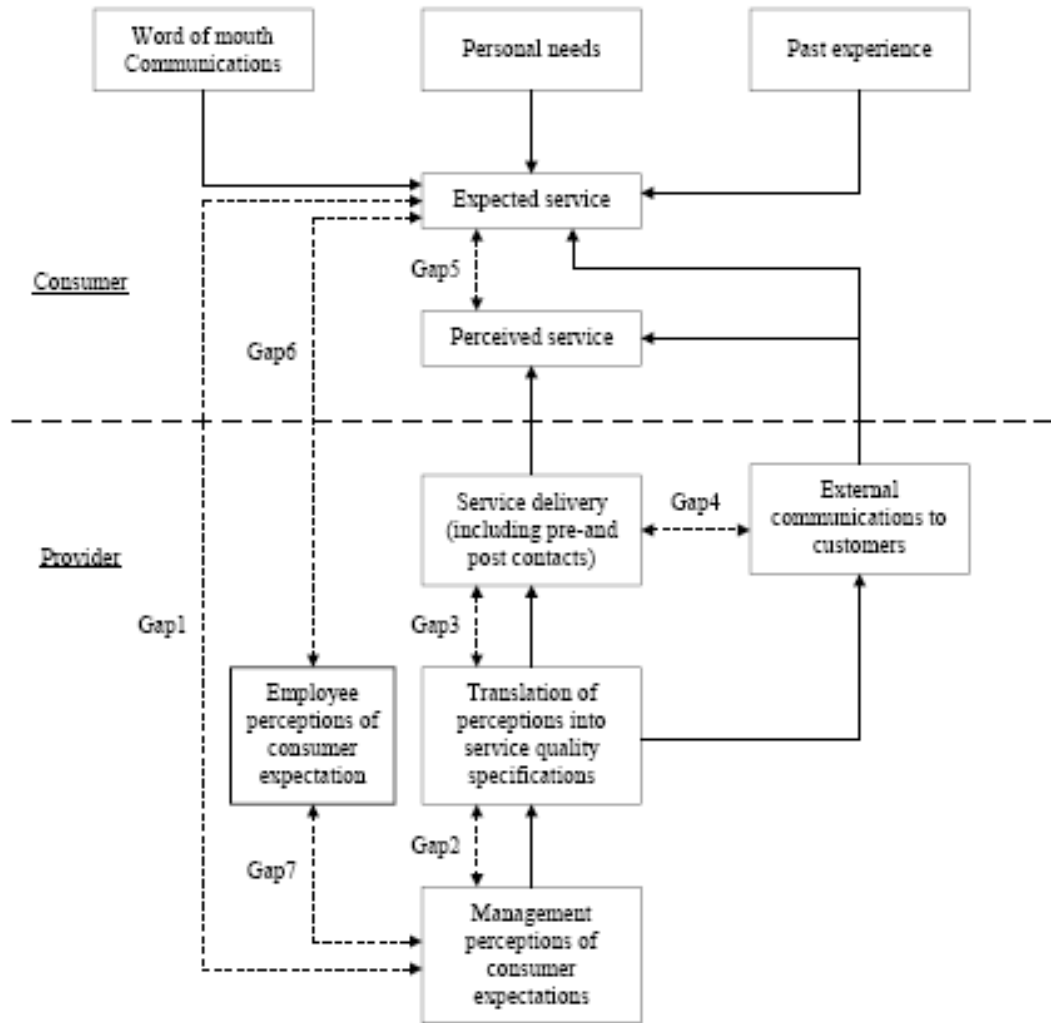
*Figure 2.7: Model of Service Gaps*

Hirschheim & Lacity (1996) researched case studies of 14 decisions in large companies and concluded that top management were the decision initiators for outsourcing and insourcing and based their decisions on the reduction of overall IS costs Parasuraman, Zeithaml & Berry, (1984, 88 & 96) also concluded that various stakeholders held different expectations — a successful evaluation depends on who is doing the evaluating. Research based on the outcome of service (customers' perceptions) relies on internal corporate customers or employees in the service delivery process (Das, Soh & Lee, 1999; Kaiser & Hawk, 2004; Landrum & Prybutok, 2001; Sargent, 2006; Jeyaraj, Rottman, & Lacity, 2006). The dominant belief is that user satisfaction is a surrogate measure of IS effectiveness and that success in outsourcing seems to be the critical factor for the success of enterprise applications (Cronin & Taylor, 1994; McFarlan & Nolan, 1995). Reynoso & Moores (1995) suggested that

internal dynamics which occur between departments and organisational dynamics affect service production and delivery. ). Dynamics caused by adding outsourcing partners could also be linked to effectiveness and success. Therefore, the use of SERVQUAL to assess employees' perceptions of the service quality of outsourcing gives a solid basis for user satisfaction, with resultant enterprise application outsourcing of maintenance and support. Lai (2006) gave five reasons as to why employee research has been appropriated for customer research (Dabholkar, Shepherd & Thorpe, 2000; Peter, Churchill & Brown, 1993):

1. Employees are customers of internal service, and indirectly outsourced service.

2. Employees offer insight into service quality (experience service delivery day after day).

3. Early warning system due to intensive exposure to service delivery systems.

4. Competencies may be located in the knowledge and skills of key employees, and can be lost in knowledge-based economy if that employee leaves.

5. Dynamic set of technologies, applications and business processes with relationships between employee–company, employee–technology and employee–customer.

As various authors research the dynamics of technologies, applications and business processes, the relationship between employee–outsourcer is also important (Van Dyke, Prybutok & Kappelman, 1999; Parasuraman, Zeithaml & Berry, 1993; Van Dyke, Prybutok & Kappelman, 1997; Cronin & Taylor, 1994). The study by Zeithaml et al. (1993) concludes that employees' opinions provide a reflection of customers' reactions to the outsourcing of IS based on SERVQUAL's five dimensions of tangibles, responsiveness, reliability, assurance and empathy. Based on the literature reviewed, it can be safely said that employees' perceptions of service quality are an important measure of outsourcing success or failure (Cronin & Taylor, 1994; Brown, Churchill & Peter, 1993; Kang & Bradley, 2000; Buttle 1996). A reasonable assumption is that quantitative tests on data obtained from various industries over many years and contexts have proven that SERVQUAL is a reliable and validated instrument.

### 2.7.2  *Issues with the SERVQUAL methodology*

Research studies conducted by Parasuraman, Berry & Zeithaml, (1984, 1988, 1994) created the service quality (SERVQUAL) concept by identifying customer expectations as a way to maximise quality. The perceived service quality is based on higher performance minus expectation score.

Questions related to SERVQUAL have been identified by various authors:

- Should service quality be measured as perceptions or as disconfirmation? (Parasuraman, Zeithaml & Berry, 1984)

- Is measured disconfirmation superior to computed disconfirmation? (Otorowski, 2007)

- Is a cross-sectional design adequate or does a longitudinal design offer significant advantage? (Gilbert, 2000)

- Problems with the use of difference or gap scores, poor predictive and convergent validity, ambiguous definition of the 'expectations' construct, and unstable dimensionality (Cronin & Taylor, 1994).

SERVQUAL has a zone of tolerance based on the levels of service a customer will accept, which may vary depending on outside factors such as price (Brady, Cronin & Brand, 2002). An increase or decrease in price may not affect the required level of service. Various researchers have suggested modifications such as combining UIS and SERVQUAL (Whitten, 2004). Authors such as Cronin et al. (1994) have proposed a variation of SERVQUAL based on measuring 'direct' perceptions of service quality which is called SERVPERF (Buttle, 1996). SERVPERF is often cited as a performance-only assessment and in some analyses performed better than minus expectation difference scores (Cronin & Taylor, 1994; Kettinger, Lee & Lee, 1995). The conceptual model of IT service quality as proposed by Kang et al. negates some of the concerns associated with different score measure of SERVQUAL as outlined in Figure 2.8. It is based on the following factors (Kang & Bradley, 2000):

1. an ideal level of IT service;

2. the acceptable level of IT service; and

3. a perceived level of IT service integrated into original 'gaps model' by Parasuraman et al. (Mahnke, Overby & Vang, 2003).

This model takes into account the limitations imposed on IT suppliers due to personnel, technology and organisational factors.
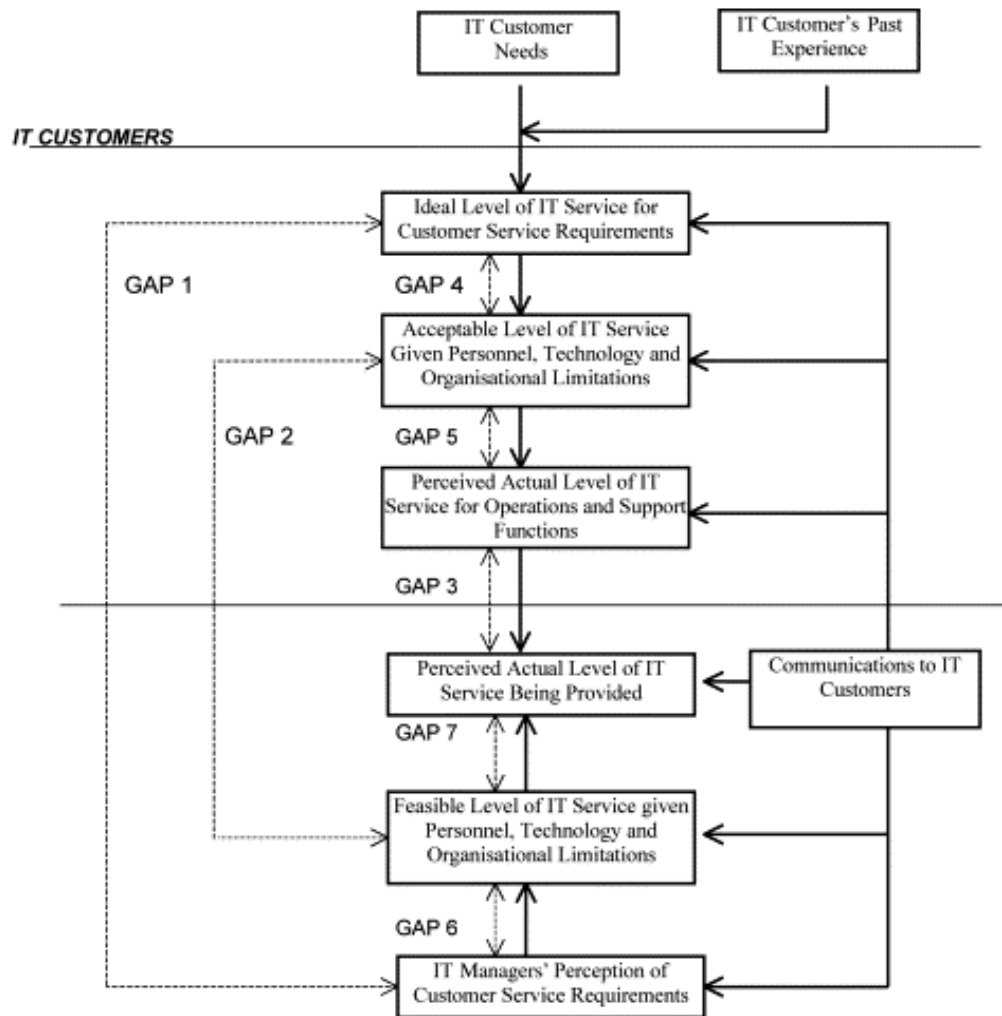


*Figure 2.8: Revised Model of Service Gaps*

Authors such as Buttle (1996b) have highlighted deficits in the SERVQUAL methodology based on theoretical and operational factors (Van Dyke, Prybutok & Kappelman, 1999; Van Dyke, Prybutok & Kappelman, 1997) and these are outlined below:

1.    **Theoretical:**

- SERVQUAL is based on a disconfirmation paradigm rather than an attitudinal paradigm and fails to draw on established economic, statistical and psychological theory.

- Gaps model: There is little evidence that customers assess service quality in terms of Perceptions (P) — Expectations (E) gaps.

- Process orientation: SERVQUAL focuses on the process of service delivery, not the outcomes of the service encounter.

- Dimensionality: SERVQUAL's five dimensions are not universals. The number of dimensions comprising SQ is contextualised so that items do not always load on to the factors which one would expect as a priority and there is a high degree of inter-correlation between the five dimensions (reliability, assurance, tangibles, empathy and responsiveness).

2. **Operational:**

- Expectations: The term expectation is polysemic as consumers use standards other than expectations to evaluate SERVQUAL and SERVQUAL fails to measure absolute SERVQUAL expectations.

- Item composition: Four or five items cannot capture the variability within each SERVQUAL dimension.

- Moments of truth (MOT): Customers' assessments of SERVQUAL may vary from MOT to MOT.

- Polarity: The reversed polarity of items in the scale causes respondent error.

- Scale points: the seven-point Likert scale is flawed (mid-range numbers can only vaguely be related to varying degrees of opinions and respondents may rate differently (Gilmore, 2003)).

- Two administrations: Two administrations of the instrument cause boredom and confusion.

- Variance extracted: The overall SERVQUAL score accounts for a disappointing proportion of item variances.

SERVQUAL has been criticised for taking too simplistic a view, for a lack of outcome perspective, and also because it does not provide any measurement tool (Lee, Miranda & Kim, 2004). It has been proposed that SERVPERF is a simpler 'performance' measure of service quality that is properly modelled and gives an antecedent of satisfaction that eliminates the need for gap scoring such as that used in

SERVQUAL. However, SERVPERF has not been tested in the IS outsourcing environment. Based on literature reviews, the SERVQUAL instrument is proven and reliable Lacity & Willcocks (2000). Zeithaml et al. (1996) and Cronin and Taylor (1994) highlighted that Perceptions-minus-expectations difference-score measure is appropriate if the primary purpose is to diagnose accurately service and based on this study SERVQUAL was selected as the measuring tool for this thesis research. SERVQUAL fully meets the requirement to examine perception measures of variance of outsourcing outcomes.

Even the harshest critics accept that SERVQUAL has been widely applied and is highly valued (Buttle 1996). It was concluded by Kettinger et al. (1995) that an international corporate instrument used to measure performance may not be the most effective way in view of the behavioural uniqueness of individual national. Rather, they propose that a localised SERVQUAL based on the Global ISF Quality Framework could form part of a gauge of 'soft' and 'hard' indicators of quality.

### 2.7.3    Satisfaction — User Information Satisfaction

User Information Satisfaction (UIS) is an important construct in information system research and is widely used as a measure for service quality (Kettinger, et al., 1995; Chakrabarty, Whitten & Green, 2007). UIS is commonly linked to information systems satisfaction, which in turn relates to user beliefs that IT meets their information requirements. This fact was first identified by Ives et al. (1983) and has been used by multiple researchers since then (Ives, Olson & Baroudi, 1983; Chakrabarty, Whitten & Green, 2007; Miller, 1992).

The UIS was derived from Bailey and Pearson's (1983) technique of five ratings of a 39-factor Computer User Satisfaction (CUS) instrument which required 195 individual seven-point scale responses. This was simplified by Baroudi et al. (1983) into the UIS instrument based on 13 factors which in turn are based on two seven-point scales per factor for a quality.

Two service factors have been identified by Gilbert (2000); these are personal service and technical competence (Kang & Bradley, 2000). Satisfaction and service quality are distinct concepts. Satisfaction generally refers to a specific service encounter, whereas service quality is a long-term attitude (Dedeke, 2003; Smith, 2005). The UIS instrument is therefore not a suitable measure of service quality (Galletta and

Lederer, 1989). Refer to Table 2.9 for the User Satisfaction Scale proposed by Chakrabarty, Whitten & Green (2007).

| Variables | Definitions |
|---|---|
| **Time** | • Processing of requests for changes to existing systems<br><br>• Time required for new systems development |
| **Information Product** | • Reliability of output information<br><br>• Relevance of output information<br><br>• Accuracy of output information<br><br>• Precision of output information<br><br>• Completeness of output information |
| **Knowledge and Involvement** | • Degree of IS training provided to users<br><br>• Users' understanding of systems<br><br>• Users' feelings of participation |

Table 2.9: User Satisfaction Relationship Variables

### 2.7.4 Relationship quality

The relationship between an organisation and its outsourcing vendors is critical to the success of the outsourcing process. As previously highlighted, satisfaction and service quality are distinct concepts but numerous researchers have shown that they are important factors in outsourcing (Dahlberg & Nyrhinen, 2006; Goles, 2001; Han, Lee & Seo, 2006; Whitten, 2004). Stern & Reve (1980) studied the processes (decision-making mechanisms) and structures (the ways in which transactions are organised) required between two parties.

Various relationship quality theories have been proposed, the principal ones being 'Agency Theory' and 'Transaction Cost Theory (TCT)'. Agency Theory is based on the exchange relationship between principals and agents where authority is delegated to the agent. Authors such as Donaldson & Davis (1991) argued that strategic management and business policy are strongly influenced by the Agency Theory. Agency Theory assumes that the interests of principals (outsourcer) and agents (service provider) are inclined to diverge, resulting in agency loss, gap expectations, different goals and value loss to the contract (Nilakant & Rao, 1994; Goles & Chin, 2005).

It is argued that in outsourcing it is difficult and expensive to measure what the agent is actually doing and this results in principals fearing dependency and in agents exhibiting opportunistic behaviour (Baloh, Jha & Awazu, 2008; Klein, Crawford & Alchian, 1978; Gonzalez, Gasco & Llopis, 2005; Nordin, 2006). It has also been argued that Agency Theory is too vague and misses many important points such as uncertainty in organisations and incomplete knowledge. Nilakant & Rao (1994) have highlighted factors affecting outsourcing contracts such as individual–contributor jobs and the degree to which individuals are work-averse. They have emphasised that the quantity of effort at the expense of the quality and type of effort utilised in pursuing outsourcing are important but are not covered by Agency Theory.

In the mid-1980s Williamson (1979 & 1985) proposed transactional governance and the vertical/horizontal organisation, which resulted in McNeil (1980) and then Dwyer et al. (1987) proposing a relational exchange based on commitment and communication. Heide (1994) developed a typology of three different forms of governance which vary systematically in terms of how specific inter-firm processes are carried out and different relationships form 'the institutional framework in which contracts are initiated, negotiated, monitored, adapted and terminated'. Heide discusses market governance to which he links discreet exchange (as identified by McNeil) and non-market governance, which he divides into 'unilateral' governance, or 'hierarchical' governance (in Williamson's terminology) and 'bilateral' governance.

Grover et al. (1996) proposed Transaction Cost Theory (TCT) as a framework for IS outsourcing. It is based on the service quality of the vendor and on partnership factors such as trust, cooperation and communication which are needed to achieve outsourcing success. This has been qualified by various IT outsourcing research (Lee & Kim, 1999; Parasuraman, Zeithaml & Berry, 1984). Both theories can assist in understanding decisions to outsource and to manage processes.

The relationship variables highlighted by various authors can be summarised as variables of trust, commitment, communication quality, cultural similarity and interdependence (Whitten, 2004) and are summarised in Table 2.10.

| Variables | Definitions | References |
|---|---|---|
| Trust | Important as it allows realistic relationship between both parties. Establishes equal partnerships between outsourcers and service providers with the objective of attaining strategic management outcomes for both parties i.e. a win-win strategy. | Kettinger, Lee & Lee (1995); Gefen & Ridings (2003a); Waheed & Molla (2004) |
| Commitment | Long term in nature, in that both parties allocate time and resources to a perpetual relationship. Commitment from both parties must exist so that contract type, decision rights, performance measures and risk-and-reward allocation schemes must be aligned with the strategic intent of both parties. | Lee & Kim (1999); DiRomualdo & Gurbaxani (1998). |
| Communication Quality | Formal as well as informal sharing of information. | Waheed & Molla (2004); De Wulf, Odekerken-Schroder & Iacobucci (1997); Chakrabarty, Whitten & Green (2007). |
| Cultural Similarity | It is believed that cultures with similar values cause a higher level of trust, thus a better relationship. | Goles & Chin (2005); Waheed & Molla (2004); Aggarwal & Pandey (2004). |
| Interdependence | When mutual dependence is balanced between organisations, the relationship is positively affected; if interdependence becomes unbalanced, a negative effect on the relationship is brought about. | Chakrabarty, Whitten & Green (2007). Goles & Chin (2005) |

Table 2.10: Relationship Variables

These three configurations of governance of relationships constitute typical ideal types and can be analysed along the following five dimensions: (i) the motives for finalising the deal, (ii) followed by the adjustment, (iii) incentive, (iv) control and (v) regulation mechanisms. Overall, this theoretical framework is well suited to analysing the different forms of relationship between organisation (outsourcer) and vendors (service providers).

The research model used by Lee (2000) as shown in Figure 2.9 provides another dimension to this research. It is based on the relationship between an organisation and the variables in that relationship with the outsourcing partner who can affect the quality of customer experience.

Figure 2.9 is supported by Table 2.11 which outlines the link between this study, previous researchers and the proposed research model.
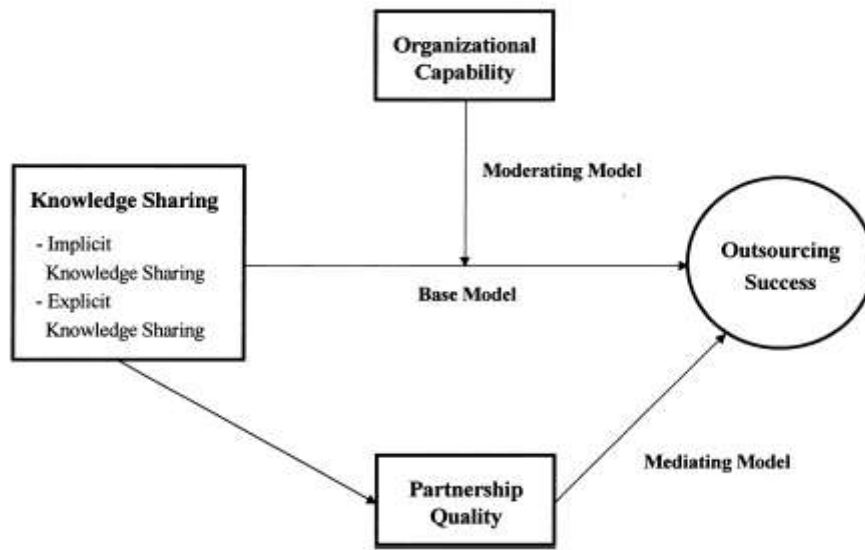


*Figure 2.9: Proposed Lee Research Model*

| Dimensions | This Study (Questionnaire) | Definitions | Authors |
|---|---|---|---|
| Organisation Quality | Resources Q24 to 48 Issues with outsourcing partner Q71 to 84 | Quality of information and resources provided by outsourcing vendor and business, that affects customer experience. | Van Dyke, Prybutok & Kappelman (1999); Myerscough (2002; Bailey & Pearson (1983) |
| Knowledge Sharing | Changing outsourcing partner/Benefits/ Switching costs Q. 142 to 156 | Knowledge management is the process of capturing, storing, sharing, and using knowledge. | Bailey & Pearson (1983); Gonzalez, Gasco & Llopis (2005); Goles & Chin (2005) |
| Outsourcing Success | Impact of outsourcing Q. 85-100 | User commitment and participation. | Leclercq (2007); Lacity & Willcocks (2000); Felton(2006); Chakraborty & Remington (2005) |
| Partnership Quality | Relationship with vendor and out-sourcing partner Q101 to 135 | Quality of services and support provided by IT department | Furneaux (2007); Cummings (2005); Lai (2006); Lee & Kim (1999) |

*Table 2.11: Research Model*

The research model proposed by Whitten (2004, p.199) as shown in Figure 2.10 offers another dimension to this research by providing an overview for what is required to make a decision to continue or discontinue an outsourcing contract.
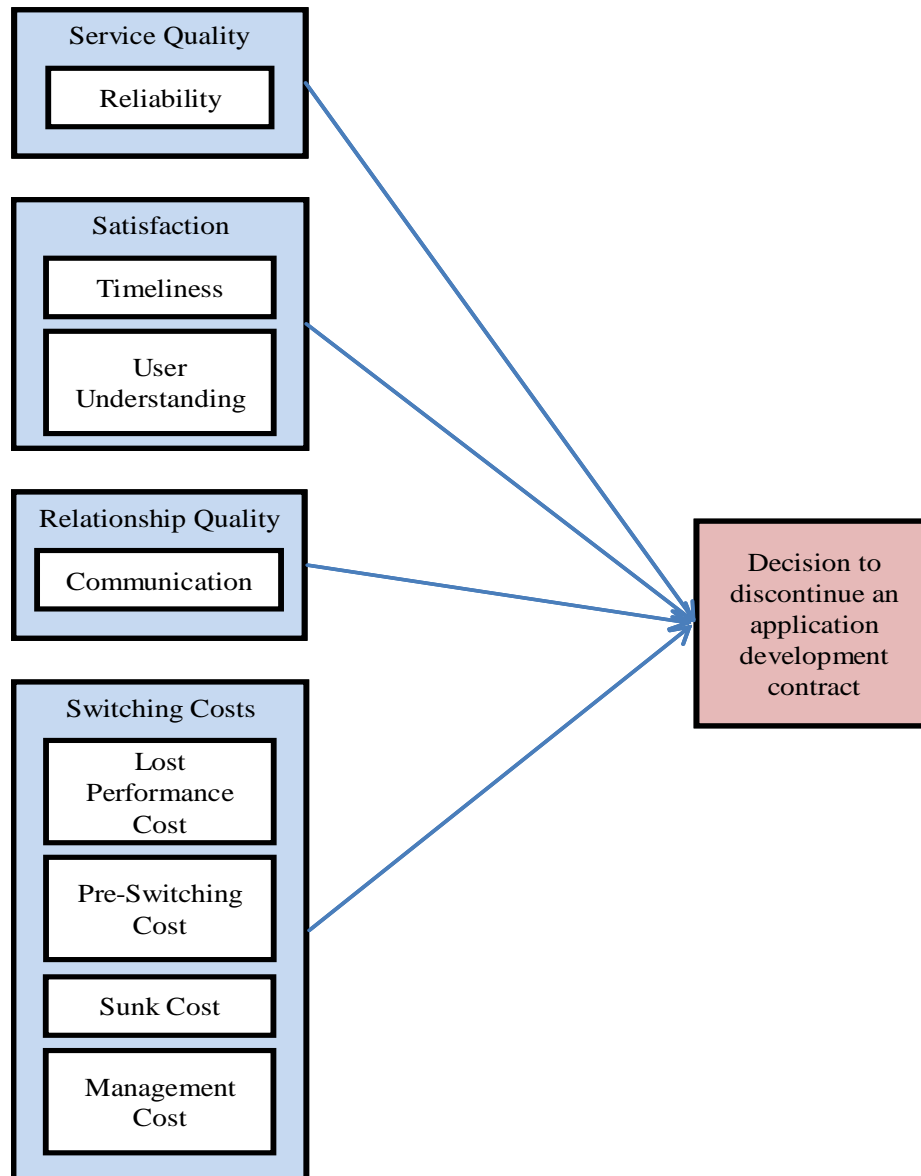


Figure 2.10: Whitten Research Model

## 2.8 Conclusion

Outsourcing has become an important business tool for IT in organisations — strategic partnering has been proposed as an important factor in the outsourcing and offshoring process (Lendrum, 2000). However, the human element can be forgotten in the process. Many so-called partnerships and alliances are nothing more than glorified contractual relationships with a twist of cooperative rhetoric. Management structures need to be in

place to be able to develop and maintain the outsourcing relationship (Kern & Willcocks, 2000).

Literature points to service quality as an important instrument in measuring the service actually experienced by the customer (Bolton & Drew, 1994; Das, Soh & Lee, 1999; Kang & Bradley, 2000 ). The process is based on a comparison of the expected service provided to the customer compared with the actual service. The SERVQUAL model has been developed and attempts to measure the following:

- tangibles — facilities, equipment and personnel;

- responsiveness — promptness of service and keenness to assist;

- reliability — ability to perform service in a dependable and accurate manner;

- assurance — ability to inspire trust and confidence; and

- empathy — care and attention to customer.

Other research studies have used different dimensions (reliability, responsiveness, assurance and empathy) to describe service quality and conceptually validated instruments to measure the success of IT outsourcing from a managerial perspective (Chakrabarty, Whitten & Green, 2007; Han, Lee & Seo, 2007; Wang, Gwebu, Wang & Zhu, 2008). This then allows the relationship between service quality and user satisfaction to be assessed by others (Lai, 2006; Chakrabarty, Whitten & Green, 2007; Myerscough, 2002). Research has added additional dimensions to include a 'relationship' which is based on trust, commitment, culture, interdependence and communication (Goles & Chin, 2005; Lee & Kim, 1999; Lee, 2000; Chakrabarty, Whitten & Green, 2007; Felton, 2006). Wherein the terms are defined as follows:

- trust: exchange relationships among participants;

- commitment: keep promises and perform as per specified agreements;

- culture: vendor and company communicate well and understand business rules and etiquette;

- interdependence: balanced interdependence between entities in the service partnership; and

- communication: quality, accuracy, timeliness and credibility.

It has been shown that outsourcing is about low-cost offshoring in order to exploit the low cost of labour in other countries; it is about making a decision that will most benefit the outsourcing organisation (Jensen & Stonecash, 2004; Beaumont & Sohal, 2004). Satisfaction and service quality are distinct concepts. Service quality is based on a long-term attitude, whereas customer satisfaction is a transitory judgement based on a specific service encounter (Wade & Hulland, 2004). Liljander & Strandvik (1997) point to emotion being important in perceived service quality and satisfaction.

It is currently recommended that UIS may not be suitable to measure service quality (Myerscough, 2002; Brynjolfsson, 1993). Kettinger et al. (1995) made a contribution to this with their suggestion of combining the UIS with a modified IS version of the SERVQUAL instrument, but Van Dyke et al.(1999) warn of, scoring problems aside, the unstable dimensionality of the SERVQUAL instrument and highlighted that further research is needed to determine the dimensions underlying the construct of service quality. Later studies performed by Lai (2006) support combining of UIS and SERVQUAL to provide a 'surrogate measure of IS success in computing environments' which provides appropriate and useful information.

A localised version of SERVQUAL, with appropriate adaptation, can be used by Australian IT outsourcers to ascertain the service quality they provide to employees, departments and customers. Based on higher levels of service quality, this would be repeated to lead to higher levels of satisfaction with IT outsourcing. SERVQUAL is a suitable tool to provide a benchmark measure of IT outsourcing and it forms the basis for the Research Methodology discussed in Chapter 3.

# CHAPTER 3   Research Methodology

## 3.1    Introduction to research methodology

This chapter describes the methodology underlying this research, the interview methodology, the questionnaire design process and the data collection method used in the project. It outlines the analysis strategy used to test the propositions of this study, and also discusses ethical considerations pertaining to data collection.

This thesis researches a major Australian corporation that has implemented an Enterprise Resource Planning (ERP) application and outsourced Information Technology (IT) support and development. It focuses on the outsourcing of ERP systems, including the factors determining satisfaction with the IT partnership and the retention of that partnership.

It builds on the research of Lee (2000), Lin (2002), Goles (2001) and Whitten (2004) by closely examining themes revolving around evaluation and benefits realisation processes, particularly the related practices of Australian outsourcing. Goles (2001) measured processes involved in the outsourcing relationship and achieved interesting results, which related to the client-vendor relationship expectations and the overall success of the relationship. This research aims to build on the existing research by Goles (2001) and Whitten (2004) as it relates to the Australian environment. Whitten (2004) and various other authors specialised in the area of outsourcing contract discontinuations, providing practitioners with a valuable indication of the factors associated with outsourcing contract discontinuation.

Exploratory core research was undertaken in order to determine the optimum research design and data collection methods, as well as to select subjects based on the work of Yin (2003), Leedy & Ormrod (2009) and Zikmunds (1997). Figure 3.1 illustrates the steps undertaken and the choices made in the design process, based on the work of Zikmund (1997), who highlighted that the purpose of the research – rather than the technique used – determines whether or not a study is explorative and descriptive.
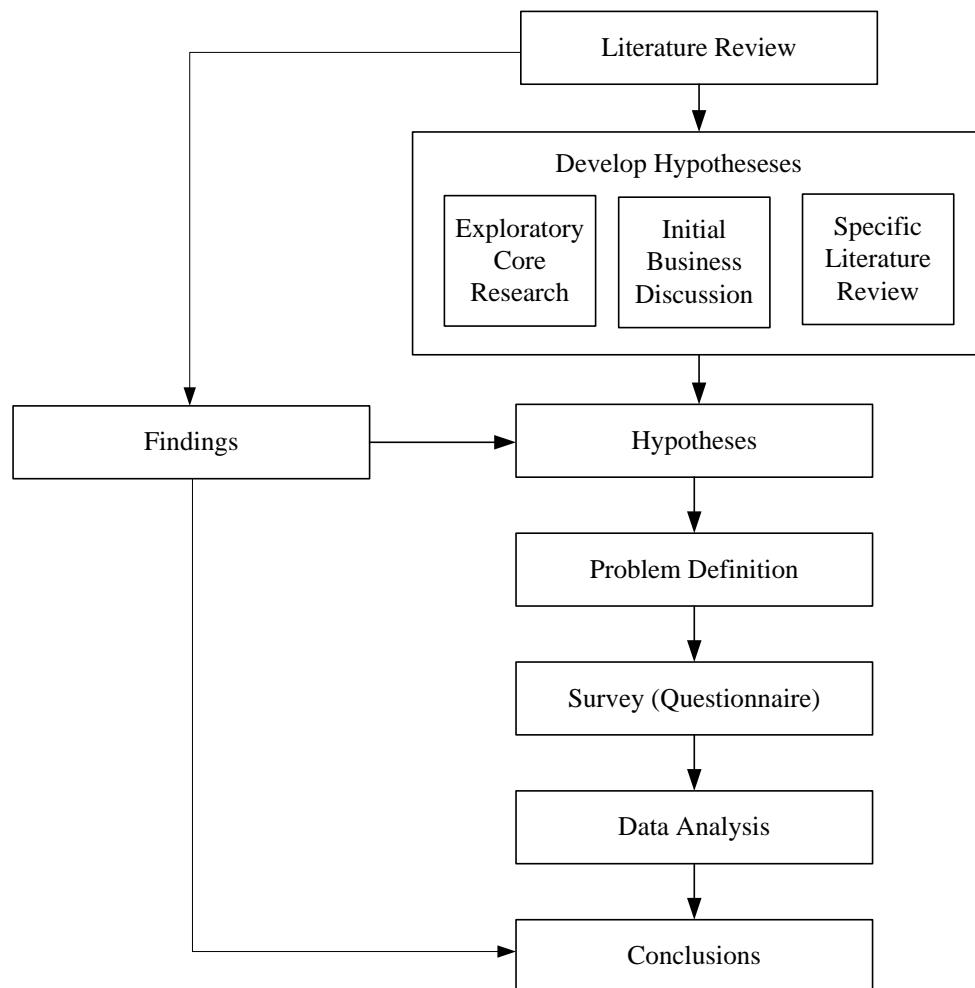
*Figure 3.1: Problem Discovery and Definition*

Following the literature review, ideas were formulated to develop hypothesises. Initial ad-hoc discussions with key business representatives were conducted and specific issues raised in casual conversations were investigated by the researcher through a specific literature review to gain additional understanding of current academic research. Three hypotheses were formulated (these are discussed in section 1.2 'Research Objectives'). These hypotheses were translated into defined problems for consistency that could be tested in a quantitative survey. A survey in the form of a questionnaire was formulated, distributed, collected and collated. Data was referenced against previous research by Baroudi et al. (1983), Ives et al. (1983) and Wrigley et al. (1997) to confirm the validity of results.

As researchers, we must accept that competing paradigms exist and that over time they will change (Koschmann, 1996). Currently four major competing paradigms dominate the discourse: positivism, post-positivism, critical theory and

constructivism/naturalistic inquiry. This study is based on post-positivism which is itself based on explanation prediction and control, hypotheses that are probable facts or laws, accretion adding to the 'edifice of knowledge', internal and external validity, reliability and objectivity (Guba & Lincoln 1994).

A qualitative approach to data analysis was used when analysing the interview transcripts. This was based on Huberman's (1994) attempts to identify recurring themes that help in reviewing the 'essence' of the data. Similar phrases, patterns, themes and also distinct differences between subgroups were identified based on the interviews conducted. This was based on constant comparison/grounded theory where an iterative and progressive process is used (Leedy & Ormrod, 2009; Cresswell, 2003; Williams, 2007). Quantitative survey study design was selected as the most appropriate method to test defined problems because surveys are relatively inexpensive to perform and they can target a particular population to provide accurate and representative data (Leedy & Ormrod, 2009; Cresswell, 2003).

Qualitative research is often less structured and more responsive to the needs of research in real-world settings, while quantitative research has the advantages of focusing problem-solving and pursuing a step-by-step, logical, organised and rigorous method to identify problems, gather data, analyse the data, and draw valid conclusions (Lin 2002 p. 87). Quantitative research is suitable to answers questions about complex situations and relationships by using measurable variables to explain, predict and control. Structural equation modelling of the surveyed data (used in this research) incorporates interdependencies using multi-item scales to measure latent and unobservable variables and provide qualitative analysis (Amoroso & Cheney, 1991; Chakrabarty, Whitten & Green, 2007). By using quantitative research, allowing statistical analysis we can:

- seek explanations and predictions that will contribute to theory; and
- allow the researcher to objectively measure the variable(s).

Quantitative research seeks explanations and makes predictions, but there are various schools of thought on how it does so:

- positivist;
- post-positivist; and
- constructivism.

| | Positivism | Post-positivism | Constructivism |
|---|---|---|---|
| **Ontology** | Realist, singular reality | Critical realist. Social reality is 'real' but only knowable in a probabilistic sense. | Relativist. Multiple realities constructed by individuals. Multiple/Holistic |
| **Epistemology** | Objectivist. Dualist (knower can be independent of the known) | Modified objectivist (objectivity approximated by external verification.) | Subjectivist. Interactive. Researcher and subject are interdependent. |
| **Methodology** | Experimental. Manipulative. Verification/falsification. | Modified experimental. Manipulative. Verification/falsification. Discovery. | Hermeneutics. Empathetic interaction between researcher and subject. Interpretation and interaction. |
| **Outcomes of the research** | Context & time independent generalisations leading to 'natural' immutable laws or predictions. | Context & time dependent generalisations leading to models for predictions. Probabilistically true laws. | Context & time dependent working hypotheses leading to understanding. |

Table 3.1: Summary of Research Paradigms

As stated by Pickard & Dixon (2004) and shown in Table 3.1 (Source: Figure 2: Axiomatic contrasts of research paradigms), research often combines both qualitative and quantitative methodologies. The combination is labelled post-positivism (post-empiricism) methodology and this research is well suited to a combination of interviews (qualitative), postal survey (positivist) and survey (qualitative); thus a post-positivism methodology was selected. The processes involved in both qualitative and quantitative research are based on similar processes, that is:

- formation of hypotheses;
- a review of literature;
- collection of data; and
- an analysis of data.

Surveys, which include written questionnaires and personal interviews, have long been established as legitimate tools to conduct research by Pinsonneault et al. (1993) and Panacek (2008), though both authors point out that novice researchers with poorly designed questionnaires may have contributed to survey methodology having a questionable reputation.

Qualitative and quantitative research are similar types of research processes and not mutually exclusive, as highlighted by various authors (Creswell, 1998; Glesne & Peshkin, 1992; Moss, 1996). Leedy and Ormrod (2009 p.133) argue that 'in qualitative research… there is not necessarily a single, ultimate Truth to be discovered'. This researcher believes that for this thesis the use of both methods allowed for multiple perspectives and learning (Creswell, 1998; Guba & Lincoln, 1988).

A result of the initial (qualitative) interviews was the ability to generate hypotheses which could be tested by a subsequent survey. Previous research by Goles (2001) on the client-vendor relationship and Whitten (2004) on outsourcing contract decisions used a similar survey methodology as that used in this thesis. This was chosen for comparison purposes and to provide validity. A combination of open and closed questions were used to provide more scientifically valid data.

## 3.2   Exploratory

This thesis provides a study of a large Australian organisation (Telstra) and assesses its major IT outsourcing arrangements, organisational models and the reasons for those particular arrangements. Telstra was selected as the company where the initial qualitative research study would be conducted because, as a major Australian company with a range of different IT system arrangements, it was anticipated that it provided a portal to the larger business community. Another reason for selecting Telstra is that it has been a major player in outsourcing for the last 15 years, both onshore and offshore.

The main sources of information for this thesis are literature reviews of relevant scholarly articles and theses. Once an article was identified during the literature review, it was classified according to its relevance to the theme of procedures and outcomes of IT outsourcing practices in Australia, with an emphasis on ERP systems. Emphasis was placed on topical articles written in the English language including research papers, conference papers and selected journals. Articles were classified using the Association for Computing Machinery (ACM) report on 'Globalization and Offshoring of Software' (Aspray, Mayadas & Vardi, 2006), which has identified at least six categories of IT work being outsourced to offshore locations. These include but are not limited to:

- IT research and development process outsourcing;
- high-end jobs, such as software architecture;
- product design;
- project management;
- independent IT consulting; and
- business strategy.

These articles have been carefully read, reviewed and classified to provide background information and knowledge of the topic. Endnote[20] was utilised as the document management system to enable document classification, tabulation and the management of bibliography.

This researcher has also been able to make use of personal experience with IT outsourcing, having over 20 years in the IT industry –as both an employee and a contractor. Practical project work by the researcher includes lengthy work periods with Accenture, Telstra, CapGemini, Satyam and NAB, which provided a practical understanding of IT outsourcing procedures and processes. The researcher investigated Telstra business units that use different outsourcing partners by conducting one-on-one interviews with representatives from different levels within these business units. Written and verbal approval to conduct one-on-one interviews with Telstra staff and contractors was obtained from the appropriate management prior to starting the process. For interviewees who had been involved in sensitive corporate outsourcing meetings, the general nature of the research was stressed and it was emphasised that no corporate secrets would be published.

Fourteen interviews were conducted between June 2006 and December 2006 with various employees in IT outsourcing support, human resources and financial business units, all of whom were directly affected by IT outsourcing. Table 3.2 list the titles of interview subjects. Each interview subject signed a consent form for their participation, stating that their involvement was voluntary. An example is provided in Appendix D (Consent Form for Participants). Each interview lasted approximately one hour. Respondents were asked a fixed set of open and closed questions based on their personal experiences with IT outsourcing. For qualitative research study purposes, the interviews conducted for this study had the central issue of outsourcing and were quite open-ended, as this allowed participant to lead the direction of the interview. Hand-written notes were taken during the interviews and transcribed into Endnote.

A qualitative approach with personal interviews was the method used for the initial phase. This built on the literature review and helped formulate the basis of the thesis. The personal interview method was selected as it allowed for versatility in the questions, and speed in both data collection and respondent collaboration. These initial

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[20] Endnote – software tool for publishing and managing bibliographies (http://www.endnote.com)

interviews helped identify themes. Analysis was then conducted from a direct reading of the interview transcripts. While broad in outlook, the interviewing provided a basis for discovering emergent factors that could be categorised and in turn lead to context-bound information. The interviews were conducted one-on-one in the suitably quiet and secure locations of private offices or meeting rooms.

| Interview | Job Title | Company |
|---|---|---|
| 1 | Delivery Manager | Telstra |
| 2 | Senior HR Specialist | Telstra |
| 3 | Product and Regulatory Accounting — Finance Specialist | Telstra |
| 4 | Contractor (Project Manager) | Telstra |
| 5 | Finance Specialist | Telstra |
| 6 | Director IT - Solution Delivery | Telstra |
| 7 | Technology Team Manager Implementation | Telstra |
| 8 | Senior Operations Service Specialist | Telstra |
| 9 | Director Human Resources Operations | Telstra |
| 10 | Former Chief Information Officer | Telstra |
| 11 | Contractor — Project Manager | Telstra |
| 12 | IT SAP Operations | Telstra |
| 13 | IT Delivery Manager | Telstra |
| 14 | LAN L3 Manager | Telstra |

Table 3.2: Source of Interview Titles

Based on Glaser & Strauss (1967), Creswell (1998), Leedy & Ormrod (2001) and Stake (1995), data analysis of the interview results (refer Chapter 4 Interview Findings) was performed using grounded theory analysis known as the constant comparative method. The post-interview process of the following five steps was then taken:

**Step 1 Organisation of details**

The information from interviews was collated into logical order. The initial groupings used were based on work from the literature review:

- benefits;

- issues with outsourcing partner;

- impact of outsourcing; and

- relationship with vendor/outsourcing partner.

**Step 2 Categorisation of data into meaningful groups**

The results from Step 1 were entered into an Excel spreadsheet, where various categories of events and behaviour, based on Table 2.8: 'Linkage Table for Outsourcing' were compared to identify common groupings. Based on the classification of Jeffery & Leliveld (2004), key factors were identified (Refer 2.6.3 Quality hypothesis and redistribution hypothesis):

- cost savings;

- service quality/delivery;

- level of control/governance; and

- risk tolerance.

**Step 3 Interpretation of single instances**

Specific documents, occurrences and other items of data were analysed for the specific meanings that they might have in relation to the hypothesis.

**Step 4 Interpretation of patterns**

Results from Step 1 and 2 were examined to identify underlying themes and patterns and from those, broader themes were identified.

**Step 5 Synthesis and generalisations**

An overall portrait of the available data was constructed, allowing the researcher to draw preliminary conclusions. Relevant data was coded and tabulated manually in Excel and was used to help generate the hypotheses as outlined in Chapter 4 (section 4.4 Summary). It also helped form the basis of the survey questionnaire.

The data collected from various sources including literature, exploratory research and interview surveys was combined to enable further analysis.

## 3.3    Survey introduction

The results of the literature review and data obtained from the interviews formed the basis of an extensive questionnaire, which was distributed to key personnel at Telstra.

### 3.3.1  Survey (questionnaire)

The questionnaire, presented at Appendix E (Questionnaire), used a seven-point Likert Scale which ranges from 1 (one) = disagree to 7 (seven) = agree, where a score below 4 (four) indicates degrees of dissatisfaction and scores above 4 (four) indicate increasing degrees of satisfaction. This scale was used to measure the different attributes and provide sufficient variance for analysis.

The survey was divided into different sections, the first of which dealt with respondents, details of business units and demographic profiles. The second section related to the respondents' perceptions of the service quality actually provided by various industries in Australia, switching costs and finally the respondents' satisfaction levels. The questionnaire instrument for the survey totalled 15 pages and spanned 178 items. The questionnaire covered the following points:

- respondent;
- company respondent worked for;
- resources;
- details of contracts;
- reason for outsourcing;
- benefits;
- issues with outsourcing partner;
- impact of outsourcing;
- relationship with vendor and outsourcing partner;
- outsourcing partner and benefits;
- switching costs; and
- setup and sunk costs.

This survey was distributed within the same Telstra business units where the initial interviews were conducted.

### 3.3.2 Data analysis

Data was collected by questioning a sample population of employees, managers and executives who were directly involved in outsourcing and managing the outsourcing relationship.

Questionnaires were distributed within Human Resources, financial business units and IT support services and were mailed back to the researcher anonymously. Thirty-three completed questionnaires were collected from the 100 that were personally distributed along with stamped and addressed return envelopes, giving a return rate of 33%.

The Statistical Package for Social Science (SPSS) was used to analyse the quantitative data collected. A frequency distribution was used to describe the sample. The mean and standard deviations of the attributes were also computed. Finally, paired 't-tests' were used to test the significant difference between sample means, as outlined in Figure 3.2. The t-test as designed by Moore et al. (1998) assesses whether the obtained mean of two groups is statistically different between each group. This analysis is appropriate to compare the mean of two groups and especially appropriate as the analysis for the post-test only, two-group randomised experimental design (Wrigley, Drury & Farhoomand 1997).

Researchers have recommended that as an approximation, at least 10 sources of information per prediction are required (Chin & Lee, 1998; Kinnear & Gray, 2008). The sample size was adequate to perform the necessary analysis, although a larger and more varied response would have been preferred (Chin and Newsted, 1998; Gefen et al., 2000). In ad hoc discussions, it emerged that the main factor in the failure to answer and return questionnaires was the length and complexity of the survey. The factors in return of questionnaires were size, time to complete and complexity of questionnaires, as were identified by (Baroudi et al., 1983). This survey was based on SERVQUAL to give a service dimension of research. SERVQUAL is perceived as allowing a holistic mechanism to empower decision-making teams because it is capable of enhancing advanced outsourcing approaches and provides great opportunities for future research. SERVQUAL methodology was used to measure IT service quality based on a comparison between the expected and realised levels of the five attributes of service (Buttle 1996; Gi-Du Kang 2002):

1. tangibles;

2. responsiveness;

3. reliability;

4. assurance; and

5. empathy.

As highlighted by Buttle (1996), 'SERVQUAL data can take several forms:

- item-by-item analysis (e.g. P1 – E1, P2 – E2);

- dimension-by-dimension analysis (e.g. (P1 + P2 + P3 + P4/4) – (E1 + E2 + E3 + E4/4), where P1 to P4 and E1 to E4 represent the four perception and expectation statements relating to a single dimension); and

- computation of the single measure of service quality ((P1 + P2 + P3 …+ P22/22) – (E1 + E2 + E3 + … + E22/22)), the so-called SERVQUAL gap'.

The major tool set used for analysing results was the SPSS 16 statistical software that includes capabilities for data analysis, data management and programming-enabled analysis. Before evaluating test data such as t-tests, the data was checked for abnormalities such as extreme values or skewed distributions by calculating the mean, median and standard deviation. The book *SPSS 15 Made Simple* by Kinnear & Gray (2008) was utilised as the primary SPSS reference.

Questions were collated into the SPSS toolset (SPSS AMOS) where complete Structural Equation Modelling (SEM) analysis was performed. Factor analysis was used to uncover the latent structure (dimensions) of the set of variables. As discussed by Garson (2009), SEM does not draw causal arrows in models or resolve causal ambiguities. Theoretical insight and judgement by the researcher are still required.

The basic factor analysis steps used are:

- data collection and generation of the correlation matrix;

- extraction of the initial factor solution;

- rotation and interpretation; and

- construction of scales or factor scores to use in further analyses.

Steps in analysis included the following tests:

1. **Reliability comparison** (Cronbach's Alpha) was used to calculate the reliability for each scale. A further check of Reliability Comparison (Cronbach's Alpha) was also used to measure reliability. Refer Figure 3.3 for Cronbach's Alpha Formula.

2. The probability models such as F-Test for **Analyses of Variance (ANOVA)** were used as a measure of how different the means are relative to the variability within each sample. Convergent validity was evaluated against items in the refined model for three first-order factors and one second-order factor analysis as detailed in Appendix K (Factor Analysis).

3. **Interpretations of the categorical measurement** seven-point Likert scale code are interpreted as:

   1 = Strongly disagree (Disagree)

   2 = Medium disagree

   3 = Neutral disagree

   4 = Neutral agree

   5 = Agree

   6 = Medium agree

   7 = Strongly agree (Agree).

   The seven-point Likert scale was selected to allow direct comparison of previous work by Whitten (2004) and Goles (2001) and because it yields measurement accuracy superior to that of three- and five-point scales (Malhotra et al., 2009).

4. **Mean:** If the expected mean values for tangibles, reliability, responsiveness and assurance are above 5 respectively, then these values reveal that the respondents who expressed average expectation agree with the question. If expectation of empathy has a mean value below 5, it would indicate that the respondents have expressed an average expectation of neutral towards the question.

5. **Median:** The expectations for tangibles, reliability, responsiveness and assurance have a median above the value of 5, which indicates that 'agree'

is the median opinion of the respondents. The expectation for empathy has a median value of 4.00, which indicates that 'neutral', is the median opinion of respondents.

6. **Mode:** The expectations for tangibles, reliability, responsiveness, and assurance have a mode value of above 5, which indicates that 'Agree' is the mode expectation of respondents. The expectation of empathy has a mode value of 4, which indicates that 'neutral' is the mode expectation of respondents.

7. **The Standard Deviation:** The expectations for tangibles, reliability, responsiveness, assurance and empathy have a standard deviation ranging from 0.739 to 0.873.

8. **Variance: The expectati**ons for tangibles, reliability, responsiveness, assurance and empathy have variance scores ranging from 0.006 to 0.002, which reveal that these variables have variations in the respondents' expectations.

9. **Range:** The expectations for tangibles, reliability, responsiveness, assurance and empathy have a range which indicates that these variables have differences in respondents' expectations, and respondents have expressed all types of opinions towards the study questions.

T-tests were used to evaluate the responses from different pairs based on whether the means are statistically different. They also look at differences between two groups by comparing their means relative to the spread or variability of their scores.

Cronbach's Alpha measures how well a set of items (or variables) measures a single, one-dimensional latent construct. Cronbach's Alpha is not a statistical test but a co-efficient of reliability based on consistency. It should be noted that a reliability co-efficient of 0.70 or higher is considered 'acceptable' in most social science research situations (Baroudi & Orlikowski 1988).

Control group

Treatment group

Standard Error of Difference
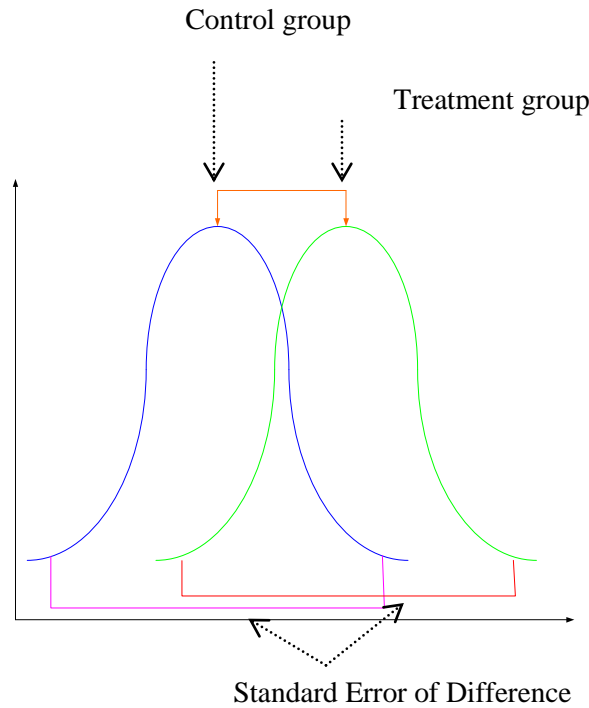
*Figure 3.2: t-tests (Overview Diagram)*

The formula for the standardised Cronbach's Alpha is shown in figure 3.3 where: N is equal to the number of items, c-bar is the average inter-item covariance among the items and v-bar equals the average variance (Ives, Olson & Baroudi, 1983).

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

*Figure 3.3: Cronbach's Alpha Formula*

## 3.4    Ethical considerations

This research accommodated the responsibility to protect the interests of businesses, employers, respondents and other parties involved. In June 2006, permission was gained from the Victoria University Human Research Ethics Committee with registration number HRETH (BHREC 2006/01), see Appendix A.

The study has had access to legal issues, vendor selection criteria, evaluation practices, decision-making processes and the post-evaluation experience of major corporations. No-one has been coerced to provide sensitive information or assist against their will. Interview subjects were briefed prior to being interviewed and given an

introduction letter (refer Appendix C). At the time of interview a consent form (refer Appendix D) was signed by participants and securely filed. At all times interviews were conducted in a professional manner. The researcher followed the Australian Government 'National Statement on Ethical Conduct in Human Research' guidelines to ensure that at no time could deception or stress arise from the interviews. Interview and questionnaire participants were guaranteed protection through anonymity, all pertinent information was held in locked storage and the information was treated as confidential

## 3.5    Summary

The major purpose of this study is to examine outsourcing and its problems from an Australian perspective. The major sources of data were one-on-one interviews, surveys and questionnaires. The thesis aims to study the Australian context for offshore outsourcing, in particular the reasons for IT outsourcing contracts being renewed or discontinued. It then makes a thorough examination of the themes around the evaluation and benefits realisation processes before suggesting remedies and actions to mediate any problems.

Results from the discussions, interviews, literature reviews and evaluations were documented in the context of the thesis work. Qualitative case research based on in-depth interviews was used in combination with the literature review to generate hypotheses that could be tested using a quantitative (survey) methodology.

This thesis was compiled to give as broad an understanding as possible of IT outsourcing, to provide insight into problems found and to offer recommendations for possible solutions and future research.

# CHAPTER 4   Interviews: Findings

## 4.1     Introduction

Telstra was selected for qualitative research (interviews) and as a primary source for quantitative research (questionnaire). This thesis is primarily based on Telstra's corporate Information Technology (IT) functions as the organisation meets the criteria of being a large Australian company with IT support both in-house and from multiple outsourcing partners. Telstra's IT history is reflective of other major companies and the researcher believes Telstra provides an example that could be extrapolated to other organisations, as it has examples of both internal and outsourced IT support. Telstra IT functions in the last 10 years have changed from an in-house federated model to a predominantly outsourced model, with multiple outsourcing partners.

## 4.2     Background Perception of IT at Telstra

Even with a large IT spend on numerous and tailored systems in the late 1990s, there was a general perception at Telstra that the IT systems, IT staff and Chief Information Officer (CIO) were failing to support the organisation in its day-to-day business operations. Information Systems (IS) and IT were perceived as commodity costs that could be outsourced. IT support and development was outsourced to offshore providers, delivering considerable financial bottom-line savings to the organisation.  Hirschheim et al., who studied the role of the CIO at Texaco, contended that 'CIOs and their IT functions did not fail' but were 'perceived' to have failed (Hirschheim, Porra & Parks, 2003). They point to factors that impact on management perceptions of IT, including:

- benchmarking;
- personal relationships;
- business magazine articles;
- consultant reports; and
- historical performance.

It can be argued that a mismatch between management expectations of IT and what IT could actually deliver contributed to the perception gap at Telstra. Reasons for the mismatch can be identified based on Peppard and Ward's (1999) four categories of perception gap as follows:

- leadership;

- structures and processes;
- service quality; and
- values and beliefs.

## 4.3 Thesis sources

This thesis is based primarily on Telstra's corporate IT function, and central events relevant to understanding how IT has evolved. The material for the thesis was obtained from public sources such as newspapers and public reports, and key personnel were interviewed. Interviews conducted as outlined in Table 3.2 were noted verbatim for important points. In writing this thesis, an interpretive stance on history has been taken and the document does not aspire to 'true' history in any objective sense of the word.

## 4.4 Telstra organisational changes

Telstra has changed from what was a telecommunications engineering-based organisation in the 1960s and 1970s to its current organisational form as an telecommunications, internet service and content provider. For the purposes of this paper 'Telstra' will be used to mean all previous forms of the telecommunications organisation and the other previous names it has gone under. The organisation's model has changed from all IT work being done in-house to a predominant outsourcing model that relies on outsourcing partners to provide IT design and support.

Telstra now enters into complex relationships with customers, service providers, suppliers and retailers worldwide. Many organisations, including Telstra, look at IT as a commodity that can be outsourced to the lowest tender, and this objective of lowering IT costs has resulted in outsourcing to offshore providers. Various studies including those of Lin (2002) and Politis (2005) have identified the major reasons for outsourcing as:

- cost saving;
- increased service levels;
- access to technical expertise; and
- freeing-up resources.

## 4.5 Telstra organisational history

Telecommunications began in Australia in 1854 with the construction of telegraph lines and the introduction of telephone services in 1879.

In 1901, telecommunications became a nationalised Commonwealth service under the Australian constitution. This was overseen by the Postmaster General's Department (PMG), which was the precursor of Telecom Australia that was formed in 1975, which in turn became Telstra in 1995. It had 16,000 staff and assets of over £6 million in 1901. By the late 1960s, the PMG had grown to 120,000 staff and had primary responsibility for providing telephone service and telegraphic traffic to all of Australia. Due to telecommunications regulations the PMG was split in 1975 into the Australian Postal Commission (Australia Post), Australian Telecommunication Commission (trading as Telecom Australia), and Australian Communications and Media Authority (ACMA) was established to provide public telecommunication services within Australia. Deregulation of telecommunications in Australia in 1992 saw the introduction of competition to the marketplace. Telecom Australia then merged with another government agency, the Overseas Telecommunications Commission (OTC)) in 1992–93 to become Australian and Overseas Telecommunications Corporation (AOTC), but was renamed Telstra Corporation Limited in 1993 and traded as Telstra; it was subsequently partially privatised in 1997 and fully privatised in November 2006.

In the 1960s, 1970s and 1980s a stable environment existed wherein each telecommunications organisational unit within the PMG and later Telecom was state-based, but had little synergy between departments or states. The organisational structure had a rigid chain of command with clear lines of authority and accountability. The structure was based on an internal environment of organisation and operational requirements with vertical divisions of labour.

As pointed out by Arnold (2003), the period since 1982 has been marked by:

- the introduction of competition in the provision of landline and mobile telephone services;
- the associated privatisation of the publicly-owned carriers in Australia;
- substantial deregulation of the telecommunications sector, with major legislative changes and a move to industry self-regulation; and
- widespread adoption of the internet.

The period from 1980 until 2000 also saw an expansion of telecommunication products to include internet-based products, cable-to-home technology and wireless technology. There were also differing expectations about ownership, revenue models,

directory services, critical information infrastructure, accessibility and the emergence of private telecommunications networks.

In the 1990s, Telstra moved from being a public sector monopoly to a commercial operation in a deregulated competitive environment, resulting in a changing organisational environment. Ross (2003) has provided a detailed insight into the decade 1990–2000, when Telstra cut labour and labour costs through large-scale downsizing programs and outsourcing, and Figure 4.1 shows changes in staff numbers over the period 1975–2005.
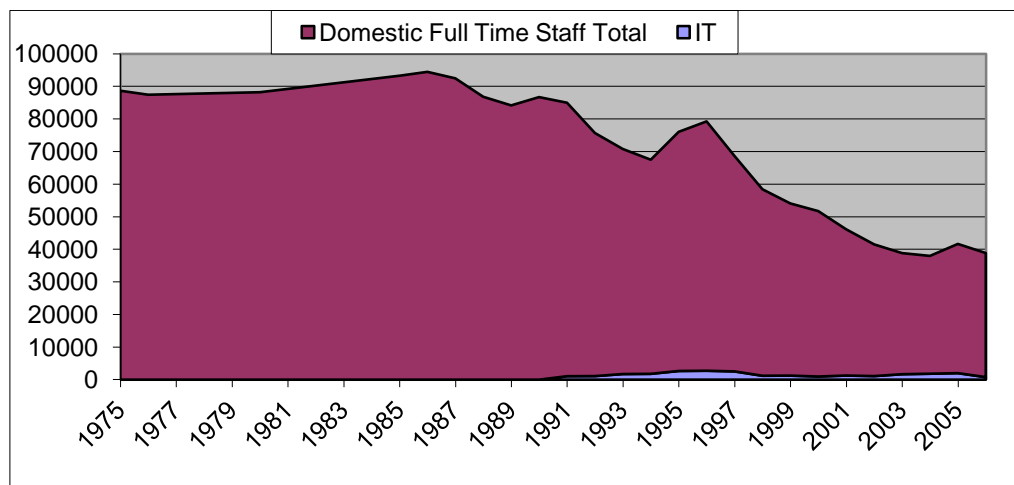


*Figure 4.1: 'Full-time Equivalent' Staff Employed by Telstra in Australia21*

Job cuts were prompted by the following factors:

- outsourcing;
- subcontractors;
- strategic alliance networks;
- work intensification;
- new technology;
- improved business processes; and
- the introduction of competition.

By 2002, Telstra had changed from a stand-alone public sector organisation to a 'leaner,' commercially-driven firm linked to subsidiaries, subcontractors and strategic alliances (Ross, 2003).

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[21] Derived from Telstra financial reports 1975–2007.

The process of privatisation was completed in 2006 with the final 'T3' sale, when Telstra became 'no longer majority government owned' (Neboiss, 2006).

## 4.6   Telstra information systems

An important question in relation to Telstra is: why did 1,400 IT systems come into existence in less than 40 years?

In the 1960s, the telecommunications division of the PMG from which Telstra grew was an engineering-based organisation structured along state-based lines, with an overall headquarters group that gave guidance and direction to the state groups. In the late 1970s, the then-named and government-owned Telecom went from an engineering-based organisation to a commercially-based one, and was reorganised into national customer-based divisions (e.g. the Corporate Customer Division), but the centralised headquarters were retained and had responsibilities for national direction and guidance.

Over the subsequent years the national telecommunications organisation reorganised multiple times but still along customer-specific lines, and the role of the headquarters group evolved into a support function. This basic customer structure still exists with the privatised Telstra company today.

In some cases, major IT systems were centrally controlled but others started life as local databases that grew over time as customer divisions had considerable freedom with stand-alone budgets. This approach to funding and systems management allowed multiple systems and interfaces to propagate. It should be noted that the impracticalities of handling large databases over a dispersed landscape were a result of the technological constraints and the diversity of data associated with different networks (A7, 2007).

This lack of IT systems coordination was also driven by ad hoc organisational unit-structure directions; so the organisational unit that funded the IT systems controlled implementation, resulting in 'off-the-shelf' Enterprise Resource Planning (ERP) systems (such as SAP R/3) that were then heavily modified to meet the special requirements of that particular business unit.

Support for each system was procured from different budgets or departments. There were no longer-term fiscal burden consequences for the organisational unit implementing the system, as support requirements were handed to in-house IT or headquarters' support staff. It was difficult to establish a realistic total cost of ownership

for individual systems due to in-house transfer-pricing rules and the costing models used.

The cost of supporting these 'off-the-shelf' systems, when viewed as a total support cost, was extremely high; minor changes required significant specification and major regression testing. Software currency under these circumstances becomes a major issue as upgrades required considerable testing, staff training and knowledge acquisition. Local knowledge is also necessary to enable an understanding of the large number of systems involved and their various interrelationships.

In the 1990s, the priority for IT was to meet the organisation's requirements at all costs, and there were vendors available who were only too happy to make changes to 'off-the-shelf' software – at a cost. This culture of buying software and then modifying it had its genesis in the 1970s, and the organisation has subsequently followed a 'best-of-breed' approach rather than using a single ERP system. This has resulted in a large number of interfaces and duplications among various systems.

It should be noted that parts of different ERP systems were implemented, but not all modules and not into all of the organisation's units. ERP systems such as SAP R/3 are tightly integrated and fit into organisational structures and cultures that are highly centralised (Pereira, 1999); when it introduced ERP systems, Telstra did not have a centralised organisational structure and culture.

From the 1970s, Telecom's ability to build or implement specialised software as required resulted in a mishmash of duplicated and modified systems. It was typical for major systems within Telecom to have in the order of 200 interfaces, and to lock users out for 12 hours each day while daily batch runs were completed (A2, 2006). Users commonly had to update numerous systems with the same data. In Telecom's IT project management area, five separate management reporting systems required updating. Telecom's software applications were highly customised, with integration between systems which required intensive batching between systems in an attempt to keep diverse systems synchronised.

This is how there came to be over 1,400 systems operating in Telstra by early 2000, requiring IT investment of $3,178 million over 10 years just to maintain the status quo. In 2004, a new management team was installed that immediately embraced a major rationalisation program involving simpler data models, and the consolidation

and/or removal of systems. However, long-term employees who were interviewed made the point that that this type of IT rationalisation had occurred on earlier occasions when new management had been brought in (A2, 2006; A3, 2006; A7, 2007).

## 4.7    Telstra information technology eras

Telstra's IT eras have been categorised to highlight the major IT activities that have occurred:

1. Mainframe: 1963–1990s;
2. Personal computers: 1980s–1990s;
3. Organisational units IT rapid growth – databases and local area networks: 1980s–1999;
4. Consolidation of IT and Y2K millennium bug: 1998–2001;
5. Downsizing and outsourcing: 2001–2004; and
6. Rationalisation of systems and outsourcing partners: 2004–present.

### *4.7.1  Mainframe*

In 1963, Research Laboratories (within the PMG) introduced its first computer with the purchase of a Control Data Corporation[22] (CDC) 160A computer to analyse telephone traffic. Harry Wragge, manager of Telstra Research Laboratories, was considered a technical leader who introduced mainframe computing into the organisation and worked on developments in telephone call switching. No IT department existed at the time and the major focus of the Telstra Research Laboratories was pure research and the automation of switching. There are signs of a perception gap between management and the research department at this time, as the organisation saw itself as an engineering group that supported switching telephone calls, while computing was a sideline left for the individual parts of the organisation to manage.

Individual units within the organisation set up timeshare agreements between each other and introduced systems in an ad hoc manner. The state-based finance department in Victoria leased computing time from the research department (A8, 2007). By 1967 (if not earlier), an ADP[23] Branch had been established within the Management Services Department at the PMG's Central Office (i.e. HQ) in Melbourne, a Computer

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[22] Control Data Corporation was a Computer Mainframe design and manufacture from 1957 to 1999.

[23] .Automatic Data Processing (ADP)

Management Group had been established and was tightly controlling all major system development work – with around 80% of the effort going into the Telephone Accounting (TEL/DRS) application. Other (uncontrolled) development work was happening but it was trivial in comparison to the centrally-sponsored work. Each Telstra business unit and area provided its own leadership, structures and processes. Differing levels of IT service were considered acceptable by different units, leading to a lack of credibility for IT support by business users, due to the ad hoc nature of the systems (A14 2007). In 1968, Telstra's first computerised billing system (TEL/DRS) was introduced with the purchase of a mainframe HI800 computer. In the 1970s, the evolution of IT (mainframe computing) meant that organisations could automate day-to-day operations. By 1972, Telstra was buying mainframe time from Control Data Australia [24], IBM Call 360[25], and Honeywell[26] Information Systems that owned the systems. By the early 1970s, the PMG (APO) was operating two massive DPC[27]s (North Sydney and Clayton) populated with (at least) six Honeywell 1800, 8200 and 66/80 mainframes. These were running 24-7 and the organisation was churning through more TXN data than any other organisation in Australia. It owned all its computers – or had exclusive use of them on long-term leases.

In the early 1980s as mainframe computers became affordable, Telecom Australia purchased and introduced major mainframe systems, with programs such as the McCormack and Dodge/Dun & Bradstreet pre-packaged software[28] for financial systems, and the Honeywell Information Systems mainframe for payroll functions, using tapes and card readers. Telecom Australia operated major IT computing centres CABS and DCRIS (successors to TEL/DRS), LEOPARD (fault management), RASS (service orders and billing for 'special' services), STOCKAID and SUPPORT (supply systems) and Directories. These initial systems were expanded and upgraded, so that by the early 1980s green screen inputs were commonplace in the telecommunications organisation.

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[24] Control Data Australia — 1969 Control Data Corporation establish a systems division in Australia.

[25] IBM Call 360 — IBM time-sharing subscriber services.

[26] Honeywell Information Systems — Mainframe design and manufacture in 1991, computer division sold then known as Honeywell Bull.

[27] .Data Processing Centres (DPC)

[28] Dun & Bradstreet Software – formed 1983 by merging Management Science America, Inc. and McCormack & Dodge.

In the 1970s and early 1980s PMG/Telecom Australia's systems approach was fragmented whereby each state and territory of Australia was dominated by a series of large, different software and special purpose applications. Each system had its own internal database and there was little integration with other applications, resulting in the need for interfaces, as well as the creation of duplications and inconsistent databases (ITG, 1991).

### 4.7.2 Personal computers

By the late 1980s, stand-alone personal computers with limited island local area network (LAN) systems and local databases were commonplace. Processes were based around mainframe systems, which were not upgraded to meet the new culture of personal computers on every desk (A8 2007).

Thus in the early 1980s, the different business units within Telecom Australia and various business-based IT support functions allowed individual organisational units to develop stand-alone solutions. For example, the financial department owned an accounting system which used automated data processing for customer billing. It was based on paper requests sent to data centres with reports (answers) returned by courier a week later. IT processes for the financial department were based around mainframe systems in both Melbourne and Sydney, which were not interfaced. Both mainframes were managed by the Telstra Information Systems department. Service quality at the time was regarded as leading edge compared to banks and other utilities (A8 2007). In the period 1980–1996, Telecom Australia had turned to packages for its systems solutions, but as authors such as McGrath (1993 p. 79) highlight, these systems were then highly modified, with 90 per cent of code being changed in some cases. Although Telstra's operations were integrated, its systems were developed on a functional area basis that resulted in data redundancy and inconsistencies, duplication in systems development and a proliferation of one-to-one interfaces. Consultant reports from McKinsey and Co. in 1986–87 highlighted that Telecom Australia's information systems were inadequate for a changing environment, and recommended a major review of the organisation's information system problems (McGrath 1993).

PMG had been created in 1901, resulting in over 80 years of quality engineering culture that supported innovation, and a specialisation culture that took pride in delivery of exactly what was requested for telecommunication purposes. This culture of

telecommunications engineering flowed into IT, which enabled five units with strong general managers to build their own specialised systems (A9, 2007). In the mid 1990s these local specialised systems then linked into major national systems. In an interview with a Telstra employee (A7, 2007), a lack of senior management was blamed for allowing the situation to develop in which 'every state in Australia and each department had an IT department, which developed local IT systems'. This meant that rather than standardised structures and procedures for IT across Australia, various Telecom Australia business units built different systems to align with various local processes. In the mid 1980s Telecom Australia still had its basis in telecommunications engineering and a strong awareness of the requirement for computing power to support business unit objectives.

The introduction in the late 1980s of dumb terminals into the workplace enabled staff to deliver real-time information to the customer. At this time, Telecom Australia was seen as a leader in the implementation of technology in the workplace by Australian business (A8 2007; A14 2007).

However, decisions made in the 1970s and 1980s were made in the absence of an adequate understanding of how to use the power of personal computers in the organisation. It has been stated that Telstra's lack of understanding of personal computer-based business applications in the 1980s contributed considerably to the present situation, where there are now over 1,400 major systems in place (A8, 2007). In the early 1980s, Telstra had over 630 separate interfaces and it is estimated that in some systems around 43 per cent of processing capacity was devoted to interface processing (McGrath, 1993).

### 4.7.3 Organisational units rapid growth

The early 1990s saw the widespread introduction of personal computers and associated business software including spreadsheets, databases, LANs and island mail (six different mail systems were in use). In 1994, Telecom Australia was Australia's largest IT user organisation, with 40,000 screens (25,000 PCs and 15,000 terminals) (O'Neill, 2006). The explosive growth of personal computers in the 1980s meant that by the early 1990s virtually every knowledge worker in the Western world had one on their desk (Philipson, 2006). At this time in the early 1990s, Telstra was still an organisation controlled by telecommunications engineers who were driven by technology, but by the

mid 1990s accountants had taken control; they required up-to-date fiscal information and saw IT as the solution. The formation of Telstra in 1995 also coincided with a move from being a state-based engineering organisation to a regional, customer-focused organisation. In 1992, a systems inventory dictionary had been published by Hawkins (1992) that identified over 850 separate systems.

In 1991, an internal Telstra publication, *Overall Systems Architecture,* made the following points:

- applications were executed in multiple environments spread across different processing platforms;
- Telecom Australia's 1987 shift to a business-driven, customer focus underlined the need for integrated information systems;
- there was a need for development of 'DRIFT' interfaces to collect data from various systems; and
- there was a need for introduction of standardised desktops and networks.

In 1993, the newly established department in Telecom Australia, the 'Information Technology Group', had a charter to:

- reduce divisional costs;
- improve the quality of customer service;
- enhance flexibility and functionality; and
- respond quickly to competitive initiatives.

In 1995, a plan was developed to consolidate corporate databases to seven major systems, with the corporate and government business unit as the lead provider. Because the development cost of $55 million was deemed excessive, only the customer database was built.

The newly created position of Chief Information Officer (CIO) reported directly to the Chief Executive Officer (CEO) and was instrumental in the development of standards, introducing a 'Standard Operating Environment'. The CIO was not able to introduce common values, beliefs and service quality into the various business units, which continued to act autonomously even though introduction of the CIO title was acknowledgment of the importance of the role. IT was supporting applications,

hardware, tools, training, maintenance and support across a diversity of landscapes, which stretched resources and capabilities.

Telecommunication engineers struggled to understand IT, necessitating the introduction of outside consultants and IT experts to help manage the changing business structure. Mainframe-based processes continued, but technology in the 1980s had moved on to 'super minis'. In interviews with Telstra employees it was felt that the introduction of consultants had been political to force a management outcome of a change in organisational culture (A11, 2007).

Thus new systems proliferated as additional areas of Telstra's operations grew and required IT services (e.g. Sales, Financial Services, HR), resulting in a plethora of systems with no communication between the various areas. The organisation had a systems philosophy of 'because we can, let's make the system meet our processes', and a mentality of spending money with no control or accountability. An IT creed of 'we can fix any problem given enough time and money' prevailed, and a culture of using consultants as shields to justify management decisions also evolved (A8, 2007).

### 4.7.4 Consolidation of IT

A federated business model was developed with the IT leadership distributed throughout the organisation so that, for example, the Financial Director led financial IT, while the Human Resources Manager led Human Resources IT. Telstra's managing director of organisation processes and information, Dwight King[29] (1998–2001) considered his major achievement to have been the consolidation of many of Telstra's state-based IT systems. Telstra organisational unit managers led organisational units with titles such as 'General Manager of Information Technology Corporate Systems Solutions', which entrenched a fragmented approach as the various units did their own IT purchasing, support and development.

In the mid-1990s, Telstra, in consultation with Andersen Consulting, developed a telecommunications billing system, FLEXCAB – the successor to DCRIS and CABS purchased from a US telecommunication company (and massively modified) in the early 1980s – which was sold to a number of major American telecommunications companies. FLEXCAB was designed to provide Telstra with a competitive edge in the newly deregulated market.

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[29] Dwight King was also a pioneer of outsourcing in the USA as part of the EDS management team

Telstra began to investigate and use IT outsourcing as part of its organisational model under Mr King's direction. Mr King's objectives as outlined to Newcomb (2001) for outsourcing were to:

- reduce IT costs;

- increase speed-to-market for infrastructure;

- provide solutions that supported customer initiatives; and

- continue the overall quality of delivery.

A symptom of Telstra's in-house IT project delivery had been the lack of control and governance concerning requirements (A1, 2006). When an organisational unit deals with an in-house delivery team, lack of a strategic IT direction often leads to 'scope creep' – that is, an increase or change in project deliverables adding to costs and causing time delays. Support costs are covered by a variety of departments with different budgets, which results in a lack of transparency regarding cost responsibilities. Telstra senior management in the late 1990s and early 2000s regarded IT systems and their costs as a burden on the organisation that should be reduced; this resulted in various major outsourcing support agreements, for example with IBMGSA[30] and Deloitte Consulting Consortium[31]. Dibbern et al. (2004) saw this as an Australian trend for business organisations to sign outsourcing 'mega-deals' for the provision of Information Services. As a result of uncontrolled IT spending in the late 1990s, business restructuring and also due to the perceived threat of the Y2K millennium bug[32], organisations have attempted to use outsourcing as a method of establishing control over organisational units (Abelson, 2005; Lin & Pervan, 2001).

In 1998, Telstra formed an alliance with IBM and Lend Lease to form IBMGSA in a 10-year support agreement for $3,178 million (Telstra Financial Report 1997). Stackhouse & Frith (2001) made an interesting observation: 'That deal comes with some irony. Telstra, along with Lend Lease and IBM, is a partner in IBMGSA — meaning it will effectively be outsourcing its IT work to itself'. As Miles & Metcalfe (2000) point out, at other organisations in this period IT staff and knowledge had been

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[30] IBMGSA was an alliance between Telstra, Lend Lease and IBM.

[31] Deloitte Consulting Consortium was a services alliance between Deloitte Consulting and EDS.

[32] Y2K millennium bug — Year 2000 problem where in computer programs, the practice of representing the year with two digits becomes problematic with logical error(s) arising upon 'rollover' from x99 to x00.

'outsourced resulting in lack of control over strategy and overall systems'. The late 1990s had seen an upgrade of systems, driven by the perceived Y2K millennium bug, and the introduction of client server infrastructure such as SAP R/3. In 2000, Telstra also outsourced the bulk of its electronic billing operations and ERP systems development to a Deloitte Consulting Consortium for a cost of $500 million for a five-year contract (Seddon, Cullen & Wilcocks, 2002). Mr King, then CIO, predicted that the outsourcing deal would create cost savings of 25 per cent in Telstra's IT overheads and reduce its time to market by 50 per cent within a year (Han, 2000).

From 2001, with the appointment of CIO Jeff Smith, Telstra moved towards outsourced additional IT support and development for non-business-critical systems. IT had little influence on organisational structures and processes and this affected the service quality provided. It was felt that the 'organisation didn't have an over-arching strategy' and organisational units focused on their own area, not the end-to-end process (A2, 2006).

The reasons for outsourcing were summarised by one interview subject A2 (2006) as due to:

- following a global trend;
- a business case for reduced cost;
- prioritising core business issues, where IT was not regarded as core business;
- IT being regarded as an expense that didn't generate income;
- requirements to reduce the costs of processes;
- IT systems not value-adding; and
- the whims of senior stakeholders (the Chief Executives Officer and Business General Managers).

The organisation's units were not consulted about the new IT direction, consequent redundancies resulted in a loss of business knowledge, and there was reduced time for outsourced partners to understand the organisation's requirements (A8, 2007). Telstra created internal groups to fill the knowledge gap resulting from the outsourcing partner's lack of understanding of the systems, but not for the knowledge gap regarding the telecommunications industry or business processes.

From the interviews emerged the general belief that the organisation's IT requirements for gathering, managing and spending were out of control (A8, 2007; A14, 2007). Senior management believed that outsourcing IT provisions and support would provide visibility and accountability as real money was required. Outsourcing moved the business from internal funds transfers to payment of external organisations with real money, forcing accountability back on the business units to fund. The Y2K millennium bug forced the organisation to focus on rationalising systems and working as a team. Mr King was able to provide IT direction to meet the perceived Y2K millennium bug problem but was unable to control individual business general managers due to a lack of support from senior management (A10, 2007).

Mr King strongly advocated that outsourcing should be a win-win for Telstra's business operations, Telstra's IT department and the outsourcing partners that were working as a team to achieve the organisation goals. An important point was that integrity and trust should be the basis of these relationships. The outsourcing arrangement was effectively a failure if the partners involved were required to stick to the letter of the contract under any circumstances. This meant that trust and professional conduct were intended as the basis for outsourcing relationships. Mr King was a strong believer in 'right outsourcing,' as the basis for any outsourcing deal, which meant that a deal had to work for both parties involved (A10 2007).

### 4.7.5   Downsizing and outsourcing

In this period from 2001–2004, rationalisation of Telstra's IT groups transformed its IT delivery model and developed new partnerships (LeMay, 2005). Telstra's annual IT budget had grown to over $1.5 billion per year (Thomsen-Moore, 2002). The perception within the organisation was that business units' spend on IT and IT departments' total spend was out of control, with Telstra in 2004 paying IBMGSA $130 million to exit contractual commitments (Telstra Financial Report 2004). A new CIO was appointed to replace Mr King who had extensive IT offshore outsourcing experience in the USA. In 2005/06 the emerging Indian IT service firms, Satyam and Infosys, won work with Telstra as a result of competitive tenders (Sainsbury, 2006b). This was a reversal from the approach in the previous two and a half years prior to 2004, when Telstra had cut back its outsourcing to restock its internal technology resources. In 2004, Deloitte, IBMGSA and EDS all lost large contracts with Telstra for underperformance.

By 2005, the Telstra found itself with over 1,400 major IT systems on its systems register, despite attempts to rationalise systems over the previous 10 years.

In an article published in *The Australian* newspaper on 15 February 2005 and headlined, 'Telstra short of $1.5bn savings', the chief financial officer, John Stanhope, stated that, 'Telstra's outsourcing of jobs to Indian software development operations run by IBM, Infosys, Satyam and EDS had been slower than planned'. Stanhope also stated that in 2003 Telstra had aimed to cut $750 million from its annual IT operating and capital expenditure (Sainsbury, 2005). Telstra Australia's 2005 annual report (p. 34) highlighted that Telstra Corporation Limited had, as of 2005, the remainder of a 10-year contract with IBMGSA to provide technology services worth $1,596 million (Telstra Financial Report, 2005). It cost Telstra $130 million to change this contract, which is only one of many IT outsourcing contracts that it had (Sainsbury, 2005).

In November 2005, a new management team led by Sol Trujillo was appointed, focused on leading Telstra to full privatisation. The CIO was then the subject of a complaint from computer maker Hewlett-Packard in 2006, and Telstra's then technology chief was forced to bring in a deputy CIO to handle operational weaknesses in the IT group. The CIO was replaced by the deputy CIO shortly afterwards. This was accompanied by the departure of senior IT management; in the period 2001–2007 there were four different CIOs. In 2006, a comprehensive review of IT systems was undertaken and consolidations of IT business units into a single IT group were undertaken. As a result of problems in the IT arrangements, a transformation project was initiated in 2006 with the aim of consolidating and simplifying the IT systems. Adam Kerr. a Telstra transformation manager, stated: 'Telstra's strategy for improving its business involves deploying a company-wide, market-based management system, adopting a one-factory approach to managing operations and delivering integrated services to customers' (Kerr 2006).

The Chief Operations Officer (COO), Greg Winn, as part of Sol Trujillo's new management team, said in a November 2005 briefing, 'We're going to remove some 80 per cent of our systems, mostly in the next three years. When I say remove them, we're removing them. They're going to be cut dead and no longer will be available. Multiple benefits: we get less complexity, less costs for your outages and easier training for our front-end employees' (Corner, 2006).

Andrew Maiden, Telstra's public relations chief in early 2006, said: 'Telstra has pledged to reduce our 1,252 business and operating systems by 75 per cent over three years and by 80 per cent over five years. Telstra is happy with the progress being made against these targets' (Sainsbury 2006a).

Greg Winn in 2006 was in the midst of trying to rationalise the duplicated systems inside the organisation, so as to make Telstra's operations more efficient. Under Telstra's then silo model, each division of the organisation had its own IT systems and network operations support service (OSS). There was a separate OSS for internet, fixed-line voice, traditional data services and each mobile network (Sainsbury, 2006a).

Offshore outsourcing by low-cost providers was forced onto Telstra by the IT leadership, with little regard to actual service delivery and as a cost-cutting exercise (A8, 2007). The Human Resources department believed it was paying for a premium service but receiving cut-price delivery (A2, 2006; A9, 2007).

Senior management within Telstra felt that engaging in outsourcing too quickly had resulted in a loss of intellectual capital. Outsourcing partners were preparing business cases that affected Telstra's ability to make informed decisions. This was detrimental to Telstra's values, so the model was changed to bring some expertise and knowledge back in-house (A6, 2006). This affected service quality to internal organisational units. Vendors worked to meet service quality and delivery in line with 'service level agreements', but had little local knowledge of Telstra's processes or requirements. This created the perception by internal staff that organisational units were being forced to accept whatever the outsourcing provider delivered, rather than what was agreed to. The Telstra IT business unit saw itself as a facilitator of IT systems and the outsourcing partner as the developer and maintainer, but individual business units saw Telstra IT as a full service provider (A4, 2006). The Telstra IT business units felt that the service quality varied among business units because different outsourcing suppliers had different service level agreements, and little effort was made to enforce them by the Telstra contract management unit (A9, 2007).

In 2004, Vish Padmanabhan from IBM joined Telstra as deputy CIO. On becoming acting CIO he was charged with consolidating some 50 unwieldy billing systems that had been an impediment to the development of a much-desired single-

customer view within Telstra (Bajkowski 2005). The Telstra IT organisation was entering a new era with a new senior management team that mooted initiating cuts of around 10 per cent to Telstra's IT management structure. More focus on operational performance, IT governance, and IT end-to-end process re-engineering was instigated.

With the arrival of a new management team in late 2005, Greg Winn was appointed Chief Operations Officer (COO) and immediately assumed tight control of key information decision-making and communication technologies (LeMay, 2006). With the organisation conducting an extensive review of IT in conjunction with the consultancy firm Accenture, speculation mounted about the extent to which Mr. Padmanabhan had been sidelined under the new regime and relegated to custodian of the organisation's existing systems. Service quality was questionable as outsourcing partners attempted to cope with the changing structures and new processes. Due to the changes taking place in the organisation, the roles of the CIO and IT needed to be justified. It was perceived that Mr Padmanabhan was part of the previous management team and this may have been a factor in why he was not promoted to the permanent CIO role and subsequently left the organisation (LeMay, 2006). In 2006, Fiona Balfour was appointed CIO directly reporting to the CEO.

### 4.7.6 Rationalisation of systems and outsourcing partners

Considerable effort was being made in the period 2006–2007 to transform front-of-house customer interface systems and to unify the diverse billing systems. Back-of-house systems were being managed through ad hoc changes and attempts to simplify architecture and rationalise systems. It is ironic that one of the systems replaced — Andersen Consulting's FEXREM system — was replaced with an off-the-shelf product from Accenture, the new face of Andersen Consulting. The transformation project was an attempt to centralise considerable customer and operational IT systems into unified platforms. It was not being managed by the Telstra CIO or in-house IT team but an Accenture-led technology transformation program (Woodhead, 2007).

A common criticism was the lack of a grand plan, with only front office changes being implemented by contractors who had an eye to timelines and cost, rather than quality (A9, 2007; A14, 2007). This resulted in disjointed business processes and counterproductive enhancements. Focus was on the transformation project and attempting to limit 'keep it running' projects (A9, 2007).

At the same time as attempts were being made to remove systems, additional business-driven ones were being initiated, including a new supply chain system. The seven-year outsourcing of supply chain procurement to IBM required considerable interfacing between Telstra and the IBM supply chain systems (Lombardi, 2006). This highlighted the way Telstra business needs were driving systems' requirements, with a tendency to fulfil near-term requirements while disregarding overall system blueprints or total costs.

During 2006–2007, with over 1,200 legacy systems remaining, Telstra lacked the flexibility to meet the evolving business landscape. The CIO and IT department were apparently not providing leadership, instead acting as surrogate implementers who reacted to ad hoc business requirements, and to outsourcing support for offshore providers who were attempting to offer value-added services to their clients. In newspaper articles at the time, 'Satyam's consulting-led approach to client-partnering' was highlighted for not supplying thoughtful leadership (Charlie, 2006). Telstra found the reality to be that offshore partners didn't have local business expertise or the motivation to provide considered leadership. The outsourcing support relationship was about specification down to the smallest detail and micro-managing the service provider. Telstra's internal processes and procedures, combined with the off-shoring model, meant long lead times for projects and a lack of flexibility (A4, 2006).

It should be noted that for the major transformation of customer-facing and billing systems, Accenture, a local outsourcing partner, was the primary partner for its introduction and offshore providers such as Satyam and Infosys were relegated to supporting the legacy systems remotely that were targeted for replacement. There was discontent within the IT department, which felt that rather than leading the transformation it was being imposed on the department by the external consultancy group Accenture, but Telstra's IT departments would  be left to sort out the problems (A4 2006). It should also be noted that the previous transformation program had replaced only a small proportion of the legacy systems.

Leadership was still being driven by the COO, although the CIO reported directly to the CEO. The CIO was not regarded as part of the senior management team's 'inner sanctum'. Enns & Huff (1999) noted that the CIO's involvement in Telstra's strategy formulation process provided a good indication of his true position in the organisation's leadership. The then director of IT transformation did not report to the

COO via the CIO. The CIO's major role was as custodian of the organisation's existing systems, and the position was charged with managing day-to-day issues in the new transformation systems. This reporting structure, with the CIO at level 1, highlights the recognition of IT's importance to the organisation but the transformation structure appears to indicate a lack of IT departments' ability to deliver.

By 2007 Telstra's IT structure had not changed significantly, but additional processes and committees had been introduced in attempts to limit business-as-usual IT spending and to focus on the transformation projects. Programs aimed at improvement, such as the six Sigma Quality programs, disappeared. It was felt that the service quality of the outsourcing service providers had dropped as Telstra's management concentrated on the transformation projects, to the detriment of operational systems (A8, 2007). To keep them running, projects were based on time and cost with incumbent service providers guaranteed projects. While each organisational unit was attempting to follow a set process, there was no formal program in place to ensure improvements in IT processes and delivery of IT service.

It was felt by Telstra business units that the incumbent outsourced service providers (Accenture, IBM, Infosys, EDS and Satyam) had different degrees of reliability, responsiveness, assurance and empathy, which made managing and coordinating integrated IT projects extremely difficult (A6, 2006, A14, 2007).

In a shock announcement Ms Balfour resigned as CIO and left the organisation when she was only eight months into a five-year contract (Sainsbury 2007). It is perceived by Telstra's business units that the IT department's ability to deliver IT projects to business, rationalise and transform the IT systems and integrate with the transformation team put Ms Balfour in conflict with the senior management, and that this became untenable. Ms Balfour felt that the CIO should be responsible for the IT transformation project (LeMay, 2007).

## 4.8    Telstra conclusion

Based on Peppard and Ward's (1999) perception gaps in leadership, structures and processes, service quality, and values and beliefs, it would appear that Telstra's IT perception gap is comparable to that at Texaco (Hirschheim, Porra & Parks, 2003). Hirschheim et al. concluded that IT leaders do not make the perception gap go away, and this has been confirmed in the case of Telstra. They pointed out that the perception

gap may continue to plague future IT organisations, whether they occur as in-house or outsourced functions, and the research for this thesis supports that view.

Telstra at the end of 2008 was committed to reducing business and operational systems by 75 per cent in three years, and by 80 per cent in five years. Outsourcing remained very much on the agenda and was being driven by senior management's need to cut costs. The problem continues to be that the IT business unit sees itself as primarily a service to business, but the business unit's existing perception is that Telstra IT should also provide the strategic IT business leadership.

The traditional role of IT is development and maintenance of IT systems, and includes a service component to support the organisation. In Telstra, the IT function over the last 10 years changed from the traditional IT role (an in-sourced federated model) towards a unitary outsourced model (A9, 2007). During this time, there have been three different outsourcing partners and four different CIOs, and each CIO introduced new outsourcing partners and processes. This lack of continuity in leadership was reflected in the inability of all of the CIOs to take ownership of IT functions within the organisation. This was mirrored by the fact that business unit general managers were still able to build mission-critical IT systems without the CIO's knowledge or agreement (A9, 2007).

In 2007, Telstra was rationalising the number of platforms to form a cost-competitive operation. Yet by 2011 with Australian Government legislation to introduce a National Broadband Network (NBN), Telstra still has legacy portfolio of over 1,400 systems using conflicting and niche technologies and long-term hosting and outsourcing contracts with various vendors, which has resulted in disparate systems and a convoluted supply chain. Telstra's outsourcing support models may have been effective for stable legacy systems, but are they effective in an emerging and changing market? It would require considerable commitment of resources, time and process re-engineering to transform Telstra from an engineering-based service provider to a market-driven organisation.

A continual focus for this thesis is a better definition of what IT does and the role it plays in an organisation in relation to such things as vendor management, architecture strategy and system implementation. The different eras are summarised in

Table 4.1, which is intended as a guide to the different periods, the CIO involved and the type of leadership provided.

| Era Name | Dates | Main Lead | CIO Type | Reporting Relationship |
|---|---|---|---|---|
| Pioneering | 1963–1965 | H. S. Wragge Chief Technology Office | Initiator | Direct to Board |
| Centralised + much 'rogue' development | 1965–1980 | Ron Smith from 1970–1991 | Builder (Federation) | Level 2 — Managing Director |
| Same as above | 1980–1987 | Various organisation units | Builder (Federation) | Level 2 — Managing Director |
| End User Computing | 1987–1990 | Ron Smith Various organisation units | Builder (Federation) | Level 2 — Managing Director |
| Rapid Growth (IT to Organisation) | 1990–1998 | Brian Lovelock *CIO[33] | Distributor (Federation) | Level 2 — Managing Director |
| Consolidation | 1998–2001 | Dwight King CIO | Consolidator Entrepreneur (Federation) | Level 2 — Managing Director |
| Rationalisation | 2001–2004 | Jeff Smith (Corporate CIO) | Downsizing | Level 2 — Managing Director |
| Consensus Building | 2005–2006 | Vish Padmanabhan (Acting CIO) | Consensus Builder | Level 2 — Managing Director |
| Transformation Downsizing | 2006–2007 | Fiona Balfour (Corporate CIO) | Transitionary | CIO — Level 1 to CEO |
| Transformation | 200–2008 | Tom Lamming (CIO & Transformation) | IT Transformation | CIO — Level 1 to CEO |
| Outsourcing & External Hosting | 2008–2010 | John McInerney (CIO) | IT Transformation | CIO — Level 1 to CEO |
| Customer Driven | 2010– | Patrick Eltridge (Reports to CEO) | Agile Methodology | CIO — Level 1 to CEO |

Table 4.1: Eras of IT at Telstra

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[33] Chief Information Officer (CIO) first time title was used (O'Neill 2006).

The various eras have involved different IT functions associated with the various CIO leaders. Authors Bourbeau (2004), Lin & Pervan (2001) and Hirschheim et al. (2003) point to the IT leadership of organisations as the reason why IT function is ineffective, while Weiss & Anderson (2004) and others have highlighted the lack of alignment of the technology and business strategies at the corporate level.

## 4.9 Exploratory phase interviews

Interviewees from different Telstra business units (refer Table 3.2: Source of Interview Titles) were selected by this researcher to gain a cross-sectional view of IT outsourcing in the Australian context. One-on-one interviews were conducted as outlined in chapter 3 (Research Methodology) and figure 3.1. Coding based on the major themes – reasons for outsourcing, benefits of outsourcing, and impact of outsourcing – was used as the starting point to integrate and refine the categories that emerged as outlined in Appendix F (Results of Interviews).

For the qualitative research, data analysis was then conducted, based on 'constant comparison' (or 'grounded') theory, where an iterative and progressive process is used as an aid in the formulation of hypotheses (Creswell, 1998; Strauss & Corbin, 1967; Leedy & Ormrod, 2005 and Stake, 1995). Glaser (1978) highlights the use of background reading (the literature review) to provide models to help make sense of the data.

Data analysis was used to help generate the hypotheses (refer 4.10: Interview Conclusions). It also helped form the basis of the survey questionnaire used in Chapter 5: Results. This coding approach allowed analysis based on categories and concepts and their interrelationships. A combination of abstract ideas and categories (based on Chapter 2: Literature Review) was used to generate a general theory. This researcher was looking for indicators, with reference to the literature review, for initial concepts, using Strauss & Corbin's (1998) ideas to expose thoughts, ideas and meaning.

### 4.9.1 Step 1: Organisation of details

Interview findings were grouped as follows to help formulate the hypotheses:

- reasons to outsource (refer Appendix F, Table F1);
- benefits of outsourcing (refer Appendix F, Table F2);
- issues with the outsourcing partner (refer Appendix F, Table F3);

- impact of outsourcing on the outsourcing business (refer Appendix F, Table F4); and

- the relationship with the vendor/outsourcing partner (refer Appendix F, Table F5).

It was apparent from the reasons given for outsourcing (refer Appendix F, Table F1) that there were issues relating to the internal management of Telstra business units and that outsourcing was seen as a means to control those units. From the initial classification of items, reasons to outsource (refer Appendix F Table F1), it was clear that cost was only one factor and that political or internal politics were a factor, with statements such as 'circumvent', 'force change' and 'just too hard' being used. The findings of previous research conducted by Goles & Chin (2005); Djavanshir (2005); Intriligator (2001); Dahlberg & Nyrhinen (2006) and Pai & Basu (2007) indicate that within an outsourcing organisation the major driver for change is initially cost but this changes during the outsourcing process. Goles & Chin (2005) proposed that reasons to outsource include:

- improving the quality of service;

- providing access to new technology;

- providing flexible and responsive systems;

- focussing on business competencies; and

- improving cash flow.

When the benefits of outsourcing and the issues with the outsourcing partner were examined, the lack of business enthusiasm for the outsourcing process was evident. Among the interview responses on outsourcing (refer Appendix F Table F2) was acknowledgement of the potential additional skill base, the requirement for standardised processes and reporting and opportunities for win-win situations. However, it was evident from the interviews that Telstra employees questioned whether improved quality of service, access to new technology and improved flexibility were relevant results or benefits of outsourcing.

It was clear from the interview findings that the issues which initially prompted management to move to outsourcing — such as time delays, bureaucratic processes and excessive charges — had not disappeared with the instigation of outsourcing. Concerns with inconsistent performance and rigid processes were given as criteria for

outsourcing; however, no reference was made in the interviews to any formal evaluation methodology by Telstra to determine whether performance and processes had improved with outsourcing.

It was clear that outsourcing had a significant impact on the business and on Telstra management (refers Appendix F, Table F5). Drawing on the interview responses, it is clear that the interviewees see the impacts of outsourcing on Telstra as:

- a loss of control to the outsourcing partner;
- a loss of mission and business values in the organisation;
- a loss of service quality;
- longer response times;
- diminished employee morale, productivity and skills; and
- a loss of business knowledge.

It could be surmised from the interview responses that the internal Telstra IT department had not tried to facilitate effective IT outsourcing or to provide enough business IT support. This was reflected in the negativity expressed towards outsourcing.

As highlighted in 2.3.3: Trends in IT, a hierarchy of support is employed in IT organisations that results in complex relationships and partnerships between organisations like Telstra and its outsourcing suppliers. The role of the internal IT department, as highlighted by Goles (2001), became one of facilitating a partnering model. Telstra has a multifaceted relationship with customers, service providers, suppliers and retailers worldwide. The importance that interview subjects gave to the relationships in the process was a consistent theme.

For a summary of the results from this first step of organising details, please refer to Appendix F, Table F6.

### 4.9.2  Step 2: Categorisation of data into meaningful groups

The results of organising details in Step 1 were categorised into the following groups:

- cost savings (refer Appendix F, Table F7);
- service quality/delivery (refer Appendix F, Table F8);
- the level of control/governance (refer Appendix F, Table F9); and
- risk tolerance (refer Appendix F, Table F10).

The reasons to outsource (refer Appendix F, Table F1) were categorised into two groups:

1. internal drivers based on cost (Appendix F, Table F12); and
2. internal drivers not cost driven (Appendix F, Table F11).

The impact of outsourcing (refer Appendix F, Table F4) was also broken into two groups:

1. the impact in relation to management (refer Appendix F, Table F13); and
2. the impact in relation to employees (refer Appendix F, Table F14).

Conflict arose due to outsourcing partners and Telstra management using quantifiable data to justify outsourcing, whereas the Telstra business units' criteria for the ongoing success of outsourcing were based on qualitative factors, e.g. measures. In the interviews, the outsourcing partners' motivations were questioned by respondents with comments such as: 'Outsourcer knows how to play the game and milk organisations' (A4, 2006). This researcher interpreted statements of this type as pointing to a mismatch in criteria for outsourcing between Telstra management, Telstra business units and Telstra employees when it came to what outsourcing had achieved and could achieve. This is reflected in Appendix F, Table F7 and reflects the findings of Lin (2002) that quantitative measures are easier to use than qualitative measures. Lin & Pervan (2001) point out that companies often consider it suitable to rely on cost as the only measurement, because formal evaluation methods have high costs associated with management time and effort. In the case of Telstra, this is reflected in the lack of a formal evaluation methodology by the organisation. Interviews with Telstra employees highlighted that many unquantifiable measures impacted on the costs of outsourcing at Telstra. A common concern referred to in the interviews was the additional cost above the standard outsourcing costs (refer Appendix F, Table F7, Items 6, 7, 8, 9, & 11).

Service quality and delivery using an outsourced model introduced different considerations, insofar as resources of labour and knowledge needed to be managed in different ways and as various outsourcers had varying advantages and disadvantages (refer Appendices 7.2, Table 7, Items 8, 9 and 10). This demonstrates again the benefit of outsourcing organisations such as Telstra using a formal evaluation methodology so they can measure and quantify changes in service quality and delivery.

The differences in the impact of outsourcing on management compared to outsourcing's impact on employees occurred because management was concerned mainly with the costs, while business units concentrated on the effectiveness of their business processes. Differences between employees and management in approach and rationale were highlighted in the interview analysis (refer Appendix F, Table 13). Outsourcing forced business units to follow set processes and these processes were not seen as best practice by Telstra business employees in interviews. This is reflected in Telstra IT business units having various service qualities and different outsourcing suppliers with different service level agreements (A9, 2007). The IT business units that set contracts with the outsourcers did not set the key performance indicators on which Telstra business units were judged (A4, 2006). Telstra business units found that innovation or changes to their business processes were difficult because contracts did not allow for or support changes or improvements. From Telstra management's perspective, cost was the main driver for outsourcing with no regard for each business unit's ability to conduct business (refer Appendix F, Table 8, Items 11, 12, 13 and 14).

### 4.9.3 Step 3: Interpretation of single instances

Telstra's lack of IT governance had led to undisciplined spending on IT. The company's ability to build mission-critical IT systems without the CIO's knowledge or agreement (A9, 2007) resulted in over 1,200 major IT systems in 2005. These in turn resulted in Telstra's IT department lacking the flexibility to cope with an evolving business landscape. The large number of interlinked IT systems resulted in a lack of flexibility. Telstra's IT projects suffered from 'scope creep' and unrealistic requirements, resulting in a need for central IT governance to manage and control costs. Agency theory, as highlighted by Donaldson & Davis (1991), points to managers using opportunistic behaviour based on personal incentives that may not always be in the organisation's best interest. Telstra management, seeing this lack of IT governance, attempted to use the introduction of outsourcing as a tool to slow spending and centralise control, which points to a lack of IT benefit realisation across Telstra (see Appendix F, Table F15, Item 1, 2, 4, 6, 9, 10 and 11). This lack of IT governance is a key factor in the move to outsourcing in some cases. Additional motives for outsourcing included controlling costs, better control and governance, standardisation of processes and moving accountabilities to outsourcing partners (Huang 2009).

The motivations for outsourcing differed between Telstra business units, Telstra IT and the outsourcing vendor and each had different criteria for determining the success of the contracts. The motivations for outsourcing were cost and control by Telstra IT and by Telstra management, while Telstra business units wanted IT systems to support business processes. Interviewees cited difficulties with the internal management of Telstra personnel — when personnel were from other Telstra business units — impacting to such a degree that it became easier to outsource with contracts instead (Appendix F, Table 15, Item 2, 5, 8 and 11). The outsourcing vendor wished to provide a service based on a contract and also to make a profit.

The impact of IT on business has been well documented (Chang, 2007, Hanseth, et al., 2001 and Oh, 2005). The function of IT impacted on the efficiency and productivity of Telstra. The conflict about motivation to outsource was combined with the complexity of the decision-making processes regarding the role of Telstra's management, business and IT.  The role of the Telstra IT department in an outsourced environment was questioned by Telstra business units (Appendix B; Table B8 Item 3 and Table 10 Item 2 & 10): was it to support business requirements, or to provide control and governance? Telstra business required Telstra IT to facilitate a smooth transition to outsourcing partners and to ensure that all business requirements were met (Appendix F, Table F15, Item 1, 2, 5 and 11). Telstra management wanted control and governance (Appendix F, Table F15, item 6, 7, 9 & 10); however, the role of Telstra IT in an outsourced environment was unclear to Telstra business units.

A paradox existed regarding Telstra IT's role, in that it was expected to provide business units with individual tailored IT solutions when requested, yet also provide standardised cost-effective solutions. The IT outsourcing process was managed by the Telstra IT department with little business participation, and interviewees expressed concerns regarding alignment between the outsource service and the delivery of services and governance (Appendix F, Table 15 Item 6, 7, 9 & 11).

Single instances identified by this researcher are summarised in Appendix F at Table F15.

### 4.9.4 Step 4 and 5: Identification of patterns, synthesis and generalisation

The factors identified in Steps 1, 2 and 3 were examined to identify underlying themes and patterns (refer Appendix F, Table F16 Drivers of Outsourcing, Table F17: Critical Success Factors and Table F18: Factors Touted as Outsourcing Advantages). The items were classified and patterns identified as shown in Appendix F, Table F18: Factors Proposed and Identified and summarised in Table 4.2:

- reduces and controls operating costs;

- improves the company focus;

- provides access to world-class talent and capabilities;

- frees internal resources for other purposes;

- accelerates re-engineering benefits;

- helps to handle functions that are difficult to manage or are out of control; and

- makes capital funds available.

| No. | Identification of patterns |
|-----|----------------------------|
| 1 | Management was concerned with the size and spend of IT, outsourcing was seen as a way to control or stifle spend |
| 2 | Employees saw in-house 'build' as better managed and more flexible with shorter timeframes and the ability for ad hoc changes to be accommodated |
| 3 | Employees see outsourcing as a loss of business knowledge and intellectual capital that adversely affects total service cost, time and quality |
| 4 | While most contracts are built around cost and time, which are easily identified, key performance indicators the subset 'Quality' was easily the most relevant from interviews |
| 5 | Management culture is getting it done with a 'work smarter' emphasis but the processes do not support changes or improvements |
| 6 | Quality of service was highlighted as a significant factor, in most cases it was expressed around 'time' |
| 7 | Relationship with vendor both positive and negative |

Table 4.2: Identification of Overall Patterns from Interviews

From the data analysis of perceived outsourcing drivers, critical success factors and outsourcing advantages, it was evident that:

- management was concerned with the size and spend of IT, and outsourcing was seen as a way to control or stifle spend (refer Appendix F at Table 19);

- employees perceived in-house 'builds' as better managed and more flexible, with shorter timeframes and with the ability for ad hoc changes to be accommodated; and

- employees perceived outsourcing as resulting in a loss of business knowledge and intellectual capital, and in this manner outsourcing was adding to the total service cost and resulting in a poor quality product.

### 4.9.4.1 Management: efficiency improvements

By the mid-1990s, Telstra as an organisation had over 1,400 IT systems, its annual IT budget was over $1.5 billion per year (Thomsen-Moore, 2002) and there had been a succession of CIOs. Overemphasis on financial (performance) controls can also reduce the incentive to build inter-relationships among business units or to learn and acquire new skills internally. These concerns were reflected in the interviews with Telstra employees and are highlighted at Appendix F, Table F19, Items 1, 2, 4 and 7.

### 4.9.4.2 Employees: reduced flexibility

Many factors impacted on the decision to outsource and many of the outcomes supported the decisions to outsource as they resulted in a competitive advantage for Telstra. Outsourcing has been deemed by various researchers to significantly increase the speed of work, and thereby create greater organisational efficiencies (Sriwongwanna, 2009; Thompson, Strickland & Gamble, 2005). However, the responses from Telstra interviewees contradicted this as they highlighted concerns and difficulties with the outsourcing processes. Dess et al. (2008) describe the importance of channelling employees throughout the organisation toward common goals, and the experience described by the Telstra interviewees also demonstrated this. The lack of user participation in contract development was an issue; as Lee and Kim (1999) have found, user participation is a key predictor of outsourcing success.

### 4.9.4.3 Associated business costs: business knowledge and intellectual capital

In addition, employees saw outsourcing as resulting in a loss of business knowledge and of intellectual capital. In this manner, outsourcing was adding to the total service cost and resulting in a poor quality product.

Issues with the outsourcing process (refer Appendix F, Table 3) were the loss of internal knowledge and the loss of control of the outsourcing process by Telstra. Outsourcing was seen as reducing the quality of what was delivered, causing both 'unseen' work for Telstra business and 'unseen' costs to the Telstra management. The loss of Telstra business knowledge, intellectual capital and the reduction in the quality of service were significant factors (refer Appendix F, Table F19). The impact of outsourcing on Telstra could be summed up by one interviewed employee's statement that: 'The outsourcing partner has control of your business' (A4, 2006). This meant the relationship with the outsourcing partner was critical. The total costs of outsourcing were not always covered by the money paid to the outsourcing partners as there were additional costs to the business due to loss of:

- ownership of the process;
- intellect; and
- knowledge.

Lei & Hitt (1995) point to the use of outsourcing as an attractive means to control and lower the costs of operation, but they also point to the loss of knowledge and human capital as well as a loss of skills that leads to additional outsourcing of human embodied skills and technologies.

### 4.9.4.4  Quality of outsourcing partnerships

While most contracts are built around cost and time, which are easily identified as key performance indicators, the issue of the 'quality' of the outsourcing partnership was seen as most relevant from interviews. Previous research has highlighted the quality of the outsourcing partnership as a significant factor in successful outsourcing (Chakrabarty et al., 2007; Goles & Chin, 2005; Han, Lee, & Seo, 2007). Many factors contribute towards the concept of 'quality' including communication, participation, cooperation, knowledge sharing, joint action and conflict resolution (Lee and Kim, 1999). Lee and Kim propose four activities to improve partnership quality:

- active participation towards a cooperative relationship;
- increased communication to achieve and monitor integrative agreements;
- sharing information to build a competitive synergy; and
- building trust among partners so that neither partner will act opportunistically.

Telstra contracts are built around cost, not quality; service was highlighted as a significant factor and in most cases it was expressed around 'time'. Quality of service has become an essential parameter in outsourcing, and buyers now look beyond cost and labour arbitrage (Bhagowati, 2005; Dahl, 1996). Researchers have recognised on-time delivery and performance reliability as indicators of the service provided (Alzola, 2005). Previous research has highlighted perceptions and expectations as being important factors in successful outsourcing (Kim, Chen, & Aiken, 2005; Otorowski, 2007). Instruments such as SERVQUAL have been developed to measure these factors but Telstra interviewees made no mention of an evaluation methodology.

The management culture was to get projects done with a 'work smarter' approach, but often the processes in use did not support changes or result in improvements. Employee involvement and communication have been found to be significant factors in successful outsourcing (Sriwongwanna, 2009). In addition, minimising the gap between management and employees' perceptions of outsourcing has been shown to be a contributing factor for successful outsourcing. The Telstra 'Six Sigma' initiative, a quality management program, disappeared in 2005 with the arrival of the Sol Truillo management team and was not replaced by enterprise-wide change management programs or process improvement programs (A8, 2007). Researchers point to change management being an important facet of outsourcing (DiRomualdo & Gurbaxani, 1998; Han, Lee & Seo, 2007; Levina & Ross, 2003).

The relationship with the vendor often has both positive and negative aspects to it and the relationship between outsourcers and outsourcing partners can have many facets. A relationship where significant aspects of performance are to be measured using intangible criteria requires a cooperative or partnership relationship (Beaumont & Sohal, 2004; Bourbeau, 2004; Burdon, 2004 and Lin, Pervan & McDermid, 2007). Telstra with its complexity of IT systems, processes and procedures required all levels of the organisation to share the responsibility for making the relationships work. Benefits that could be gained by outsourcing were:

- forcing strategic thinking for an end-to-end process; and
- providing clear reporting and costing for this process.

However, outsourcing also required the introduction of additional layers of management between the business and the IT functions. Telstra attempted to use

outsourcing as a tool to control or stifle spending on IT (refer Appendix F, Table 19). The benefits of outsourcing, such as a competitive advantage and cost savings,-may be negated by other effects of outsourcing, such as rigid processes (refer Appendix F, Table F19), the loss of intellectual knowledge and longer lead times.

Outsourcing was seen by Telstra management as critical in controlling costs within the individual business units of Telstra. However, business units themselves questioned the true costs and cost savings involved. The quality of service provided by the outsourcing partner was also identified as a concern (refer Appendix F, Table F19).

## 4.10 Interview conclusion

Pak and Basu (2007) point to the need for tight contracts to ensure both the outsourcer and the outsourcing partners have the same expectations irrespective of competing profit motives. The gap between Telstra's expectations and the actual results of the outsourcing partnership was the major factor determining whether outsourcing was seen as successful or not. Interviewees felt that two aspects of the process were major factors in the success of the outsourcing relationship: conflict resolution and integration.

By combining the critical success factors in IT relationships (refer Table 2.3) with the results from the analysis of exploratory phase interviews in Step 1, it was apparent that the following issues with Telstra outsourcing were not identified in the interviews:

- vendor resource exploitation (resource-based theory);
- contract completeness (contractual theory);
- relationship exploitation (relational exchange theory);
- demarcation of labour (theory of firm boundaries); and
- alliance exploitation (partnership and alliance theory).

(Also refer Appendix F, Table 13.) The reason for these issues not arising in the interviews can be attributed to Telstra's history with IT development, its internal support structure and the availability of in-house IT. The relationship between the vendor and the outsourcing parties was clearly identified in interviews as being a significant factor in the success of outsourcing, which confirms previous research by Gottschalk & Solli-Saether (2006) and Basu (2005).

'Quality' of service provided by service providers was a common term used in interviews, which is consistent with research findings in European countries where quality is an important factor in the outsourcing decision (Bhagowati 2005).

The patterns identified from the data analysis of the Telstra employee interviews confirmed that there was a gap within Telstra between management and business units about the reasons to outsource, but is it significant?

Based on the literature review and the interviews the following hypotheses were formulated:

**Hypothesis 1:**

*The reasons to outsource can be multi-tiered. Senior management has different criteria for outsourcing from the criteria considered by middle management and lower-level employees, and the success of outsourcing will be assessed differently by all these groups.*

**Hypothesis 2:**

*Satisfaction with outsourcing is strongly associated with the perception of whether or not outsourcing is working. Satisfaction with outsourcing is a function of the outsourcer's customer service quality and the quality of the information being provided by outsourcers for the processes implemented. The relationships between service quality, satisfaction and switching costs are important factors in the outsourcing process.*

**Hypothesis 3:**

*The primary reason for outsourcing IT functions has changed from cost-cutting to an attempt to better manage the client's internal resources.*

Telstra's IT leadership and a lack of alignment between management and business units were the basis of hypothesis 1 and hypothesis 2.

It was apparent from Telstra employee interviews that many unquantifiable factors impacted on the costs of outsourcing at Telstra. Researchers Willcocks & Lester (1997) point out that there is a need for a family of measures that cover technical and business performance of IT in an integrated manner. In Telstra's case a formal evaluation methodology for outsourcers would have helped to address measures for technical and business performance. One of the primary reasons for outsourcing was

Telstra's inability to manage internal IT. Consequently, hypothesis 3 was to test if the transition to outsourcing was driven by a need to change the culture of Telstra rather than simply for cost containment.

## 4.11  Survey

As described in Chapter 3, a survey (questionnaire) was then formulated and distributed to Telstra personnel with a self-addressed envelope for anonymous return.

The aim of the survey was to investigate issues and ideas formulated in the literature review (refer Chapter 2), as well as those generated in the interviews described in this chapter and in turn to test the three proposed hypotheses.

The questionnaire (Appendix E — Questionnaire) was divided into seven sections as outlined in Table 4.3 (Structure of Survey (Questionnaire)) and Figure 4.2: Survey (Questionnaire) Flow.

Survey items were collated from various sources to facilitate a wide range of data for analysis (Dahlberg et al., 2006; Whitten, 2004; Han et al., 2006 and Goles, 2001).

| Questions | Questionnaire Subheadings | Factors for how questions were determined for each subheading in the questionaire. |
|---|---|---|
| 1 to 55 | About Respondent: About Your Firm; Resources; and About Contract(s). | The researcher interviewed a cross section of employees as outlined in Table 3.2 Source of Interviews. |
| 56 to 57 | Reason to Outsource | This section was based on the main factors touted as outsourcing advantages (refer section 2.5). |
| 58 to 70 | Benefits | Questions are designed to focus on core business, service and quality provided by the service providers in conjuction with results of interviews Appendix F Results Interviews (Table F17: Identification of Patterns – Critical Success Factors) |
| 71 to 84 | Issues with Outsourcing Partner | Focus on inherent risk, negative and positive in IT outsourcing based on results of interviews Appendix F Results Interviews (Table F17: Identification of Patterns – Critical Success Factors) |
| 85 to 100 | Impact of Outsourcing | Examine impact of outsourcing based on relationship and quality (Gover et al., 1996; Goles & Chin, 2005; Intriligator, 2001;and Pai & Basu, 2007) |
| 101 to 135 | Relationship with the Vendor / Outsourcing Partner | The measure of the quality of relationship between Telstra and outsourcing provider, based on SERVQUAL instrment of tangibles and reliability (Parasuraman et al., 1988). The literature review and Hypothesis 2 suggest that switching costs are a major factor after outsourcing. It offers another dimension to this research by providing an overview of what is required to make a decision to continue or discontinue an outsourcing contract. The research model proposed by Whitten (2004, p.199) as shown in Chapter 2 (Figure 2.10 Whitten research Model and Table 2.11 research model) |
| 136 to 177 | Switching costs: Changing outsourcing partner; /Benefits; Back sourcing[34]; Setup costs; and Sunk costs. | Literature review and Hypothesis 2 point to switching costs as being a major factor after outsourcing. Switching of service provider offers another dimension to this research by providing an overview of what is required to make a decision to continue or discontinue an outsourcing contract. The research model proposed by Whitten (2004, p.199) as shown in Chapter 2 (Figure 10 Whitten research Model and Table 2.11 research model) |

Table 4.3: Structure of Survey (Questionnaire)

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[34] Backsourcing is the strategy of bringing the once outsourced IT functions back into the organisation

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┌─────────────────────────────────────┐
│ About Respondent                    │
│ About Your Firm                     │
│ Resources                           │
│ About Contract (s)                  │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│ Reason to Outsource                 │
│ Benefits                            │
│ Issues with Outsourcing Partner     │
│                                     │
│                                     │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│ Impact of Outsourcing               │
│ Relationship with Vendor / Outsourcing Partner │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────────────────┐
│ Switching costs                                 │
│ Changing outsourcing partner/Benefits /Switching costs │
│ Back sourcing / Switching costs                 │
│ Switching costs  / setup costs / Sunk costs     │
└─────────────────────────────────────────────────┘
```
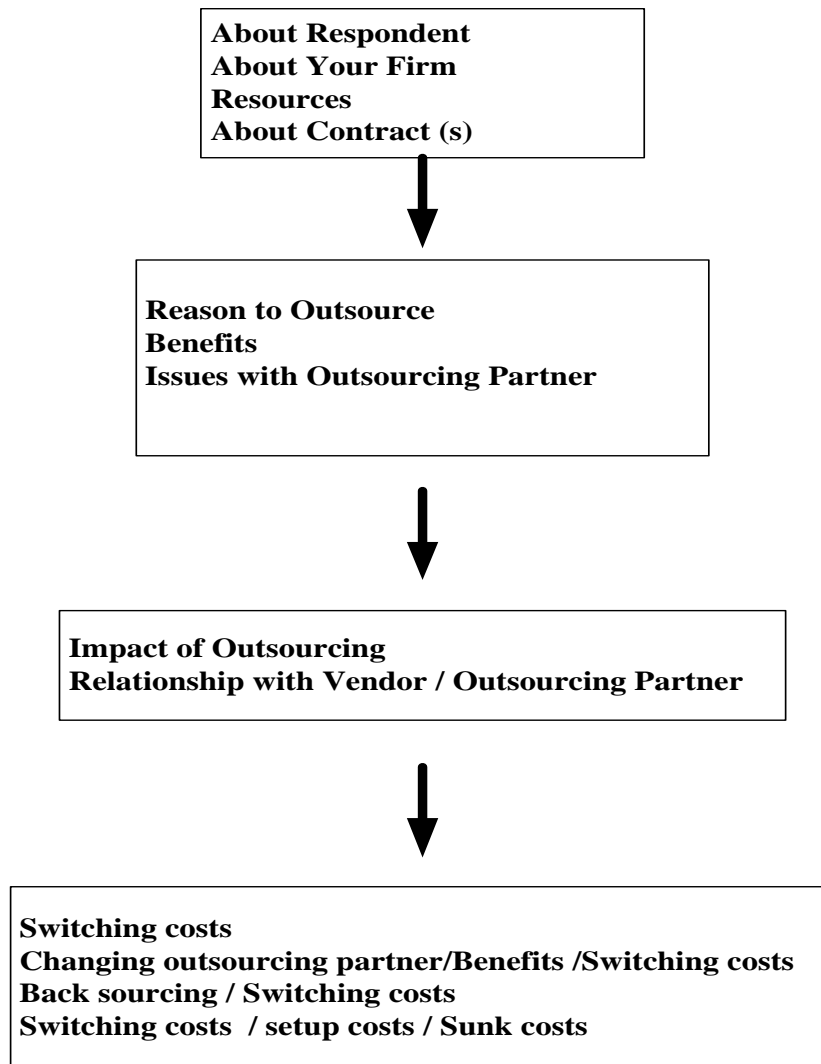
*Figure 4.2: Survey (Questionnaire) Flow*

# CHAPTER 5   Results of Survey

## 5.1   Introduction

Telstra has a mature, technically advanced IT workforce that is well able to provide complex and technical solutions to meet business processes. Telstra has become an international organisation and accepts outsourcing from IT providers, both onshore and offshore, as normal business practice. Past studies on outsourcing have examined a long list of factors that affect the outsourcing decision but their ultimate conclusions are that outsourcing is an economic decision (Costa & Beaumont, 2001; Shao & David, 2007; Williamson, 1981). However, empirical studies have generated mixed findings about the effects of outsourcing IT based on fiscal factors. These perplexing results may occur because of the multifaceted nature of business and its inability to capture the true cost of IT outsourcing based on fiscal factors. Measured in disparate dimensions, fiscal or political variables may bring different results (Mankiw & Swagel 2005).

While outsourcing organisations are realising benefits, they are hard pressed to demonstrate conclusively that these are due to the changing environment and technology (Lin & Pervan, 2001). Organisations view IT outsourcing as a business strategy with contracts tailored to meet their requirements, and outsourcing organisations have learnt what to outsource and, more importantly, what not to outsource (Willcocks & Lacity, 1998). In the process, outsourcers have learned how to manage outsourced IT projects using tools like Key Performance Indicators (KPI) (Pai & Basu, 2007).

This chapter presents results of the survey conducted (refer Appendix E — Questionnaire). Section 3.3.1 Data Analysis gives an overview of the methodology used to collect and collate data. A cross-sectional data survey was developed (for an overview refer Section 4.12, Figure 4.2: Questionnaire Flow and Table 4.3: Structure of Survey), resulting in the survey (as outlined in Appendix E). The questionnaires were distributed to a sample population of employees, managers and executives involved in IT outsourcing within the Telstra business units of human resources, financial business and IT support services. Questionnaires were mailed back to the researcher anonymously. From the 100 that were personally distributed along with stamped and addressed return envelopes, 33 completed questionnaires were collected and this sample size was adequate to perform analysis. Survey results were tabulated, as shown in

Appendix G: Independent Variable, for the frequencies and percentages of individual questions and the results of background questions are tabulated in Appendix G, Tables G1 to G23. Descriptive statistics were used to describe patterns in the respondent database and to understand the areas of Telstra surveyed, the IT budget, the total number of staff and the numbers of IT staff in the organisation.

The statistical techniques for descriptive statistics, Chi-Square and t-test, were used to test the survey response data. The mean, mode and standard deviations of responses are listed in Appendix K: Factor Analysis.

The dependent variable groups measured by the researcher and predicted to be influenced by independent variable groups, as identified in this study, are outlined in Appendix J: Iterations. Within the Iterations, Tables J1 to J93 were used to test the statistical significance of groups of variables. This research provides an Australian perspective on IT outsourcing using Telstra as a model and is based on the earlier literature research and information gathered from interviews. Three hypotheses were proposed (refer Section 4.10: Interview Conclusions). Data was collated and grouped based on an initial questionnaire (refer Appendix E: Questionnaire) regarding:

- resources;
- contract description;
- benefits;
- issues with outsourcing partner;
- impact of outsourcing;
- relationship with outsourcing partner;
- changing outsourcing partner − benefits and switching costs;
- back-sourcing/switching costs; and
- switching, setup and sunk costs.

## 5.2   Respondents and organisation profile

The Telstra employees surveyed are part of a well-established organisation that has existed in various forms for over 100 years and has had an established IT sector since the leasing of mainframe computing in the early 1960s. In 2008, when the survey for this research was conducted, Telstra employed in excess of 30,000 individuals and contractors across the business units of the organisation (refer Figure 4.1 in Chapter 4).

Telstra is a large, Australian-based multinational organisation with multiple outsourcing contracts. Respondents were typically middle-aged males (81%[35]), between 41 and 59 years old (50%) (refer Table 5.1). The majority of 16% had between two and five years' service in their current positions with Telstra (refer Table 5.2) and were in mid-level managerial positions (refer Table 5.19 and Appendix G, Tables G1 to G9). They had been in their respective business units for more than five years (refer Table 5.2) and had been in their respective positions for less than five years. Telstra had varied outsourcing contracts, with more than 50% of respondents indicating a knowledge of over 40 outsourcing contracts (refer Appendix G, Tables G19 to G22). The average dollar amount of outsourcing contracts was estimated at AUD$78 million. Most respondents were not involved in decisions to outsource (88% of respondents) but all respondents were involved with outsourced vendors (refer Appendix G, Tables G5 and G6). From the questionnaire results it was evident that Telstra employees were not educated regarding outsourcing, as 88% had no formal training and did not have specific knowledge of Telstra IT outsourcing processes, procedures and costs outside of their immediate work area (refer Appendix G, Tables G5 and G11–G16).

|  | Age Range | Frequency | Male | Female |
|---|---|---|---|---|
| Valid | 20 to 30 years | 4 | 4 | 0 |
|  | 31 to 40 years | 6 | 6 | 0 |
|  | 41 to 50 years | 16 | 12 | 4 |
|  | 51 to 60 years | 7 | 5 | 2 |
|  | Total | 33 | 27 | 6 |

Table 5.1: Age and Gender of Respondents
(extract from Appendix G: Tables G1 & G2)

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[35] All percentages are calculated to 2 decimal places but rounded down to whole numbers

| Frequency | | Years of Service with Telstra | Time in Current Position |
|---|---|---|---|
| Valid | 0 to 1 year | 7 | 13 |
| | 2 to 5 years | 6 | 16 |
| | greater than 5 years | 20 | 4 |
| | Total | 33 | 33 |

Table 5.2: Respondents' Years of Service to Organisation
(extract from Appendix G: Tables G3 & G4)

| Position | Frequency |
|---|---|
| Analysis | 6 |
| Support | 7 |
| Middle Manager | 16 |
| Senior Manager | 2 |
| Other | 2 |
| Total | 33 |

Table 5.3: Position in Firm (extract from Appendix G, Table G8)

Section 4.8 highlighted the Chief Information Officer's (CIO) lack of continuity and the changing role of IT in Telstra. Almost half of all respondents (48%) were noncommittal on the effectiveness of the CIO, while 12% disagreed that the CIO was effective (refer Appendix G, Question 40). Similarly a large proportion of respondents were noncommittal (36%) regarding the excellence of IT solution delivery, while almost a quarter (24%) of respondents disagreed with the statement that excellent IT solutions were delivered (refer Appendix G, Question 39). There was mixed support for in-house IT, as summarised in Table 5.4 (also refer Appendix G, Questions 41 to 45), where 42% strongly disagreed and only 27% agreed that in-house IT lacked strategic direction. Furthermore, 52% disagreed with the lack of rigour but 20% disagreed that project scope creep was significant and 36% were non-committal, while 33% agreed that this was a significant factor. From the research, the conclusion could be drawn that support for the Telstra IT department was by no means universal.

| Question (Appendix E) | Disagree 1&2 | Noncommittal 3,4&5 | Agree 6&7 | Mean (Appendix H) |
|---|---|---|---|---|
| Q 41. Lack of Strategic Direction | 48% | 24% | 27% | 3.06 |
| Q 42. Lack of Rigour | 54% | 18% | 27% | 3.06 |
| Q 43. Scope Creep | 30% | 36% | 33% | 4.27 |
| Q 44. Cost Increases | 30% | 36% | 33% | 4.09 |
| Q 45. Timelines Increases | 30% | 48% | 21% | 3.85 |

Table 5.4: Summary of In-house IT support Before Outsourcing
(extract from Appendix G: Tables G41–G45)

Based on the small sample size for the questionnaire (33 responses) and on the data of a random sample of independent observations, a one-sample t-test was used to obtain a sampling mean (refer Appendix H: One Sample t-test).

### 5.2.1 About contracts and benefits: Questions 49–70

Strategies for outsourced IT support and development were important and were based on contractual obligations, but it was assessed that additional costs outside of a contract are high. The assessment was that six months was required to exit most contracts.

Reasons given to outsource (refer Table 5.17 and Figure 5.4 and also Appendix G: Table G56) were:

- cost saving measure (72.7%);
- strategic business direction (12.1%);
- freeing up internal resources (9.1%); and
- competitive advantage (6.1%).

Types of outsourcing (Appendix G, Table G57) were stated as:

- total outsourcing (27.3%);
- offshore outsourcing (54.5%); and
- multi-sourcing (18.2%).

Thirty-six percent of respondents considered that outsourced IT development was strategically important to the organisation (refer Appendix G, Table G5, Question 50) and 36% viewed it as strategically unimportant, while 25% were noncommittal. This obviously indicates divided opinions. However, at Question 49 where 42% of

respondents indicated that outsourced IT support was strategically important and 54% were noncommittal, this appeared to indicate that there were differences between attitudes to development and support (Table 5.21 and Appendix G, Tables G49 and G50).

There was strong disagreement on whether there were improvements to business by outsourcing (refer Questions 58 to 64) where agreement based on a Likert score of 6 or 7 was less than 6% (refer Table G6). Question 58 resulted in 72% of respondents indicating that they felt changes had not resulted in improved development cycles; of these, 60% strongly disagreed that outsourcing had resulted in improved quality of application and at Question 62 42% felt it had not been beneficial from a business perspective (refer Table 5.22 and Appendix G, Tables G58 to G64). This is also reflected at Questions 123 to 124, 126 to 129 and 131 to 135 where on a Likert score of 6 or 7, agreement was less that 12% and in some cases 0% for the outsourcing vendor's communications, quality, and improved business productivity (refer Table 5.24). Telstra employees questioned the vendors' IT skills: 60% were noncommittal and 33% had strong concerns, while only 6% supported vendors' IT skills. For IT outsourcing partners' expertise in business processes (Question 64), another 60% expressed strong concerns while 36% had passive concerns (refer Table 5.22, Question 63 and 64 and Appendix G, Tables G63 and G64).

This correlates with Question 52 where 51% of respondents strongly agreed and only 6% disagreed that additional costs outside of the contract were high (refer Table 5.22 and Appendix G, Table G52). Responses were mixed on the complexity of the supply chain (refer Table 5.22 and Appendix G, Table G66) where 42% selected 'strongly agree' and an additional 36% selected 2, 3 or 5 (that is, passively agreeing) but 21% strongly disagreed.

Most interviewees recognised the need for management support and a good relationship combined with rigorous internal controls, with 66% indicating that outsourcing had decreased local IT knowledge (refer Appendix G: Tables G66 to G69).

| Question (Appendix E) | Important 1&2 | 3,4&5 | Not Important 6&7 | Mean (Appendix H) |
|---|---|---|---|---|
| Q 49. Strategic importance of outsourced IT support | 42 % | 54 % | 3 % | 2.61 |
| Q 50. Strategic importance of outsourced IT development | 36 % | 27 % | 36 % | 2.94 |

Table 5.5: Strategic Importance of Outsourced IT Support and Development

| Question (Appendix E) | Disagree 1&2 | Noncommittal 3,4&5 | Agree 6&7 | Mean (Appendix H) |
|---|---|---|---|---|
| Q 52. Additional costs outside of contracts are high | 6 % | 51 % | 42 % | 5.30 |
| Q 58. Shortened development life cycle | 72 % | 27 % | 0 % | 2.09 |
| Q 59. Improved quality of application | 60 % | 39 % | 0 % | 2.21 |
| Q 60. Improved service delivery times | 54 % | 39 % | 6 % | 2.70 |
| Q 61. Outsourcing partner has reduced total cost | 45 % | 55 % | 0 % | 2.77 |
| Q 62. Beneficial from a business perspective | 42 % | 51 % | 6 % | 3.03 |
| Q 63. Skilled in IT applications | 33 % | 60 % | 6 % | 3.61 |
| Q 64. Skilled in business processes | 60 % | 36 % | 3 % | 2.36 |
| Q 65. Competitive advantage between internal business and outsourcing companies | 51 % | 47 % | 0 % | 2.52 |
| Q 66. Complex supply chain | 21 % | 36 % | 42 % | 4.94 |
| Q 67. Decreased local IT knowledge | 0 % | 33 % | 66 % | 5.70 |
| Q 68. Outsourcing is important for success | 6 % | 21 % | 72 % | 5.88 |
| Q 69. Relationship between business and outsourcing vendor has improved [?] | 9 % | 36 % | 54 % | 5.03 |
| Q 70. Rigorous internal controls between business and outsourcing vendor are required. | 33 % | 0 % | 66 % | 5.91 |

Table 5.6: Summary of Contract and Benefits of Outsourcing
(extract from Appendix G: Tables 52–70)

### 5.2.2 Issues and impact with outsourcing partner: Questions 71–100

Telstra business users were not satisfied with the results of outsourcing, with only 12% agreeing and 36% disagreeing with overall satisfaction. This was reflected in Question

84 with 0% support for win/win in outsourcing, 75% noncommittal and only 12% agreeing that they had overall satisfaction with the outsourcing partner (refer Table 5.7; and also Appendix G: Questions 84, 85 and 92). Most respondents doubted an outsourcer's ability to manage functions: specifically, only 6% thought that outsourcing allowed better management and no one thought that the quality of delivered systems had increased since outsourcing (refer Table 5.6; and also Appendix G: Questions 78, 84 and 96–100).

The responses confirmed that outsourcing did not solve cost or management issues in that, while 69% believed vendor management to be important, 72% were of the view that the business had lost expertise and 12% thought that the outsourcing partner met KPIs (refer Table 5.7; and also Appendix G: Questions 72, 73, 74, 80 and 94). This suggests that, as with the research by Hijazi (2005), Kern et al. (2000), Sargent (2006) and Worthington (1997), outsourcing requires ongoing supervision and additional management.

Responses to Question 78 indicated a lack of support (45%) for outsourcing as a means of allowing regulators to better manage functions. Beaumont et al. (2004), Mammano (2004) and Jiang & Qureshi (2006) state that outsourcing frees up resources and allows organisations to concentrate on running their businesses. However, this was not supported in the results from the questionnaire, as 72% highlighted lost expertise and only 12% supported the proposal that using outsourcers provided additional flexibility with staff (refers Table 5.7 and Questions 79, 77 and 80). Results from Questions 71, 79, 80 and 84 indicated that resources were required to manage the outsourcing process and that the expected benefits did not eventuate and, in fact, resulted in a loss of expertise which in turn affected staff morale (refer Table 5.7 and also Appendix G). Results from Questions 71, 77, 79, 80 and 84 confirmed the findings of Kakabadse & Kakabadse (2003) that a loss of expertise was a major concern associated with outsourcing.

The IT outsourcing literature has not recommended outsourcing a large portion of services, but rather using selective sourcing (Allen 2004; Lacity, Willcocks & Feeny 1996; Whitten 2004). One of the consequences of selective sourcing is that outsourced services vary in quality, as highlighted with Question 91 where 54% agreed and 39% passively agreed (refer Table 5.7 and also Appendix G). Questions 96–99 indicate that the benefits for selective outsourcing services are not being realised where agreement as

to improvement in development and quality is less than 12%. This aligns with the perceived feeling by respondents that benefits did not eventuate and that this then affected staff morale (refer Appendix G: Table G 96 to G99).

| Question (Appendix E) | Disagree 1 & 2 | Noncommittal 3, 4 & 5 | Agree 6 & 7 | Mean (Appendix H) |
|---|---|---|---|---|
| Q 71. Choosing wrong vendor has caused ongoing problems | 6% | 51% | 42% | 5.09 |
| Q 72. Vendor management is very important and requires ongoing supervision | 0% | 30% | 69% | 6.00 |
| Q 73. Support and enhancement and projects requires ongoing supervision | 0% | 45% | 54% | 5.67 |
| Q 74. Operation and expense management of vendor requires ongoing supervision | 6% | 51% | 42% | 5.24 |
| Q 75. Onshore work is of better quality than offshore work | 12% | 45% | 36% | 4.52 |
| Q 76. Response to business requests is dependent on outsourcing partner | 0% | 51% | 48% | 5.24 |
| Q 77. Outsourcing partner / vendor is able to provide flexibility with staffing | 18% | 69% | 12% | 4.06 |
| Q 78. Outsourcing has allowed regulators to better manage functions | 45% | 42% | 6% | 2.70 |
| Q 79. Staff morale has decreased with outsourcing | 0% | 45% | 48% | 5.15 |
| Q 80. Business has lost expertise with outsourcing | 5% | 21% | 72% | 5.70 |
| Q 81. Business has lost control with outsourcing | 18% | 60% | 21% | 4.18 |
| Q 82. Organisational support from outsourcing partner has decreased over time | 12% | 70% | 18% | 4.18 |
| Q 83. Market demands forces outsourcing partner to improve their performance | 30% | 60% | 9% | 3.55 |

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| Question<br>(Appendix E) | Disagree<br>1 & 2 | Noncommittal<br>3, 4 & 5 | Agree<br>6 & 7 | Mean<br>(Appendix H) |
|---|---|---|---|---|
| Q 84. Outsourcing allows win/win in that business can concentrate on business and leave outsourcing partner to manage their contracted items | 24% | 75% | 0% | 3.30 |
| Q 85. Outsourcing was supported by business | 36% | 51% | 12% | 3.61 |
| Q 86. Outsourcing was supported by internal IT staff | 60% | 27% | 12% | 2.76 |
| Q 87. Most internal IT staff were transferred to outsourcer | 24% | 33% | 36% | 4.06 |
| Q 91. Outsourced service varies between applications | 6% | 39% | 54% | 5.55 |
| Q 92. Business overall satisfaction with outsourcing partner is high | 36% | 51% | 12% | 2.91 |
| Q 93. Relationship with outsourcing vendor is strong | 24% | 63% | 12% | 3.91 |
| Q 94. Outsourcing partner meets key performance indicators | 12% | 75% | 12% | 4.27 |
| Q 95. Communication with outsourcing partner is positive | 24% | 53% | 12% | 4.27 |
| Q 96. Development time for minor changes has decreased since outsourcing | 45% | 36% | 18% | 2.97 |
| Q 97. Development time for major changes has decreased since outsourcing | 54% | 39% | 6% | 2.58 |
| Q 98. Quality of delivered system has increased since outsourcing | 42% | 57% | 0% | 2.88 |
| Q 99. Quality of documentation has increased since outsourcing | 60% | 33% | 6% | 2.88 |
| Q 100. Quality of training has increased since outsourcing | 54% | 33% | 0% | 2.15 |

Table 5.7: Summary of Issues and Impact with Outsourcing Partner
(extract from Appendix G, Tables G71–G100)

### 5.2.3 Relationship with outsourcing partner

The relationship between Telstra and the outsourcing service partners was critical, yet Question 7 indicates that 88% of Telstra employees had not received formal training.

At Question 108, 42% of Telstra employees indicated their strong belief that outsourcing partners were committed to the relationship; however, only 15% at Question 109 believed Telstra's internal business units were committed to the relationship (refer Table 5.8; also refer Appendix G: Questions 108 and 109). This can be attributed in part to the responses at Questions 104 and 105, where the outsourcing partner was perceived as ethical and sincere in providing service, but the trust or lack of relationship between parties was considered a problem. Questions 101 and 102 show that 36% of outsourcing partners have made decisions that were not seen as beneficial to Telstra in some cases and 42% indicated that outsourcers didn't provide assistance above contract requirements (refer Appendix G: Questions 101 and 102). This was highlighted in the Telstra interviews (refer Table 4.15: Identification of Overall Patterns) where Telstra employees saw in-house 'build' as better managed and saw the outsourcing partner as not prepared to provide service and assistance beyond the minimum contract requirements. This was also evident from the responses to Question 106 where 18% agreed that the relationship was based on the contract only, while only 12% disagreed.

The relationship with the outsourcing partner was an important factor in outsourcing success (Arnold, 2001; Walsh & Deery, 2006; Wong et al., 2010). In initial interviews an experienced IT executive (with a proven international track record of managing outsourcing and the CIO of a major Australian organisation) stated that 'Contracts are a failure if you stick to the letter of the contract' (A10, 2007). With failed outsourcing identified by Hong & O (2009), the degree of interaction between largely independent entities is an important factor. Ambiguity is a significant problem insofar as communication between various Telstra business units, management and employees and the outsourcing partners is concerned. This role ambiguity, as identified by Pierce et al. (2001) and Watson (2000), results in the generation of a low trust environment and deterioration of employee morale, which is borne out by the results of Questions 118, 119, 120, 123 to 124, 126–129, 131 and 132, where less than 10% agreed that outsourcers' communications were accurate or timely. This highlighted a need for business to continue to provide business and functional support (refer Appendix G, Table G4).

Sriwongwanna (2009) and Yoon & Im (2008) highlight that the performances of outsourcing companies should be reviewed on a regular basis and with feedback

provided, which was also the case at Telstra. As Questions 115 and 116 show, over 42% and 45% respectively agreed that feedback was provided (Table 5.8, also Appendix G). Responses to Questions 131 and 132 also supported this, where approximately 50% strongly disagreed that vendors required little Telstra business management and functional support. Their accuracy and completeness of communications was also questioned, as less than 6% support was provided for outsourcers' communications being accurate and complete (refer Question 123 & 124, Table 5.8 and Appendix G). Vendors' communication problems and lack of leadership were issues in outsourcing and this is also highlighted by Abelson (2005). This appears be a problem at Telstra where there was a lack of communication and leadership – as highlighted in Question 128, where 42% strongly disagreed that the vendor provided leadership. Baldwin et al. (2001) and Choudhuri et al. (2009) point to outsourcing being complex, with various stakeholders and involving more than the simple transfer of resources and functionalities. The complexity of outsourcing highlights that stakeholder management and vendor behaviour control are seen as important factors by researchers (Gottschalk & Solli-Sæther, 2005). The low agreement rate at Questions 131 and 132 indicates that Telstra employees recognised the need for additional business and functional support to the outsourced partner.

The responses to Question 109, where only 15% strongly agreed, raise the issue of commitment between parties and the different forms of relationships between organisations and vendors. Authors such as Baldwin et al. (2001) highlight that outsourcing 'is driven by a series of complex, interrelated motives' based on 'political perspectives, as well as human and organisational issues'.

| Question (Appendix E) | Disagree 1 & 2 | Noncommittal 3, 4 & 5 | Agree 6 & 7 | Mean (Appendix H) |
|---|---|---|---|---|
| Q 101. Outsourcing partner made decisions beneficial to us | 36% | 57% | 6% | 3.152 |
| Q 102. Outsourcing partner provides assistance to business above contract requirements | 42% | 45% | 12% | 3.000 |
| Q 103. Outsourcing partner is sincere in providing service | 15% | 54% | 30% | 4.667 |
| Q 104. Outsourcing partner is ethical | 12% | 63% | 24% | 4.667 |

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| Question<br>(Appendix E) | Disagree<br>1 & 2 | Noncommittal<br>3, 4 & 5 | Agree<br>6 & 7 | Mean<br>(Appendix H) |
|---|---|---|---|---|
| Q 105. Relationship between outsourcing partner and business is based on trust | 36% | 63% | 0% | 3.061 |
| Q 106. Relationship between outsourcing partner and business is based on contract only | 12% | 69% | 18% | 4.424 |
| Q 107. Outsourcing partner keeps contract commitments | 18% | 60% | 21% | 4.242 |
| Q 108. Outsourcing partner is committed to relationship | 0% | 57% | 42% | 5.394 |
| Q 109. Business units are committed to relationship with outsourcing partners | 48% | 36% | 15% | 3.030 |
| Q 110. Both outsourcing partner and business commit resources to sustain relationship | 6% | 75% | 18% | 4.212 |
| Q 111. Both outsourcing partner and business freely exchange information | 12% | 63% | 24% | 3.909 |
| Q 112. Corporate culture clashes between outsourcing partner and business are an ongoing issue | 12% | 63% | 24% | 4.182 |
| Q 113. Different business rules between business and outsourcing partner causes disagreements | 18% | 57% | 24% | 4.121 |
| Q 114. Different business processes between business and outsourcing partner causes disagreement | 12% | 63% | 18% | 4.121 |
| Q 115. The outsourcers performance is reviewed on a regular basis | 0% | 57% | 42% | 5.121 |
| Q 116. Feedback is provided to the outsourcer following a review | 6% | 42% | 45% | 4.879 |
| Q 117. Problem solving is a joint exercise between business and outsourcing vendor | 12% | 57% | 30% | 4.455 |
| Q 118. Decision making is a joint exercise between business and outsourcing vendor | 18% | 75% | 6% | 3.970 |
| Q 119. Communication between business and outsourcing vendor is strong | 33% | 60% | 6% | 4.152 |
| Q 120. Business support team works well with outsourcing vendor | 12% | 81% | 6% | 3.848 |

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| Question<br>(Appendix E) | Disagree<br>1 & 2 | Noncommittal<br>3, 4 & 5 | Agree<br>6 & 7 | Mean<br>(Appendix H) |
|---|---|---|---|---|
| Q 121. Outsourcing vendor supports teamwork | 6% | 69% | 24% | 4.636 |
| Q 122. Offshore outsourcing vendors are responsible for large portions of system development | 27% | 20% | 36% | 4.303 |
| Q 123. Outsourcing vendor's communications are accurate | 24% | 69% | 6% | 3.606 |
| Q 124. Outsourcing vendor's communications are complete | 36% | 54% | 3% | 2.879 |
| Q 125. Outsourcing vendor's communications are credible | 18% | 63% | 18% | 4.061 |
| Q 126. Outsourcing vendor's communications are timely | 33% | 66% | 0% | 3.455 |
| Q 127. Outsourcing vendor operated efficiently | 12% | 76% | 9% | 3.871 |
| Q 128. Outsourcing vendor provided leadership | 42% | 47% | 0% | 2.697 |
| Q 129. Outsourcing vendor provided quality work | 30% | 60% | 9% | 3.333 |
| Q 130. Outsourcing vendor provided work within budget | 6% | 68% | 24% | 4.545 |
| Q 131. Outsourcing vendor requires little business management | 54% | 45% | 0% | 2.273 |
| Q 132. Outsourcing vendor requires little functional support | 48% | 51% | 0% | 2.364 |
| Q 133. Outsourcing vendor was able to meet project goals | 12% | 75% | 12% | 3.909 |
| Q 134. Outsourcing vendor was innovative and creative | 42% | 57% | 0% | 3.030 |
| Q 135. Outsourcing vendor has improved business productivity | 48% | 51% | 0% | 2.727 |

Table 5.8: Summary of Relationship with Outsourcing Partner
(extract from Appendix G, Tables G101–G135)

### 5.2.4 Changing outsourcing partner — benefits and switching costs

IT outsourcing has benefits but it also entails risks that need to be managed. The results of Questions 142–146 and 148–157 on changing outsourcing partner, where less than

12% disagreed, point to a lack of quality of service and, as identified by Lai (2006), a need for knowledge management (refer Table 5.9 and Appendix G). The researcher concluded that the outsourcing partners being transitioned acted in good faith and this is further supported by responses to Question 108, where 42% indicated a high commitment to the relationship on the part of the outsourcing partner. The responses to Questions 149, 150 and 154 point to a change of outsourcing partner leading to a drop in system knowledge along with a lack of documentation and poor processes, and this is also supported in the findings of others (e.g. Hirschheim, George & Wong, 2004; Mathrani, 2004; Nissen, 2004; Thayer, 2005; Weiss & Anderson, 2004). This changing business environment has been recognised by researchers such as Gottschalk & Solli-Sather (2007) who acknowledge that knowledge transfer is an important factor in outsourcing. It is important that knowledge transfer occurs in both directions and, in the case of Telstra, that Telstra with its numerous outsourcing partners should be the custodian of that knowledge.

| Question (Appendix E) | Disagree 1 & 2 | Noncommittal 3, 4 & 5 | Agree 6 & 7 | Mean (Appendix H) |
|---|---|---|---|---|
| Q 136. Business found it difficult to hire internal IT staff after outsourcing | 18% | 51% | 8% | 3.88 |
| Q 137. Cost of retaining internal IT staff increased after outsourcing functions | 33% | 54% | 6% | 2.91 |
| Q 138. Cost of training internal IT staff increased after outsourcing functions | 36% | 51% | 0% | 2.55 |
| Q 139. Internal IT staff lost interest after outsourcing of other functions | 12% | 75% | 12% | 4.15 |
| Q 140. Other outsourcing partner's performance improved after a contract was terminated | 24% | 54% | 9% | 2.85 |
| Q 141. Terminated contracts led to revised vendor management processes | 6% | 57% | 12% | 3.27 |
| Q 142. Changing 'outsourcing' partner caused transition costs to be high due to lack of support from previous vendor | 3% | 36% | 24% | 4.06 |
| Q 143. When changing outsourcing partner, the previous vendor made it difficult to discontinue contract | 12% | 45% | 18% | 3.58 |
| Q 144. When changing outsourcing partner the previous vendor withheld vital information | 6% | 45% | 18% | 3.64 |
| Q 145. When changing outsourcing partner the previous vendor withheld documentation | 6% | 45% | 18% | 3.61 |

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| Question<br>(Appendix E) | Disagree<br>1 & 2 | Noncommittal<br>3, 4 & 5 | Agree<br>6 & 7 | Mean<br>(Appendix H) |
|---|---|---|---|---|
| Q 146. After changing outsourcing partner we decided not to give previous vendor another contract | 0% | 30% | 21% | 3.64 |
| Q 147. Transition time - Previous vendor withholding information | 18% | 27% | 18% | 3.21 |
| Q 148. Transition time - Other problems with previous vendor | 12% | 27% | 26% | 3.91 |
| Q 149. Transition time - Lack of documentation | 6% | 23% | 36% | 4.45 |
| Q 150. Transition time - Lack of internal processes | 6% | 23% | 36% | 4.45 |
| Q 151. Transition time - Lack of suitable staff | 9% | 36% | 24% | 3.76 |
| Q 152. Level of service decreased - Reluctance of previous vendor to help | 12% | 24% | 27% | 3.39 |
| Q 153. Level of service decreased - Lack of local processes | 12% | 33% | 24% | 3.70 |
| Q 154. Level of service decreased - In-house staff lacking system knowledge | 12% | 21% | 42% | 4.33 |
| Q 155. Level of service decreased - In-house staff had to learn how IT systems worked | 12% | 33% | 24% | 3.55 |
| Q 156. Level of service decreased - The need for new policies | 6% | 39% | 12% | 3.39 |
| Q 157. Internal team required considerable time to be productive | 6% | 57% | 18% | 3.97 |
| Q 158. We hired experienced staff who produced results quickly | 12% | 39% | 18% | 3.28 |
| Q 159. Service from internal provider is worse than previous outsourcing provider | 36% | 33% | 0% | 1.90 |
| Q 160. Back sourcing required new skills | 12% | 39% | 6% | 2.59 |
| Q 161. In-house development requires different processes | 6% | 39% | 18% | 3.45 |
| Q 162. In house development is simpler process | 0% | 27% | 36% | 4.24 |
| Q 163. Discontinuation of outsourcing contract - Business performance improved(?) | 36% | 27% | 6% | 2.10 |
| Q 164. Discontinuation of outsourcing contract - IT performance improved(?) | 30% | 33% | 6% | 2.72 |
| Q 165. Discontinuation of outsourcing contract - In unexpected ways | 24% | 24% | 15% | 2.72 |
| Q 166. Discontinuation of outsourcing contract - Internal processes improved(?) | 18% | 27% | 18% | 2.86 |

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| Question (Appendix E) | Disagree 1 & 2 | Noncommittal 3, 4 & 5 | Agree 6 & 7 | Mean (Appendix H) |
|---|---|---|---|---|
| Q 167. Discontinuation of outsourcing contract - Internal staff availability improved(?) | 21% | 24% | 24% | 3.55 |
| Q 168. discontinuation of outsourcing contract – Not Applicable | | | | |
| Q 169. We lost significant money due to time and effort of building relationship with previous vendor | 0% | 21% | 42% | 4.17 |
| Q 170. After switching outsourcing contract, replacement IT staff were difficult to find | 18% | 27% | 18% | 2.97 |
| Q 171. When contract switched additional internal employees required | 12% | 45% | 24% | 3.67 |
| Q 172. Relationship developed with previous vendor was lost | 6% | 39% | 42% | 4.64 |
| Q 173. Lost knowledge and transition costs to switch vendors were significant | 6% | 39% | 42% | 4.76 |
| Q 174. New support team required - Considerable setup time | 0% | 51% | 36% | 4.52 |
| Q 175. New support team required - Additional internal processes | 6% | 51% | 30% | 4.55 |
| Q 176. New support team required - Little time or effort to provide support | 24% | 45% | 12% | 2.82 |
| Q 177. New support team required - Additional training | 12% | 51% | 18% | 3.73 |

Table 5.9: Summary of Switching of Outsourcing Partner
(extract from Appendix G, Tables G136-G177)

### 5.2.5 Back-sourcing/switching costs

The results of Questions 162 and 169 point to the complexity of outsourcing and, while considerable effort was spent in building a relationship for short-term gain, the longer-term results imposed an additional cost on the organisation (Ellram, Tate & Billington, 2008; Wang et al., 2008). The results of Question 176 point to the outsourcing partner requiring support and that this then is an additional cost in the outsourcing process. The results of Questions 163 and 159 had less than 6% support for the outsourcer preferring to end an outsourcing arrangement that is not working.

A better service was available through an internal provider than from an outsourcing provider and this was borne out in the lack of support (0%) at Question 159. This also correlates with the responses at Question 162, where 36% strongly

supported and 27% passively supported the internal process being simpler than the outsourced one.

### *5.2.6 Switching, setup and sunk costs*

Agency theory, Transaction Cost Theory (TCT) and current literature point to the fact that as service quality decreases a customer is likely to terminate an outsourcing contract (Whitten, 2004). As highlighted in Section 4.7.6, Telstra has shown a willingness to terminate contracts if they were not working. Questions 169 and 172–174 strongly demonstrate that transition costs are significant within an organisation and that this in turn places an additional burden on the business (refer Table 5.9; Appendix G; Aubert, Patry & Rivard, 1998; Overby, 2003). This is also reflected in the responses at Questions 149, 150 and 154 where, as a consequence of the loss of knowledge, there was a lack of documentation, lack of due internal processes and a loss of system knowledge (refer Table 5.9; Appendix G)

### *5.2.7 Results of initial data analysis*

The key issues identified from the data analysis of the survey, where the mean response was greater than 4 or less than 3 on the seven-point Likert scale, are:

- selective outsourced services vary in quality;
- resources are required to manage the outsourcing process;
- outsourcing benefits are not always realised, thus affecting staff morale;
- outsourcing partners are thought to be ethical, committed and sincere in providing service;
- business management and functional support with regular review and feedback are required;
- outsourcing requires additional and ongoing supervision;
- there is a lack of support for allowing regulators to better manage functions;
- there is a lack of support for the win–win scenario - i.e. with the outsourcing specialist focusing on what it does best and with the outsourcer allowing resources to be freed up and business to  concentrate on its core business;
- the outsourcing partner may make business decisions in isolation;
- the performance of outsourcers should be reviewed on a regular basis and feedback should be provided;
- vendors require business management and functional support;

- organisations are not holistic units with a single view;
- there are different forms of relationships between organisations and vendors;
- outsourcing partners being transitioned acted in good faith and showed a high commitment to the relationship;
- there is a need for knowledge management;
- the complexity of outsourcing and the need to manage the process should not be underestimated; and
- considerable effort was spent in building a relationship for short-term gain and the longer-term results incurred an additional cost for the organisation.

Further key issues of a negative nature are:

- vendors are not prepared to provide additional service and assistance above the minimum contract requirements;
- the outsourcer's internal business units may not be committed to outsourcing;
- it is erroneous to assume that various stakeholders in an organisation are fully committed to the outsourcing relationship;
- an internal provider provides better service than the outsourcing provider;
- outsourcing results in more complexity in the business processes; and
- poor staff morale and the loss of expertise with outsourcing are major issues.

The results as identified at Questions 159 and 162 show that internal Telstra business personnel prefer internal service providers due to their superior and simpler service and processes (refer Appendix G). This is in agreement with articles that highlight a need for outsourcers to better manage their service delivery, along with a need for automation of processes and provision of effective reporting (Mahnke, Overby & Vang, 2003; Oshri, Kotlarsky & Willcocks, 2008; Patton, 2005).

The results from Questions 169, 172 and 173 indicate that outsourcing is expensive to set up and manage, and that there are additional costs incurred in changing outsourcing partners or bringing a service in-house. Business units would prefer to see a contract discontinued when outsourcing is not working, despite the transition costs that would be incurred. Further research is required on knowledge management and the cost

of transitioning to different vendors. Satisfaction in service quality and the relationship between the outsourcer and vendor are important parts of this process.

## 5.3 Employees versus management t-test

Of particular interest from the in-depth interviews was the differing view between employees and management on the reasons for outsourcing. A point from the initial interviews (as outlined in Chapter 4) was that while Telstra management made the decision to outsource, Telstra employees had to make it work day-to-day. In the initial analysis of data, the researcher found a (statistical) difference.

Based on interview results (Appendix F: Table F19), Telstra management appeared to view outsourcing as a way to control or stifle its IT spend. The researcher concluded that IT was viewed as a commodity in Telstra and outsourcing was a strategy to better manage this commodity. This is also highlighted by Fahy et al. (2007), Dudek et al. (2009) and Carr (2003). Telstra management believed that outsourcing allowed for better cost controls on business units and provided an increasingly visible and manageable IT process. It also grants senior management the ability to force fiscal processes and procedural controls on its business units. Telstra IT managers' predominant reason to outsource was to 'get [the] businesses under control'; this was a recurring theme amongst IT management (refer Appendix G: Question 56), whereas business unit respondents spoke of service and getting what they specified (A1 2006; A2 2006; A9 2007; A13 2007).

Themes that became evident from the interviews with frontline employees were the day-to-day frustrations, the lack of response from outsourcing partners and the lack of control over outsourcing partners (A2, 2006; A3, 2006). Frontline workers claimed that outsourcing did not cut costs but added additional management effort, costs and delays in getting IT work done (with questionable results). Most employees had anecdotes about the promises of outsourcing partners and how contract requirements were not met (A5, 2006). According to many middle managers and employees, outsourcing partners displayed a marked inability to allocate resources to projects quickly and also showed a lack of adequate strategic planning (A7, 2007; A8, 2007). The researcher believes that employees viewed outsourcing as a measure imposed on them by management to cut costs, while managers sae it as a way to control IT spending and as a tool to better manage the business.

The t-test was used in evaluating the response differences between employees and senior managers. For the results refer Appendix I: Results of t-test (Employee versus Management). Tables I1 to I18 show independent samples and group statistics between Telstra employees and senior Telstra management.

Detailed analysis was conducted based on the two means being different, which supports Hypothesis 1: that employees and senior managers have different criteria in assessing the reasons for outsourcing and for assessing the degree of its success – but are they significantly different? The t-test was based on the employee survey replies compared with the senior manager survey replies in Appendix I. See data regarding position within the company at Table 5.3 and refer Appendix G: Table G8 for the classifications as either an employee or a senior manager. Those in the employee category were those from:

- administration;
- analysis;
- support;
- technical;
- first-level supervisor; and
- other.

Those allocated to the senior manager category were:

- middle managers; and
- senior managers.

Before running the t-test, a test for anomalies was performed and a scatter plot was used to display the relationship between employees and senior managers (refer Appendix I). These are based on the mean value of 'Employee' answers and 'Senior Management' answers to the questions.

The mean values of responses for Questions 35–177 (excepting Questions 53, 54 and 168, which were removed as they were not applicable) were graphed in Figure 5.1 and show the differing views between Employees and Senior Managers on outsourcing issues.

Legend: ◆ Employee ■ Senior Manager

7 Point Likert Scale

Survey Questions 36 to 177
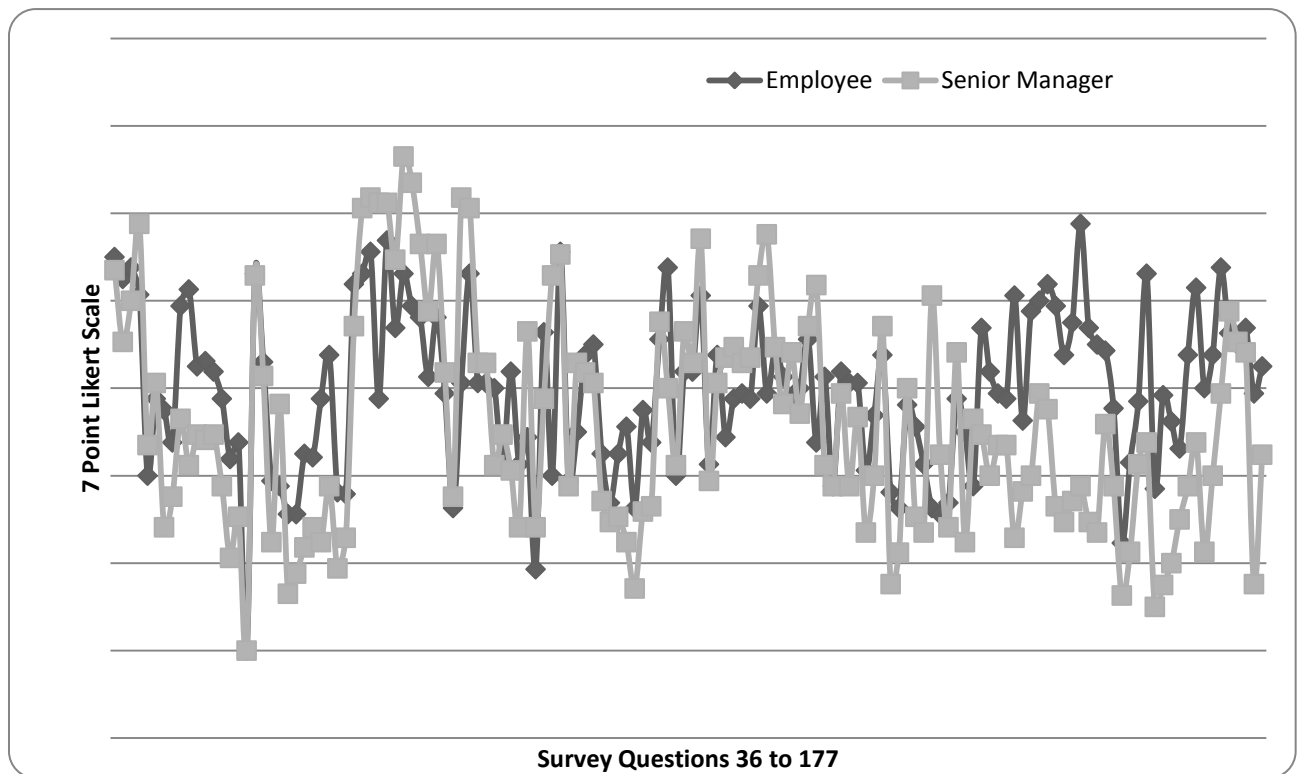
*Figure 5.1: Outsourcing Partner t-test (Employee to Senior Manager)*

The null hypothesis ($H_0$) is that the Employees and Senior Management are equal to each other regarding their judgement of outsourcing (where null indicates that there is no difference between the two sample groups).

The researcher selected a significance level of 0.05 (or $p < 0.05$) i.e. 1 chance in 20 (or 5%) that the differences found were not due to the hypothesised reason (Salkind, 2005). Using a significance level of 0.05 (or $p < .05$) based on $N = 30$, this is conservative, with a level of risk of 2.043 (based on Salkind, 2005; Table B.2).

Using the SPSS software package allowed possible differences of variance between subgroups to be checked using Levene's test of equality of error variances (refer Appendix I) Independent Samples Tests. Levene's test is based on the test statistic being F, not t. Variances are assumed to be homogeneous and the Equal Variances line is used based on the p-value of f being greater than 0.05 which, in turn, is based on a pooled (separate – variance) t-test (Kinnear & Gray, 2008, p.200). To cross-reference questions to the questionnaire, refer to Appendix I, Outputs of All Questions.

Based on Sig. (2-tailed) t-value having a p-value of <0.05, meaning that it is significant at the 0.05 level, the researcher has derived that the homogeneity of variance

assumption is tenable and the equal-variance t-test (equal variances assumed) can be used (Kinnear & Gray, 2008, p.201).

Based on equal variance outputs for all questions (refer Appendix I) and looking at the obtained t values, a comparison of the obtained value and the critical value to significant difference between groups indicates not only whether the difference is (statistically) significant, but also whether it is meaningful – that is, with a Sig. (2-tailed) of greater-than > 0.05, (based on Appendix I: Results of t-test for Employee/Manager).

With 29 degrees of freedom, the difference is significant (< .05) at the 0.05 level for Questions 29, 44, 49, 58, 62, 63, 69, 72, 73, 79, 99 (close[36]), 101, 104, 116, 122 126, 131, 134 (close), 136, 140 (close), 146, 148 (close), 151, 153, 154, 155, 156, 163 (close), 164, 170 (close), 172 and 176. From a possible 135 answers, 32 or 24% are significantly different. In the section of the questionnaire relating to switching costs and changing outsourcing partner/benefits (refer Appendix I: Tables I14 & I16), 38% of responses to the questions are significantly different between employees and managers. Responses that the 'Level of service decreased after switching outsourcing vendor' warrant further research in this area to identify the actual reasons for those differences.

Overall, the t-tests do not show significant differences. The p-value in most cases was greater than 0.05, and in order to reject the null hypothesis a p-value smaller than 0.05 is needed (Kinnear & Gray, 2008 p.263).

### 5.3.1 Findings factor analysis

Factor analysis was performed to:

- test whether variables were interrelated through a set of linear relationships;
- reduce the measurement items into a smaller set of dimensions for further analysis; and
- identify the latent structure (dimensions) of the set of variables.

The dimensions of organisation quality, knowledge sharing, and outsourcing success and partnership quality were gathered independently. To remove redundant items, detailed factor analysis was performed on the study by the researcher as outlined by Newcastle University (2008) and involved:

---

[36] Close between .040 and 0.05

1. Descriptive statistics — mean, standard deviation and the number of respondents (N) who participated in the survey are given.

2. Univariate statistics — in order to view the means and standard deviations of the variables, to ensure that the data is in good order.

3. Correlation matrix to view correlation coefficients.

4. Kaiser-Meyer-Olkin (KMO) and Bartlett's Test — the KMO measures the sampling adequacy, which should be greater than 0.5 for a satisfactory factor analysis to proceed.

5. Communalities — which show how much of the variance in the variables has been accounted for by the extracted factors.

6. Total Variance Explained — factors extractable from the analysis along with their eigenvalues, the percentage of variance attributable to each factor, and the cumulative variance of the factor and previous factors.

7. Scree plot — a graph of the eigenvalues against all the factors (the point of interest is where the curve starts to flatten and an eigenvalue of less than 1 is not retained) (Kinnear & Gray 2008, p.547).

8. A component (factor) matrix — the higher the absolute value of the loading, the more the factor contributes to the variable, loadings that are less than 0.5 are not displayed.

9. Reproduced correlations — estimated from the factor matrix to determine model fit.

10. Rotated component matrix (varimax procedure) — to reduce the number factors on which the variables under investigation have high loadings.

11. Component transformation matrix — to produce the residuals between the observed correlations and the reproduced correlations.

Confirmatory Factor Analysis (CFA) was used to achieve strong reliability and validity that the measurement model approximates reality. High-order confirmatory factor analysis can be regarded as an extension of a subsequent common factor with oblique rotations; correlations of the first factors from the first factor analysis were entered into a second-order analysis to examine the possibility of second-order factors (Marsh & Hocevar 1985, 1988). SERVQUAL was adapted in this study and is a second-order construct governing correlations among factors such as tangibles, reliabilities, responsiveness and assurance. CFA was used to:

- reduce the number of variables to a smaller number of factors for modelling purposes;

- allow factor analysis to be combined with Structure Equation Modelling (SEM), in order to allow latent variables to be modelled by SEM;

- establish that multiple tests measure the same factor, thereby giving justification for reducing tests;

- validate a scale or index by demonstrating that its constituent items load on the same factor, and to drop proposed scale items which cross-load on more than one factor;

- assist in the selection of subsets of variables from the larger set, based on which original variables have the highest correlations with the principal component factors; and

- assist in identifying clusters of cases and/or outliers i.e. observations that are distant from the rest of the data.

Convergent validity was evaluated for the refined model for order factors with detailed analysis as per Appendix K. Results from the factor analysis are summarised below and are based on a rotated component matrix where a component loading of 0.6 is regarded as high and one of 0.4 is low.

The resultant factor/component in Table 5.10 was performed and a summary description added to aid identification. Initial Reliability Analysis and ANOVA F-test were performed using SPSS software.

| Resources | Cronbach's Alpha | ANOVA 'F' / Sig |
|---|---|---|
| *Factor / Component 1:- 38. 41. 42. 43. 44. 45.* *(Internal strategic)* | 0.899 | 12.98 /0.000 |
| *Factor / Component 2:- 46. 47. 48.* *(Loss of control)* | 0.947 | 4.05 / 0.022 |
| *Factor / Component 3:- 39. 40.* *(CIO performance)* | 0.594 | 7 / 0.012 |
| **Details of contract** | | |
| *Factor / Component 4:- 35. 36. 37.* *(Outsourcing Strategy)* | 0.685 | 1.387 / 0.257 |
| **Benefits** | | |
| *Factor / Component 1:- 58. 60. 64. 65.* *(Outsourcing improvement)* | 0.873 | 1.194 / 0.317 |
| *Factor / Component 2:- 61. 62.* *(Outsourcing benefits)* | 0.870 | 0.000 / 1.000 |
| *Factor / Component 3:- 59. 63. 66.* *(Outsourcing Quality)* | 0.558 | 34.68 / 0.000 |
| *Factor / Component 4:- 68.* *(Outsourcing management)* | | |
| **Issues with outsourcing partner** | | |
| *Factor / Component 1:- 72. 73. 80.* *(Vendor management)* | 0.775 | 1.423 / 0.248 |
| *Factor / Component 2:- 75. 79.* *(Staff morale)* | 0.665 | 3.404 / 0.074 |
| *Factor / Component 3:- 74. 82.* *(Organisational support)* | 0.652 | 15.253 / 0.000 |
| *Factor / Component 4:- 77. 84.* *(Outsourcing win/win)* | 0.656 | 8.651 / 0.006 |
| *Factor / Component 5:- 71. 79. 81.* *(Outsourcing problems)* | 0.723 | 6.118 / 0.004 |
| **Relationship with vendor and outsourcing partner** | | |
| *Factor / Component 1:- 101. 102. 120. 122. 128.* *129. 131. 132. 134. 135.* *(Outsourcing vendor)* | 0.763 | 7.408 / 0.000 |
| *Factor / Component 2:- 103. 104. 107. 118. 123. 125.* *126. 127.* *(Outsourcing vendor (2))* | 0.946 | 7.515 / 0.000 |
| *Factor / Component 3:- 112. 113. 114. 124.* *(Vendor Problems)* | 0.511 | 5.605 / 0.001 |
| *Factor / Component 4:- 110. 115. 119. 130.* *(Business and Vendor)* | 0.820 | 7.843 / 0.000 |
| *Factor / Component 5:- 108. 111. 117. 122.* *(Relationship)* | 0.183 | 4.993 / 0.003 |
| *Factor / Component 6:- 116. 122. 126.* *(Communication)* | -0.172 | 4.540 / 0.014 |

**...cont**

| Relationship with vendor and outsourcing partner | | |
|---|---|---|
| *Factor / Component 7:-* 105. 133. 135. *(Relationship)* | 0.735 | 11.973 / 0.000 |
| *Factor / Component 8:-* 109. 115. *(Committed)* | -0.056 | 28.724 / 0.000 |
| **Switching costs** | | |
| *Factor / Component 1:-* 138. 141. *(Vendor processes)* | 0.634 | 4.558 / 0.041 |
| *Factor / Component 2:-* 136. 137. *(Internal Staff)* | 0.519 | 6.756 / 0.014 |
| *Factor / Component 3:-* 139. 140. *(Internal Staff (2))* | 0.599 | 17.758 / 0.000 |
| **Changing outsourcing partner/benefits/switching costs** | | |
| *Factor / Component 1:-* 142. 143. 146. 151. 154. 155. 156 *(Changing partner)* | 0.941 | 1.513 / 0.176 |
| *Factor / Component 2:-* 148.  149. 150. 151. 153. 154 *(Transition time)* | 0.945 | 2.162 / 0.061 |
| *Factor / Component 3:-* 142.144. 145. 147. 152. *(Cost of changing partner)* | 0.948 | 2.045 / 0.092 |
| **Back-sourcing/switching costs** | | |
| *Factor / Component 1:-* 157. 163. 164. 165. 166.167.  *(Discontinuation of outsourcing)* | 0.910 | 5.699 / 0.000 |
| *Factor / Component 2:-* 160. 169. 170. *(Back-sourcing cost)* | 0.866 | 9.321 / 0.000 |
| *Factor / Component 3:-* 158, 159. 160.161. *(Sourcing skills)* | 0.801 | 6.156 / 0.001 |
| *Factor / Component 4:-* 158. 162. *(In-house process)* | 0.656 | 4.008 / 0.055 |
| **Switching costs/ setup costs/sunk costs** | | |
| *Factor / Component 1:-* 171. 172. 173. 174. 175. *(Internal cost)* | 0.921 | 3.914 / 0.005 |
| *Factor / Component 2:-* 176. 177. *(Support training)* | 0.781 | 7.477 / 0.010 |

Table 5.10: Questionnaire Reliability Comparison (Cronbach's Alpha) and ANOVA 'F'

Probability models such as F-test for Analyses of Variance (ANOVA) were used as measures of how different the means are relative to the variability within each sample. Significant 'Sig' values were recorded, which implies that the means may differ more than would be expected by chance alone, so that the effect can be said to be significant or insignificant. If the effects are found to be insignificant (critical value ($\alpha$) greater than 0.05), then the differences between the means are not great enough to say that they are different. In that case, no further interpretation is attempted.

## 5.4 Findings UIS scale

A further check of the Reliability Comparison (Cronbach's Alpha) was used to measure reliability for each scale, as outlined in Table 27. Questions that required removal from the Reliability Comparison are listed in Appendix K and summarised in Table 5.11.

| This study | Questions | Reliability | Removed questions (Appendix K, Table K40) | Reliability with removed questions |
|---|---|---|---|---|
| Resources | Q 35 to 48 | 0.776 | | 0.776 |
| Details of contracts | Q 49, 50 & 52 | 0.370 | 52 | 0.792 |
| Benefits | Q 58 to 70 | 0.504 | 66, 67 | 0.712 |
| Issues with outsourcing partner | Q 71 to 84 | 0.405 | 74, 82 & 83 | 0.653 |
| | | | 77 | 0.703 |
| | | | 78 | 0.732 |
| Impact of outsourcing | Q 85 to 100 | 0.480 | 87 & 96 | 0.784 |
| Relationship with vendor and outsourcing partner | Q101 to 135 | 0.883 | | 0.883 |
| Switching costs | Q136 to Q141 | 0.831 | | 0.831 |
| Changing outsourcing partner/benefits/ switching costs | Q142 to 156 | 0.959 | | 0.959 |
| Back-sourcing/switching costs | Q 157 to 167 & 169 to 170 | 0.884 | | 0.884 |
| Switching costs/setup costs /sunk costs | Q. 171 to 177 | 0.869 | | 0.869 |
| | Q. 171 to 175 | 0.921 | | 0.921 |

Table 5.11: Reliability Comparison UIS (Cronbach's Alpha)

Based on the factor analysis performed in Appendix J and Table 5.11, the results were mapped to research a comparison between this survey and previous studies by Baroudi et al. (1983), Ives et al. (1983) and Wrigley et al. (1997). Table 5.12 gives an acceptable comparison of User Information Scale (UIS) reliability.

A comparison between this survey's factor analysis from Appendix K and previous studies by Baroudi et al. (1983), Ives et al. (1983) and Wrigley et al. (1997) in Table 5.12 gives an acceptable comparison of UIS reliability.

| UIS Scale | Scales | This study's questions | This study | Wrigley et al. (1997) | Baroud i et al. (1983) | Ives et al. (1983) |
|---|---|---|---|---|---|---|
| 1 | Relationship with MIS Staff | 93, 105, 85, 111, 119, 109, 110, 119 = 0.575 | 0.58 | 0.95 | 0.92 | 0.94 |
| 2 | Processing of requests for change | 60, 58, 107, 99 = 0.716 | 0.72 | 0.94 | 0.88 | 0.9 |
| 3 | Degree of MIS training provided | 132, 133, 7, 100, 131 = 0 .710 | 0.71 | 0.95 | 0.93 | 0.97 |
| 4 | User's understanding of systems | 123, 124, 125, 126 = 0.782 | 0.78 | 0.94 | 0.88 | 0.92 |
| 5 | User's feeling of participation | 69, 70, 79, 80, 81 = 0.693 | 0.69 | 0.91 | 0.89 | 0.92 |
| 6 | Attitude of MIS staff | 79, 80, 81 = 0.748 | 0.75 | 0.95 | 0.92 | 0.88 |
| 7 | Reliability of output information | 107, 125, 63, 123, 124 = 0.769 | 0.77 | 0.95 | 0.91 | 0.95 |
| 8 | Relevance of output information | 64, 125, 129, 99 = 0.754 | 0.74 | 0.95 | 0.91 | 0.95 |
| 9 | Accuracy of output information | 125, 99, 123, 124 = 0.758 | 0.76 | 0.97 | 0.89 | 0.95 |
| 10 | Precision of output information | 129, 123, 99 = 0.771 | 0.77 | 0.95 | 0.84 | 0.94 |
| 11 | Communication with the MIS staff | 99, 119, 123 = 0.703 | 0.7 | 0.93 | 0.88 | 0.9 |
| 12 | Time for new system development | 133, 60, 97 = 0.722 | 0.72 | 0.94 | 0.94 | 0.9 |
| 13 | Completeness of the output information | 124, 94, 95, 92 = 0.794 | 0.79 | 0.97 | 0.93 | 0.96 |

Table 5.12: UIS Scale Reliability Comparison with Previous Studies (Cronbach's Alpha)

Convergent validity was evaluated for items as shown in Table 5.14, regarding the refined model for three first-order factors and for one second-order factor analysis (also refer Appendix K).

| This study | Questions | Removed questions | Reliability |
|---|---|---|---|
| Organisational quality (Moderating Variable) | Q 24 to 48<br>Q 71 to 84 | Q 32,33, 34,35, & 37<br>Q 82,83, 74, 77 & 78 | .727 |
| Knowledge sharing (Independent Variable) | Q 142 to 156 | | .959 |
| Outsourcing success (Dependent Variable) | Q 85 to 100 | Q 87, 88, 90 & 96 | .784 |
| Partnership quality (Process-oriented Variable) | Q 101 to 135 | | .883 |

Table 5.13: UIS Scale Reliability Proposed Research Model

The research model used by Lee (2000) and as shown in Figure 2.9 (Chapter 2) provides the basis for the research model (Figure 5.2 & Table 5.13) in this research and it shows on the relationship between an organisation (moderating variable) and knowledge sharing (independent variables) in their relationship with the outsourcing partner (Outsourcing success (Dependent Variable)) that can affect the quality of the customer experience (Process-oriented Variable). Results indicate that the models tested in UIS findings possess an acceptable level of predictive validity. Overall findings were consistent with proposed models, and formative measures provide additional information regarding the relative importance of their constituent factors. The factor analysis of the multi-item construct provided validation of the instrument (refer Appendix K).
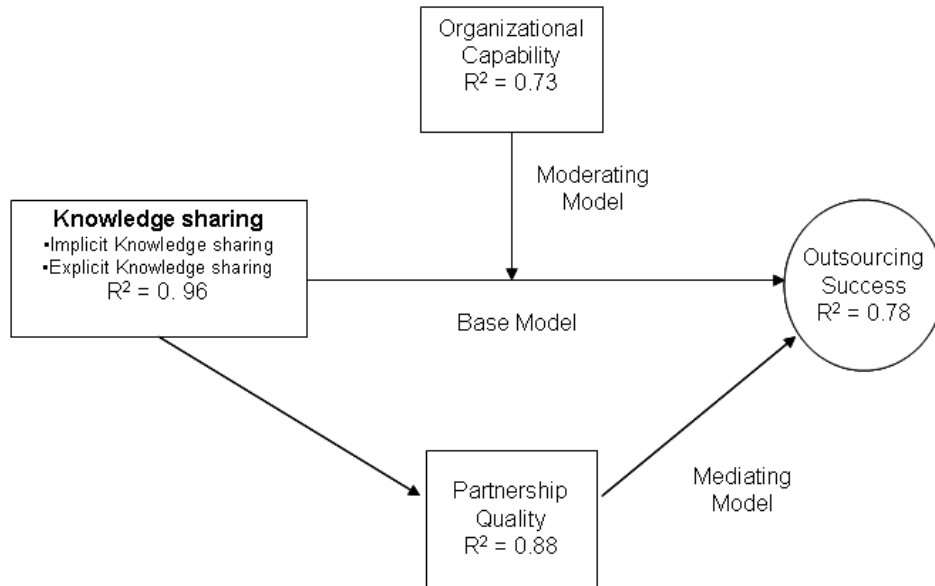
*Figure 5.2: Research Model (Cronbach's Alpha)*

## 5.5 Content Validation of Survey Instrument

Content validation of the instrument was established through reference to other research, in this case Whitten (2004) and based on research outlined in Table 5.14. In Appendix K (Factor Analysis), each factor was measured using a multi-item construct, item analysis and factor analysis. These results were then used to validate the research, resulting in a multi-item construct to prove a comparison to the Whitten model (refer Figure 2.10) and as outlined in Table 5.14 and Figure 5.3.

| Resources | Q 35 to 48 | 0.776 |
|---|---|---|
| Details of contracts | Q 49 to 51 | 0.792 |
| benefits | Q 58 to 66 & 68 to 70 | 0.712 |
| Issues with outsourcing partner | Q 71 to 73 & 75 to 76 & 79 to 84 | 0.732 |
| Impact of outsourcing | Q 85 to 86 & 88 to 95 & 97 to 100 | 0.784 |
| Relationship with vendor and outsourcing partner | Q101 to 135 | 0.883 |
| switching costs | Q136 to 141 | 0.831 |
| Changing outsourcing partner/benefits/switching costs | Q142 to 156 | 0.959 |
| Back sourcing /Switching costs | Q 157 to 167 & 169 to 170 | 0.884 |
| Switching costs/setup costs/ | Q. 171 to 177 | 0.869 |

| sunk costs | Q. 171 to 175 | 0.921 |
|---|---|---|

Table 5.14: Multi-item Construct Based on the Whitten Model
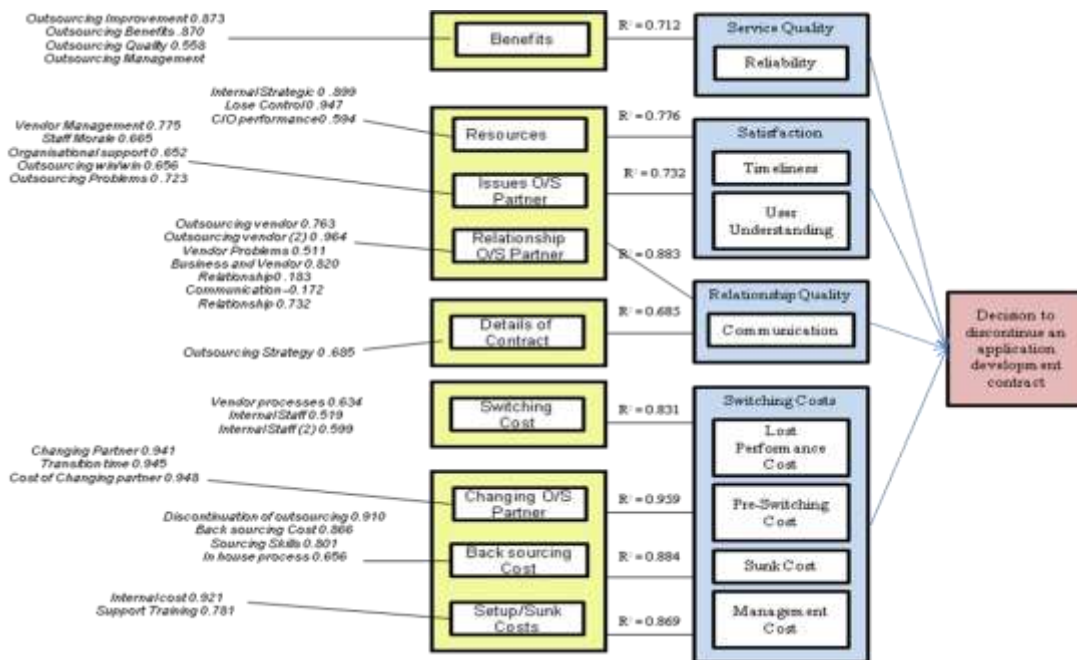


*Figure 5.3: Research Model Linked to the Whitten research model*

Researchers such as Lai (2006) and Dahlberg & Nyrhinen (2006) have shown that service quality appears to be the antecedent of user satisfaction in various areas of IT. Statistical tests show good reliability and validity of the UIS scales. This instrument shows that perceived service quality based on the Whitten (2004) and Lee (2000) models provided a confirmatory model. This is based on the primary dimensions of an employee's perceived service quality. The researcher found that relationships between service quality, satisfaction, knowledge sharing and partnership quality are important factors in outsourcing success. This correlates with research by Lai (2006) that a high level of service quality leads to a high level of user satisfaction. Lai (op. cit.) proposed a system based on SERVQUAL for the employee's perceptions of perceived service quality provided by outsourcers. This was based on:

- internal service quality affecting external service quality
- insight into conditions that reduce service quality providing early warning – employees experience the company's service delivery system daily and so measuring internal service quality is essential;
- employee research serving as an early warning system;

- knowledge-based economy competencies may be located in the knowledge and skills of key employees;

- ERP systems are a set of technologies, applications and business processes; and

- relationships with respect to employee–company, employee–technology and employee–customer have shown that the role played by the employee is crucial.

## 5.6 Reason for Outsourcing

The responses from the interviews with Telstra personnel highlighted that a major driver for outsourcing IT was the need for businesses to become accountable regarding the true cost of IT projects (refer Table 4.15: Identification of Overall Patterns at item 1 in Section 4.9.4 for service and change requests). Results from the questionnaire for Questions 40–45 (also refer Section 5.3) indicate disaffection with the CIO and the internal IT department within Telstra. The reasons for outsourcing were summarised by various interview subjects as:

- issues with internal staff;

- process to control spend;

- following a trend;

- business case for reduced cost;

- core business issues (IT was not regarded as core business);

- IT was regarded as an expense as it doesn't generate income;

- duplication of IT systems between business units, caused an overlap;

- requirement to reduce cost of processes;

- IT systems were not value-adding; and

- whim of a senior stakeholder (CEO/Business general managers).

These findings aligned with those of Sharma et al. (2005), A1 (2006), A4 (2006) and A8 (2007). (Also refer to Appendix F for results of interviews and Table 2.1 for reasons to outsource.)

Those findings are also backed up by the arguments from the studies provided in Table 5.15:

| Factor | Arguments provided by |
|---|---|
| Following trends or imitating | (Lacity & Willcocks 2000) |
| Reducing costs / Reductions in cost of processes | (Beaumont & Sohal 2004; Kim et al. 2003) |
| Core business | (Kim et al. 2003; Mcintyre 2008) |
| Duplication of IT systems | (Sainsbury 2007) |
| Senior stakeholder | (LeMay 2006) |

Table 5.15: Summarised Reasons for Outsourcing

In interviews a recurring theme was that a major reason for pursuing outsourcing was the need for accountability within organisations and that timing was a critical factor in forcing outcomes. This political factor has been highlighted by researchers such as Kern, Willcocks & Heck (2002), Kern & Willcocks (2000) and Mahnke, Overby & Vang (2003) and is indicated in Table 4.1 Item 1, which also points to scope creep and cost increase as factors.

Delays in changes to internal business units, lack of accountability and fuzzy requirements combined to allow unrealistic demands to be placed on IT according to the results from Questions 41–45 (Appendix G). Individual managers or departments failed to understand that other departments incurred a cost for each change in a project, in a system scope or in a new system and that this increased the ongoing burden on the organisation. Telstra was a typical example of this problem occurring, with the organisation having 1,400 major IT systems and numerous vendors. Because of this, Telstra had to undertake a major five-year rationalisation project to reduce the number of systems, vendors and outsourcing partners, at a cost of AUD$1.5 billion (Rossi, 2005; Smith, 2005; Benetton, 2007; Gonzalez, Gasco & Llopis, 2005; A2, 2006; Sainsbury, 2006).

Most believed that Telstra's IT requirements for gathering data, management and spending were out of control (A4, 2006; Bajkowski, 2005). The business was not following its IT blueprints and the lack of compliance with Service Level Agreements (SLA) caused problems. Management believed that outsourcing IT provisioning and support would provide visibility and accountability since real money was required. Outsourcing moved processes from internal business funds transfers to payment of external organisations, thereby forcing accountability back onto the organisation's units from the IT departments. Senior executives have stated that they did not know the costs

(or the 'real' costs) for the development or support of individual IT systems (Raditsis, 2006; Sainsbury, 2006).

Authors such as Weiss et al. (2004) and others have highlighted the lack of alignment between the technology and business strategies at the corporate level. Yourdon (2005) pointed out that in the IT area, productivity measurements are not simple. Thus a major reason to outsource was the need to force discipline upon departments and enable the corporate office to exercise better controls with strict Service Level Agreements (SLA), processes and procedures.

The IT service industry has evolved into a formidable sector since the landmark deal of Eastman Kodak in 1989. Gartner (2008) estimates that the total value of outsourcing contracts in 2007 was AUD$748 billion. The IT outsourcing sector will continue to grow and evolve with the growth and evolution of technology and, similarly, the scope of IT outsourcing agreements has seen a significant expansion over the past decade. Furthermore, the types of functions that become candidates for outsourcing have expanded and will continue to expand (Pai & Basu, 2007).

Companies involved in the initial stages of outsourcing deals anticipated substantial cost savings and wanted to gain access to large pools of technically skilled workers. Loh et al. (1992) argue that outsourcing IT functions to external service providers is done to acquire economic, technological and strategic advantages. In the past 10 years, however, companies have reduced their cost-saving expectations for both domestic and global (offshore) outsourcing: a claim supported by authors DiRomualdo and Gurbaxani (1998). The researcher concluded that factors driving companies to outsource their IT functions have changed (refer Chapter 4.10: Interview Conclusion).

|  | Strategic Business Direction | Cost saving | Freeing-up internal Resources | Competitive Advantage |
|---|---|---|---|---|
| Employees | 2 | 11 | 1 | 2 |
| Senior Managers | 2 | 13 | 2 | - |
| Number of Respondents | 4 | 23 | 3 | 2 |

Table 5.16: Reason to Outsource
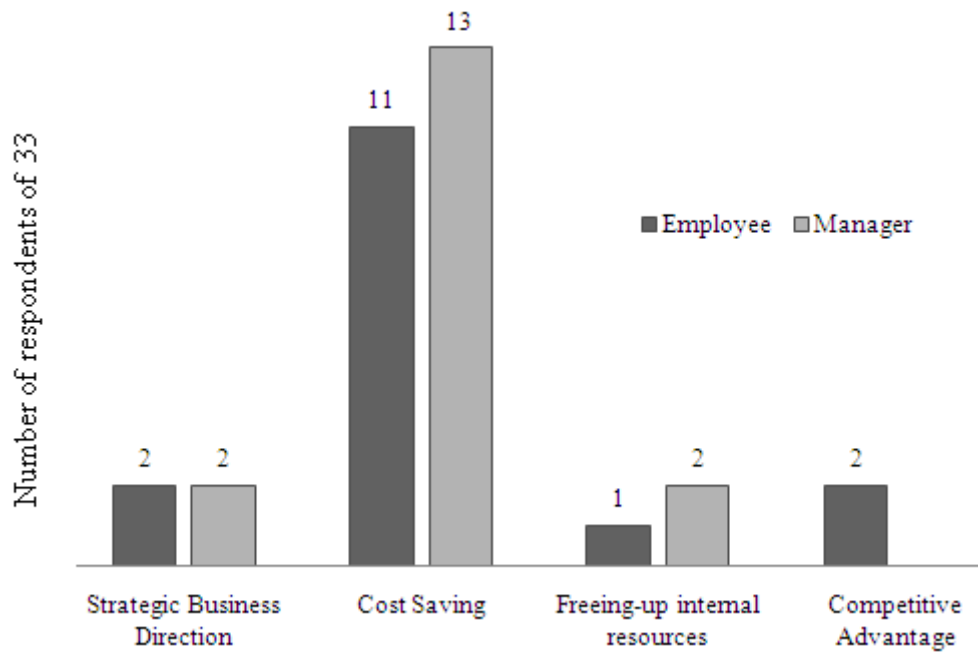
*Figure 5.4: Reasons to Outsource*

The results from Question 56 regarding reasons for outsourcing are summarised in Appendix G: Table G56, Table 5.16 and at Figure 5.4. These findings from the interviews are similar to those of a previous Australian study by Lin (2002) that listed cost and budget as the major factors in outsourcing. Results of the survey questions on internal IT support prior to outsourcing confirm the related items of scope creep and cost increases (refer Appendix G - Table G43 to G49). This also correlates with the results of the interviews as per Table 4.2 at item 1, where concerns were expressed on the size and spend of IT and where outsourcing was seen as a way to control or stifle spend.

Referring to Appendix G: Question 24, 77% reported outsourcing strategically important IT functions. At Question 29 results indicated that 70% of respondents rated as high (points 5, 6 or 7) the level of strategic importance of outsourced systems. In Question 65 the proposition that outsourcing created competitive advantage with a mean 2.52 was not supported by the interview results and the responses at Question 70 highlighted that a need for 'rigorous internal controls' does not support freeing up of internal resources. The researcher concluded that when strategically important systems were outsourced, outsourcing required resources to manage the process and that cost savings were still the primary purpose behind Telstra's outsourcing.

## 5.7 Summary of Results

The purpose of this study was to provide an Australian view of IT outsourcing. Using the literature research, quantitative and qualitative data determined from interviews and from a survey of Telstra personnel, the following conclusions were reached:

**Conclusion 1**

The hypothesis that employees and senior management have different criteria for outsourcing was proved to be a refuted or null hypothesis, in that although differences existed, they were not statistically significant overall.

**Conclusion 2**

Satisfaction with outsourcing was strongly associated with the perception that outsourcing was working. Partial support was found for the idea that satisfaction with outsourcing was a function of the outsourcer's customer service quality, as well as the quality of the information provided and the processes implemented. Support was found for the relationship between service quality and satisfaction with the outsourcing process. If outsourcing was not working, the cost of discontinuing an application development outsourcing contract was not considered significant.

**Conclusion 3**

The third hypothesis was a refuted or null hypothesis, in that cutting costs was still seen as a the major reason to outsource. Although other factors including strategic business direction, resource use and competitive advantage gained recognition as reasons, they were not statistically significant overall.

Outsourcing has emerged as a tool to force fiscal and structured business processes onto all parties involved in the outsourcing contract. This, although a factor in the decision to outsource, was deemed insignificant. Thus it has not been established that a major reason for outsourcing is driven by the decision to better manage the customer's resources.

Cost savings were still seen as a major factor in driving outsourcing. As highlighted in Section 2.5.6, while cost savings are a major driver behind outsourcing, they are not significant in explaining an organisation's satisfaction with IT outsourcing. This is also reflected in a previous study by Hoffmann (2001).

Implementing outsourcing can facilitate a checking of internal business processes and accountability in all sections of the business. Explicit and implicit knowledge are important factors in the relationship but it is important that service receivers still manage and maintain their internal knowledge. Telstra was predominantly a telecommunications carrier and engineering company that built and managed telecommunications networks. It has been and is being forced by competition – and facilitated by government legislation – to change. In the last 10 years Telstra has moved to a predominantly outsourced model. Its attempts to reduce costs have seen outsourcing of strategic systems, which has resulted in greater complexity in processes. It was identified in the interview responses (refer Appendix F, Table F6) that based on rigid processes, have resulted in issues with service quality and delivery. The responses to the questionnaire supported those findings – that is, outsourcing was not freeing up resources but actually requiring extra resources to manage it (refer Appendix G: Questions 71–100). Time delays and quality were identified as critical elements (refer Table 4.2). But no major issues were identified from Questions 101–135 regarding the relationship with the vendor. When evaluating outsourcing costs, businesses need to consider not just the case for IT but also the effects on other business units within the organisation.

The researcher concluded that the role taken by the CIO in, the IT leadership of an organisations can be an important factor in the effectiveness of the IT department (refer Table 4.1). The researcher also believes that the IT department and the CIO in Telstra may become inconsequential as a result of outsourcing (also refer Appendix H: Table H12). Further research is needed in this area.

The study results indicate that various business units have differing expectations and regard service quality as significant. Should the IT department's role undergo a transition to becoming contract managers and consultants? This would require a different skill set based on relationship management between internal business units and outsourcing partners; monitoring; managing processes and procedures; and setting standards and knowledge management. This interaction between complex and complementary organisations has been highlighted by Bandyopadhyay et al. (2007), who highlight the need to manage relationships and that the involvement of senior management does not end when an outsourcing contract is signed.

Theoretical models of IT outsourcing as proposed by Whitten (2004) and Lee (2000) were tested using Australian data. A SEM approach was employed with factor analysis to allow latent variables to be modelled and it was concluded that the measurement model was able to measure latent variables. The overall findings (refer Figure 5.4) were consistent with the Lee and Whitten models, providing valuable information on the importance of all the different factors: i.e. service quality, satisfaction, relationship quality and switching costs

# CHAPTER 6   Conclusion

This research explores attitudes to outsourcing within Telstra and some of the factors seen as important to successful outsourcing. Researchers Whitten (2004) and Goles (2001) recognised the need for further research regarding the set of factors that comprise successful outsourcing. They theorised on the factors that influence outsourcing success, such as switching costs, service quality, relationship quality and satisfaction with outsourcing.

The aim of this research was to investigate IT outsourcing in Telstra, in particular the relationship between the service quality, service satisfaction and switching costs involved in the outsourcing process. This study has examined the factors involved in service satisfaction and if outsourcing's success is assessed differently between the outsourcer's various staffing levels.

Telstra is a large organisation with multiple business units, and complex relationships exist between these business units and various IT departments, both internal and external. Telstra is also involved in strategic partnerships with various providers. This study found that within the Telstra organisation various criteria or agendas impacted on outsourcing. Hypotheses were formulated based on a literature research and interviews in relation to the criteria for outsourcing and the satisfaction with outsourcing. The research methods and context are provided in Chapter 3: Research Methodology (Figure 3.1). Systematic reading, review and classification of relevant journals, topical articles and other published research provided background on the topic, while initial interviews were conducted to identify themes.

The data from both the literature review and the initial interviews conducted with Telstra employees formed the basis for an extensive questionnaire. The previous work of Whitten (2004) and Goles (2001) also assisted in the formulation of this questionnaire comprising over 178 questions. The questionnaire was then distributed to a random selection of key personnel involved in Telstra's business and IT outsourcing. Existing knowledge gained from the literature review was used to formulate the hypotheses tested.

The questionnaire results were analysed using quantitative techniques and statistical analysis software. These research results are discussed and future research possibilities are proposed in Chapter 5: Results.

## 6.1 Restatement of Research

Australian organisations have a mature, technically advanced IT workforce that can readily provide complex and technical solutions to meet business processes, yet these same large organisations outsource to both onshore and offshore IT providers. Australian organisations have become international organisations and accept global IT providers as normal business practice. As researchers Beaumount and Sohal (2004) observed, the practical benefits of outsourcing are inferred by its growing popularity. However, while these outsourcing organisations are realising cost savings, they are hard pressed to demonstrate this conclusively due to changing technology and a shifting ability to determine true costs (Bourbeau 2004; Chakraborty & Remington 2005). Organisations view IT outsourcing as a long-term strategy, with contracts running for five years or longer, and outsourcing organisations have learnt what to outsource and, more importantly, what not to outsource (Pai & Basu, 2007; Benson & Allen, 2004; Beaumont & Sohal, 2004). Outsourcing has become a strategic business tool and in the process businesses have learnt how to manage outsourced IT project costs and timelines. Vendor service and timeliness are deemed to be significant requirements for successful outsourcing (Whitten, 2004). The relationship between outsourcer satisfaction and the decision to discontinue a contract with vendors is also well established (Beaumont & Sohal, 2004; Whitten, 2004).

### 6.1.1 Emergence of hypotheses

Satisfaction with outsourcing is shown by researchers Beaumont & Sohal (2004) and Whitten (2004) to be a function of the outsourcer's customer service quality, the quality of the information provided and the processes implemented. Research by Parasuraman et al. (1984), Lee & Kim (1999), Kern (1997) and Grover et al. (1996) has shown that satisfaction is strongly associated with the perception of whether or not outsourcing is working. The research of Goles (2001), which is based on that of Lacity and Willcocks (2000), called for further research on the various stakeholders' different perspectives regarding the IT outsourcing relationship. In the research for this thesis it was evident at the interview stage that various personnel within an organisation had differing criteria for outsourcing and different measures for what outsourcing was considered successful and that the reasons for outsourcing had evolved over time (refer Table 4.15: Identification of Overall Patterns from Interviews, Items 1, 2 and 3). This formed the basis for hypotheses 1 and 3. From the interviews (refer Table 4.15: Identification of

Overall Patterns from Interviews, Items 2, 3, 4 and 6), the importance placed on 'quality of service' to satisfaction with outsourcing was also evident, and this resulted in hypothesis 2. Hypotheses were premised on different parts of the organisation having different criteria in assessing the effectiveness of outsourcing. This is consistent with previous studies which emphasised that employees can significantly affect the outcome of projects (Sriwongwanna, 2009; Brown & Cregan, 2008 and Robinson & Kalakota, 2004).

## 6.2  Summary of Research Findings

For the purpose of this research, Telstra employees were treated as the customers of the service providers to gain an insight into the level of service provided with IT outsourcing. Telstra IT's gaps in leadership, structures and processes, service quality, and values and beliefs continue to be issues with the outsourcing model presently in place. The lack of enthusiasm on the part of business units for outsourcing was evident due to reduced flexibility for system changes, loss of intellectual capital and increased cost to the business of retaining business knowledge. This research has exposed the difficulties Telstra management has in controlling its internal business units, using outsourcing as a tool to force fiscal accountability and structured business processes onto individual business units.

The first part of hypothesis 1 — the contention that different personnel positions at Telstra have different criteria for outsourcing — was not supported. The second part of hypothesis 1 – that different personnel within an organisation have different criteria for success in the context of outsourcing — was not supported either. The findings for the second part of hypothesis 1 agree with Parasuraman et al. (1984) that most groups or organisations have similar criteria in evaluating service quality. The issue of outsourcing perceptions of managers at different levels is area that requires additional research.

The second hypothesis dealt with satisfaction with outsourcing. The research showed that the quality of the relationship with the outsourcing vendors had a direct effect on user satisfaction in Telstra. This agrees with studies conducted in the USA by Chakrabarty, Whitten & Green (2007) which established that the relationship quality in outsourcing between outsourcer and vendors  influenced the perception of whether or not outsourcing was working. This research has established a relationship between low

satisfaction with outsourcing and the decision to discontinue an outsourcing contract. The reliability, timeliness and effective communication (or lack thereof) demonstrated by outsourcing vendors were fundamental factors considered when decisions to switch outsourcing arrangements were made. Additional costs incurred by Telstra as a result of switching vendors were not deemed significant by Telstra employees in terms of contract renewal (refer Appendix G: Results Independent Variable – Table G136 to G177). The quality of the outsourcing partnership was seen as relevant, as gauged from interview responses (refer Table 4.15: Identification of Overall Patterns from Interviews) that pointed to difficulties such as a lack of flexibility, loss of internal knowledge and a loss of control of outsourced processes. If Telstra decided an outsourcing contract was not satisfactory, then the cost of changing vendor was not deemed a significant enough factor to prevent such a change. Telstra's relationship with vendors was mixed, both positive and negative factors being identified.

This research on Telstra, an Australian-based organisation, correlates with the findings of researchers in Korea and North America where similar constructs have been used (Goles, 2001; Lee, 2000; Whitten, 2004). Peppard & Ward (1999) highlighted cultural differences as undesirable factors in outsourcing, but this was not a factor at Telstra (refer Appendix G: Tables G112 and G113).

The first hypothesis, that the primary business driver for outsourcing has changed from cost-cutting to allowing Telstra to better manage internal resources, was not substantiated, as outsourcing is still about better managing costs.

## 6.3 Conclusions

Even though Telstra business units have access to a skilled IT workforce (in some cases sophisticated internal IT departments), the trend to outsource continues. This is driven by concerns with the size and spends on IT. Outsourcing has reduced Telstra's enterprise capability in IT, with a complex service chain resulting in a loss of flexibility in IT service delivery and a loss of business knowledge and intellectual capital. Telstra, despite years of rationalising IT systems, still has over 1,400 IT systems, which the researcher believes reflects a lack of IT leadership over an extended period by Chief Information Officers at the corporate level, as well as being due to a lack of technology and business strategy alignment.

The apparent existence of a 'gap' between Telstra employees and management on their criteria for outsourcing and how the success of outsourcing was assessed was not statistically significant. Cost-cutting was perceived by Telstra employees as the primary reason to outsource, while benefits such as improved strategic business direction and the freeing up of internal resources were not considered as significant. Competitive advantage was not seen as a major reason to outsource by Telstra management.

Outsourcers such as Telstra have to build processes and procedures that allow flexibility to move to newer, cheaper suppliers while maintaining levels of business user satisfaction based on service quality. The reasons given for outsourcing (need for accountability, issues with internal staff, control spend and reduced cost) continue to be issues even after outsourcing.

## 6.3.1 Significance of this research

Political factors based on disaffection with internal IT departments proved not to be a major reason to outsource. In both the interviews and questionnaire responses, cost was given as the most significant reason for outsourcing, while the difficulty of maintaining control over processes was cited as one of its difficulties. Although complex organisations are multi-dimensional and complex relationships exist within organisations, outsourcing does not make these issues disappear; on the contrary, it can worsen the situation. Telstra's experiences with outsourcing within the Australian context are extremely similar to those of organisations in Korea and North America, as per the findings of researchers such as Goles (2001), Lee (2000) and Whitten (2004).

This research on Telstra, a complex organisation with various layers of management and organisational resources, provides a benchmark for research on other organisations outside the telecommunications area. Telstra contracts are built around cost, not quality, and given the multi-faceted nature of outsourcing a valid set of constructs was created and tested. The constructs used in this research, based on knowledge sharing, partnership quality and relationship and satisfaction, could be used for future research to develop service quality measures for long-term success in outsourcing at Telstra and other organisations.

Outsourcing practitioners should question the benefits of outsourcing and realise that while initial outsourcing may be driven by the need for cost-cutting, ongoing

support for it will be dependent on service quality. Further research is required on the reasons for switching outsourcing vendors and the lessons to be learnt from choosing a replacement vendor.

This research provides a theoretic base for future research regarding Australian outsourcing. It also provides a snapshot of a moving, evolving and changing environment. Future research is needed to explore various Australian industries regarding the long-term effects of IT outsourcing.

## 6.5 Academic and Practitioner Contributions to the Study

This paper investigates outsourcing from an Australian corporate perspective, providing an initial investigation of the reasons a corporation chooses to initiate outsourcing, change outsourcing vendor or bring outsourced IT back in house. The researcher was also able to make use of personal experience with IT outsourcing, having over 20 years in the IT industry as both an employee and a contractor. Practical project work by the researcher has included lengthy work periods with Accenture, Telstra, CapGemini, Satyam and National Australian Bank (NAB), which has led to an understanding of IT outsourcing procedures and processes from a practical viewpoint.

## 6.6  Limitations of this Study

Limitations were due to problems inherent in the empirical studies, insofar as only a limited number of conceptual factors can be studied at any one time. The data was gathered in a specific geographic area of Melbourne, Australia and solely from Telstra employees as members of a major Australian organisation. The study was based on a single Australian company and therefore contains some information and results that are specific only to the Australian market. Hence, the results of this study cannot be generalised to cover all cases or scenarios. Further investigation is needed into the true cost to organisations after outsourcing commences, once the loss of internal expertise occurs and additional management skill sets are required.

A convenience sampling method was used to collect the data. The interviews provided a snapshot of views from Telstra individuals and provided valuable insights into outsourcing as outlined in Table 4.15: Identification of Overall Patterns from Interviews. Although not statistically significant, patterns identified in Table 4.15 show that Telstra management looked to outsourcing to control the size and spend of IT, but

Telstra employees saw outsourcing as adversely affecting service cost, time and quality of IT. While many empirical studies have been based on measuring customers' perceptions of service quality, only a limited number of organisations or personnel can be studied because of access, time and cost constraints. A cross-sectional rather than a longitudinal research design was used, dictated by the need to manage the scope of the project.

This survey was based on SERVQUAL which has been proven and is reliable. A strong, positive aspect of the research was the depth of the survey instrument, which allowed for a diverse and broad range of questions. The survey instrument was, however, long and time-consuming for respondents, which impacted on the response rate. This small sample size (33 cases) was a limitation of the study. A more focused survey instrument may have delivered a clearer picture on some of the outcomes.

## 6.7 Recommendations

The quality of the relationships in outsourcing, in and between all levels of an organisation, and the perception among staff that outsourcing is working are important factors in the success or failure of outsourcing. Satisfaction by Telstra business users was strongly associated with the perception of whether or not outsourcing was working. Both explicit and implicit knowledge are important factors in the relationship, but it is important that Telstra business users manage the company's internal IT knowledge.

The Telstra CIO and also Telstra's IT business units need to provide a framework that supports the business in providing IT in-house or outsourced services. IT business units must add value to the process or find themselves bypassed by IT vendors and/or outsourcing partners and the researcher encourages further investigation into the role of IT departments in a modern 'virtual' organisation. Business units within an organisation differ from each other regarding their expectations of outsourcing, which means that an organisation requires a range of skill sets including those based on relationship management between internal business units and outsourcing partners. Additional skill sets based around monitoring, managing processes and procedures, setting of standards and knowledge management are also required.

Organisations are viewing IT as a commodity that can be outsourced to the lowest bidder. The driver for outsourcing continues to be cost, but success is difficult to

measure and qualify; nonetheless, satisfaction on the part of the service receiver(s) is a significant factor in whether contracts are renewed or cancelled.

Prior to and during any IT outsourcing project, the company seeking to outsource must:

1. be clear and unambiguous about its reasons for outsourcing (whether it is entire or selective outsourcing);
2. be clear and unambiguous about the objectives of outsourcing;
3. be clear and unambiguous with an outsourcing vendor regarding its expectations for the outsourcing contract;
4. understand that the effect of separation of service provision should be viewed as part of the vertical IT service chain;
5. establish a different skill set (one based on relationship management between internal business units and outsourcing partners, monitoring, managing processes and procedures, setting of standards and knowledge management); and
6. manage its internal knowledge.

Explicit and implicit knowledge are important factors in the relationship, as has been demonstrated by this thesis and others, and are crucial factors as to whether or not an outsourcing project succeeds or fails.

For an outsourcing vendor's contract to be a mutually satisfying, ongoing relationship, it is critical that:

1. the expectations of the outsourcing company are fully understood by the vendor;
2. customer satisfaction occurs by ensuring reliability, timeliness and communication when dealing with an outsourcing partner; and
3. the longer-term implications of outsourcing are considered, rather than just short-term cost saving.

# APPENDICES

# Appendix A — Ethics Approval

Human Research Ethics Committee FOBL - Out of Session Approval

Tina.Jeggo [tina.jeggo@vu.edu.au]    Tue 27/06/2006 2:26 PM

**BHREC 2006/01 - Australian Outsourcing Model Onshore and Offshore (Professor Michael McGrath/Associate Professor Arthur Tatnall/Mr Brian Haveckin)**

I am pleased to inform you that the Chair of the Human Research Ethics Committee, Faculty of Business and Law has given out of session approval for the **Interview Phase** of your Ethics application.

We would like to draw your attention to the fact that a copy of the follow-up survey questions and related information sheet  must be provided to the Committee before commencement of this phase of the research project. As this will be an anonymous survey, no consent form will be required.

If you have any questions with regard to the above, please do not hesitate to contact me.

We wish you good luck with your research and data collection.

Regards,

Tina Jeggo

on behalf of

Professor Michael Polonsky
Chair, Human Research Ethics Committee
Faculty of Business and Law

# Appendix B — Questionnaire Cover Letter



## Australian Outsourcing Model Onshore and Offshore

The School of Information Systems at Victoria University is currently researching the ramifications of Information outsourcing. This study is being conducted by Brian Haveckin, a doctoral student studying his PhD under my supervision, who will be conducting the data collection for the study.

As a user of outsourced systems, we would like to invite your participation in our survey research by completing the enclosed questionnaire. We have selected your organisation through your participation in SAP user groups

Your participation in this survey is entirely voluntary. The questionnaire will take approximately 20 minutes to complete. If you decide to participate, kindly post us back the completed questionnaire in the supplied reply envelope as soon as convenient, but no later than October 2007.

Please note that the results will be entered anonymously into a database. The results will be handled in strictest confidence and all written record will be stored securely for at least five years. Results of the survey will be published on a group basis (for instance, as a customer group or as an industry perspective). No individual survey results will be released.

We look forward to your kind cooperation for the research. For any questions, you may contact Brian Haveckin (0418 501700; Email: brian.haveckin@research.vu.edu.au).

Yours faithfully

Dr Michael McGrath

School of Information Systems

**This research project has been approved by the Victoria University**

**Faculty of Business and Law**

**Ethics Approval, Human Research Ethics Committee.**

**Project BHREC 2006/01**

If you have any queries or complaints, you may contact the Secretary,

Victoria University Human Research Ethics Committee,

Victoria University, PO Box 14428, Melbourne, VIC, 8001 phone (03) 9919 4710

# Appendix C — Introduction for Interview



_____, as discussed, I am a PHD student at Victoria University (Business and Law) conducting research on outsourcing in Australia.

I would appreciate your assistance with my dissertation by learning from your insights. My object is to learn from your opinions and experience about factors related to application outsourcing contracts. I hope to identify indicators that lead to organisations continuation with current outsourcing partner, switching to different outsourcing vendor or bringing the support functions back in-house.

I expect the one on one interview to take approximately 30 minutes.
If you have any questions or concerns please contact me
Brian Haveckin (0418 501700) or my project Supervisor
Dr Michael McGrath (+61 3 9919 4627) Michael.Mcgrath@vu.edu.au
at Faculty of Business and Law, Victoria University.
Your cooperation is greatly appreciated, and any information obtained will be treated with strict confidentiality and in an ethical manor, thank you in advance for you assistance.

Sincerely, Brian Haveckin

brian.haveckin@research.vu.edu.au
Faculty of Business and Law
School of Information Systems

# Appendix D — Consent Form of Participants



**Victoria University of Technology**

**Consent Form for Participants Involved in Research**

**CERTIFICATION BY PARTICIPANT**

I**,** _____ of   Telstra Corporation Limited certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the research for "Australian Outsourcing Model Onshore and Offshore" being conducted at Victoria University of Technology by: Michael McGrath and Mr. Brian Haveckin a PHD student.

I understand that the objectives of the research, together with any information given by me will be treated with the strictest confidentiality. This has have been fully explained to me by: Mr. Brian Haveckin. That I freely consent to participation and am involved in the above procedures. I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this research at any time and that this withdrawal will not jeopardise me in any way.

My involvement in this procedure may include the following:-

- One on One interview
- Completion of outsourcing survey questionnaire
- Tape recorded interview

I have been informed that the information I provide will be kept confidential.

Signed:**...................................}** Witness other than the experimenter: **.**

**Date: ........................................................}**

Any queries about your participation in this project may be directed to the researcher (Professor Michael McGrath, ph. 9919 4627)  If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MC, Melbourne, 8001 (telephone no:  03-9688 4710).

[*please note:  where the participant/s is aged under 18, separate parental consent is required; where the participant is unable to answer for themselves due to mental illness or disability, parental or guardian consent may be required.]

# Appendix E — Questionnaire

**Instructions**

Please read the following questions and select an appropriate answer by crossing the circle associated with the **single, most appropriate** response to indicate degree of agreement, approx answers are fine.

| About Respondent |
|---|
| 1. ○ Male / ○ Female |
| Age of respondent<br><br>2. ○ 20 to 30 years   ○ 31 to 40 years   ○ 41 to 50 years   ○ 51 to 60 years<br><br>○ 61 to 70 years |
| Number Years with Organization<br><br>3. ○ 0 to 1 years   ○ 2 to 5 years   ○ greater than 5 years |
| Time in Current position<br><br>4. ○ 0 to 1 years   ○ 2 to 5 years   ○ greater than 5 years |

| | |
|---|---|
| 5. Were you involved in decision to outsource? | ○ Yes / ○ No |
| 6. Your involvement with vendor's services? | ○ Daily / ○ Weekly /<br><br>○ Monthly |
| 7. Have you received formal training on managing relationship with vendors? | ○ Yes / ○ No |

| |
|---|
| 8. Position within firm<br><br>○ Administration  ○ Analysis  ○ Support  ○ Technical  ○ First level supervisor<br><br>○ Middle Manager  ○ Senior Manager   ○ Other<br>_____ |
| 9. What best describes your area in organisation<br><br>○ Accounting  ○ Engineering  ○ Finance  ○ Human Resources  ○<br><br>Information Systems  ○ Marketing  ○ Manufacturing  ○ Sales    ○ Other<br>_____ |

## About Your Firm

(Please indicate degree of agreement, approx answers are fine)

Which industry do you work in?

10. ○ Telecommunications  ○ Manufacturing  ○ Health Care  ○ Public sector

○ Information Technology  ○ Utilities  ○ Financial Services  ○ Construction

○ Real Estate  ○ Other _____

| | |
|---|---|
| 11. What year was firm started | |
| 12. Number of employees | |
| 13. Number of IT employees | |
| 14. Firms approximate annual turnover | |
| 15. Approximate yearly organisation wide IT spend | |
| 16. Approximate yearly organisation wide IT spend on outsourcing | |
| 17. IT management is centralized / decentralized | ○ Centralized<br>○ Decentralized<br>○ Both |
| 18. IT budget is centralized / decentralized | ○ Centralized<br>○ Decentralized<br>○ Both |

19. Current number of outsourced projects

○ 0 to 4  ○ 5 to 9  ○ 10 to 19  ○ 20 to 29  ○ 30 to 39  ○ greater than 40

20. Estimated number of outsourcing projects previous 5 years

○ 0 to 4  ○ 5 to 9  ○ 10 to 19  ○ 20 to 29  ○ 30 to 39  ○ greater than 40

21. Estimated number of outsourcing contracts in last five years

○ 0 to 4  ○ 5 to 9  ○ 10 to 19  ○ 20 to 29  ○ 30 to 39  ○ greater than 40

22. How many major IT systems does your organisation currently outsource?

○ 0 to 4  ○ 5 to 9  ○ 10 to 19  ○ 20 to 29  ○ 30 to 39  ○ greater than 40

23. How many major IT outsource partners does your organisation currently have?

○ 0 to 4  ○ 5 to 9  ○ 10 to 19  ○ 20 to 29  ○ 30 to 39  ○ greater than 40

| **Resources** (Please indicate degree of agreement, approx answers are fine) | |
|---|---|
| 24. Do you currently outsource strategically important IT functions | ○ Yes / ○ No |
| Has your organisation in the last 5 years: - <br><br> a. (25) Switched outsourcing vendors <br><br> b. (26) Renewed an outsourcing contract with current vendor <br><br> c. (27) Back sourced outsourced contract <br><br> d. (28) Kept IT in-house | ○ Yes / ○ No <br><br> ○ Yes / ○ No <br><br> ○ Yes / ○ No <br><br> ○ Yes / ○ No |
| 29. Indicate level of strategic importance of outsourced system/s | Low　　　　　　High <br> $_1$○ $_2$○ $_3$○ $_4$○ $_5$○ $_6$○ $_7$ |
| 30. Degree to which outsourcing system increased the competitiveness of business | Low　　　　　　High <br> $_1$○ $_2$○ $_3$○ $_4$○ $_5$○ $_6$○ $_7$ |
| 31. 32. Is Application development done Onshore or Offshore? <br><br> (Please provide an estimate of the percentage) | Onshore ○ / <br><br> Offshore ○ / Both ○ <br><br> _____ / _____ % |
| 33. 34. Is Application support done Onshore or Offshore? <br> Percentage? | Onshore ○ / Both ○ <br><br> Offshore ○ / Both ○ <br><br> _____ / _____ % |
| 35. Organisation is planning additional IT outsourcing in near future. | Disagree　　　Agree <br> $_1$○ $_2$○ $_3$○ $_4$○ $_5$○ $_6$○ $_7$○ |
| 36. Organisation's outsourcing is aligned to business strategy | Disagree　　　Agree <br> $_1$○ $_2$○ $_3$○ $_4$○ $_5$○ $_6$○ $_7$○ |
| 37. Organisation's outsourcing is aligned to technology strategy | Disagree　　　Agree <br> $_1$○ $_2$○ $_3$○ $_4$○ $_5$○ $_6$○ $_7$○ |
| 38. Chief Information Officer was instrumental in outsourcing decision | Disagree　　　Agree <br> $_1$○ $_2$○ $_3$○ $_4$○ $_5$○ $_6$○ $_7$○ |

| | Disagree          Agree |
|---|---|
| 39. Chief Information Officer has delivered excellent IT solutions | Disagree                    Agree<br>$_1\bigcirc_2\bigcirc_3\bigcirc_4\bigcirc\ _5\bigcirc_6\bigcirc_7\bigcirc$ |
| 40. Chief Information Officer is considered effective | Disagree                    Agree<br>$_1\bigcirc_2\bigcirc_3\bigcirc_4\bigcirc\ _5\bigcirc_6\bigcirc_7\bigcirc$ |
| In house IT support before outsourcing had:-<br><br>41. a. Lack of IT strategic direction<br>42. b. Lack of rigour<br>43. c. Project scope creep<br>44. d. Cost increases<br>45. e. Timelines increase | Disagree                    Agree<br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc_7\bigcirc$<br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc_7\bigcirc$<br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc_7\bigcirc$<br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc_7\bigcirc$<br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc_7\bigcirc$ |
| Outsourcing projects and support has caused organisation:-<br>46. a. To lose control of projects<br>47. b. To lose control of requirements<br>48. c. To lose ownership of projects | Disagree                    Agree<br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc_7\bigcirc$<br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc_7\bigcirc$<br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc_7\bigcirc$ |

## About Contract (s)

(Please indicate degree of agreement, approx answers are fine)

| | |
|---|---|
| 49. Strategic importance of outsourced IT support to organisation | Important   Not Important<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 50. Strategic importance of outsourced IT development to organisation | Important   Not Important<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 51. Is vendor relationship based on clauses in contracts or relationship | O Contract / O Relationship |
| 52. Additional costs outside of contracts are high | Disagree                Agree<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 53. Approx length of contracts | _____  months |
| 54. Approx start date of major contract | __/__/____ |
| 55. Approx time to exit or terminate a contract | _____  Months |

## Reason to Outsource

(Please indicate degree of agreement, approx answers are fine)

| 56. Please rate reasons to outsource from number 1 to 9 in order of priority. | ☐ Strategic Business Direction |
| | ☐ Cost Saving |
| | ☐ Improved service levels |
| | ☐ Access to Technical expertise |
| | ☐ Freeing-up internal resources |
| | ☐ Globalization forcing change |
| | ☐ Introduce new Technology |
| | ☐ Provide staffing versatility |
| | ☐ Competitive Advantage |
| | ☐ Other: Please indicate: -------------------------------- |
| 56. Which term could be used to correctly define the type of outsourcing at your organisation? (maybe more than one ) Number in order of suitability, 1 being the most suitable. | ☐ Total outsourcing |
| | ☐ Value-adding outsourcing |
| | ☐ Equity holding |
| | ☐ Offshore outsourcing |
| | ☐ Multi sourcing |
| | ☐ Co-sourcing |
| | ☐ Spin offs |
| | ☐ Smarter Contracting |
| | ☐ Business Process Outsourcing |
| | ☐ Other: Please indicate: -------------------------------- |

## Benefits

(Please indicate degree of agreement, approx answers are fine)

| | Disagree — Agree |
|---|---|
| 58. Outsourcing partner has shortened development life cycle | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 59. Outsourcing partner has improved quality of application | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 60. Outsourcing partner has improved service delivery times | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 61. Outsourcing partner has reduced total cost | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 62. Outsourcing has been beneficial from a business perspective | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 63. Vendor is skilled in IT applications | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 64. Vendor is skilled in business processes | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 65. Outsourcing has created a competitive advantage between internal business units and outsourcing companies | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 66. Outsourcing has created a complex supply chain | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 67. Outsourcing has decreased local IT knowledge | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 68. Management support for outsourcing is important for success | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 69. The relationship between business and outsourcing vendor is the most important success factor | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 70. Rigorous internal controls between business and outsourcing vendor are required. | $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |

## Issues with Outsourcing Partner

(Please indicate degree of agreement, approx answers are fine)

| | |
|---|---|
| 71. Choosing wrong vendor has caused ongoing problems | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 72. Vendor management is very important and requires ongoing supervision | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 73. Support and enhancement of projects requires ongoing supervision | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 74. Operation and expense management of vendor requires ongoing supervision | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 75. Onshore work is of better quality than offshore work | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 76. Response to business requests is dependent on outsourcing partner | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 77. Outsourcing partner / vendor is able to provide flexibility with staffing | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 78. Outsourcing has allowed regulators to better manage functions | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 79. Staff morale has decreased with outsourcing | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 80. Business has lost expertise with outsourcing | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 81. Business has lost control with outsourcing | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 82. Organisational support from outsourcing partner has decreased over time | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 83. Market demands forces outsourcing partner to improve their performance | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 84. Outsourcing allows win/win in that business can concentrate on business and leave outsourcing partner to manage contracted items | Disagree — Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |

## Impact of Outsourcing

(Please indicate degree of agreement, approx answers are fine)

| | |
|---|---|
| 85. Outsourcing was supported by business | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 86. Outsourcing was supported by internal IT staff | Disagree<br>Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 87. Most internal IT staff were transferred to outsourcer | Disagree<br>Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 88. Percentage of internal IT staff transferred to outsourcing partner? | _____ |
| 89/90. Percentage of work that is performed onshore / offshore | ☐ onshore / ☐ offshore |
| 91. Outsourced service varies between applications | Disagree       Agree<br>$_1$O$_2$O$_3$O$_4$O$_5$O$_6$O$_7$O |
| 92. Business overall satisfaction with outsourcing partner is high | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 93. Relationship with outsourcing vendor is strong | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 94. Outsourcing partner meets key performance indicators | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 95. Communication with outsourcing partner is positive | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 96. Development time for minor changes has decreased since outsourcing | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 97. Development time for major changes has decreased since outsourcing | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 98. Quality of delivered system has increased since outsourcing | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 99. Quality of documentation has increased since outsourcing | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 100. Quality of training has increased since outsourcing | Disagree       Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |

## Relationship with Vendor / Outsourcing Partner

(Please indicate degree of agreement, approx answers are fine)

| | |
|---|---|
| 101. Outsourcing partner made decisions beneficial to us | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O<br>$_7$O |
| 102. Outsourcing partner provides assistance to business above contract requirements | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O<br>$_7$O |
| 103. Outsourcing partner is sincere in providing service | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O<br>$_7$O |
| 104. Outsourcing partner is ethical | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 105. Relationship between outsourcing partner and business is based on trust | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 106. Relationship between outsourcing partner and business is based on contract only | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 107. Outsourcing partner keeps contract commitments | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 108. Outsourcing partner is committed to relationship | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 109. Business units are committed to relationship with outsourcing partners | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 110. Both outsourcing partner and business commit resources to sustain relationship | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 111. Both outsourcing partner and business freely exchange information | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 112. Corporate culture clashes between outsourcing partner and business are an ongoing issue | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 113. Different business rules between business and outsourcing partner causes disagreements | Disagree $\quad\quad$ Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 114. Different business processes between business and outsourcing partner causes disagreement | Disagree $\quad\quad$ Agree<br>$_1$O $\quad_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |

| | |
|---|---|
| 115. The outsourcers performance is reviewed on a regular basis | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 116. Feedback is provided to the outsourcer following a review | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 117. Problem solving is a joint exercise between business and outsourcing vendor | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 118. Decision making is a joint exercise between business and outsourcing vendor | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 119. Communication between business and outsourcing vendor is strong | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 120. Business support team works well with outsourcing vendor | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 121. Outsourcing vendor supports teamwork | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 122. Offshore outsourcing vendor are responsible for large portions of system development | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 123. Outsourcing vendor's communications are accurate | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 124. Outsourcing vendor's communications are complete | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 125. Outsourcing vendor's communications are credible | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 126. Outsourcing vendor's communications are timely | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 127. Outsourcing vendor operated efficiently | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 128. Outsourcing vendor provided leadership | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |
| 129. Outsourcing vendor provided quality work | Disagree             Agree<br><br>$_1\bigcirc$ $_2\bigcirc$ $_3\bigcirc$ $_4\bigcirc$ $_5\bigcirc$$_6\bigcirc$$_7\bigcirc$ |

| | |
|---|---|
| 130. Outsourcing vendor provided work within budget | Disagree          Agree<br><br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc_6\bigcirc_7\bigcirc$ |
| 131.Outsourcing vendor requires little business management | Disagree          Agree<br><br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc_6\bigcirc_7\bigcirc$ |
| 132. Outsourcing vendor requires little functional support | Disagree          Agree<br><br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc_6\bigcirc_7\bigcirc$ |
| 133. Outsourcing vendor was able to meet project goals | Disagree          Agree<br><br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc_6\bigcirc_7\bigcirc$ |
| 134. Outsourcing vendor was innovative and creative | Disagree          Agree<br><br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc_6\bigcirc_7\bigcirc$ |
| 135. Outsourcing vendor has improved business productivity | Disagree          Agree<br><br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc_6\bigcirc_7\bigcirc$ |

## Switching costs

(Please indicate degree of agreement, approx answers are fine)

| | |
|---|---|
| 136. Business found it difficult to hire internal IT staff after outsourcing | Disagree            Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 137. Cost of retaining internal IT staff increased after outsourcing functions | Disagree            Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 138. Cost of training internal IT staff increased after outsourcing functions | Disagree            Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 139. Internal IT staff lost interest after outsourcing of other functions | Disagree            Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 140. Other outsourcing partner's performance improved after a contract was terminated | Disagree            Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |
| 141. Terminated contracts led to revised vendor management processes | Disagree            Agree<br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O |

## Changing outsourcing partner/Benefits /Switching costs

(Please indicate degree of agreement, approx answers are fine)

| | |
|---|---|
| 142. Changing outsourcing partner caused transition costs to be high due to lack of support from previous vendor | Disagree         Agree<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O |
| 143. When changing outsourcing partner, the previous vendor made it difficult to discontinue contract | Disagree         Agree<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O |
| 144. When changing outsourcing partner the previous vendor withheld vital information | Disagree         Agree<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O |
| 145. When changing outsourcing partner the previous vendor with held documentation | Disagree         Agree<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O |
| 146. After changing outsourcing partner we decided not to give previous vendor another contract | Disagree         Agree<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O |
| Transition time for new provider to become productive was affected by:-<br><br>147. a. Previous vendor withholding information<br><br>148. b. Other problems with previous vendor<br><br>149. c. Lack of documentation<br><br>150. d. Lack of internal processes<br><br>151. e. Lack of suitable staff | Disagree         Agree<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O<br><br>$_1$O $_2$O $_3$O $_4$O $_5$O $_6$O $_7$O<br><br>$_{N/A}$O |

| | Disagree          Agree |
|---|---|
| | 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ <br> N/A ○ |
| Level of service decreased after switching outsourcing vendor due to:- | 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ <br> N/A ○ |
| 152. a. Reluctance of previous vendor to help | |
| 153. b. Lack of local processes | 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ <br> N/A ○ |
| 154. c. In-house staff lacking system knowledge | |
| 155. d. In-house had to learn how IT systems worked | 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ <br> N/A ○ |
| 156. e. The need for new policies | 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ <br> N/A ○ |
| | 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ <br> N/A ○ |

## Back sourcing / Switching costs

(Please indicate degree of agreement, approx answers are fine)

| | |
|---|---|
| 157. Internal team required considerable time to be productive | Disagree        Agree <br> $_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 158. We hired experienced staff who produced results quickly | Disagree        Agree <br> $_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 159. Service from internal provider is worse than previous outsourcing provider | Disagree        Agree <br> $_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 160. Back sourcing required new skills | Disagree        Agree <br> $_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 161. In-house development requires different processes | Disagree        Agree <br> $_1$O $_2$O $_3$O $_4$O $_5$O$_6$O$_7$O |
| 162. In house development is simpler process | Disagree <br> Agree <br> $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O <br><br> $_7$O |
| The discontinuation of outsourcing contract has detrimental effect on:- <br><br> 163. a. Business performance <br> 164. b. IT performance <br> 165. c. In unexpected ways <br> 166. d. Internal processes <br> 167. e. Internal staff availability <br> 168. g. Not Applicable | Disagree <br> Agree <br><br> $_1$O$_2$O$_3$O$_4$O$_5$O$_6$O $_7$O <br><br> $_1$O$_2$O$_3$O$_4$O$_5$O$_6$O$_7$O <br><br> $_1$O$_2$O$_3$O$_4$O$_5$O$_6$O$_7$O <br><br> $_1$O$_2$O$_3$O$_4$O$_5$O$_6$O$_7$O <br><br> $_1$O$_2$O$_3$O$_4$O$_5$O$_6$O$_7$O <br><br> $_1$O$_2$O$_3$O$_4$O$_5$O$_6$O$_7$O |
| 169. We lost significant money due to time and effort of building relationship with previous vendor | Disagree        Agree <br> $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O$_7$O |
| 170. After switching outsourcing contract, replacement it staff were difficult to find | Disagree        Agree <br> $_1$O $_2$O $_3$O $_4$O $_5$O $_6$O$_7$O |

## Switching costs / setup costs / Sunk costs

(Please indicate degree of agreement, approx answers are fine)

| | Disagree      Agree |
|---|---|
| 171. When contract switched additional internal employees required | $_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc\ _7\bigcirc$ |
| 172. Relationship developed with previous vendor was lost | $_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc\ _7\bigcirc$ |
| 173. Lost knowledge and transition costs to switch vendors were significant | $_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc\ _7\bigcirc$ |
| New support team required:-<br><br>174. a. Considerable setup time<br><br>175. b. Additional internal processes<br><br>176. c. Little time or effort to provide support<br><br>177. d. Additional training | Disagree      Agree<br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc\ _7\bigcirc$<br><br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc\ _7\bigcirc$<br><br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc\ _7\bigcirc$<br><br>$_1\bigcirc\ _2\bigcirc\ _3\bigcirc\ _4\bigcirc\ _5\bigcirc\ _6\bigcirc\ _7\bigcirc$ |

**178. Thank you very much for your assistance. Are there any additional insights related to your outsourcing experience that you would like to express, if so please include below.**

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If you have any questions or concerns please contact Brian Haveckin. (0418 501700) Brian.Haveckin@research.vu.edu.au or project Supervisor Dr Michael McGrath (+61 3 9919 4627) Michael.Mcgrath@vu.edu.au  at Faculty of Business and Law, Victoria University.

# Appendix F — Results of Interviews

## List of Tables

The following is the analysis of interviews conducted as outlined in Table 13: Source of interview Titles (refer Ch 3.2: Exploratory). The method of analysis used was constant comparison as outlined by Leedy & Ormrod (2005).(refer Ch 4.9: Exploratory Phase Interviews).

A cross-case analysis of all interviews was done using the following five steps

- Step 1: Organisation of details;
- Step 2:  Categorisation of data into meaningful groups;
- Step 3: Interpretation of single instances;
- Step 4: Broad themes highlighted; and
- Step 5: Synthesis and generalisations developed further.

**Step 1: Organisation of details**

The following groupings were made:

- reasons to outsource (refer Table F.1);
- benefits of outsourcing (refer Table F.2);
- issues with the outsourcing partner (refer Table F.3);
- the impact of outsourcing on the outsourcing business (refer Table F.4); and
- the relationship with the vendor/outsourcing partner (refer Table F.5).

| Item | Interviewees' reasons for outsourcing |
|------|----------------------------------------|
| 1 | Issues with internal staff and performance make it easier to outsource |
| 2 | When size and spend are out of control, outsourcing is a process to limit spending |
| 3 | IT is not core business, it is regarded as a back of house expense |
| 4 | Requirements to reduce cost of processes and improve service |
| 5 | The area to be outsourced is just too hard for business unit to manage |
| 6 | To circumvent internal politics with end-to-end process ownership |
| 7 | Forced change on the federated IT model |
| 8 | Brings in competition and competitive pressure to achieve world best practice benchmarking |
| 9 | Provides a global delivery model to improve commercial arrangements and competition from service providers |
| 10 | Provides IT multi-vendors with forced competition |
| 11 | Business units accountable for funding with real dollars |
| 12 | Leverages cost, quality, scalability and skill ability (large skill base) available from offshore, while Australia has a fixed pool of talent |

Table F.1: Reasons to Outsource

| Item | Interviewees' benefits of outsourcing |
|------|----------------------------------------|
| 1 | Forces strategic thinking on Business |
| 2 | Outsourcing is a leadership issue (where) the IT provider has to be better than the internal provider and provide value-add so the relationship provides a win–win situation |
| 3 | Regular reporting to senior management |
| 4 | Requires a clear end-to-end process |
| 5 | Business unit is forced to accept outsourcing |
| 6 | Demonstrates savings |
| 7 | By offshore outsourcing you provide a larger pool of talaent that can be utilised to improve cost, quality, scalability and skill ability (large skill base), while Australia has limited pool of talent |

Table F.2: Benefits of Outsourcing

| Item | Issues with the outsourcing partner |
|------|-------------------------------------|
| 1 | Costings don't include the total cost of ownership |
| 2 | The business unit loses control of skills and personnel |
| 3 | Rigid processes, result in the outsourcer being paid to follow bad processes, this teaches bad habits but 'legal' contracts make it is too hard to change |
| 4 | Low cost providers may lack expertise to support the business unit |
| 5 | Lack of knowledge, both of a technical and business nature |
| 6 | Requires too much direction |
| 7 | Delivering on cost but not delivering on schedule |
| 8 | Off-shoring program requires additional management and greater specification |
| 9 | Cheaper cost but less service with longer lead times for delivery |
| 10 | End users are forced to accept the delivered quality of service |
| 11 | No methodology to evaluate 'user' acceptance or satisfaction |
| 12 | Causes stress and longer hours |
| 13 | Previously had 'Gold Star' service, now have third rate service |
| 14 | The job is still getting done but more work is done by the in house business team |
| 15 | Time delays |
| 16 | Bureaucratic/red tape |
| 17 | Outsourced partners' performance is patchy due to:<br>– turnover in staff<br>– loss of knowledge<br>– loss of local knowledge<br>– moving work offshore<br>– being on the basis of a yearly retainer (provider cutting costs — level of support)<br>– excessive charges (gouging)<br>– five-year contract<br>– lack of business experience<br>– Outsourcing partner personnal are smart but lacking business experience<br>– communications skills lacking (poor English) |

Table F.3: Issues with Outsourcing Partner

| Item | Impacts of outsourcing |
|------|------------------------|
| 1 | Outsourcing partner has control of the business |
| 2 | Short-term cost driver, not strategic long-term direction |
| 3 | Business units are focused on their own area, not the end-to-end process |
| 4 | Lack of business support for knowledge transfer and continuity |
| 5 | Business processes are ad hoc and not documented |
| 6 | In house 'build' was easy, with shorter timeframes and changes could be accommodated |
| 7 | Moving to a rigid business process has associated overheads in time delay and cost |
| 8 | Stakeholders have outsourcing forced on them by IT groups – one result is they have no input to the outsourcing partner |
| 9 | Legacy systems still require support (not supporting complete end to end process, has added additional layer of complexity) |
| 10 | Business units just can't get things done, as they have to follow a flawed process, causing frustration when it can take up to three years for minor changes |
| 11 | Critical issues get lost with no accountability |
| 12 | Contract arrangements not always met, but the business unit has no control |
| 13 | Process not flexible enough to support minor change, as even minor changes become complex |
| 14 | Significant effort is required internally to support the outsourcing process, which results in increased frustration for employees and time delays |
| 15 | Results in additional costs of outsourcing flowing onto business unit |

Table F.4: Impact of Outsourcing

| Item | Relationship with vendor/outsourcing partner |
|------|----------------------------------------------|
| 1 | Rigid processes - the outsourcing partner is paid to follow bad processes, which teaches bad habits but 'legal' contract make it too hard to change |
| 2 | Staff turnover by outsourcer: no control over outsourcing partners' personnel |
| 3 | Disputes with outsourcing partner have flow-on cost to business, which requires additional internal resources to manage |
| 4 | Relationship with business units, IT support and outsourcing partner leads to lack of ownership |
| 5 | Different outsourcing partners have different skills mix |
| 6 | Outsourcing partner is interested in profits |
| 7 | Alignment of objectives between outsourcing partners (different objectives — opposite);  For the outsourcing partner to make money against business requires 'requires costs to decrease and spending to be reduced' |
| 8 | Justification of outsourcing because it suits vested interests (Consulting companies, Suppliers and Upper Management) |
| 9 | Little time for outsourcing partner to learn the business and in-business processes |
| 10 | Loss of intellectual and human capital |
| 11 | Contracts with outourcing partners are reviewed every 12 months, resulting in increased rates, which make switching  Oustourcing providers  cost effective |
| 12 | Need to train outsourcing partner to manage to the organisation's requirements |
| 13 | Only outsource to a  reputable   market, where you can easily change oustourcing partner without upsetting business |
| 14 | Process to change  oustourcing partner needs to be easily managed |
| 15 | Business unit should describe business processes, with outsourcing partner bringing expertise to the table |
| 16 | Oustourcing providers take six to 12 months to come up to speed |
| 17 | Exit  oustourcing providers to force competition between suppliers |
| 18 | Improve negotiation position with  oustourcing providers |
| 19 | Improve position for tender |
| 20 | Improve terms |
| 21 | Move to global delivery model |
| 22 | Effort to manage relationship and additional costs aren't always factored into the end-to-end processes |

| Item | Relationship with vendor/outsourcing partner (cont'd) |
|------|-------------------------------------------------------|
| 23 | Payment on outsourcing key performance indicators is not always aligned to business needs |
| 24 | Knowledge group to build interface to outsourcing partner |
| 25 | Used intranet and other tools to manage documentation and outsourcing |
| 26 | Integrity and trust should be the basis of these relationships |
| 27 | 'Right outsourcing', as the basis for any outsourcing deal, which means that a deal has to work for both parties involved |

Table F.5: Relationship with Vendor/Outsourcing Partner

The general groupings of reasons, benefits, issues, impact of outsourcing and the relationship with the vendor/outsourcing partner are captured in Tables F.1 to 5. The factors in Table F.1 to 5 have then been summarised to provide a review in Table F.6: Summarised Results of Step 1.

| Table Appendix F | Description | Factors |
|------------------|-------------|---------|
| F.1 | Reason to outsource | Cost saving<br>Internal staff accountability<br>Competition |
| F.2 | Benefits | Strategic thinking<br>Standised process and pocedures |
| F.3 | Issues with outsourcing partner | Service quality |
| F.4 | Impact of outsourcing | Service quality/Delivery |
| F.5 | Relationship with vendor/ outsourcing partner | Rigid business process/Governance/Risk tolerance |

Table F.6: Summarised Results of Step 1 Appendix F

**Step 2: Categorisation of data into meaningful groups**

Items were collated and categorised to find both consistencies and differences as a way of revealing categories. The results from Step 1 (Organisation of Details) were grouped into various categories of events and behaviour.

| Item | Impact of Outsourcing on Costs |
|------|-------------------------------|
| 1 | Size and spending out of control means of limiting spending |
| 2 | Requirement to reduce cost of IT process and improve service |
| 3 | Business units accountable for funding with real dollars |
| 4 | To leverage cost, quality, scalability and skill ability (large skill base) of offshore personnel, while Australia has a fixed pool of talent |
| 5 | Demonstration of savings (by outsourcer) |
| 6 | Costings don't have total cost of ownership factored in |
| 7 | Cheaper cost but less service with longer lead times for delivery |
| 8 | Excessive charges (gouging) |
| 9 | Results and additional costs of outsourcing flow onto business |
| 10 | Disputes with maintainer have flow-on cost to business, which requires additional internal resources to manage |
| 11 | Outsourcing partner interested in profits |
| 12 | Alignment of objectives between outsourcing entities (different objectives – opposite) -  Outsourcer to make money vs Telstra require costs to go down / less spending |
| 13 | For the outsourcing partner to make money against business requires it requires costs to go down thus less spend [Doesn't make sense.] |
| 14 | Efforts to manage the relationship aren't always factored into the costs of end-to-end processes |

Table F.7: Impact of Outsourcing on Costs

| Item | Outsourcing impact on service quality and delivery |
|------|---------------------------------------------------|
| 1 | Rigid processes, outsourcer paid to follow bad processes, which teaches bad habits but with 'legal' contract too hard to change |
| 2 | Staff turnover by outsourcer, no control over outsourcing partner's personnel |
| 3 | Relationship with business units, IT support and outsourcing partner leads to lack of ownership by all stakeholders |
| 4 | Justification of outsourcing because it suits vested interests (Consulting companies, Suppliers and Upper Management) |
| 5 | Time needed for the outsourcing partner to learn the business and the in-business process |
| 6 | Loss of intellectual and human capital |
| 7 | Contracts are reviewed every 12 months, resulting in increased rates, which make switching supplier cost effective |
| 8 | Need to train outsourcing partner to manage to the business unit's requirements |
| 9 | Can only outsource to a competitive market where the business unit can easily change supplier without upsetting the business |
| 10 | Process to change partner needs to be easily managed |
| 11 | Business owner should describe the process, with the outsource partner bringing expertise to the table |
| 12 | Improves negotiation position with vendors |
| 13 | Improves position for tender |
| 14 | Improves terms |
| 15 | Knowledge group builds interface to outsourcing partner |
| 16 | Intranet and other tools are used to manage documentation and outsourcing |
| 17 | Different providers have different skill mix |

Table F.8: Outsourcing Impact on Service Quality and Delivery

| Item | Impact of outsourcing on the level of control and governance |
|------|--------------------------------------------------------------|
| 1 | Issues with internal staff and performance avoided, as easier to outsource instead |
| 2 | Internal politics with end-to-end process ownership |
| 3 | Force change on federated IT model |
| 4 | Regular reporting to senior management |
| 5 | Requires clear end-to-end process |
| 6 | Requires too much direction |
| 7 | Job still gets done but more work by in-house business unit |
| 8 | Increased bureaucracy |
| 9 | Work is moved offshore |
| 10 | Five-year contracts |
| 11 | Short term cost driver, not strategic long term direction |
| 12 | Ad hoc business processes that are not documented |
| 13 | In-house 'build' was easy, shorter timeframes with ad hoc changes accommodated |
| 14 | Moves to a rigid business process with associated overheads in time delay and cost |
| 15 | Move to global delivery model |
| 16 | Payment is on outsourcing key performance indicators which are not always aligned to business needs |

Table F.9: Impact of Outsourcing on In-house Levels of Control and

Governance

| Item | Impact on risk tolerance |
|------|--------------------------|
| 1 | IT is not core business, so is regarded as a back of house expense |
| 2 | Just too hard for business to manage (refers to managements inability to control internal business unit's IT build and costs , so easier to outsource) |
| 3 | Business units are forced to accept outsourcing |
| 4 | Low cost outsourcing partners may lack expertise to support the business requirements |
| 5 | Causes stress and longer hours (refers to employees of outsoucer, losing control of process) |
| 6 | Turnover in staff |
| 7 | Loss of knowledge (refers to corperate knowledge) |
| 8 | Loss of local knowledge (refers to individuals knowledge) |
| 9 | Outsourcing partner has control of the business |
| 10 | Stakeholders (business units) accept outsourcing as it is forced on them by IT groups with no input to the outsourced providers (refers to business users/units being dissatisfied with service provider but lacking mechanisms or authority to change) |
| 11 | Different outsourced providers have different skill mix |
| 12 | Outsoured providers take six to 12 months to come up to speed |
| 13 | Exit incumbent suppliers to force competition between suppliers (refers to management's decision to terminate some existing contracts) |

Table F.10: Outsourcing Impact on Risk Tolerance

| Item | Internal drivers other than cost |
|------|----------------------------------|
| 1 | Issues with internal staff and performance are avoided, so it is easier to outsource |
| 2 | IT is not considered a core business but is regarded as a back of house expense |
| 3 | (Internal IT support) just too hard for business to manage |
| 4 | Internal politics with end-to-end process ownership |
| 5 | Force change on federated IT model |
| 6 | Forces strategic thinking |
| 7 | Outsourcing is a leadership issue where the outsourced IT provider has to be better than the internal provider and provide value-adding so the relationship provides a win–win situation. |

Table F.11: Internal Drivers for Outsourcing Other than Cost

| Item | Internal drivers based on cost |
|------|-------------------------------|
| 1 | Size and spend out of control inhouse, where the outsourcing process stifles this spend |
| 2 | Requirement to reduce the cost of process and improve service |
| 3 | Brings in competition and competitive pressure to achieve world best practice |
| 4 | Global delivery model improves commercial arrangements and competitions from outsourced service providers |
| 5 | IT multi-vendors force competition |
| 6 | Business units are accountable for funding with real dollars |
| 7 | Leverages cost, quality, scalability and skill ability (from a large skill base) offshore, instead of being restricted to a fixed pool of talent within Australia |

Table F.12: Internal Drivers for Outsourcing based on Cost

Table F.11 and F.12 are connected in that researcher has attempted to identify reasons to outsource as they relate to internal resources and were then categorised based on being driven by cost:

- Table F.11 is based on internal resource having other issues than cost that provide driver for outsourcing; and

- Table F.12 is based on internal resource cost being a driver for outsourcing.

| Item | Outsourcing's Impact on Management |
|------|-----------------------------------|
| 1 | Short term cost driver not strategic long term direction |
| 2 | Stakeholders (business) accepted outsourcing as it was forced on them by IT groups with no input to the outsourced service provider. (refers to business users/units being dissatisfied with service provider but lacking mechanisms or authority to change) |
| 3 | Critical issues get lost with no accountability |
| 4 | Results and additional costs of outsourcing flow onto business |

Table F.13: Outsourcing's Impact on Management

Table F.13 would indicate that from Managements perspective, cost is driver for outsourcing with no regard for business unit's ability to conduct business.

| Item | Outsourcing's Impact on Business Units |
|---|---|
| 1 | Outsourcing partner has control of your business (refers to business unit's employee's inability to control outsourcing partner) |
| 2 | Business units are focused on their own areas, not the end-to-end process |
| 3 | Lack of business support with knowledge transfer and continuity (refers to outsource requiring additional support by business unit employees) |
| 4 | Business processes were ad hoc and not documented |
| 5 | In-house 'build' was easy, shorter timeframes with ad hoc changes accommodated |
| 6 | Moves to a rigid business process with associated overheads in time delay and cost |
| 7 | System lifecycle, legacy systems still require support |
| 8 | Business units just can't get things done, has to follow a flawed process, causing frustration as it takes up to three years for minor changes |
| 9 | Contract arrangements not always met, but business unit (user) has no control |
| 10 | Process not flexible enough to support minor change, as even minor changes become complex |
| 11 | Significant effort required internally to support outsourcing processes, resulting in increased frustration for employees and time delays |

Table F.14: Impact of Outsourcing on Business Units

**Step 3: Interpretation of single instances**

The following specific meanings in Table F.15: Interpretation of Single Instances was judged to be relevant in relation to the formation of the hypothesis.

| Item | Interpretation of single instances |
|------|-----------------------------------|
| 1 | Organisation had a systems culture of 'because we can, let's make the system meet our processes' mentality towards spending money with no control or accountability |
| 2 | Relationship with internal IT business units was fluid with 'transfer pricing' allowing scope creep and unrealistic requirements |
| 3 | If you can't see a person doing work, it can be performed offshore |
| 4 | Fiscal accountability with business cases' budgets but the organisation still required central IT governance to manage and control costs |
| 5 | Service quality was summed up with: '... my team was great but the rest of Telstra is crap', which highlights the lack of end-to-end process or high level management of processes |
| 6 | Structures and processes are built around slowing expenditure by creating additional hurdles to stop IT spend. If you wish to provide an environment so flexible, quick cheap changes can be managed: this is not it |
| 7 | Loss of business knowledge, intellectual; capital (not on balance sheet or business case) lost to outsourcing partner |
| 8 | Too hard to manage internal staff and business problems, so given to the outsourced partner to manage |
| 9 | If bad processes are questioned the normal retort is 'you're being negative'. The reporting and managing process causes large overheads to hinder actually doing work. Too many chiefs requesting project updates. |
| 10 | Values and beliefs have public utterances of support but no proactive support to follow up or process to allow process changes to achieve it. Management culture is that to get the word done 'work smarter' but through forced processes, which do not support changes or improvements. |
| 11 | Telstra in-house IT project delivery had a lack of control and of governance concerning requirements |

Table F.15: Interpretation of Single Instances

The interpretation of single instances at Table F.15 was based on a further study of interview results, to determine relevance and information that the researcher felt was pertinent as primary data for the thesis.

**Step 4: Identification of patterns**

Table F.16: Identification of Patterns Based on Drivers of Outsourcing the results from Table F.2: Benefits of Outsourcing and Table F.3: Issues with Outsourcing Partners.

| Item | Outsourcing drivers | Outsourcing drivers |
|---|---|---|
| 1 | Improved productivity | Requirement to reduce cost of process and improve service |
| | | Outsourcing is a leadership issue where IT provider has to be better than the internal provider and provide value-add so the relationship provides a win–win situation. |
| 2 | Centralised IT delivery model | Size and spend out of control, process to stifle spend |
| | | Force change on federated IT model |
| 3 | Flexibility in staffing levels | To leverage cost, quality, scalability and skill ability (large skill base) of offshore, while Australia has fixed pool of talent |
| 4 | Increase in cost-efficient foreign competition | Global delivery model to improve commercial arrangements and competitions from service providers |
| | | IT multi-vendors forced competition |
| 5 | Focus on core business | Issues with internal staff and performance, easier to outsource |
| | | IT not a core business, it is regarded as a back of hourse expense |
| 6 | World best practice | Brings in competition and competitive pressure to achieve world best practice |

Table F.16: Identification of Patterns on Based on Drivers of Outsourcing

| Item | Critical success factors in IT outsourcing relationships | Rank from Table 3 Chapter2.4 | Factors for Identification of patterns |
|---|---|---|---|
| 1 | Core competency management | 1 | IT is not a core business but regarded as back of house expense |
| 2 | Stakeholder management | 2 | Regular reporting to senior management |
| | | | Outsourcing you lose control of skills and personnel |
| | | | Rigid processes, outsourced partner is paid to follow bad processes, and taught bad habits but because of the 'legal' contract it is too hard to change. |
| 3 | Production cost reduction | 3 | Requires clear end-to-end process |
| 4 | Social exchange exploitation | 4 | Businesses are forced to accept outsourcing |
| 5 | Transactional cost reduction | 5 | Demonstration of savings |
| | | | Costings don't include total cost of ownership |
| | | | Cheaper cost but less service with longer lead times for delivery |
| 6 | Vendor behaviour control | 9 | Low cost providers may have a lack of expertise to support business |
| | | | Lack of knowledge is both technical and business |
| | | | Requires too much direction |
| | | | Delivered on cost but not delivered on schedule or on time |
| | | | Off-shoring program requires additional management and greater specification |

Table F.17: Identification of Patterns Based on Critical Success Factors

Based on Table 3: Ranking of Critical Success Factors in IT Outsourcing Relationships the results from Step 1 were grouped in Table F.17: Identification of Patterns Critical Success Factors.

It should be noted that in Table 3: Ranking of Critical Success Factors (CSF) (Chapter 2.4 - IT outsourcing: success or failure) listed 11 factors, while in Table F.17 only six CSF were deemed appropriate by the researcher.

Three items are classified as stakeholder management in Table F.17; two of those could be construed as negatives but are included because they highlight the importance of stakeholder management.

**Step 5 Synthesis and generalisations**

| Item | Main factors touted as advantages | Factors Proposed |
|---|---|---|
| 1 | Reduces and controls operating costs | Requirement to reduce cost of process and improve service |
| 2 | Improves the company focus | Issues with internal staff and performance, easier to outsource |
| | | Forces strategic thinking |
| 3 | Provides access to world class talent and capabilities | Global delivery model to improve commercial arrangements and competitions from service providers |
| | | IT multi-vendors forced competition |
| | | To leverage cost, quality, scalability and skill ability (large skill base) from offshore, while Australia has a fixed pool of talent |
| 4 | Free internal resources for other purposes | Just too hard for business to manage |
| | | Internal politics with end-to-end process ownership |
| 5 | Accelerates re-engineering benefits | Force change on federated IT model |
| | | Bring in competition and competitive pressure to achieve world best practice |
| | | Requires clear end-to-end process |
| 6 | Helps to handle functions that are difficult to manage or are out of control | Size and spend out of control, process to stifle spend |
| | | Regular reporting to senior management |
| 7 | Makes capital funds available | IT not core business regarded as expense (regarded as back of house) |
| | | Demonstration of savings |

Table F.18: Factors Proposed

# Appendix G — Independent Variable

# List of Tables

**Q 1. Gender**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Male | 27 | 81.8 | 81.8 | 81.8 |
| | Female | 6 | 18.2 | 18.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.1: Gender

**Q 2. Age of respondent**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 20 to 30 years | 4 | 12.1 | 12.1 | 12.1 |
| | 31 to 40 years | 6 | 18.2 | 18.2 | 30.3 |
| | 41 to 50 years | 16 | 48.5 | 48.5 | 78.8 |
| | 51 to 60 years | 7 | 21.2 | 21.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.2: Age of respondent

**Q 3. Number of Years with Organisation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 0 to 1 year | 7 | 21.2 | 21.2 | 21.2 |
| | 2 to 5 years | 6 | 18.2 | 18.2 | 39.4 |
| | greater than 5 years | 20 | 60.6 | 60.6 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.3**:** Number of years with organisation

**Q 4. Time in current position**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 0 to 1 years | 13 | 39.4 | 39.4 | 39.4 |
| | 2 to 5 years | 16 | 48.5 | 48.5 | 87.9 |
| | greater than 5 years | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.4**:** Time in current position

**Q 5. Were you involved in decision to outsource?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 4 | 12.1 | 12.1 | 12.1 |
| | No | 29 | 87.9 | 87.9 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.5**:** Were you involved in decision to outsource?

**Q 6. Your involvement with vendor's services?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Daily | 16 | 48.5 | 55.2 | 55.2 |
| | Weekly | 6 | 18.2 | 20.7 | 75.9 |
| | Monthly | 7 | 21.2 | 24.1 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | missing | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.6**:** Your involvement with vendor's services?

**Q 7. Have you received formal training on managing relationship with vendors?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 4 | 12.1 | 12.1 | 12.1 |
| | No | 29 | 87.9 | 87.9 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.7**:** Have you received formal training on managing relationship with vendors?

**Q 8.  Position within firm**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Analysis | 6 | 18.2 | 18.2 | 18.2 |
| | Support | 7 | 21.2 | 21.2 | 39.4 |
| | Middle Manager | 16 | 48.5 | 48.5 | 87.9 |
| | Senior Manager | 2 | 6.1 | 6.1 | 93.9 |
| | Other | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.8**:** Position within firm

**Q 9. What best describes your area in organisation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Accounting | 2 | 6.1 | 6.1 | 6.1 |
| | Human Resources | 4 | 12.1 | 12.1 | 18.2 |
| | Information System | 27 | 81.8 | 81.8 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.9**:** What best describes your area in organisation

**Q 10. Which industry do you work in?**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Telecommunications | 24 | 72.7 | 72.7 | 72.7 |
|  | Utilites | 3 | 9.1 | 9.1 | 81.8 |
|  | Financial Services | 6 | 18.2 | 18.2 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.10: Which industry do you work in?

**Q 11. What year was firm started**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 01-Jan-1858 | 2 | 6.1 | 12.5 | 12.5 |
|  | 01-Jan-1900 | 2 | 6.1 | 12.5 | 25.0 |
|  | 01-Jan-1901 | 8 | 24.2 | 50.0 | 75.0 |
|  | 01-Jan-1960 | 2 | 6.1 | 12.5 | 87.5 |
|  | 01-Jan-1979 | 2 | 6.1 | 12.5 | 100.0 |
|  | Total | 16 | 48.5 | 100.0 |  |
| Missing | System | 17 | 51.5 |  |  |
|  | Total | 33 | 100.0 |  |  |

Table G.11**:** What year was firm started

**Q 12. Number of employees**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 150 | 2 | 6.1 | 6.9 | 6.9 |
| | 7000 | 2 | 6.1 | 6.9 | 13.8 |
| | 10000 | 2 | 6.1 | 6.9 | 20.7 |
| | 25000 | 1 | 3.0 | 3.4 | 24.1 |
| | 30000 | 2 | 6.1 | 6.9 | 31.0 |
| | 36000 | 2 | 6.1 | 6.9 | 37.9 |
| | 37000 | 2 | 6.1 | 6.9 | 44.8 |
| | 40000 | 12 | 36.4 | 41.4 | 86.2 |
| | 50000 | 2 | 6.1 | 6.9 | 93.1 |
| | 60000 | 2 | 6.1 | 6.9 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | 99 | 2 | 6.1 | | |
| | System | 2 | 6.1 | | |
| | Total | 4 | 12.1 | | |
| Total | | 33 | 100.0 | | |

Table G.12**:** Number of employees

**Q 13. Number of IT employees**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 57 | 2 | 6.1 | 8.0 | 8.0 |
|  | 1000 | 4 | 12.1 | 16.0 | 24.0 |
|  | 1400 | 4 | 12.1 | 16.0 | 40.0 |
|  | 1500 | 2 | 6.1 | 8.0 | 48.0 |
|  | 2000 | 4 | 12.1 | 16.0 | 64.0 |
|  | 2500 | 1 | 3.0 | 4.0 | 68.0 |
|  | 3000 | 4 | 12.1 | 16.0 | 84.0 |
|  | 10000 | 4 | 12.1 | 16.0 | 100.0 |
|  | Total | 25 | 75.8 | 100.0 |  |
| Missing | 0 | 2 | 6.1 |  |  |
|  | 99 | 4 | 12.1 |  |  |
|  | System | 2 | 6.1 |  |  |
|  | Total | 8 | 24.2 |  |  |
| Total |  | 33 | 100.0 |  |  |

Table G.13: Number of IT employees

**Q 14. Firms approximate annual turnover**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 5000000 | 2 | 6.1 | 11.8 | 11.8 |
| | 10000000 | 1 | 3.0 | 5.9 | 17.6 |
| | 1000000000 | 4 | 12.1 | 23.5 | 41.2 |
| | 2000000000 | 2 | 6.1 | 11.8 | 52.9 |
| | 4000000000 | 2 | 6.1 | 11.8 | 64.7 |
| | 5000000000 | 2 | 6.1 | 11.8 | 76.5 |
| | 6000000000 | 2 | 6.1 | 11.8 | 88.2 |
| | 20000000000 | 2 | 6.1 | 11.8 | 100.0 |
| | Total | 17 | 51.5 | 100.0 | |
| Missing | 0 | 4 | 12.1 | | |
| | 99 | 4 | 12.1 | | |
| | System | 8 | 24.2 | | |
| | Total | 16 | 48.5 | | |
| Total | | 33 | 100.0 | | |

Table G.14: Firms approximate annual turnover

**Q 15. Approximate yearly organisation wide IT spend**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1000000 | 2 | 6.1 | 15.4 | 15.4 |
| | 5000000 | 2 | 6.1 | 15.4 | 30.8 |
| | 10000000 | 1 | 3.0 | 7.7 | 38.5 |
| | 300000000 | 2 | 6.1 | 15.4 | 53.8 |
| | 400000000 | 2 | 6.1 | 15.4 | 69.2 |
| | 500000000 | 2 | 6.1 | 15.4 | 84.6 |
| | 1000000000 | 2 | 6.1 | 15.4 | 100.0 |
| | Total | 13 | 39.4 | 100.0 | |
| Missing | 0 | 4 | 12.1 | | |
| | 99 | 4 | 12.1 | | |
| | System | 12 | 36.4 | | |
| | Total | 20 | 60.6 | | |
| Total | | 33 | 100.0 | | |

Table G.15: Approximate yearly organisation wide IT spend

**Q 16. Approximate yearly organisation wide IT spend on outsourcing**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 500000 | 2 | 6.1 | 22.2 | 22.2 |
| | 10000000 | 1 | 3.0 | 11.1 | 33.3 |
| | 100000000 | 2 | 6.1 | 22.2 | 55.6 |
| | 280000000 | 2 | 6.1 | 22.2 | 77.8 |
| | 500000000 | 2 | 6.1 | 22.2 | 100.0 |
| | Total | 9 | 27.3 | 100.0 | |
| Missing | 0 | 8 | 24.2 | | |
| | 99 | 4 | 12.1 | | |
| | System | 12 | 36.4 | | |
| | Total | 24 | 72.7 | | |
| Total | | 33 | 100.0 | | |

Table G.16:  Approximate yearly organisation wide IT spend on outsourcing

**Q 17.  IT management is centralized / decentralized**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Centralized | 22 | 66.7 | 75.9 | 75.9 |
| | Both | 7 | 21.2 | 24.1 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | missing | 2 | 6.1 | | |
| | System | 2 | 6.1 | | |
| | Total | 4 | 12.1 | | |
| Total | | 33 | 100.0 | | |

Table G.17**:** IT management is centralized / decentralized

**Q 18.  IT budget is centralized / decentralized**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Centralized | 20 | 60.6 | 69.0 | 69.0 |
|  | Both | 9 | 27.3 | 31.0 | 100.0 |
|  | Total | 29 | 87.9 | 100.0 |  |
| Missing | missing | 2 | 6.1 |  |  |
|  | System | 2 | 6.1 |  |  |
|  | Total | 4 | 12.1 |  |  |
| Total |  | 33 | 100.0 |  |  |

Table G.18: IT budget is centralized / decentralized

**Q 19.  Current number of outsourced projects**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 0 to 4 | 4 | 12.1 | 12.9 | 12.9 |
|  | 5 to 9 | 2 | 6.1 | 6.5 | 19.4 |
|  | 10 to 19 | 2 | 6.1 | 6.5 | 25.8 |
|  | 20 to 29 | 2 | 6.1 | 6.5 | 32.3 |
|  | 30 to 39 | 2 | 6.1 | 6.5 | 38.7 |
|  | greater than 40 | 19 | 57.6 | 61.3 | 100.0 |
|  | Total | 31 | 93.9 | 100.0 |  |
| Missing | System | 2 | 6.1 |  |  |
|  | Total | 33 | 100.0 |  |  |

Table G.19: Current number of outsourced projects

**Q 20. Estimated number of outsourcing projects previous 5 years**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 0 to 4 | 4 | 12.1 | 12.9 | 12.9 |
| | 5 to 9 | 4 | 12.1 | 12.9 | 25.8 |
| | 10 to 19 | 2 | 6.1 | 6.5 | 32.3 |
| | 20 to 29 | 4 | 12.1 | 12.9 | 45.2 |
| | greater than 40 | 17 | 51.5 | 54.8 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | System | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.20: Estimated number of outsourcing projects previous five years

**Q 21. Estimated number of outsourcing contracts in last five years**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 5 to 9 | 6 | 18.2 | 20.7 | 20.7 |
| | 10 to 19 | 6 | 18.2 | 20.7 | 41.4 |
| | 30 to 39 | 2 | 6.1 | 6.9 | 48.3 |
| | greater than 40 | 15 | 45.5 | 51.7 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | Missing | 2 | 6.1 | | |
| | System | 2 | 6.1 | | |
| | Total | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.21: Estimated number of outsourcing contracts in last five years

**Q 22. How many major IT systems does your organisation currently outsource?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 0 to 4 | 4 | 12.1 | 12.1 | 12.1 |
| | 5 to 9 | 2 | 6.1 | 6.1 | 18.2 |
| | 10 to 19 | 2 | 6.1 | 6.1 | 24.2 |
| | 20 to 29 | 2 | 6.1 | 6.1 | 30.3 |
| | greater than 40 | 23 | 69.7 | 69.7 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.22: How many major IT systems does your organisation currently outsource?

**Q 23. How many major IT outsource partners does your organisation currently have?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 0 to 4 | 8 | 24.2 | 24.2 | 24.2 |
| | 5 to 9 | 12 | 36.4 | 36.4 | 60.6 |
| | 10 to 19 | 10 | 30.3 | 30.3 | 90.9 |
| | 20 to 29 | 2 | 6.1 | 6.1 | 97.0 |
| | greater than 40 | 1 | 3.0 | 3.0 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.23: How many major IT outsource partners does your organisation currently have?

**Q 24. Do you currently outsource strategically important IT functions**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 24 | 72.7 | 77.4 | 77.4 |
| | No | 7 | 21.2 | 22.6 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | Missing | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.24: Do you currently outsource strategically important IT functions?

**Q 25. Has your organisation in the last 5 years (a) Switched Outsourcing Vendors**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 24 | 72.7 | 72.7 | 72.7 |
| | No | 9 | 27.3 | 27.3 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.25: Has your organisation in the last 5 years (a) switched outsourcing vendors

**Q 26. Has your organisation in the last 5 years (b) Renewed with current vendor**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 30 | 90.9 | 90.9 | 90.9 |
| | No | 3 | 9.1 | 9.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.26: Has your organisation in the last 5 years (b) renewed with current vendor

**Q 27. Has your organisation in the last 5 years (c)  Back sourced outsourced contracts**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 8 | 24.2 | 27.6 | 27.6 |
| | No | 21 | 63.6 | 72.4 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | Missing | 2 | 6.1 | | |
| | System | 2 | 6.1 | | |
| | Total | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.27: Has your organisation in the last 5 years (c) back sourced outsourced contracts

**Q 28. Has your organisation in the last 5 years  (d) Kept IT in-house**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 18 | 54.5 | 58.1 | 58.1 |
| | No | 13 | 39.4 | 41.9 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | Missing | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.28: Has your organisation in the last 5 years (d) kept IT in-house

**Q 29. Indicate level of strategic importance of outsourced system/s**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 2 | 6.1 | 6.5 | 6.5 |
| | 3 | 4 | 12.1 | 12.9 | 19.4 |
| | 4 | 2 | 6.1 | 6.5 | 25.8 |
| | 5 | 3 | 9.1 | 9.7 | 35.5 |
| | 6 | 6 | 18.2 | 19.4 | 54.8 |
| | 7 High | 14 | 42.4 | 45.2 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | System | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.29: Indicate level of strategic importance of outsourced system/s

**Q 30. Degree to which outsourcing system increased the competitiveness of business**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Low | 6 | 18.2 | 19.4 | 19.4 |
| | 2 | 10 | 30.3 | 32.3 | 51.6 |
| | 3 | 6 | 18.2 | 19.4 | 71.0 |
| | 4 | 6 | 18.2 | 19.4 | 90.3 |
| | 5 | 3 | 9.1 | 9.7 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | System | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.30: Degree to which outsourcing system increased the competitiveness of business

**Q 31. Is Application development done onshore or offshore?**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Onshore | 3 | 9.1 | 9.7 | 9.7 |
|  | Offshore | 2 | 6.1 | 6.5 | 16.1 |
|  | Both | 26 | 78.8 | 83.9 | 100.0 |
|  | Total | 31 | 93.9 | 100.0 |  |
| Missing | System | 2 | 6.1 |  |  |
|  | Total | 33 | 100.0 |  |  |

Table G.31: Is Application development done onshore or offshore?

**Q 32. Is Application development done onshore or offshore? Percentage?**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 5 | 2 | 6.1 | 7.7 | 7.7 |
|  | 25 | 2 | 6.1 | 7.7 | 15.4 |
|  | 30 | 2 | 6.1 | 7.7 | 23.1 |
|  | 40 | 6 | 18.2 | 23.1 | 46.2 |
|  | 50 | 6 | 18.2 | 23.1 | 69.2 |
|  | 60 | 4 | 12.1 | 15.4 | 84.6 |
|  | 95 | 2 | 6.1 | 7.7 | 92.3 |
|  | 100 | 2 | 6.1 | 7.7 | 100.0 |
|  | Total | 26 | 78.8 | 100.0 |  |
| Missing | Missing | 2 | 6.1 |  |  |
|  | System | 5 | 15.2 |  |  |
|  | Total | 7 | 21.2 |  |  |
| Total |  | 33 | 100.0 |  |  |

Table G.32: Is Application development done onshore or offshore? Percentage?

**Q 33. Is Application support done onshore or offshore?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Onshore | 7 | 21.2 | 22.6 | 22.6 |
| | Offshore | 2 | 6.1 | 6.5 | 29.0 |
| | Both | 22 | 66.7 | 71.0 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | System | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.33: Is Application support done onshore or offshore?

Q 34. **Is Application support done onshore or offshore? Percentage?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 20 | 2 | 6.1 | 8.3 | 8.3 |
| | 40 | 8 | 24.2 | 33.3 | 41.7 |
| | 50 | 6 | 18.2 | 25.0 | 66.7 |
| | 60 | 4 | 12.1 | 16.7 | 83.3 |
| | 85 | 2 | 6.1 | 8.3 | 91.7 |
| | 100 | 2 | 6.1 | 8.3 | 100.0 |
| | Total | 24 | 72.7 | 100.0 | |
| Missing | Missing | 2 | 6.1 | | |
| | System | 7 | 21.2 | | |
| | Total | 9 | 27.3 | | |
| Total | | 33 | 100.0 | | |

Table G.34: Is Application support done onshore or offshore? Percentage?

**Q 35. Organisation is planning additional IT outsourcing in near future**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
| | 3 | 2 | 6.1 | 6.1 | 12.1 |
| | 4 | 6 | 18.2 | 18.2 | 30.3 |
| | 5 | 4 | 12.1 | 12.1 | 42.4 |
| | 6 | 6 | 18.2 | 18.2 | 60.6 |
| | 7 Agree | 13 | 39.4 | 39.4 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.35: Organisation is planning additional IT outsourcing in near future

**Q 36. Organisation's outsourcing is aligned to business strategy**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 3 | 2 | 6.1 | 6.1 | 18.2 |
| | 4 | 6 | 18.2 | 18.2 | 36.4 |
| | 5 | 4 | 12.1 | 12.1 | 48.5 |
| | 6 | 12 | 36.4 | 36.4 | 84.8 |
| | 7 Agree | 5 | 15.2 | 15.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.36: Organisation's outsourcing is aligned to business strategy

**Q 37. Organisation's outsourcing is aligned to technology strategy**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
|  | 4 | 12 | 36.4 | 36.4 | 42.4 |
|  | 5 | 2 | 6.1 | 6.1 | 48.5 |
|  | 6 | 8 | 24.2 | 24.2 | 72.7 |
|  | 7 Agree | 9 | 27.3 | 27.3 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.37: Organisation's outsourcing is aligned to technology strategy

**Q 38. Chief Information Officer was instrumental in outsourcing decision**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.5 | 6.5 |
|  | 3 | 2 | 6.1 | 6.5 | 12.9 |
|  | 4 | 4 | 12.1 | 12.9 | 25.8 |
|  | 6 | 14 | 42.4 | 45.2 | 71.0 |
|  | 7 Agree | 9 | 27.3 | 29.0 | 100.0 |
|  | Total | 31 | 93.9 | 100.0 |  |
| Missing | Missing | 2 | 6.1 |  |  |
|  | Total | 33 | 100.0 |  |  |

Table G.38: Chief Information Officer was instrumental in outsourcing decision

**Q 39**. **Chief Information Officer has delivered excellent IT solutions**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 2 | 6.1 | 6.1 | 30.3 |
| | 3 | 6 | 18.2 | 18.2 | 48.5 |
| | 4 | 12 | 36.4 | 36.4 | 84.8 |
| | 5 | 4 | 12.1 | 12.1 | 97.0 |
| | 7 Agree | 1 | 3.0 | 3.0 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.39: Chief Information Officer has delivered excellent IT solutions

**Q 40. Chief Information Officer is considered effective**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 2 | 2 | 6.1 | 6.1 | 18.2 |
| | 3 | 2 | 6.1 | 6.1 | 24.2 |
| | 4 | 16 | 48.5 | 48.5 | 72.7 |
| | 5 | 4 | 12.1 | 12.1 | 84.8 |
| | 6 | 2 | 6.1 | 6.1 | 90.9 |
| | 7 Agree | 3 | 9.1 | 9.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.40: Chief Information Officer is considered effective

**Q 41. In house IT support before outsourcing had (a) house IT support – (b)Lack of IT strategic direction**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 14 | 42.4 | 42.4 | 42.4 |
| | 2 | 2 | 6.1 | 6.1 | 48.5 |
| | 3 | 6 | 18.2 | 18.2 | 66.7 |
| | 5 | 2 | 6.1 | 6.1 | 72.7 |
| | 6 | 8 | 24.2 | 24.2 | 97.0 |
| | 7 Agree | 1 | 3.0 | 3.0 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.41: In house IT support before outsourcing had (a) house IT support — Lack of IT strategic direction

**Q 42. In house IT support before outsourcing had (b) In house IT support — Lack of rigour**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 | 14 | 42.4 | 42.4 | 42.4 |
| | 2 | 4 | 12.1 | 12.1 | 54.5 |
| | 3 | 2 | 6.1 | 6.1 | 60.6 |
| | 4 | 4 | 12.1 | 12.1 | 72.7 |
| | 6 | 6 | 18.2 | 18.2 | 90.9 |
| | 7 | 3 | 9.1 | 9.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.42: In house IT support before outsourcing had (b) In house IT support — Lack of rigour

**Q 43. In house IT support before outsourcing had  (c)  Project scope creep**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 6 | 18.2 | 18.2 | 18.2 |
|  | 2 | 4 | 12.1 | 12.1 | 30.3 |
|  | 3 | 2 | 6.1 | 6.1 | 36.4 |
|  | 5 | 10 | 30.3 | 30.3 | 66.7 |
|  | 6 | 6 | 18.2 | 18.2 | 84.8 |
|  | 7 Agree | 5 | 15.2 | 15.2 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.43: In house IT support before outsourcing had (c) Project scope creep

**Q 44. In house IT support before outsourcing had  (d)  Cost increases**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 8 | 24.2 | 24.2 | 24.2 |
|  | 2 | 2 | 6.1 | 6.1 | 30.3 |
|  | 3 | 2 | 6.1 | 6.1 | 36.4 |
|  | 4 | 4 | 12.1 | 12.1 | 48.5 |
|  | 5 | 6 | 18.2 | 18.2 | 66.7 |
|  | 6 | 6 | 18.2 | 18.2 | 84.8 |
|  | 7 Agree | 5 | 15.2 | 15.2 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.44: In house IT support before outsourcing had (d) Cost increases

**Q 45. In house IT support before outsourcing had  (e)   Timelines Increase**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 2 | 6.1 | 6.1 | 30.3 |
| | 3 | 2 | 6.1 | 6.1 | 36.4 |
| | 4 | 6 | 18.2 | 18.2 | 54.5 |
| | 5 | 8 | 24.2 | 24.2 | 78.8 |
| | 6 | 4 | 12.1 | 12.1 | 90.9 |
| | 7 Agree | 3 | 9.1 | 9.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.45: In house IT support before outsourcing had (e) Timelines Increase

**Q 46. Outsourcing projects and support has caused organisation  (a) To lose control of projects**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 2 | 8 | 24.2 | 24.2 | 36.4 |
| | 3 | 2 | 6.1 | 6.1 | 42.4 |
| | 4 | 6 | 18.2 | 18.2 | 60.6 |
| | 5 | 6 | 18.2 | 18.2 | 78.8 |
| | 6 | 2 | 6.1 | 6.1 | 84.8 |
| | 7 Agree | 5 | 15.2 | 15.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.46: Outsourcing projects and support has caused organisation (a) To lose control of projects

**Q 47. Outsourcing projects and support has caused organisation  (b) To lose control of requirements**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 6 | 18.2 | 18.2 | 18.2 |
|  | 2 | 4 | 12.1 | 12.1 | 30.3 |
|  | 3 | 6 | 18.2 | 18.2 | 48.5 |
|  | 4 | 3 | 9.1 | 9.1 | 57.6 |
|  | 5 | 6 | 18.2 | 18.2 | 75.8 |
|  | 6 | 4 | 12.1 | 12.1 | 87.9 |
|  | 7 Agree | 4 | 12.1 | 12.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.47: Outsourcing projects and support has caused organisation (b) To lose control of requirements

**Q 48. Outsourcing projects and support has caused organisation  (c) To lose ownership of projects**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 7 | 21.2 | 21.2 | 21.2 |
|  | 2 | 8 | 24.2 | 24.2 | 45.5 |
|  | 3 | 6 | 18.2 | 18.2 | 63.6 |
|  | 5 | 6 | 18.2 | 18.2 | 81.8 |
|  | 6 | 2 | 6.1 | 6.1 | 87.9 |
|  | 7 Agree | 4 | 12.1 | 12.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.48: Outsourcing projects and support has caused organisation (c) To lose ownership of projects

**Q 49. Strategic importance of outsourced IT support to organisation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Important | 10 | 30.3 | 30.3 | 30.3 |
| | 2 | 4 | 12.1 | 12.1 | 42.4 |
| | 3 | 12 | 36.4 | 36.4 | 78.8 |
| | 4 | 4 | 12.1 | 12.1 | 90.9 |
| | 5 | 2 | 6.1 | 6.1 | 97.0 |
| | 6 | 1 | 3.0 | 3.0 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.49: Strategic importance of outsourced IT support to organisation

**Q 50. Strategic importance of outsourced IT development to organisation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Important | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 4 | 12.1 | 12.1 | 36.4 |
| | 3 | 9 | 27.3 | 27.3 | 63.6 |
| | 4 | 6 | 18.2 | 18.2 | 81.8 |
| | 5 | 6 | 18.2 | 18.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.50: Strategic importance of outsourced IT development to organisation

**Q 51. Is vendor relationship based on clauses in contracts or relationship**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Contract | 29 | 87.9 | 100.0 | 100.0 |
| Missing | Missing | 2 | 6.1 | | |
| | System | 2 | 6.1 | | |
| | Total | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.51: Is vendor relationship based on clauses in contracts or relationship

**Q 52. Additional costs outside of contracts are high**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 2 | 6.1 | 6.1 | 6.1 |
| | 4 | 8 | 24.2 | 24.2 | 30.3 |
| | 5 | 9 | 27.3 | 27.3 | 57.6 |
| | 6 | 4 | 12.1 | 12.1 | 69.7 |
| | 7 Agree | 10 | 30.3 | 30.3 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.52: Additional costs outside of contracts are high

**Q 53. Approx length of contracts (months)**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | 12     | 2         | 6.1     | 8.7           | 8.7                |
|         | 20     | 2         | 6.1     | 8.7           | 17.4               |
|         | 36     | 10        | 30.3    | 43.5          | 60.9               |
|         | 40     | 2         | 6.1     | 8.7           | 69.6               |
|         | 60     | 6         | 18.2    | 26.1          | 95.7               |
|         | 90     | 1         | 3.0     | 4.3           | 100.0              |
|         | Total  | 23        | 69.7    | 100.0         |                    |
| Missing | System | 10        | 30.3    |               |                    |
|         | Total  | 33        | 100.0   |               |                    |

Table G.53: Approx length of contracts (months)

**Q 54. Approx start date of major contract**

|         |             | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-------------|-----------|---------|---------------|--------------------|
| Valid   | 01-Jan-2000 | 2         | 6.1     | 13.3          | 13.3               |
|         | 01-Jun-2000 | 2         | 6.1     | 13.3          | 26.7               |
|         | 01-Jul-2002 | 2         | 6.1     | 13.3          | 40.0               |
|         | 30-Jun-2003 | 2         | 6.1     | 13.3          | 53.3               |
|         | 30-Jun-2005 | 2         | 6.1     | 13.3          | 66.7               |
|         | 01-Jun-2006 | 4         | 12.1    | 26.7          | 93.3               |
|         | 01-Oct-2008 | 1         | 3.0     | 6.7           | 100.0              |
|         | Total       | 15        | 45.5    | 100.0         |                    |
| Missing | System      | 18        | 54.5    |               |                    |
|         | Total       | 33        | 100.0   |               |                    |

Table G.54: Approx start date of major contract

**Q 55. Approx time to exit or terminate a contract (Months)**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 4 | 12.1 | 23.5 | 23.5 |
| | 0-6 | 6 | 18.2 | 35.3 | 58.8 |
| | 12-24 | 2 | 6.1 | 11.8 | 70.6 |
| | 6 | 2 | 6.1 | 11.8 | 82.4 |
| | 12 | 2 | 6.1 | 11.8 | 94.1 |
| | 24 | 1 | 3.0 | 5.9 | 100.0 |
| | Total | 17 | 51.5 | 100.0 | |
| Missing | System | 16 | 48.5 | | |
| | Total | 33 | 100.0 | | |

Table G.55: Approx time to exit or terminate a contract (Months)

**Q 56. Reasons to Outsource**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Strategic Business Direction | 4 | 12.1 | 12.1 | 12.1 |
| | 2 Cost Saving | 24 | 72.7 | 72.7 | 84.8 |
| | 5 Freeing up internal res | 3 | 9.1 | 9.1 | 93.9 |
| | 9 Competitive Advan | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.56: Reasons to outsource

**Q 57. Type of  Outsourcing**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1Total outsourcing | 9 | 27.3 | 27.3 | 27.3 |
| | 4 Offshore outsourcing | 18 | 54.5 | 54.5 | 81.8 |
| | 5 Multi sourcing | 6 | 18.2 | 18.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.57: Type of outsourcing

**Q 58. Outsourcing partner has shortened development life cycle**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 12 | 36.4 | 36.4 | 36.4 |
| | 2 | 12 | 36.4 | 36.4 | 72.7 |
| | 3 | 4 | 12.1 | 12.1 | 84.8 |
| | 4 | 4 | 12.1 | 12.1 | 97.0 |
| | 5 | 1 | 3.0 | 3.0 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.58: Outsourcing partner has shortened development life cycle

**Q 59. Outsourcing partner has improved quality of application**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 30.3 | 30.3 |
| | 2 | 10 | 30.3 | 30.3 | 60.6 |
| | 3 | 11 | 33.3 | 33.3 | 93.9 |
| | 5 | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.59: Outsourcing partner has improved quality of application

**Q 60. Outsourcing partner has improved service delivery times**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 12 | 36.4 | 36.4 | 36.4 |
| | 2 | 6 | 18.2 | 18.2 | 54.5 |
| | 3 | 4 | 12.1 | 12.1 | 66.7 |
| | 4 | 6 | 18.2 | 18.2 | 84.8 |
| | 5 | 3 | 9.1 | 9.1 | 93.9 |
| | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.60: Outsourcing partner has improved service delivery times

**Q 61. Outsourcing partner has reduced total cost**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 32.3 | 32.3 |
| | 2 | 4 | 12.1 | 12.9 | 45.2 |
| | 3 | 6 | 18.2 | 19.4 | 64.5 |
| | 4 | 5 | 15.2 | 16.1 | 80.6 |
| | 5 | 6 | 18.2 | 19.4 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | Missing | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.61: Outsourcing partner has reduced total cost

**Q 62. Outsourcing has been beneficial from a business perspective**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 30.3 | 30.3 |
|  | 2 | 4 | 12.1 | 12.1 | 42.4 |
|  | 3 | 4 | 12.1 | 12.1 | 54.5 |
|  | 4 | 9 | 27.3 | 27.3 | 81.8 |
|  | 5 | 4 | 12.1 | 12.1 | 93.9 |
|  | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.62: Outsourcing has been beneficial from a business perspective)

**Q 63. Vendor is skilled in IT applications**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 8 | 24.2 | 24.2 | 24.2 |
|  | 3 | 3 | 9.1 | 9.1 | 33.3 |
|  | 4 | 12 | 36.4 | 36.4 | 69.7 |
|  | 5 | 8 | 24.2 | 24.2 | 93.9 |
|  | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.63: Vendor is skilled in IT applications

**Q 64. Vendor is skilled in business processes**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 30.3 | 30.3 |
| | 2 | 10 | 30.3 | 30.3 | 60.6 |
| | 3 | 8 | 24.2 | 24.2 | 84.8 |
| | 4 | 2 | 6.1 | 6.1 | 90.9 |
| | 5 | 2 | 6.1 | 6.1 | 97.0 |
| | 6 | 1 | 3.0 | 3.0 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.64: Vendor is skilled in business processes

**Q 65. Outsourcing has created a competitive advantage between internal business units and outsourcing companies**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 32.3 | 32.3 |
| | 2 | 6 | 18.2 | 19.4 | 51.6 |
| | 3 | 6 | 18.2 | 19.4 | 71.0 |
| | 4 | 7 | 21.2 | 22.6 | 93.5 |
| | 5 | 2 | 6.1 | 6.5 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | System | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.65: Outsourcing has created a competitive advantage between internal business units and outsourcing companies

**Q 66. Outsourcing has created a complex supply chain**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 3 | 3 | 9.1 | 9.1 | 21.2 |
| | 5 | 12 | 36.4 | 36.4 | 57.6 |
| | 6 | 8 | 24.2 | 24.2 | 81.8 |
| | 7 Agree | 6 | 18.2 | 18.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.66: Outsourcing has created a complex supply chain

**Q 67. Outsourcing has decreased local IT knowledge**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 3 | 4 | 12.1 | 12.1 | 12.1 |
| | 4 | 3 | 9.1 | 9.1 | 21.2 |
| | 5 | 4 | 12.1 | 12.1 | 33.3 |
| | 6 | 10 | 30.3 | 30.3 | 63.6 |
| | 7 Agree | 12 | 36.4 | 36.4 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.67: Outsourcing has decreased local IT knowledge

**Q 68. Management support for outsourcing is important for success**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 2 | 6.1 | 6.1 | 6.1 |
| | 4 | 3 | 9.1 | 9.1 | 15.2 |
| | 5 | 4 | 12.1 | 12.1 | 27.3 |
| | 6 | 10 | 30.3 | 30.3 | 57.6 |
| | 7  Agree | 14 | 42.4 | 42.4 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.68: Management support for outsourcing is important for success

**Q 69. The relationship between business and outsourcing vendor is the most important success factor**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
| | 2 | 1 | 3.0 | 3.0 | 9.1 |
| | 3 | 2 | 6.1 | 6.1 | 15.2 |
| | 4 | 6 | 18.2 | 18.2 | 33.3 |
| | 5 | 4 | 12.1 | 12.1 | 45.5 |
| | 6 | 14 | 42.4 | 42.4 | 87.9 |
| | 7  Agree | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.69: The relationship between business and outsourcing vendor is the most important success factor

**Q 70. Rigorous internal controls between business and outsourcing vendor are required**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 4 | 2 | 6.1 | 6.1 | 6.1 |
|  | 5 | 9 | 27.3 | 27.3 | 33.3 |
|  | 6 | 12 | 36.4 | 36.4 | 69.7 |
|  | 7 Agree | 10 | 30.3 | 30.3 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.70: Rigorous internal controls between business and outsourcing vendor are required.

**Q 71. Choosing wrong vendor has caused ongoing problems**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 2 | 6.1 | 6.1 | 6.1 |
|  | 3 | 6 | 18.2 | 18.2 | 24.2 |
|  | 4 | 1 | 3.0 | 3.0 | 27.3 |
|  | 5 | 10 | 30.3 | 30.3 | 57.6 |
|  | 6 | 6 | 18.2 | 18.2 | 75.8 |
|  | 7 Agree | 8 | 24.2 | 24.2 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.71: Choosing wrong vendor has caused ongoing problems

**Q 72. Vendor management is very important and requires ongoing supervision**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 4 | 6 | 18.2 | 18.2 | 18.2 |
| | 5 | 4 | 12.1 | 12.1 | 30.3 |
| | 6 | 7 | 21.2 | 21.2 | 51.5 |
| | 7 Agree | 16 | 48.5 | 48.5 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.72: Vendor management is very important and requires ongoing supervision

**Q 73. Support and enhancement of projects requires ongoing supervision**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 3 | 1 | 3.0 | 3.0 | 3.0 |
| | 4 | 2 | 6.1 | 6.1 | 9.1 |
| | 5 | 12 | 36.4 | 36.4 | 45.5 |
| | 6 | 10 | 30.3 | 30.3 | 75.8 |
| | 7 Agree | 8 | 24.2 | 24.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.73: Support and enhancement of projects requires ongoing supervision

**Q 74. Operation and expense management of vendor requires ongoing supervision**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 2         | 6.1     | 6.1           | 6.1                |
|       | 3          | 2         | 6.1     | 6.1           | 12.1               |
|       | 5          | 15        | 45.5    | 45.5          | 57.6               |
|       | 6          | 8         | 24.2    | 24.2          | 81.8               |
|       | 7 Agree    | 6         | 18.2    | 18.2          | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.74: Operation and expense management of vendor requires ongoing supervision

**Q 75. Onshore work is of better quality than offshore work**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | Missing    | 2         | 6.1     | 6.1           | 6.1                |
|       | 1 Disagree | 2         | 6.1     | 6.1           | 12.1               |
|       | 2          | 2         | 6.1     | 6.1           | 18.2               |
|       | 3          | 2         | 6.1     | 6.1           | 24.2               |
|       | 4          | 6         | 18.2    | 18.2          | 42.4               |
|       | 5          | 7         | 21.2    | 21.2          | 63.6               |
|       | 6          | 6         | 18.2    | 18.2          | 81.8               |
|       | 7 Agree    | 6         | 18.2    | 18.2          | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.75: Onshore work is of better quality than offshore work

**Q 76. Response to business requests is dependent on outsourcing partner**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 3 | 5 | 15.2 | 15.2 | 15.2 |
| | 4 | 4 | 12.1 | 12.1 | 27.3 |
| | 5 | 8 | 24.2 | 24.2 | 51.5 |
| | 6 | 10 | 30.3 | 30.3 | 81.8 |
| | 7  Agree | 6 | 18.2 | 18.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.76: Response to business requests is dependent on outsourcing partner

**Q 77. Outsourcing partner / vendor is able to provide flexibility with staffing**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 2 | 2 | 6.1 | 6.1 | 18.2 |
| | 3 | 6 | 18.2 | 18.2 | 36.4 |
| | 4 | 1 | 3.0 | 3.0 | 39.4 |
| | 5 | 16 | 48.5 | 48.5 | 87.9 |
| | 6 | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.77: Outsourcing partner / vendor is able to provide flexibility with staffing

**Q 78. Outsourcing has allowed regulators to better manage functions**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 2 | 6.1 | 6.1 | 6.1 |
| | 1 Disagree | 11 | 33.3 | 33.3 | 39.4 |
| | 2 | 4 | 12.1 | 12.1 | 51.5 |
| | 3 | 4 | 12.1 | 12.1 | 63.6 |
| | 4 | 6 | 18.2 | 18.2 | 81.8 |
| | 5 | 4 | 12.1 | 12.1 | 93.9 |
| | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.78: Outsourcing has allowed regulators to better manage functions

**Q 79. Staff morale has decreased with outsourcing**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 2 | 6.1 | 6.1 | 6.1 |
| | 3 | 4 | 12.1 | 12.1 | 18.2 |
| | 4 | 3 | 9.1 | 9.1 | 27.3 |
| | 5 | 8 | 24.2 | 24.2 | 51.5 |
| | 6 | 6 | 18.2 | 18.2 | 69.7 |
| | 7 Agree | 10 | 30.3 | 30.3 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.79: Staff morale has decreased with outsourcing

**Q 80. Business has lost expertise with outsourcing**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 2 | 6.1 | 6.1 | 6.1 |
| | 3 | 4 | 12.1 | 12.1 | 18.2 |
| | 4 | 1 | 3.0 | 3.0 | 21.2 |
| | 5 | 2 | 6.1 | 6.1 | 27.3 |
| | 6 | 10 | 30.3 | 30.3 | 57.6 |
| | 7 Agree | 14 | 42.4 | 42.4 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.80: Business has lost expertise with outsourcing

**Q 81. Business has lost control with outsourcing**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
| | 2 | 4 | 12.1 | 12.1 | 18.2 |
| | 3 | 4 | 12.1 | 12.1 | 30.3 |
| | 4 | 10 | 30.3 | 30.3 | 60.6 |
| | 5 | 6 | 18.2 | 18.2 | 78.8 |
| | 6 | 3 | 9.1 | 9.1 | 87.9 |
| | 7 Agree | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.81: Business has lost control with outsourcing

**Q 82. Organisational support from outsourcing partner has decreased over time**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 3 | 4 | 12.1 | 12.1 | 24.2 |
| | 4 | 11 | 33.3 | 33.3 | 57.6 |
| | 5 | 8 | 24.2 | 24.2 | 81.8 |
| | 6 | 4 | 12.1 | 12.1 | 93.9 |
| | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.82: Organisational support from outsourcing partner has decreased over time

**Q 83. Market demands forces outsourcing partner to improve their performance**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 2 | 6.1 | 6.1 | 30.3 |
| | 3 | 4 | 12.1 | 12.1 | 42.4 |
| | 4 | 6 | 18.2 | 18.2 | 60.6 |
| | 5 | 10 | 30.3 | 30.3 | 90.9 |
| | 6 | 2 | 6.1 | 6.1 | 97.0 |
| | 7 Agree | 1 | 3.0 | 3.0 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.83: Market demands forces outsourcing partner to improve their performance

**Q 84. Outsourcing allows win/win in that business can concentrate on business and leave outsourcing partner to manage their contracted items**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 4         | 12.1    | 12.1          | 12.1               |
|       | 2          | 4         | 12.1    | 12.1          | 24.2               |
|       | 3          | 11        | 33.3    | 33.3          | 57.6               |
|       | 4          | 6         | 18.2    | 18.2          | 75.8               |
|       | 5          | 8         | 24.2    | 24.2          | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.84: Outsourcing allows win/win in that business can concentrate on business and leave outsourcing partner to manage their contracted items

**Q 85. Outsourcing was supported by business**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 6         | 18.2    | 18.2          | 18.2               |
|       | 2          | 6         | 18.2    | 18.2          | 36.4               |
|       | 3          | 2         | 6.1     | 6.1           | 42.4               |
|       | 4          | 6         | 18.2    | 18.2          | 60.6               |
|       | 5          | 9         | 27.3    | 27.3          | 87.9               |
|       | 6          | 2         | 6.1     | 6.1           | 93.9               |
|       | 7 Agree    | 2         | 6.1     | 6.1           | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.85: Outsourcing was supported by business

**Q 86. Outsourcing was supported by internal IT staff**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 30.3 | 30.3 |
| | 2 | 10 | 30.3 | 30.3 | 60.6 |
| | 3 | 4 | 12.1 | 12.1 | 72.7 |
| | 5 | 5 | 15.2 | 15.2 | 87.9 |
| | 6 | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.86: Outsourcing was supported by internal IT staff

**Q 87. Most internal IT staff were transferred to outsourcer**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 2 | 6.1 | 6.1 | 6.1 |
| | 1 Disagree | 4 | 12.1 | 12.1 | 18.2 |
| | 2 | 4 | 12.1 | 12.1 | 30.3 |
| | 3 | 4 | 12.1 | 12.1 | 42.4 |
| | 4 | 3 | 9.1 | 9.1 | 51.5 |
| | 5 | 4 | 12.1 | 12.1 | 63.6 |
| | 6 | 6 | 18.2 | 18.2 | 81.8 |
| | 7  Agree | 6 | 18.2 | 18.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.87: Most internal IT staff were transferred to outsourcer

**Q 88. Percentage of internal IT staff transferred to outsourcing partner?**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 10 | 30.3 | 32.3 | 32.3 |
|  | 1 - 10 | 10 | 30.3 | 32.3 | 64.5 |
|  | 30 - 40 | 4 | 12.1 | 12.9 | 77.4 |
|  | 40 - 50 | 2 | 6.1 | 6.5 | 83.9 |
|  | 70 - 80 | 2 | 6.1 | 6.5 | 90.3 |
|  | 100 | 3 | 9.1 | 9.7 | 100.0 |
|  | Total | 31 | 93.9 | 100.0 |  |
| Missing | System | 2 | 6.1 |  |  |
|  | Total | 33 | 100.0 |  |  |

Table G.88: Percentage of internal IT staff transferred to outsourcing partner?

**Q 89. Percentage of work that is performed onshore / offshore**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 2 | 6.1 | 6.5 | 6.5 |
|  | 1 - 10 | 4 | 12.1 | 12.9 | 19.4 |
|  | 30 - 40 | 4 | 12.1 | 12.9 | 32.3 |
|  | 40 - 50 | 8 | 24.2 | 25.8 | 58.1 |
|  | 50 - 60 | 4 | 12.1 | 12.9 | 71.0 |
|  | 60 - 70 | 2 | 6.1 | 6.5 | 77.4 |
|  | 70 - 80 | 5 | 15.2 | 16.1 | 93.5 |
|  | 100 | 2 | 6.1 | 6.5 | 100.0 |
|  | Total | 31 | 93.9 | 100.0 |  |
| Missing | System | 2 | 6.1 |  |  |
|  | Total | 33 | 100.0 |  |  |

Table G.89: Percentage of work that is performed onshore / offshore

**Q 90. Percentage of work that is performed onshore / offshore**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 3 | 9.1 | 9.7 | 9.7 |
| | 1 - 10 | 2 | 6.1 | 6.5 | 16.1 |
| | 20 -30 | 6 | 18.2 | 19.4 | 35.5 |
| | 30 - 40 | 2 | 6.1 | 6.5 | 41.9 |
| | 40 - 50 | 4 | 12.1 | 12.9 | 54.8 |
| | 60 - 70 | 6 | 18.2 | 19.4 | 74.2 |
| | 70 - 80 | 4 | 12.1 | 12.9 | 87.1 |
| | 100 | 4 | 12.1 | 12.9 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | System | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.90: Percentage of work that is performed onshore / offshore

**Q 91. Outsourced service varies between applications**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 2 | 6.1 | 6.1 | 6.1 |
| | 4 | 2 | 6.1 | 6.1 | 12.1 |
| | 5 | 11 | 33.3 | 33.3 | 45.5 |
| | 6 | 10 | 30.3 | 30.3 | 75.8 |
| | 7 Agree | 8 | 24.2 | 24.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.91: Outsourced service varies between applications

**Q 92. Business overall satisfaction with outsourcing partner is high**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 6 | 18.2 | 18.2 | 18.2 |
|  | 2 | 6 | 18.2 | 18.2 | 36.4 |
|  | 3 | 10 | 30.3 | 30.3 | 66.7 |
|  | 4 | 7 | 21.2 | 21.2 | 87.9 |
|  | 5 | 4 | 12.1 | 12.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.92: Business overall satisfaction with outsourcing partner is high

**Q 93. Relationship with outsourcing vendor is strong**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
|  | 2 | 4 | 12.1 | 12.1 | 24.2 |
|  | 3 | 3 | 9.1 | 9.1 | 33.3 |
|  | 4 | 6 | 18.2 | 18.2 | 51.5 |
|  | 5 | 12 | 36.4 | 36.4 | 87.9 |
|  | 6 | 4 | 12.1 | 12.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.93: Relationship with outsourcing vendor is strong

**Q 94. Outsourcing partner meets key performance indicators**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 4 | 12.1 | 12.1 | 12.1 |
| | 3 | 4 | 12.1 | 12.1 | 24.2 |
| | 4 | 8 | 24.2 | 24.2 | 48.5 |
| | 5 | 13 | 39.4 | 39.4 | 87.9 |
| | 6 | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.94: Outsourcing partner meets key performance indicators


**Q 95. Communication with outsourcing partner is positive**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
| | 2 | 6 | 18.2 | 18.2 | 24.2 |
| | 4 | 2 | 6.1 | 6.1 | 30.3 |
| | 5 | 19 | 57.6 | 57.6 | 87.9 |
| | 6 | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.95: Communication with outsourcing partner is positive

**Q 96. Development time for minor changes has decreased since outsourcing**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 8 | 24.2 | 24.2 | 24.2 |
|  | 2 | 7 | 21.2 | 21.2 | 45.5 |
|  | 3 | 10 | 30.3 | 30.3 | 75.8 |
|  | 4 | 2 | 6.1 | 6.1 | 81.8 |
|  | 6 | 4 | 12.1 | 12.1 | 93.9 |
|  | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.96: Development time for minor changes has decreased since outsourcing

**Q 97. Development time for major changes has decreased since outsourcing**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 30.3 | 30.3 |
|  | 2 | 8 | 24.2 | 24.2 | 54.5 |
|  | 3 | 8 | 24.2 | 24.2 | 78.8 |
|  | 4 | 2 | 6.1 | 6.1 | 84.8 |
|  | 5 | 3 | 9.1 | 9.1 | 93.9 |
|  | 6 | 2 | 6.1 | 6.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.97: Development time for major changes has decreased since outsourcing

**Q 98. Quality of delivered system has increased since outsourcing**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 6 | 18.2 | 18.2 | 42.4 |
| | 3 | 9 | 27.3 | 27.3 | 69.7 |
| | 4 | 2 | 6.1 | 6.1 | 75.8 |
| | 5 | 8 | 24.2 | 24.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.98: Quality of delivered system has increased since outsourcing

**Q 99. Quality of documentation has increased since outsourcing**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 30.3 | 30.3 |
| | 2 | 10 | 30.3 | 30.3 | 60.6 |
| | 3 | 1 | 3.0 | 3.0 | 63.6 |
| | 4 | 2 | 6.1 | 6.1 | 69.7 |
| | 5 | 8 | 24.2 | 24.2 | 93.9 |
| | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.99: Quality of documentation has increased since outsourcing

**Q 100. Quality of training has increased since outsourcing**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | Missing    | 4         | 12.1    | 12.1          | 12.1               |
|       | 1 Disagree | 10        | 30.3    | 30.3          | 42.4               |
|       | 2          | 8         | 24.2    | 24.2          | 66.7               |
|       | 3          | 2         | 6.1     | 6.1           | 72.7               |
|       | 4          | 6         | 18.2    | 18.2          | 90.9               |
|       | 5          | 3         | 9.1     | 9.1           | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.100: Quality of training has increased since outsourcing

**Q 101. Outsourcing partner made decisions beneficial to us**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 8         | 24.2    | 24.2          | 24.2               |
|       | 2          | 4         | 12.1    | 12.1          | 36.4               |
|       | 3          | 4         | 12.1    | 12.1          | 48.5               |
|       | 4          | 11        | 33.3    | 33.3          | 81.8               |
|       | 5          | 4         | 12.1    | 12.1          | 93.9               |
|       | 6          | 2         | 6.1     | 6.1           | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.101: Outsourcing partner made decisions beneficial to us

**Q 102. Outsourcing partner provides assistance to business above contract requirements**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 30.3 | 30.3 |
|  | 2 | 4 | 12.1 | 12.1 | 42.4 |
|  | 3 | 8 | 24.2 | 24.2 | 66.7 |
|  | 4 | 2 | 6.1 | 6.1 | 72.7 |
|  | 5 | 5 | 15.2 | 15.2 | 87.9 |
|  | 6 | 4 | 12.1 | 12.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.102: Outsourcing partner provides assistance to business above contract requirements

**Q 103. Outsourcing partner is sincere in providing service**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
|  | 2 | 1 | 3.0 | 3.0 | 15.2 |
|  | 3 | 2 | 6.1 | 6.1 | 21.2 |
|  | 4 | 2 | 6.1 | 6.1 | 27.3 |
|  | 5 | 14 | 42.4 | 42.4 | 69.7 |
|  | 6 | 6 | 18.2 | 18.2 | 87.9 |
|  | 7 Agree | 4 | 12.1 | 12.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.103: Outsourcing partner is sincere in providing service

**Q 104. Outsourcing partner is ethical**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 4 | 7 | 21.2 | 21.2 | 33.3 |
| | 5 | 14 | 42.4 | 42.4 | 75.8 |
| | 6 | 4 | 12.1 | 12.1 | 87.9 |
| | 7 Agree | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.104: Outsourcing partner is ethical

**Q 105. Relationship between outsourcing partner and business is based on trust**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 6 | 18.2 | 18.2 | 18.2 |
| | 2 | 6 | 18.2 | 18.2 | 36.4 |
| | 3 | 10 | 30.3 | 30.3 | 66.7 |
| | 4 | 2 | 6.1 | 6.1 | 72.7 |
| | 5 | 9 | 27.3 | 27.3 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.105: Relationship between outsourcing partner and business is based on trust

**Q 106. Relationship between outsourcing partner and business is based on contract only**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 2         | 6.1     | 6.1           | 6.1                |
|       | 2          | 2         | 6.1     | 6.1           | 12.1               |
|       | 3          | 4         | 12.1    | 12.1          | 24.2               |
|       | 4          | 5         | 15.2    | 15.2          | 39.4               |
|       | 5          | 14        | 42.4    | 42.4          | 81.8               |
|       | 6          | 4         | 12.1    | 12.1          | 93.9               |
|       | 7  Agree   | 2         | 6.1     | 6.1           | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.106: Relationship between outsourcing partner and business is based on contract only

**Q 107. Outsourcing partner keeps contract commitments**

|       |          | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------|-----------|---------|---------------|--------------------|
| Valid | 2        | 6         | 18.2    | 18.2          | 18.2               |
|       | 3        | 4         | 12.1    | 12.1          | 30.3               |
|       | 4        | 8         | 24.2    | 24.2          | 54.5               |
|       | 5        | 8         | 24.2    | 24.2          | 78.8               |
|       | 6        | 5         | 15.2    | 15.2          | 93.9               |
|       | 7  Agree | 2         | 6.1     | 6.1           | 100.0              |
|       | Total    | 33        | 100.0   | 100.0         |                    |

Table G.107: Outsourcing partner keeps contract commitments

**Q 108. Outsourcing partner is committed to relationship**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 4 | 9 | 27.3 | 27.3 | 27.3 |
| | 5 | 10 | 30.3 | 30.3 | 57.6 |
| | 6 | 6 | 18.2 | 18.2 | 75.8 |
| | 7 Agree | 8 | 24.2 | 24.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.108: Outsourcing partner is committed to relationship

**Q 109. Business units are committed to relationship with outsourcing partners**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 8 | 24.2 | 24.2 | 48.5 |
| | 3 | 4 | 12.1 | 12.1 | 60.6 |
| | 4 | 6 | 18.2 | 18.2 | 78.8 |
| | 5 | 2 | 6.1 | 6.1 | 84.8 |
| | 6 | 5 | 15.2 | 15.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.109: Business units are committed to relationship with outsourcing partners

**Q 110. Both outsourcing partner and business commit resources to sustain relationship**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
|  | 3 | 11 | 33.3 | 33.3 | 39.4 |
|  | 4 | 4 | 12.1 | 12.1 | 51.5 |
|  | 5 | 10 | 30.3 | 30.3 | 81.8 |
|  | 6 | 4 | 12.1 | 12.1 | 93.9 |
|  | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.110: Both outsourcing partner and business commit resources to sustain relationship

**Q 111. Both outsourcing partner and business freely exchange information**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
|  | 2 | 2 | 6.1 | 6.1 | 12.1 |
|  | 3 | 12 | 36.4 | 36.4 | 48.5 |
|  | 4 | 6 | 18.2 | 18.2 | 66.7 |
|  | 5 | 3 | 9.1 | 9.1 | 75.8 |
|  | 6 | 8 | 24.2 | 24.2 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.111: Both outsourcing partner and business freely exchange information

**Q 112. Corporate culture clashes between outsourcing partner and business are an ongoing issue**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
| | 2 | 2 | 6.1 | 6.1 | 12.1 |
| | 3 | 8 | 24.2 | 24.2 | 36.4 |
| | 4 | 11 | 33.3 | 33.3 | 69.7 |
| | 5 | 2 | 6.1 | 6.1 | 75.8 |
| | 6 | 2 | 6.1 | 6.1 | 81.8 |
| | 7 Agree | 6 | 18.2 | 18.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.112: Corporate culture clashes between outsourcing partner and business are an ongoing issue

**Q 113. Different business rules between business and outsourcing partner causes disagreements**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 2 | 2 | 6.1 | 6.1 | 18.2 |
| | 3 | 6 | 18.2 | 18.2 | 36.4 |
| | 4 | 7 | 21.2 | 21.2 | 57.6 |
| | 5 | 6 | 18.2 | 18.2 | 75.8 |
| | 6 | 4 | 12.1 | 12.1 | 87.9 |
| | 7 Agree | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.113: Different business rules between business and outsourcing partner causes disagreements

**Q 114. Different business processes between business and outsourcing partner causes disagreement**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
|  | 2 | 4 | 12.1 | 12.1 | 18.2 |
|  | 3 | 4 | 12.1 | 12.1 | 30.3 |
|  | 4 | 11 | 33.3 | 33.3 | 63.6 |
|  | 5 | 6 | 18.2 | 18.2 | 81.8 |
|  | 6 | 2 | 6.1 | 6.1 | 87.9 |
|  | 7 Agree | 4 | 12.1 | 12.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.114: Different business processes between business and outsourcing partner causes disagreement

**Q 115. The outsourcer's performance is reviewed on a regular basis**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 3 | 5 | 15.2 | 15.2 | 15.2 |
|  | 4 | 6 | 18.2 | 18.2 | 33.3 |
|  | 5 | 8 | 24.2 | 24.2 | 57.6 |
|  | 6 | 8 | 24.2 | 24.2 | 81.8 |
|  | 7 Agree | 6 | 18.2 | 18.2 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.115: The outsourcer's performance is reviewed on a regular basis

**Q 116. Feedback is provided to the outsourcer following a review**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 2 | 6.1 | 6.1 | 6.1 |
| | 2 | 2 | 6.1 | 6.1 | 12.1 |
| | 3 | 4 | 12.1 | 12.1 | 24.2 |
| | 4 | 2 | 6.1 | 6.1 | 30.3 |
| | 5 | 8 | 24.2 | 24.2 | 54.5 |
| | 6 | 8 | 24.2 | 24.2 | 78.8 |
| | 7 Agree | 7 | 21.2 | 21.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.116: Feedback is provided to the outsourcer following a review

**Q 117. Problem solving is a joint exercise between business and outsourcing vendor**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
| | 2 | 2 | 6.1 | 6.1 | 12.1 |
| | 3 | 7 | 21.2 | 21.2 | 33.3 |
| | 4 | 2 | 6.1 | 6.1 | 39.4 |
| | 5 | 10 | 30.3 | 30.3 | 69.7 |
| | 6 | 8 | 24.2 | 24.2 | 93.9 |
| | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.117: Problem solving is a joint exercise between business and outsourcing vendor

**Q 118. Decision making is a joint exercise between business and outsourcing vendor**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
| | 2 | 4 | 12.1 | 12.1 | 18.2 |
| | 3 | 4 | 12.1 | 12.1 | 30.3 |
| | 4 | 8 | 24.2 | 24.2 | 54.5 |
| | 5 | 13 | 39.4 | 39.4 | 93.9 |
| | 6 | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.118: Decision making is a joint exercise between business and outsourcing vendor

**Q 119. Communication between business and outsourcing vendor is strong**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 4 | 12.1 | 12.1 | 12.1 |
| | 3 | 7 | 21.2 | 21.2 | 33.3 |
| | 4 | 4 | 12.1 | 12.1 | 45.5 |
| | 5 | 16 | 48.5 | 48.5 | 93.9 |
| | 6 | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.119: Communication between business and outsourcing vendor is strong

**Q 120. Business support team works well with outsourcing vendor**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
|  | 2 | 2 | 6.1 | 6.1 | 12.1 |
|  | 3 | 10 | 30.3 | 30.3 | 42.4 |
|  | 4 | 8 | 24.2 | 24.2 | 66.7 |
|  | 5 | 9 | 27.3 | 27.3 | 93.9 |
|  | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.120: Business support team works well with outsourcing vendor

**Q 121. Outsourcing vendor supports teamwork**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 2 | 6.1 | 6.1 | 6.1 |
|  | 3 | 5 | 15.2 | 15.2 | 21.2 |
|  | 4 | 6 | 18.2 | 18.2 | 39.4 |
|  | 5 | 12 | 36.4 | 36.4 | 75.8 |
|  | 6 | 4 | 12.1 | 12.1 | 87.9 |
|  | 7 Agree | 4 | 12.1 | 12.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.121: Outsourcing vendor supports teamwork

**Q 122. Offshore outsourcing vendor are responsible for large portions of system development**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 2 | 6.1 | 6.1 | 6.1 |
| | 2 | 9 | 27.3 | 27.3 | 33.3 |
| | 3 | 2 | 6.1 | 6.1 | 39.4 |
| | 5 | 8 | 24.2 | 24.2 | 63.6 |
| | 6 | 6 | 18.2 | 18.2 | 81.8 |
| | 7  Agree | 6 | 18.2 | 18.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.122: Offshore outsourcing vendor are responsible for large portions of system development

**Q 123. Outsourcing vendor's communications are accurate**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 2 | 4 | 12.1 | 12.1 | 24.2 |
| | 3 | 8 | 24.2 | 24.2 | 48.5 |
| | 4 | 4 | 12.1 | 12.1 | 60.6 |
| | 5 | 11 | 33.3 | 33.3 | 93.9 |
| | 6 | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.123: Outsourcing vendor's communications are accurate

**Q 124. Outsourcing vendor's communications are complete**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | Missing    | 2         | 6.1     | 6.1           | 6.1                |
|       | 1 Disagree | 6         | 18.2    | 18.2          | 24.2               |
|       | 2          | 6         | 18.2    | 18.2          | 42.4               |
|       | 3          | 6         | 18.2    | 18.2          | 60.6               |
|       | 4          | 8         | 24.2    | 24.2          | 84.8               |
|       | 5          | 4         | 12.1    | 12.1          | 97.0               |
|       | 7  Agree   | 1         | 3.0     | 3.0           | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.124: Outsourcing vendor's communications are complete

**Q 125. Outsourcing vendor's communications are credible**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 4         | 12.1    | 12.1          | 12.1               |
|       | 2          | 2         | 6.1     | 6.1           | 18.2               |
|       | 3          | 4         | 12.1    | 12.1          | 30.3               |
|       | 4          | 9         | 27.3    | 27.3          | 57.6               |
|       | 5          | 8         | 24.2    | 24.2          | 81.8               |
|       | 6          | 4         | 12.1    | 12.1          | 93.9               |
|       | 7  Agree   | 2         | 6.1     | 6.1           | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.125: Outsourcing vendor's communications are credible

**Q 126. Outsourcing vendor's communications are timely**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 2 | 7 | 21.2 | 21.2 | 33.3 |
| | 3 | 2 | 6.1 | 6.1 | 39.4 |
| | 4 | 10 | 30.3 | 30.3 | 69.7 |
| | 5 | 10 | 30.3 | 30.3 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.126: Outsourcing vendor's communications are timely

**Q 127. Outsourcing vendor operated efficiently**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.9 | 12.9 |
| | 3 | 8 | 24.2 | 25.8 | 38.7 |
| | 4 | 6 | 18.2 | 19.4 | 58.1 |
| | 5 | 10 | 30.3 | 32.3 | 90.3 |
| | 6 | 3 | 9.1 | 9.7 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | System | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.127: Outsourcing vendor operated efficiently

**Q 128. Outsourcing vendor provided leadership**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 10 | 30.3 | 30.3 | 30.3 |
| | 2 | 4 | 12.1 | 12.1 | 42.4 |
| | 3 | 9 | 27.3 | 27.3 | 69.7 |
| | 4 | 6 | 18.2 | 18.2 | 87.9 |
| | 5 | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.128: Outsourcing vendor provided leadership

**Q 129. Outsourcing vendor provided quality work**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 6 | 18.2 | 18.2 | 18.2 |
| | 2 | 4 | 12.1 | 12.1 | 30.3 |
| | 3 | 10 | 30.3 | 30.3 | 60.6 |
| | 4 | 2 | 6.1 | 6.1 | 66.7 |
| | 5 | 8 | 24.2 | 24.2 | 90.9 |
| | 6 | 3 | 9.1 | 9.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.129: Outsourcing vendor provided quality work

**Q 130. Outsourcing vendor provided work within budget**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 2         | 6.1     | 6.1           | 6.1                |
|       | 3          | 2         | 6.1     | 6.1           | 12.1               |
|       | 4          | 11        | 33.3    | 33.3          | 45.5               |
|       | 5          | 10        | 30.3    | 30.3          | 75.8               |
|       | 6          | 8         | 24.2    | 24.2          | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.130: Outsourcing vendor provided work within budget

**Q 131. Outsourcing vendor requires little business management**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 10        | 30.3    | 30.3          | 30.3               |
|       | 2          | 8         | 24.2    | 24.2          | 54.5               |
|       | 3          | 12        | 36.4    | 36.4          | 90.9               |
|       | 4          | 2         | 6.1     | 6.1           | 97.0               |
|       | 5          | 1         | 3.0     | 3.0           | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.131: Outsourcing vendor requires little business management

**Q 132. Outsourcing vendor requires little functional support**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 10        | 30.3    | 30.3          | 30.3               |
|       | 2          | 6         | 18.2    | 18.2          | 48.5               |
|       | 3          | 12        | 36.4    | 36.4          | 84.8               |
|       | 4          | 5         | 15.2    | 15.2          | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.132: Outsourcing vendor requires little functional support

**Q 133. Outsourcing vendor was able to meet project goals**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 2         | 6.1     | 6.1           | 6.1                |
|       | 2          | 2         | 6.1     | 6.1           | 12.1               |
|       | 3          | 8         | 24.2    | 24.2          | 36.4               |
|       | 4          | 10        | 30.3    | 30.3          | 66.7               |
|       | 5          | 7         | 21.2    | 21.2          | 87.9               |
|       | 6          | 4         | 12.1    | 12.1          | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.133: Outsourcing vendor was able to meet project goals

**Q 134. Outsourcing vendor was innovative and creative**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | 1 Disagree | 6         | 18.2    | 18.2          | 18.2               |
|       | 2          | 8         | 24.2    | 24.2          | 42.4               |
|       | 3          | 6         | 18.2    | 18.2          | 60.6               |
|       | 4          | 5         | 15.2    | 15.2          | 75.8               |
|       | 5          | 8         | 24.2    | 24.2          | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.134: Outsourcing vendor was innovative and creative

**Q 135. Outsourcing vendor has improved business productivity**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 8 | 24.2 | 24.2 | 48.5 |
| | 3 | 8 | 24.2 | 24.2 | 72.7 |
| | 4 | 3 | 9.1 | 9.1 | 81.8 |
| | 5 | 6 | 18.2 | 18.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.135: Outsourcing vendor has improved business productivity

**Q 136. Business found it difficult to hire internal IT staff after outsourcing**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 2 | 6.1 | 6.1 | 6.1 |
| | 1 Disagree | 4 | 12.1 | 12.1 | 18.2 |
| | 2 | 2 | 6.1 | 6.1 | 24.2 |
| | 3 | 8 | 24.2 | 24.2 | 48.5 |
| | 4 | 5 | 15.2 | 15.2 | 63.6 |
| | 5 | 4 | 12.1 | 12.1 | 75.8 |
| | 7 Agree | 8 | 24.2 | 24.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.136: Business found it difficult to hire internal
IT staff after outsourcing

**Q 137. Cost of retaining internal IT staff increased after outsourcing functions**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | Missing    | 2         | 6.1     | 6.1           | 6.1                |
|       | 1 Disagree | 2         | 6.1     | 6.1           | 12.1               |
|       | 2          | 9         | 27.3    | 27.3          | 39.4               |
|       | 3          | 10        | 30.3    | 30.3          | 69.7               |
|       | 4          | 6         | 18.2    | 18.2          | 87.9               |
|       | 5          | 2         | 6.1     | 6.1           | 93.9               |
|       | 6          | 2         | 6.1     | 6.1           | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.137: Cost of retaining internal IT staff increased
after outsourcing functions

**Q 138. Cost of training internal IT staff increased after outsourcing functions**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | Missing    | 4         | 12.1    | 12.1          | 12.1               |
|       | 1 Disagree | 6         | 18.2    | 18.2          | 30.3               |
|       | 2          | 6         | 18.2    | 18.2          | 48.5               |
|       | 3          | 6         | 18.2    | 18.2          | 66.7               |
|       | 4          | 7         | 21.2    | 21.2          | 87.9               |
|       | 5          | 4         | 12.1    | 12.1          | 100.0              |
|       | Total      | 33        | 100.0   | 100.0         |                    |

Table G.138: Cost of training internal IT staff increased
after outsourcing functions

**Q 139. Internal IT staff lost interest after outsourcing of other functions**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 Disagree | 4 | 12.1 | 12.1 | 12.1 |
| | 3 | 6 | 18.2 | 18.2 | 30.3 |
| | 4 | 4 | 12.1 | 12.1 | 42.4 |
| | 5 | 15 | 45.5 | 45.5 | 87.9 |
| | 6 | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.139: Internal IT staff lost interest after
outsourcing of other functions

**Q 140. Other outsourcing partner's performance improved after a contract was terminated**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 4 | 12.1 | 12.1 | 12.1 |
| | 1 Disagree | 4 | 12.1 | 12.1 | 24.2 |
| | 2 | 4 | 12.1 | 12.1 | 36.4 |
| | 3 | 10 | 30.3 | 30.3 | 66.7 |
| | 4 | 8 | 24.2 | 24.2 | 90.9 |
| | 6 | 1 | 3.0 | 3.0 | 93.9 |
| | 7 Agree | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.140: Other outsourcing partner's performance
improved after a contract was terminated

**Q 141. Terminated contracts led to revised vendor management processes**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 24.2 | 24.2 |
|  | 2 | 2 | 6.1 | 6.1 | 30.3 |
|  | 3 | 4 | 12.1 | 12.1 | 42.4 |
|  | 4 | 7 | 21.2 | 21.2 | 63.6 |
|  | 5 | 8 | 24.2 | 24.2 | 87.9 |
|  | 6 | 4 | 12.1 | 12.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.141: Terminated contracts led to revised vendor management processes

**Q 142**. **Changing outsourcing partner caused transition costs to be high due to lack of support from previous vendor**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 1 | 3.0 | 3.0 | 27.3 |
| | 3 | 2 | 6.1 | 6.1 | 33.3 |
| | 4 | 6 | 18.2 | 18.2 | 51.5 |
| | 5 | 4 | 12.1 | 12.1 | 63.6 |
| | 6 | 6 | 18.2 | 18.2 | 81.8 |
| | 7 Agree | 2 | 6.1 | 6.1 | 87.9 |
| | 8 N/A | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.142: Changing outsourcing partner caused transition costs to be high due to lack of support from previous vendor

**Q 143**. **When changing outsourcing partner, the previous vendor made it difficult to discontinue contract**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 4 | 12.1 | 12.1 | 36.4 |
| | 3 | 2 | 6.1 | 6.1 | 42.4 |
| | 4 | 7 | 21.2 | 21.2 | 63.6 |
| | 5 | 6 | 18.2 | 18.2 | 81.8 |
| | 7 Agree | 2 | 6.1 | 6.1 | 87.9 |
| | 8 N/A | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.143: When changing outsourcing partner, the previous vendor made it difficult to discontinue contract

**Q 144. When changing outsourcing partner the previous vendor withheld vital information**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 2 | 6.1 | 6.1 | 30.3 |
| | 3 | 4 | 12.1 | 12.1 | 42.4 |
| | 4 | 7 | 21.2 | 21.2 | 63.6 |
| | 5 | 4 | 12.1 | 12.1 | 75.8 |
| | 6 | 2 | 6.1 | 6.1 | 81.8 |
| | 7  Agree | 4 | 12.1 | 12.1 | 93.9 |
| | 8  N/A | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.144: When changing outsourcing partner the previous vendor withheld vital information

**Q 145. When changing outsourcing partner the previous vendor with held documentation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 24.2 | 24.2 |
| | 1 Disagree | 2 | 6.1 | 6.1 | 30.3 |
| | 3 | 5 | 15.2 | 15.2 | 45.5 |
| | 4 | 4 | 12.1 | 12.1 | 57.6 |
| | 5 | 6 | 18.2 | 18.2 | 75.8 |
| | 6 | 2 | 6.1 | 6.1 | 81.8 |
| | 7  Agree | 4 | 12.1 | 12.1 | 93.9 |
| | 8  N/A | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.145: When changing outsourcing partner the previous vendor with held documentation

**Q 146. After changing outsourcing partner we decided not to give previous vendor another contract**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 12 | 36.4 | 36.4 | 36.4 |
| | 3 | 2 | 6.1 | 6.1 | 42.4 |
| | 4 | 4 | 12.1 | 12.1 | 54.5 |
| | 5 | 4 | 12.1 | 12.1 | 66.7 |
| | 6 | 3 | 9.1 | 9.1 | 75.8 |
| | 7 Agree | 4 | 12.1 | 12.1 | 87.9 |
| | 8 N/A | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.146: After changing outsourcing partner we decided not to give previous vendor another contract

**Q 147. Transition time for new provider to become productive was affected by — Previous vendor withholding information**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 10 | 30.3 | 30.3 | 30.3 |
| | 1 Disagree | 4 | 12.1 | 12.1 | 42.4 |
| | 3 | 2 | 6.1 | 6.1 | 48.5 |
| | 4 | 5 | 15.2 | 15.2 | 63.6 |
| | 5 | 4 | 12.1 | 12.1 | 75.8 |
| | 6 | 2 | 6.1 | 6.1 | 81.8 |
| | 7 Agree | 4 | 12.1 | 12.1 | 93.9 |
| | 8 N/A | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.147: Transition time for new provider to become productive was affected by —Previous vendor withholding information

**Q 148. Transition time for new provider to become productive was affected by — Other problems with previous vendor**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 18.2 | 18.2 |
| | 1 Disagree | 4 | 12.1 | 12.1 | 30.3 |
| | 3 | 4 | 12.1 | 12.1 | 42.4 |
| | 4 | 4 | 12.1 | 12.1 | 54.5 |
| | 5 | 1 | 3.0 | 3.0 | 57.6 |
| | 6 | 8 | 24.2 | 24.2 | 81.8 |
| | 7 Agree | 4 | 12.1 | 12.1 | 93.9 |
| | 8 N/A | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.148: Transition time for new provider to become productive was affected by —Other problems with previous vendor

**Q 149. Transition time for new provider to become productive was affected by — Lack of documentation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 18.2 | 18.2 |
| | 1 Disagree | 2 | 6.1 | 6.1 | 24.2 |
| | 3 | 3 | 9.1 | 9.1 | 33.3 |
| | 5 | 8 | 24.2 | 24.2 | 57.6 |
| | 6 | 4 | 12.1 | 12.1 | 69.7 |
| | 7 Agree | 8 | 24.2 | 24.2 | 93.9 |
| | 8 N/A | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.149: Transition time for new provider to become productive was affected by —Lack of documentation

**Q 150. Transition time for new provider to become productive was affected by**
**— Lack of internal processes**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 18.2 | 18.2 |
| | 1 Disagree | 2 | 6.1 | 6.1 | 24.2 |
| | 4 | 2 | 6.1 | 6.1 | 30.3 |
| | 5 | 9 | 27.3 | 27.3 | 57.6 |
| | 6 | 8 | 24.2 | 24.2 | 81.8 |
| | 7 Agree | 4 | 12.1 | 12.1 | 93.9 |
| | 8 N/A | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.150: Transition time for new provider to become productive was affected by — Lack of internal processes

**Q 151. Transition time for new provider to become productive was affected by — Lack of suitable staff**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 24.2 | 24.2 |
| | 2 | 3 | 9.1 | 9.1 | 33.3 |
| | 3 | 2 | 6.1 | 6.1 | 39.4 |
| | 4 | 6 | 18.2 | 18.2 | 57.6 |
| | 5 | 4 | 12.1 | 12.1 | 69.7 |
| | 6 | 4 | 12.1 | 12.1 | 81.8 |
| | 7 Agree | 4 | 12.1 | 12.1 | 93.9 |
| | 8 N/A | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.151: Transition time for new provider to become productive was affected by — Lack of suitable staff

**Q 152. Level of service decreased after switching outsourcing vendor due to —**
**Reluctance of previous vendor to help**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 10 | 30.3 | 30.3 | 30.3 |
|  | 1 Disagree | 4 | 12.1 | 12.1 | 42.4 |
|  | 4 | 4 | 12.1 | 12.1 | 54.5 |
|  | 5 | 4 | 12.1 | 12.1 | 66.7 |
|  | 6 | 7 | 21.2 | 21.2 | 87.9 |
|  | 7  Agree | 2 | 6.1 | 6.1 | 93.9 |
|  | 8  N/A | 2 | 6.1 | 6.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.152: Level of service decreased after switching
outsourcing vendor due to —Reluctance of previous vendor to help

**Q 153.  Level of service decreased after switching outsourcing vendor due to —**
**Lack of local processes**

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 24.2 | 24.2 |
|  | 1 Disagree | 2 | 6.1 | 6.1 | 30.3 |
|  | 2 | 2 | 6.1 | 6.1 | 36.4 |
|  | 4 | 7 | 21.2 | 21.2 | 57.6 |
|  | 5 | 4 | 12.1 | 12.1 | 69.7 |
|  | 6 | 4 | 12.1 | 12.1 | 81.8 |
|  | 7  Agree | 4 | 12.1 | 12.1 | 93.9 |
|  | 8  N/A | 2 | 6.1 | 6.1 | 100.0 |
|  | Total | 33 | 100.0 | 100.0 |  |

Table G.153: Level of service decreased after switching
outsourcing vendor due to — Lack of local processes

**Q 154. Level of service decreased after switching outsourcing vendor due to —
In-house staff lacking system knowledge**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 18.2 | 18.2 |
| | 1 Disagree | 2 | 6.1 | 6.1 | 24.2 |
| | 2 | 2 | 6.1 | 6.1 | 30.3 |
| | 3 | 1 | 3.0 | 3.0 | 33.3 |
| | 4 | 2 | 6.1 | 6.1 | 39.4 |
| | 5 | 4 | 12.1 | 12.1 | 51.5 |
| | 6 | 8 | 24.2 | 24.2 | 75.8 |
| | 7 Agree | 6 | 18.2 | 18.2 | 93.9 |
| | 8 N/A | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.154: Level of service decreased after switching
outsourcing vendor due to — In-house staff lacking system knowledge

**Q 155. Level of service decreased after switching outsourcing vendor due to —
In-house had to learn how IT systems worked**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 24.2 | 24.2 |
| | 1 Disagree | 2 | 6.1 | 6.1 | 30.3 |
| | 2 | 2 | 6.1 | 6.1 | 36.4 |
| | 3 | 2 | 6.1 | 6.1 | 42.4 |
| | 4 | 8 | 24.2 | 24.2 | 66.7 |
| | 5 | 1 | 3.0 | 3.0 | 69.7 |
| | 6 | 4 | 12.1 | 12.1 | 81.8 |
| | 7 Agree | 4 | 12.1 | 12.1 | 93.9 |
| | 8 N/A | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.155: Level of service decreased after switching
outsourcing vendor due to — In-house had to learn how IT systems
worked

**Q 156.  Level of service decreased after switching outsourcing vendor due to — The need for new policies**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 10 | 30.3 | 30.3 | 30.3 |
| | 2 | 2 | 6.1 | 6.1 | 36.4 |
| | 3 | 2 | 6.1 | 6.1 | 42.4 |
| | 4 | 9 | 27.3 | 27.3 | 69.7 |
| | 5 | 2 | 6.1 | 6.1 | 75.8 |
| | 6 | 4 | 12.1 | 12.1 | 87.9 |
| | 8  N/A | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.156: Level of service decreased after switching outsourcing vendor due to — The need for new policies

**Q 157. Internal team required considerable time to be productive**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 4 | 12.1 | 12.9 | 12.9 |
| | 2 | 2 | 6.1 | 6.5 | 19.4 |
| | 3 | 5 | 15.2 | 16.1 | 35.5 |
| | 4 | 8 | 24.2 | 25.8 | 61.3 |
| | 5 | 6 | 18.2 | 19.4 | 80.6 |
| | 7  Agree | 6 | 18.2 | 19.4 | 100.0 |
| | Total | 31 | 93.9 | 100.0 | |
| Missing | System | 2 | 6.1 | | |
| | Total | 33 | 100.0 | | |

Table G.157: Internal team required considerable time to be productive

**Q 158. We hired experienced staff who produced results quickly**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 20.7 | 20.7 |
| | 1 Disagree | 2 | 6.1 | 6.9 | 27.6 |
| | 2 | 2 | 6.1 | 6.9 | 34.5 |
| | 3 | 2 | 6.1 | 6.9 | 41.4 |
| | 4 | 8 | 24.2 | 27.6 | 69.0 |
| | 5 | 3 | 9.1 | 10.3 | 79.3 |
| | 6 | 6 | 18.2 | 20.7 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.158: We hired experienced staff who produced results
quickly

**Q 159. Service from internal provider is worse than previous outsourcing provider**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 20.7 | 20.7 |
| | 1 Disagree | 8 | 24.2 | 27.6 | 48.3 |
| | 2 | 4 | 12.1 | 13.8 | 62.1 |
| | 3 | 5 | 15.2 | 17.2 | 79.3 |
| | 4 | 6 | 18.2 | 20.7 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.159: Service from internal provider is worse than previous
outsourcing provider

**Q 160. Back sourcing required new skills**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 10 | 30.3 | 34.5 | 34.5 |
| | 1 Disagree | 4 | 12.1 | 13.8 | 48.3 |
| | 3 | 2 | 6.1 | 6.9 | 55.2 |
| | 4 | 4 | 12.1 | 13.8 | 69.0 |
| | 5 | 7 | 21.2 | 24.1 | 93.1 |
| | 7 Agree | 2 | 6.1 | 6.9 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.160: Back sourcing required new skills

**Q 161. In-house development requires different processes**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 27.6 | 27.6 |
| | 2 | 2 | 6.1 | 6.9 | 34.5 |
| | 3 | 2 | 6.1 | 6.9 | 41.4 |
| | 4 | 3 | 9.1 | 10.3 | 51.7 |
| | 5 | 8 | 24.2 | 27.6 | 79.3 |
| | 6 | 4 | 12.1 | 13.8 | 93.1 |
| | 7  Agree | 2 | 6.1 | 6.9 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.161: In-house development requires different processes

**Q 162. In house development is simpler process**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 27.6 | 27.6 |
| | 3 | 2 | 6.1 | 6.9 | 34.5 |
| | 5 | 7 | 21.2 | 24.1 | 58.6 |
| | 6 | 2 | 6.1 | 6.9 | 65.5 |
| | 7  Agree | 10 | 30.3 | 34.5 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.162: In house development is simpler process

**Q 163. The discontinuation of outsourcing contract has detrimental effect on (a) Business performance**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 20.7 | 20.7 |
| | 1 Disagree | 8 | 24.2 | 27.6 | 48.3 |
| | 2 | 4 | 12.1 | 13.8 | 62.1 |
| | 3 | 5 | 15.2 | 17.2 | 79.3 |
| | 4 | 2 | 6.1 | 6.9 | 86.2 |
| | 5 | 2 | 6.1 | 6.9 | 93.1 |
| | 6 | 2 | 6.1 | 6.9 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.163: The discontinuation of outsourcing contract has detrimental effect on (a) Business performance

**Q 164. The discontinuation of outsourcing contract has detrimental effect on (b) IT performance**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 20.7 | 20.7 |
| | 1 Disagree | 4 | 12.1 | 13.8 | 34.5 |
| | 2 | 6 | 18.2 | 20.7 | 55.2 |
| | 3 | 2 | 6.1 | 6.9 | 62.1 |
| | 4 | 2 | 6.1 | 6.9 | 69.0 |
| | 5 | 7 | 21.2 | 24.1 | 93.1 |
| | 7  Agree | 2 | 6.1 | 6.9 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.164: The discontinuation of outsourcing contract has detrimental effect on (b) IT performance

**Q 165. The discontinuation of outsourcing contract has detrimental effect on (c) In unexpected ways**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 27.6 | 27.6 |
| | 1 Disagree | 8 | 24.2 | 27.6 | 55.2 |
| | 4 | 2 | 6.1 | 6.9 | 62.1 |
| | 5 | 6 | 18.2 | 20.7 | 82.8 |
| | 6 | 2 | 6.1 | 6.9 | 89.7 |
| | 7  Agree | 3 | 9.1 | 10.3 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.165: The discontinuation of outsourcing contract has detrimental effect on (c) In unexpected ways

**Q 166. The discontinuation of outsourcing contract has detrimental effect on (d) Internal processes**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 27.6 | 27.6 |
| | 1 Disagree | 6 | 18.2 | 20.7 | 48.3 |
| | 3 | 1 | 3.0 | 3.4 | 51.7 |
| | 4 | 4 | 12.1 | 13.8 | 65.5 |
| | 5 | 4 | 12.1 | 13.8 | 79.3 |
| | 6 | 4 | 12.1 | 13.8 | 93.1 |
| | 7  Agree | 2 | 6.1 | 6.9 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.166: The discontinuation of outsourcing contract has detrimental effect on (d) Internal processes

**Q 167. The discontinuation of outsourcing contract has detrimental effect on (e) Internal staff availability**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 20.7 | 20.7 |
| | 1 Disagree | 5 | 15.2 | 17.2 | 37.9 |
| | 2 | 2 | 6.1 | 6.9 | 44.8 |
| | 5 | 8 | 24.2 | 27.6 | 72.4 |
| | 6 | 2 | 6.1 | 6.9 | 79.3 |
| | 7  Agree | 6 | 18.2 | 20.7 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.167: The discontinuation of outsourcing contract has detrimental effect on (e) Internal staff availability

**Q 168. The discontinuation of outsourcing contract has detrimental effect on —**

**(g)  Not applicable**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 23 | 69.7 | 79.3 | 79.3 |
| | 7  Agree | 4 | 12.1 | 13.8 | 93.1 |
| | Missing | 2 | 6.1 | 6.9 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.168: The discontinuation of outsourcing contract has detrimental effect on — (g) Not applicable

**Q 169. We lost significant money due to time and effort of building relationship with previous vendor**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 27.6 | 27.6 |
| | 3 | 2 | 6.1 | 6.9 | 34.5 |
| | 4 | 2 | 6.1 | 6.9 | 41.4 |
| | 5 | 3 | 9.1 | 10.3 | 51.7 |
| | 6 | 6 | 18.2 | 20.7 | 72.4 |
| | 7 Agree | 8 | 24.2 | 27.6 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.169: We lost significant money due to time and effort of building relationship with previous vendor

**Q 170. After switching outsourcing contract, replacement it staff were difficult to find**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 8 | 24.2 | 27.6 | 27.6 |
| | 1 Disagree | 2 | 6.1 | 6.9 | 34.5 |
| | 2 | 4 | 12.1 | 13.8 | 48.3 |
| | 3 | 2 | 6.1 | 6.9 | 55.2 |
| | 4 | 3 | 9.1 | 10.3 | 65.5 |
| | 5 | 4 | 12.1 | 13.8 | 79.3 |
| | 6 | 4 | 12.1 | 13.8 | 93.1 |
| | 7 Agree | 2 | 6.1 | 6.9 | 100.0 |
| | Total | 29 | 87.9 | 100.0 | |
| Missing | System | 4 | 12.1 | | |
| | Total | 33 | 100.0 | | |

Table G.170: After switching outsourcing contract, replacement it staff were difficult to find

**Q 171. When contract switched additional internal employees required**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 18.2 | 18.2 |
| | 1 Disagree | 4 | 12.1 | 12.1 | 30.3 |
| | 3 | 1 | 3.0 | 3.0 | 33.3 |
| | 4 | 8 | 24.2 | 24.2 | 57.6 |
| | 5 | 6 | 18.2 | 18.2 | 75.8 |
| | 6 | 4 | 12.1 | 12.1 | 87.9 |
| | 7 Agree | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.171: When contract switched additional internal employees required

**Q 172. Relationship developed with previous vendor was lost**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 4 | 12.1 | 12.1 | 12.1 |
| | 1 Disagree | 2 | 6.1 | 6.1 | 18.2 |
| | 3 | 2 | 6.1 | 6.1 | 24.2 |
| | 4 | 2 | 6.1 | 6.1 | 30.3 |
| | 5 | 9 | 27.3 | 27.3 | 57.6 |
| | 6 | 6 | 18.2 | 18.2 | 75.8 |
| | 7 Agree | 8 | 24.2 | 24.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.172: Relationship developed with previous vendor was lost

**Q 173. Lost knowledge and transition costs to switch vendors were significant**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 4 | 12.1 | 12.1 | 12.1 |
| | 1 Disagree | 2 | 6.1 | 6.1 | 18.2 |
| | 4 | 4 | 12.1 | 12.1 | 30.3 |
| | 5 | 9 | 27.3 | 27.3 | 57.6 |
| | 6 | 4 | 12.1 | 12.1 | 69.7 |
| | 7 Agree | 10 | 30.3 | 30.3 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.173: Lost knowledge and transition costs to switch vendors were significant

**Q 174. New support team required (a) Considerable setup time**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 4 | 12.1 | 12.1 | 12.1 |
| | 3 | 5 | 15.2 | 15.2 | 27.3 |
| | 4 | 6 | 18.2 | 18.2 | 45.5 |
| | 5 | 6 | 18.2 | 18.2 | 63.6 |
| | 6 | 4 | 12.1 | 12.1 | 75.8 |
| | 7 Agree | 8 | 24.2 | 24.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.174: New support team required (a) Considerable setup time

**Q 175. New support team required (b) Additional internal processes**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 4 | 12.1 | 12.1 | 12.1 |
| | 2 | 2 | 6.1 | 6.1 | 18.2 |
| | 4 | 7 | 21.2 | 21.2 | 39.4 |
| | 5 | 10 | 30.3 | 30.3 | 69.7 |
| | 6 | 2 | 6.1 | 6.1 | 75.8 |
| | 7 Agree | 8 | 24.2 | 24.2 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.175: New support team required (b) Additional internal processes

**Q 176. New support team required (c) Little time or effort to provide support**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 18.2 | 18.2 |
| | 1 Disagree | 8 | 24.2 | 24.2 | 42.4 |
| | 3 | 4 | 12.1 | 12.1 | 54.5 |
| | 4 | 6 | 18.2 | 18.2 | 72.7 |
| | 5 | 5 | 15.2 | 15.2 | 87.9 |
| | 6 | 4 | 12.1 | 12.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.176: New support team required (c) Little time or effort to provide support

**Q 177. New support team required (d) Additional training**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Missing | 6 | 18.2 | 18.2 | 18.2 |
| | 1 Disagree | 4 | 12.1 | 12.1 | 30.3 |
| | 3 | 1 | 3.0 | 3.0 | 33.3 |
| | 4 | 2 | 6.1 | 6.1 | 39.4 |
| | 5 | 14 | 42.4 | 42.4 | 81.8 |
| | 6 | 4 | 12.1 | 12.1 | 93.9 |
| | 7  Agree | 2 | 6.1 | 6.1 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

Table G.177: New support team required (d) Additional training

**Q 178. Comments**

| | | Frequency | Percent |
|---|---|---|---|
| Missing | System | 33 | 100.0 |

Table G.178: Comments

# Appendix H — One Sample t Test

## List of Tables

**One Sample Statistics — Resources**

|  | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q 29. Strategic Importance | 31 | 5.58 | 1.708 | .307 |
| Q30_Degree_30_out | 31 | 2.68 | 1.275 | .229 |
| Q35_Org_plan_add_out | 33 | 5.42 | 1.751 | .305 |
| Q36_Org_Out_bus_strat | 33 | 4.88 | 1.850 | .322 |
| Q37_Org_Out_tec_strat | 33 | 5.18 | 1.648 | .287 |
| Q38_CIO_instr_out | 31 | 5.52 | 1.691 | .304 |
| Q39_CIO_Excellent | 33 | 3.18 | 1.550 | .270 |
| Q40_CIO_Effective_p4 | 33 | 3.97 | 1.630 | .284 |
| Q41_IH_lack_strate_p5 | 33 | 3.06 | 2.193 | .382 |
| Q42_IH_lack_rigour | 33 | 3.06 | 2.277 | .396 |
| Q43_IH_Pro_creep | 33 | 4.27 | 2.155 | .375 |
| Q44_H_Cost_inc | 33 | 4.09 | 2.213 | .385 |
| Q45_IH_Time_inc | 33 | 3.85 | 2.033 | .354 |
| Q46_OUT_lose_pr | 33 | 3.85 | 2.002 | .348 |
| Q47_OUT_lose_re | 33 | 3.82 | 2.038 | .355 |
| Q48_OUT_own_pr_p5 | 33 | 3.36 | 2.074 | .361 |

Table H.1: One sample statistics — Resources Q 29, 30, 35 to 48

**One Sample Test — Resources**

| | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Q 29. Strategic Importance | 18.189 | 30 | .000 | 5.581 | 4.95 | 6.21 |
| Q30_Degree_30_out | 11.691 | 30 | .000 | 2.677 | 2.21 | 3.15 |
| Q35_Org_plan_add_out | 17.800 | 32 | .000 | 5.424 | 4.80 | 6.04 |
| Q36_Org_Out_bus_strat | 15.150 | 32 | .000 | 4.879 | 4.22 | 5.53 |
| Q37_Org_Out_tec_strat | 18.063 | 32 | .000 | 5.182 | 4.60 | 5.77 |
| Q38_CIO_instr_out | 18.167 | 30 | .000 | 5.516 | 4.90 | 6.14 |
| Q39_CIO_Excellent | 11.790 | 32 | .000 | 3.182 | 2.63 | 3.73 |
| Q40_CIO_Effective_p4 | 13.994 | 32 | .000 | 3.970 | 3.39 | 4.55 |
| Q41_IH_lack_strate_p5 | 8.018 | 32 | .000 | 3.061 | 2.28 | 3.84 |
| Q42_IH_lack_rigour | 7.722 | 32 | .000 | 3.061 | 2.25 | 3.87 |
| Q43_IH_Pro_creep | 11.392 | 32 | .000 | 4.273 | 3.51 | 5.04 |
| Q44_H_Cost_inc | 10.619 | 32 | .000 | 4.091 | 3.31 | 4.88 |
| Q45_IH_Time_inc | 10.875 | 32 | .000 | 3.848 | 3.13 | 4.57 |
| Q46_OUT_lose_pr | 11.043 | 32 | .000 | 3.848 | 3.14 | 4.56 |
| Q47_OUT_lose_re | 10.762 | 32 | .000 | 3.818 | 3.10 | 4.54 |
| Q48_OUT_own_pr_p5 | 9.317 | 32 | .000 | 3.364 | 2.63 | 4.10 |

Table H.2: One sample test — Resources Q 29, 30, 35 to 48

**One Sample Statistics – About Contract**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q49_CO_Strategic_Imp_supp_p6 | 33 | 2.61 | 1.368 | .238 |
| Q50_CO_Strategic_development | 33 | 2.94 | 1.435 | .250 |
| Q51_CO_vendor_clauses | 29 | 1.00 | .000[a] | .000 |
| Q52_CO_ven_Additional_costs | 33 | 5.30 | 1.447 | .252 |

a. t cannot be computed because the standard deviation is 0.

Table H.3: One sample statistics — About Contract Q 49 to 52

**One Sample Test – About Contract**

| | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Q49_CO_Strategic_Imp_supp_p6 | 10.944 | 32 | .000 | 2.606 | 2.12 | 3.09 |
| Q50_CO_Strategic_development | 11.768 | 32 | .000 | 2.939 | 2.43 | 3.45 |
| Q52_CO_ven_Additional_costs | 21.058 | 32 | .000 | 5.303 | 4.79 | 5.82 |

Table H.4: One sample test — About Contract Q 49 to 52

**One Sample Statistics — Benefits**

|  | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q58_Out_Shor_LC_p8 | 33 | 2.09 | 1.128 | .196 |
| Q59_OUT_im_Qual | 33 | 2.21 | 1.083 | .188 |
| Q60_OUT_SDT | 33 | 2.70 | 1.776 | .309 |
| Q61_OUT_red_cost | 31 | 2.77 | 1.543 | .277 |
| Q62_OUT_Bene_BP | 33 | 3.03 | 1.776 | .309 |
| Q63_Vendor_skilled_it | 33 | 3.61 | 1.731 | .301 |
| Q64_Vendor_sk_BP | 33 | 2.36 | 1.319 | .230 |
| Q65_Out_com_add | 31 | 2.52 | 1.338 | .240 |
| Q66_Out_comp | 33 | 4.94 | 1.836 | .320 |
| Q67_Out_lo_it | 33 | 5.70 | 1.380 | .240 |
| Q68_Management_imp_suc c | 33 | 5.88 | 1.386 | .241 |
| Q69_Relationship_buss_SF | 33 | 5.03 | 1.630 | .284 |
| Q70_Rigorous_Internal_req _p8 | 33 | 5.91 | .914 | .159 |

Table H.5: One sample statistics — Benefits Q 58 to 70

**One Sample Test — Benefits**

| | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Q58_Out_Shor_LC_p8 | 10.647 | 32 | .000 | 2.091 | 1.69 | 2.49 |
| Q59_OUT_im_Qual | 11.736 | 32 | .000 | 2.212 | 1.83 | 2.60 |
| Q60_OUT_SDT | 8.722 | 32 | .000 | 2.697 | 2.07 | 3.33 |
| Q61_OUT_red_cost | 10.011 | 30 | .000 | 2.774 | 2.21 | 3.34 |
| Q62_OUT_Bene_BP | 9.800 | 32 | .000 | 3.030 | 2.40 | 3.66 |
| Q63_Vendor_skilled_it | 11.968 | 32 | .000 | 3.606 | 2.99 | 4.22 |
| Q64_Vendor_sk_BP | 10.298 | 32 | .000 | 2.364 | 1.90 | 2.83 |
| Q65_Out_com_add | 10.467 | 30 | .000 | 2.516 | 2.03 | 3.01 |
| Q66_Out_comp | 15.454 | 32 | .000 | 4.939 | 4.29 | 5.59 |
| Q67_Out_lo_it | 23.709 | 32 | .000 | 5.697 | 5.21 | 6.19 |
| Q68_Management_imp_succ | 24.357 | 32 | .000 | 5.879 | 5.39 | 6.37 |
| Q69_Relationship_buss_SF | 17.733 | 32 | .000 | 5.030 | 4.45 | 5.61 |
| Q70_Rigorous_Internal_req_p8 | 37.143 | 32 | .000 | 5.909 | 5.59 | 6.23 |

Table H.6: One sample test benefits Q 58 to 70

**One Sample Statistics — Issues with Outsourcing Partner**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q71_Choosing_wro_Venp_p9 | 33 | 5.09 | 1.588 | .276 |
| Q72_Vendor_man | 33 | 6.00 | 1.173 | .204 |
| Q73_Support_enh | 33 | 5.67 | 1.021 | .178 |
| Q74_operation_exp | 33 | 5.24 | 1.480 | .258 |
| Q75_onshore_bet_qua | 33 | 4.52 | 2.063 | .359 |
| Q76_response_bus | 33 | 5.24 | 1.324 | .230 |
| Q77_Out_flexibility | 33 | 4.06 | 1.600 | .278 |
| Q78_Out_regulator | 33 | 2.70 | 1.912 | .333 |
| Q79_staff_morale | 33 | 5.15 | 1.889 | .329 |
| Q80_bus_lost_exper | 33 | 5.70 | 1.630 | .284 |
| Q81_bus_lost_cont | 33 | 4.18 | 1.685 | .293 |
| Q82_Org_supp_decresed | 33 | 4.18 | 1.590 | .277 |
| Q83_Mark_forces_impr | 33 | 3.55 | 1.804 | .314 |
| Q84_Out_Win_WIN_p9 | 33 | 3.30 | 1.311 | .228 |

Table H.7: One sample statistics — Issues with outsourcing partner Q 71 to 84

**One Sample Test — Issues with Outsourcing Partner**

| | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Q71_Choosing_wro_Venp_p9 | 18.413 | 32 | .000 | 5.091 | 4.53 | 5.65 |
| Q72_Vendor_man | 29.394 | 32 | .000 | 6.000 | 5.58 | 6.42 |
| Q73_Support_enh | 31.895 | 32 | .000 | 5.667 | 5.30 | 6.03 |
| Q74_operation_exp | 20.353 | 32 | .000 | 5.242 | 4.72 | 5.77 |
| Q75_onshore_bet_qua | 12.570 | 32 | .000 | 4.515 | 3.78 | 5.25 |
| Q76_response_bus | 22.753 | 32 | .000 | 5.242 | 4.77 | 5.71 |
| Q77_Out_flexibility | 14.583 | 32 | .000 | 4.061 | 3.49 | 4.63 |
| Q78_Out_regulator | 8.103 | 32 | .000 | 2.697 | 2.02 | 3.37 |
| Q79_staff_morale | 15.662 | 32 | .000 | 5.152 | 4.48 | 5.82 |
| Q80_bus_lost_exper | 20.084 | 32 | .000 | 5.697 | 5.12 | 6.27 |
| Q81_bus_lost_cont | 14.253 | 32 | .000 | 4.182 | 3.58 | 4.78 |
| Q82_Org_supp_decresed | 15.108 | 32 | .000 | 4.182 | 3.62 | 4.75 |
| Q83_Mark_forces_impr | 11.288 | 32 | .000 | 3.545 | 2.91 | 4.19 |
| Q84_Out_Win_WIN_p9 | 14.477 | 32 | .000 | 3.303 | 2.84 | 3.77 |

Table H.8: One sample test — Issues with Outsourcing Partner Q 71 to 84

**One Sample Statistics — Relationship with Vendor / Outsourcing Partner**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q85_Out_bus_p10 | 33 | 3.61 | 1.853 | .323 |
| Q86_Out__internal_it_staff | 33 | 2.76 | 1.803 | .314 |
| Q87_Most_internal_Staff_trans | 33 | 4.06 | 2.304 | .401 |
| Q88_Percent_internal_transfer | 31 | 2.19 | 2.701 | .485 |
| Q89_Percent_offshore | 31 | 4.23 | 2.305 | .414 |
| Q90_Percent_onshore | 31 | 4.26 | 2.670 | .480 |
| Q91_Out_ser_var | 33 | 5.55 | 1.277 | .222 |
| Q92_Bus_sat_partner | 33 | 2.91 | 1.284 | .223 |
| Q93_Rel_out_ven_strong | 33 | 3.91 | 1.608 | .280 |
| Q94_Out_part_KPI_94 | 33 | 4.27 | 1.206 | .210 |
| Q95_Comm_out_posit | 33 | 4.27 | 1.526 | .266 |
| Q96_Dev_maj_cha_decreased | 33 | 2.97 | 1.845 | .321 |
| Q97_Qual_min_decre | 33 | 2.58 | 1.521 | .265 |
| Q98_Qua_deliv_ic | 33 | 2.88 | 1.495 | .260 |
| Q99_Qual_docum_ic | 33 | 2.88 | 1.900 | .331 |
| Q100_Qual_tran_ic_p10 | 33 | 2.15 | 1.564 | .272 |

Table H.9: One Sample Statistics – Relationship with Vendor / Outsourcing Partner Q 85 to 100

**One Sample Test — Relationship with Vendor / Outsourcing Partner**

| | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Q85_Out_bus_p10 | 11.179 | 32 | .000 | 3.606 | 2.95 | 4.26 |
| Q86_Out__internal_it_staff | 8.784 | 32 | .000 | 2.758 | 2.12 | 3.40 |
| Q87_Most_internal_Staff_tr ans | 10.124 | 32 | .000 | 4.061 | 3.24 | 4.88 |
| Q88_Percent_internal_trans fer | 4.522 | 30 | .000 | 2.194 | 1.20 | 3.18 |
| Q89_Percent_offshore | 10.207 | 30 | .000 | 4.226 | 3.38 | 5.07 |
| Q90_Percent_onshore | 8.878 | 30 | .000 | 4.258 | 3.28 | 5.24 |
| Q91_Out_ser_var | 24.946 | 32 | .000 | 5.545 | 5.09 | 6.00 |
| Q92_Bus_sat_partner | 13.019 | 32 | .000 | 2.909 | 2.45 | 3.36 |
| Q93_Rel_out_ven_strong | 13.966 | 32 | .000 | 3.909 | 3.34 | 4.48 |
| Q94_Out_part_KPI_94 | 20.352 | 32 | .000 | 4.273 | 3.85 | 4.70 |
| Q95_Comm_out_posit | 16.081 | 32 | .000 | 4.273 | 3.73 | 4.81 |
| Q96_Dev_maj_cha_decrea sed | 9.245 | 32 | .000 | 2.970 | 2.32 | 3.62 |
| Q97_Qual_min_decre | 9.726 | 32 | .000 | 2.576 | 2.04 | 3.12 |
| Q98_Qua_deliv_ic | 11.062 | 32 | .000 | 2.879 | 2.35 | 3.41 |
| Q99_Qual_docum_ic | 8.704 | 32 | .000 | 2.879 | 2.21 | 3.55 |
| Q100_Qual_tran_ic_p10 | 7.904 | 32 | .000 | 2.152 | 1.60 | 2.71 |

Table H.10: One sample test – Relationship with vendor/outsourcing partner Q 85 to 100

**One Sample Statistics — Impact of Outsourcing**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q101_Out100_partner_bene_p11 | 33 | 3.15 | 1.584 | .276 |
| Q102_Out_par_assist | 33 | 3.00 | 1.785 | .311 |
| Q103_Out_par_sincere | 33 | 4.67 | 1.780 | .310 |
| Q104_Out_pat_ethical | 33 | 4.67 | 1.652 | .288 |
| Q105_Relationship_trust | 33 | 3.06 | 1.456 | .254 |
| Q106_Relationship_contract | 33 | 4.42 | 1.501 | .261 |
| Q107_Out_Partner_commitments | 33 | 4.24 | 1.501 | .261 |
| Q108_Out_Par_relationship | 33 | 5.39 | 1.144 | .199 |
| Q109_Bus108_comm_relationship | 33 | 3.03 | 1.759 | .306 |
| Q110_Both_sustain | 33 | 4.21 | 1.495 | .260 |
| Q111_Both_freely_excha | 33 | 3.91 | 1.508 | .262 |
| Q112_Corporate_clashes | 33 | 4.18 | 1.740 | .303 |
| Q113_Diff_rules_disagreements | 33 | 4.12 | 1.833 | .319 |
| Q114_Diff_processes_disagreements | 33 | 4.12 | 1.654 | .288 |
| Q115_the_Per_Rev | 33 | 5.12 | 1.341 | .233 |
| Q116_Feedback_review_p11 | 33 | 4.88 | 1.949 | .339 |
| Q117_Problem_Sol_join_p12 | 33 | 4.45 | 1.641 | .286 |
| Q118_Decis_joint_exe | 33 | 3.97 | 1.357 | .236 |
| Q119_Comm_business_strong | 33 | 4.15 | 1.202 | .209 |
| Q120_Busin_works_well | 33 | 3.85 | 1.395 | .243 |
| Q121_Out_ven_team | 33 | 4.64 | 1.517 | .264 |
| Q122_Off_accurate | 33 | 4.30 | 2.186 | .381 |
| Q123_Out_ven_accurate | 33 | 3.61 | 1.519 | .265 |
| Q124_Out_ven_complete | 33 | 2.88 | 1.654 | .288 |
| Q125_Out_ven_credible | 33 | 4.06 | 1.676 | .292 |
| Q126_Out_comm_timely | 33 | 3.45 | 1.438 | .250 |
| Q127_Out_ven_efficiently | 31 | 3.87 | 1.477 | .265 |
| Q128_Out_leadership | 33 | 2.70 | 1.403 | .244 |
| Q129_Out_quality_work | 33 | 3.33 | 1.633 | .284 |
| Q130_within_budget | 33 | 4.55 | 1.277 | .222 |
| Q131_litt_bus_man | 33 | 2.27 | 1.069 | .186 |
| Q132_funct_supp | 33 | 2.36 | 1.084 | .189 |
| Q133_Proj_goals | 33 | 3.91 | 1.331 | .232 |
| Q134_inn_creative | 33 | 3.03 | 1.468 | .256 |
| Q135_Ven_Bus_Pro_p12 | 33 | 2.73 | 1.420 | .247 |

Table H.11: One sample statistics — Impact of outsourcing Q 101 to 135 (note was 141)

**One Sample Test — Impact of Outsourcing**

| | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Q101_Out100_partner_bene_p11 | 11.433 | 32 | .000 | 3.152 | 2.59 | 3.71 |
| Q102_Out_par_assist | 9.653 | 32 | .000 | 3.000 | 2.37 | 3.63 |
| Q103_Out_par_sincere | 15.065 | 32 | .000 | 4.667 | 4.04 | 5.30 |
| Q104_Out_pat_ethical | 16.227 | 32 | .000 | 4.667 | 4.08 | 5.25 |
| Q105_Relationship_trust | 12.072 | 32 | .000 | 3.061 | 2.54 | 3.58 |
| Q106_Relationship_contract | 16.936 | 32 | .000 | 4.424 | 3.89 | 4.96 |
| Q107_Out_Partner_commitments | 16.240 | 32 | .000 | 4.242 | 3.71 | 4.77 |
| Q108_Out_Par_relationship | 27.086 | 32 | .000 | 5.394 | 4.99 | 5.80 |
| Q109_Bus108_comm_relationship | 9.898 | 32 | .000 | 3.030 | 2.41 | 3.65 |
| Q110_Both_sustain | 16.186 | 32 | .000 | 4.212 | 3.68 | 4.74 |
| Q111_Both_freely_excha | 14.896 | 32 | .000 | 3.909 | 3.37 | 4.44 |
| Q112_Corporate_clashes | 13.804 | 32 | .000 | 4.182 | 3.56 | 4.80 |
| Q113_Diff_rules_disagreements | 12.916 | 32 | .000 | 4.121 | 3.47 | 4.77 |
| Q114_Diff_processes_disagreements | 14.316 | 32 | .000 | 4.121 | 3.53 | 4.71 |
| Q115_the_Per_Rev | 21.944 | 32 | .000 | 5.121 | 4.65 | 5.60 |
| Q116_Feedback_review_p11 | 14.382 | 32 | .000 | 4.879 | 4.19 | 5.57 |
| Q117_Problem_Sol_join_p12 | 15.593 | 32 | .000 | 4.455 | 3.87 | 5.04 |
| Q118_Decis_joint_exe | 16.799 | 32 | .000 | 3.970 | 3.49 | 4.45 |
| Q119_Comm_business_strong | 19.839 | 32 | .000 | 4.152 | 3.73 | 4.58 |
| Q120_Busin_works_well | 15.852 | 32 | .000 | 3.848 | 3.35 | 4.34 |
| Q121_Out_ven_team | 17.558 | 32 | .000 | 4.636 | 4.10 | 5.17 |
| Q122_Off_accurate | 11.306 | 32 | .000 | 4.303 | 3.53 | 5.08 |
| Q123_Out_ven_accurate | 13.633 | 32 | .000 | 3.606 | 3.07 | 4.14 |
| Q124_Out_ven_complete | 10.000 | 32 | .000 | 2.879 | 2.29 | 3.47 |
| Q125_Out_ven_credible | 13.919 | 32 | .000 | 4.061 | 3.47 | 4.65 |
| Q126_Out_comm_timely | 13.799 | 32 | .000 | 3.455 | 2.94 | 3.96 |
| Q127_Out_ven_efficiently | 14.588 | 30 | .000 | 3.871 | 3.33 | 4.41 |
| Q128_Out_leadership | 11.044 | 32 | .000 | 2.697 | 2.20 | 3.19 |
| Q129_Out_quality_work | 11.726 | 32 | .000 | 3.333 | 2.75 | 3.91 |
| Q130_within_budget | 20.448 | 32 | .000 | 4.545 | 4.09 | 5.00 |
| Q131_litt_bus_man | 12.217 | 32 | .000 | 2.273 | 1.89 | 2.65 |
| Q132_funct_supp | 12.520 | 32 | .000 | 2.364 | 1.98 | 2.75 |
| Q133_Proj_goals | 16.866 | 32 | .000 | 3.909 | 3.44 | 4.38 |
| Q134_inn_creative | 11.857 | 32 | .000 | 3.030 | 2.51 | 3.55 |
| Q135_Ven_Bus_Pro_p12 | 11.031 | 32 | .000 | 2.727 | 2.22 | 3.23 |

Table H.12: One sample test — Impact of outsourcing Q 101 to 135 (was 141)

**One Sample Statistics — Switching Costs**

|  | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q136_Bus_Diff_inter_staff_p13 | 33 | 3.88 | 2.233 | .389 |
| Q137_Cost_inter_incre | 33 | 2.91 | 1.444 | .251 |
| Q138_Cost_train_incre | 33 | 2.55 | 1.603 | .279 |
| Q139_lost_interest | 33 | 4.15 | 1.503 | .262 |
| Q140_Out_Part_perf | 33 | 2.85 | 1.805 | .314 |
| Q141_Term_Conp_p13 | 33 | 3.27 | 2.140 | .373 |

Table H.13: One sample statistics — Switching costs Q 136 to 141

**One Sample Test – Switching Costs**

|  | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
|  |  |  | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
|  | t | df |  |  | Lower | Upper |
| Q136_Bus_Diff_inter_staff_p13 | 9.980 | 32 | .000 | 3.879 | 3.09 | 4.67 |
| Q137_Cost_inter_incre | 11.573 | 32 | .000 | 2.909 | 2.40 | 3.42 |
| Q138_Cost_train_incre | 9.125 | 32 | .000 | 2.545 | 1.98 | 3.11 |
| Q139_lost_interest | 15.872 | 32 | .000 | 4.152 | 3.62 | 4.68 |
| Q140_Out_Part_perf | 9.066 | 32 | .000 | 2.848 | 2.21 | 3.49 |
| Q141_Term_Conp_p13 | 8.785 | 32 | .000 | 3.273 | 2.51 | 4.03 |

Table H.14: One sample test — Switching costs Q 136 to 141

**One Sample Statistics — Changing Outsourcing Partner / Benefits**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q142_Cha_lack_of_support_p14 | 33 | 4.06 | 2.761 | .481 |
| Q143_When_made_difficult | 33 | 3.58 | 2.670 | .465 |
| Q144_When_withheld_infor | 33 | 3.64 | 2.596 | .452 |
| Q145_When_held_documentation | 33 | 3.61 | 2.669 | .465 |
| Q146_After_another_contract | 33 | 3.64 | 3.090 | .538 |
| Q147_TT_PV_info | 33 | 3.21 | 2.837 | .494 |
| Q148_TT_other_previous | 33 | 3.91 | 2.720 | .473 |
| Q149_TT_Lack_Documentation | 33 | 4.45 | 2.728 | .475 |
| Q150_TT_Lack_internal_process | 33 | 4.45 | 2.599 | .452 |
| Q151_TT_Lack_staff | 33 | 3.76 | 2.670 | .465 |
| Q132_LOS_Reluct | 33 | 3.39 | 2.882 | .502 |
| Q153_LOS_local | 33 | 3.70 | 2.733 | .476 |
| Q154_LOS_lacking | 33 | 4.33 | 2.746 | .478 |
| Q155_LOS_inhouse | 33 | 3.55 | 2.705 | .471 |
| Q156_LOS_policies_p14 | 33 | 3.39 | 2.738 | .477 |

Table H.15: One sample statistics — Changing outsourcing partners/benefits Q 142 to 156

**One Sample Test — Changing Outsourcing Partner / Benefits**

| | Test Value = 0 | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Q142_Cha_lack_of_support_p14 | 8.450 | 32 | .000 | 4.061 | 3.08 | 5.04 |
| Q143_When_made_difficult | 7.694 | 32 | .000 | 3.576 | 2.63 | 4.52 |
| Q144_When_withheld_infor | 8.047 | 32 | .000 | 3.636 | 2.72 | 4.56 |
| Q145_When_held_documentation | 7.763 | 32 | .000 | 3.606 | 2.66 | 4.55 |
| Q146_After_another_contract | 6.759 | 32 | .000 | 3.636 | 2.54 | 4.73 |
| Q147_TT_PV_info | 6.505 | 32 | .000 | 3.212 | 2.21 | 4.22 |
| Q148_TT_other_previous | 8.256 | 32 | .000 | 3.909 | 2.94 | 4.87 |
| Q149_TT_Lack_Documentation | 9.380 | 32 | .000 | 4.455 | 3.49 | 5.42 |
| Q150_TT_Lack_internal_process | 9.845 | 32 | .000 | 4.455 | 3.53 | 5.38 |
| Q151_TT_Lack_staff | 8.086 | 32 | .000 | 3.758 | 2.81 | 4.70 |
| Q132_LOS_Reluct | 6.764 | 32 | .000 | 3.394 | 2.37 | 4.42 |
| Q153_LOS_local | 7.772 | 32 | .000 | 3.697 | 2.73 | 4.67 |
| Q154_LOS_lacking | 9.065 | 32 | .000 | 4.333 | 3.36 | 5.31 |
| Q155_LOS_inhouse | 7.529 | 32 | .000 | 3.545 | 2.59 | 4.50 |
| Q156_LOS_policies_p14 | 7.121 | 32 | .000 | 3.394 | 2.42 | 4.36 |

Table H.16: One sample test t tested — Changing outsourcing partners/benefits Q 142 to 156

**One Sample Statistics — Back Sourcing / Switching Costs**

|  | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q157_Int_Team_time_p15 | 31 | 3.97 | 2.137 | .384 |
| Q158_we_Hire_Exp | 29 | 3.28 | 2.202 | .409 |
| Q159_Service_IP | 29 | 1.90 | 1.472 | .273 |
| Q160_Back_sourc_skills | 29 | 2.59 | 2.428 | .451 |
| Q161_In_house_different | 29 | 3.45 | 2.473 | .459 |
| Q162_In_house_simpler_process | 29 | 4.24 | 2.887 | .536 |
| Q163_DIS_busin_preform | 29 | 2.10 | 1.839 | .341 |
| Q164_DIS_performance | 29 | 2.72 | 2.202 | .409 |
| Q165_DIS_internal_staff | 29 | 2.72 | 2.631 | .489 |
| Q166_DIS_internal_process | 29 | 2.86 | 2.560 | .475 |
| Q167_DIS_internal_staff_availa | 29 | 3.55 | 2.759 | .512 |
| Q168_DIS_not_applicable |  |  |  |  |
| Q169_we_Lost_Sign_Mon | 29 | 4.17 | 2.854 | .530 |
| Q170_After_Swit_Out_Part_p15 | 29 | 2.97 | 2.471 | .459 |
| Q171_When_Con_Swit_p16 | 33 | 3.67 | 2.420 | .421 |
| Q172_Rele_Dev_Lost | 33 | 4.64 | 2.343 | .408 |
| Q173_Lost_Know | 33 | 4.76 | 2.359 | .411 |
| Q174_NST_setup | 33 | 4.52 | 2.195 | .382 |
| Q175_NST_internal_Process | 33 | 4.55 | 2.181 | .380 |
| Q176_NST_provide_support | 33 | 2.82 | 2.143 | .373 |
| Q177_NST_Addi_Train_p16 | 33 | 3.73 | 2.362 | .411 |

Table H.17: One sample statistics t tested — Back sourcing/switching costs Q 157 to 177

**One Sample Test – Back Sourcing / Switching Costs**

|  | Test Value = 0 | | | | | |
|---|---|---|---|---|---|---|
|  |  |  | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
|  | t | df | | | Lower | Upper |
| Q157_Int_Team_time_p15 | 10.339 | 30 | .000 | 3.968 | 3.18 | 4.75 |
| Q158_we_Hire_Exp | 8.011 | 28 | .000 | 3.276 | 2.44 | 4.11 |
| Q159_Service_IP | 6.937 | 28 | .000 | 1.897 | 1.34 | 2.46 |
| Q160_Back_sourc_skills | 5.737 | 28 | .000 | 2.586 | 1.66 | 3.51 |
| Q161_In_house_different | 7.510 | 28 | .000 | 3.448 | 2.51 | 4.39 |
| Q162_In_house_simpler_process | 7.913 | 28 | .000 | 4.241 | 3.14 | 5.34 |
| Q163_DIS_busin_preform | 6.160 | 28 | .000 | 2.103 | 1.40 | 2.80 |
| Q164_DIS_performance | 6.661 | 28 | .000 | 2.724 | 1.89 | 3.56 |
| Q165_DIS_internal_staff | 5.576 | 28 | .000 | 2.724 | 1.72 | 3.72 |
| Q166_DIS_internal_process | 6.021 | 28 | .000 | 2.862 | 1.89 | 3.84 |
| Q167_DIS_internal_staff_availa | 6.932 | 28 | .000 | 3.552 | 2.50 | 4.60 |
| Q168_DIS_not_applicable |  |  |  |  |  |  |
| Q169_we_Lost_Sign_Mon | 7.872 | 28 | .000 | 4.172 | 3.09 | 5.26 |
| Q170_After_Swit_Out_Part_p15 | 6.463 | 28 | .000 | 2.966 | 2.03 | 3.91 |
| Q171_When_Con_Swit_p16 | 8.706 | 32 | .000 | 3.667 | 2.81 | 4.52 |
| Q172_Rele_Dev_Lost | 11.368 | 32 | .000 | 4.636 | 3.81 | 5.47 |
| Q173_Lost_Know | 11.586 | 32 | .000 | 4.758 | 3.92 | 5.59 |
| Q174_NST_setup | 11.814 | 32 | .000 | 4.515 | 3.74 | 5.29 |
| Q175_NST_internal_Process | 11.974 | 32 | .000 | 4.545 | 3.77 | 5.32 |
| Q176_NST_provide_support | 7.556 | 32 | .000 | 2.818 | 2.06 | 3.58 |
| Q177_NST_Addi_Train_p16 | 9.065 | 32 | .000 | 3.727 | 2.89 | 4.56 |

Table H.18: One sample test t tested — Back sourcing/switching costs Q 157 to 177

**One Sample Statistics**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q 29. Strategic Importance | 31 | 5.58 | 1.708 | .307 |
| Q30_Degree_30_out | 31 | 2.68 | 1.275 | .229 |
| Q35_Org_plan_add_out | 33 | 5.42 | 1.751 | .305 |
| Q36_Org_Out_bus_strat | 33 | 4.88 | 1.850 | .322 |
| Q37_Org_Out_tec_strat | 33 | 5.18 | 1.648 | .287 |
| Q38_CIO_instr_out | 31 | 5.52 | 1.691 | .304 |
| Q39_CIO_Excellent | 33 | 3.18 | 1.550 | .270 |
| Q40_CIO_Effective_p4 | 33 | 3.97 | 1.630 | .284 |
| Q41_IH_lack_strate_p5 | 33 | 3.06 | 2.193 | .382 |
| Q42_IH_lack_rigour | 33 | 3.06 | 2.277 | .396 |
| Q43_IH_Pro_creep | 33 | 4.27 | 2.155 | .375 |
| Q44_H_Cost_inc | 33 | 4.09 | 2.213 | .385 |
| Q45_IH_Time_inc | 33 | 3.85 | 2.033 | .354 |
| Q46_OUT_lose_pr | 33 | 3.85 | 2.002 | .348 |
| Q47_OUT_lose_re | 33 | 3.82 | 2.038 | .355 |
| Q48_OUT_own_pr_p5 | 33 | 3.36 | 2.074 | .361 |
| Q49_CO_Strategic_Imp_supp_p6 | 33 | 2.61 | 1.368 | .238 |
| Q50_CO_Strategic_development | 33 | 2.94 | 1.435 | .250 |
| Q51_CO_vendor_clauses | 29 | 1.00 | .000[a] | .000 |
| Q59_OUT_im_Qual | 33 | 2.21 | 1.083 | .188 |
| Q60_OUT_SDT | 33 | 2.70 | 1.776 | .309 |
| Q61_OUT_red_cost | 31 | 2.77 | 1.543 | .277 |
| Q62_OUT_Bene_BP | 33 | 3.03 | 1.776 | .309 |
| Q63_Vendor_skilled_it | 33 | 3.61 | 1.731 | .301 |
| Q64_Vendor_sk_BP | 33 | 2.36 | 1.319 | .230 |
| Q65_Out_com_add | 31 | 2.52 | 1.338 | .240 |
| Q66_Out_comp | 33 | 4.94 | 1.836 | .320 |
| Q67_Out_lo_it | 33 | 5.70 | 1.380 | .240 |
| Q68_Management_imp_succ | 33 | 5.88 | 1.386 | .241 |
| Q69_Relationship_buss_SF | 33 | 5.03 | 1.630 | .284 |
| Q70_Rigorous_Internal_req_p8 | 33 | 5.91 | .914 | .159 |
| Q71_Choosing_wro_Venp_p9 | 33 | 5.09 | 1.588 | .276 |
| Q72_Vendor_man | 33 | 6.00 | 1.173 | .204 |
| Q73_Support_enh | 33 | 5.67 | 1.021 | .178 |
| Q74_operation_exp | 33 | 5.24 | 1.480 | .258 |
| Q75_onshore_bet_qua | 33 | 4.52 | 2.063 | .359 |
| Q76_response_bus | 33 | 5.24 | 1.324 | .230 |
| Q77_Out_flexibility | 33 | 4.06 | 1.600 | .278 |
| Q78_Out_regulator | 33 | 2.70 | 1.912 | .333 |

**..cont'd**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q79_staff_morale | 33 | 5.15 | 1.889 | .329 |
| Q80_bus_lost_exper | 33 | 5.70 | 1.630 | .284 |
| Q81_bus_lost_cont | 33 | 4.18 | 1.685 | .293 |
| Q82_Org_supp_decresed | 33 | 4.18 | 1.590 | .277 |
| Q83_Mark_forces_impr | 33 | 3.55 | 1.804 | .314 |
| Q84_Out_Win_WIN_p9 | 33 | 3.30 | 1.311 | .228 |
| Q85_Out_bus_p10 | 33 | 3.61 | 1.853 | .323 |
| Q86_Out__internal_it_staff | 33 | 2.76 | 1.803 | .314 |
| Q87_Most_internal_Staff_trans | 33 | 4.06 | 2.304 | .401 |
| Q88_Percent_internal_transfer | 31 | 2.19 | 2.701 | .485 |
| Q89_Percent_offshore | 31 | 4.23 | 2.305 | .414 |
| Q90_Percent_onshore | 31 | 4.26 | 2.670 | .480 |
| Q91_Out_ser_var | 33 | 5.55 | 1.277 | .222 |
| Q92_Bus_sat_partner | 33 | 2.91 | 1.284 | .223 |
| Q93_Rel_out_ven_strong | 33 | 3.91 | 1.608 | .280 |
| Q94_Out_part_KPI_94 | 33 | 4.27 | 1.206 | .210 |
| Q95_Comm_out_posit | 33 | 4.27 | 1.526 | .266 |
| Q96_Dev_maj_cha_decreased | 33 | 2.97 | 1.845 | .321 |
| Q97_Qual_min_decre | 33 | 2.58 | 1.521 | .265 |
| Q98_Qua_deliv_ic | 33 | 2.88 | 1.495 | .260 |
| Q99_Qual_docum_ic | 33 | 2.88 | 1.900 | .331 |
| Q100_Qual_tran_ic_p10 | 33 | 2.15 | 1.564 | .272 |
| Q101_Out100_partner_bene_p11 | 33 | 3.15 | 1.584 | .276 |
| Q102_Out_par_assist | 33 | 3.00 | 1.785 | .311 |
| Q103_Out_par_sincere | 33 | 4.67 | 1.780 | .310 |
| Q104_Out_pat_ethical | 33 | 4.67 | 1.652 | .288 |
| Q105_Relationship_trust | 33 | 3.06 | 1.456 | .254 |
| Q106_Relationship_contract | 33 | 4.42 | 1.501 | .261 |
| Q107_Out_Partner_commitments | 33 | 4.24 | 1.501 | .261 |
| Q108_Out_Par_relationship | 33 | 5.39 | 1.144 | .199 |
| Q109_Bus108_comm_relationship | 33 | 3.03 | 1.759 | .306 |
| Q110_Both_sustain | 33 | 4.21 | 1.495 | .260 |
| Q111_Both_freely_excha | 33 | 3.91 | 1.508 | .262 |
| Q112_Corporate_clashes | 33 | 4.18 | 1.740 | .303 |
| Q113_Diff_rules_disagreements | 33 | 4.12 | 1.833 | .319 |
| Q114_Diff_processes_disagreements | 33 | 4.12 | 1.654 | .288 |
| Q115_the_Per_Rev | 33 | 5.12 | 1.341 | .233 |
| Q116_Feedback_review_p11 | 33 | 4.88 | 1.949 | .339 |

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q117_Problem_Sol_join_p12 | 33 | 4.45 | 1.641 | .286 |
| Q118_Decis_joint_exe | 33 | 3.97 | 1.357 | .236 |
| Q119_Comm_business_strong | 33 | 4.15 | 1.202 | .209 |
| Q120_Busin_works_well | 33 | 3.85 | 1.395 | .243 |
| Q121_Out_ven_team | 33 | 4.64 | 1.517 | .264 |
| Q122_Off_accurate | 33 | 4.30 | 2.186 | .381 |
| Q123_Out_ven_accurate | 33 | 3.61 | 1.519 | .265 |
| Q124_Out_ven_complete | 33 | 2.88 | 1.654 | .288 |
| Q125_Out_ven_credible | 33 | 4.06 | 1.676 | .292 |
| Q126_Out_comm_timely | 33 | 3.45 | 1.438 | .250 |
| Q127_Out_ven_efficiently | 31 | 3.87 | 1.477 | .265 |
| Q128_Out_leadership | 33 | 2.70 | 1.403 | .244 |
| Q129_Out_quality_work | 33 | 3.33 | 1.633 | .284 |
| Q130_within_budget | 33 | 4.55 | 1.277 | .222 |
| Q131_litt_bus_man | 33 | 2.27 | 1.069 | .186 |
| Q132_funct_supp | 33 | 2.36 | 1.084 | .189 |
| Q133_Proj_goals | 33 | 3.91 | 1.331 | .232 |
| Q134_inn_creative | 33 | 3.03 | 1.468 | .256 |
| Q135_Ven_Bus_Pro_p12 | 33 | 2.73 | 1.420 | .247 |
| Q136_Bus_Diff_inter_staff_p13 | 33 | 3.88 | 2.233 | .389 |
| Q137_Cost_inter_incre | 33 | 2.91 | 1.444 | .251 |
| Q138_Cost_train_incre | 33 | 2.55 | 1.603 | .279 |
| Q139_lost_interest | 33 | 4.15 | 1.503 | .262 |
| Q140_Out_Part_perf | 33 | 2.85 | 1.805 | .314 |
| Q141_Term_Conp_p13 | 33 | 3.27 | 2.140 | .373 |
| Q142_Cha_lack_of_support_p14 | 33 | 4.06 | 2.761 | .481 |
| Q143_When_made_difficult | 33 | 3.58 | 2.670 | .465 |
| Q144_When_withheld_infor | 33 | 3.64 | 2.596 | .452 |
| Q145_When_held_documentation | 33 | 3.61 | 2.669 | .465 |
| Q146_After_another_contract | 33 | 3.64 | 3.090 | .538 |
| Q147_TT_PV_info | 33 | 3.21 | 2.837 | .494 |
| Q148_TT_other_previous | 33 | 3.91 | 2.720 | .473 |
| Q149_TT_Lack_Documentation | 33 | 4.45 | 2.728 | .475 |
| Q150_TT_Lack_internal_process | 33 | 4.45 | 2.599 | .452 |
| Q151_TT_Lack_staff | 33 | 3.76 | 2.670 | .465 |
| Q132_LOS_Reluct | 33 | 3.39 | 2.882 | .502 |
| Q153_LOS_local | 33 | 3.70 | 2.733 | .476 |
| Q154_LOS_lacking | 33 | 4.33 | 2.746 | .478 |

**...cont'd**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Q155_LOS_inhouse | 33 | 3.55 | 2.705 | .471 |
| Q156_LOS_policies_p14 | 33 | 3.39 | 2.738 | .477 |
| Q157_Int_Team_time_p15 | 31 | 3.97 | 2.137 | .384 |
| Q158_we_Hire_Exp | 29 | 3.28 | 2.202 | .409 |
| Q159_Service_IP | 29 | 1.90 | 1.472 | .273 |
| Q160_Back_sourc_skills | 29 | 2.59 | 2.428 | .451 |
| Q161_In_house_different | 29 | 3.45 | 2.473 | .459 |
| Q162_In_house_simpler_process | 29 | 4.24 | 2.887 | .536 |
| Q163_DIS_busin_preform | 29 | 2.10 | 1.839 | .341 |
| Q164_DIS_performance | 29 | 2.72 | 2.202 | .409 |
| Q165_DIS_internal_staff | 29 | 2.72 | 2.631 | .489 |
| Q166_DIS_internal_process | 29 | 2.86 | 2.560 | .475 |
| Q167_DIS_internal_staff_availa | 29 | 3.55 | 2.759 | .512 |
| Q168_DIS_not_applicable | | | | |
| Q169_we_Lost_Sign_Mon | 29 | 4.17 | 2.854 | .530 |
| Q170_After_Swit_Out_Part_p15 | 29 | 2.97 | 2.471 | .459 |
| Q171_When_Con_Swit_p16 | 33 | 3.67 | 2.420 | .421 |
| Q172_Rele_Dev_Lost | 33 | 4.64 | 2.343 | .408 |
| Q173_Lost_Know | 33 | 4.76 | 2.359 | .411 |
| Q174_NST_setup | 33 | 4.52 | 2.195 | .382 |
| Q175_NST_internal_Process | 33 | 4.55 | 2.181 | .380 |
| Q176_NST_provide_support | 33 | 2.82 | 2.143 | .373 |
| Q177_NST_Addi_Train_p16 | 33 | 3.73 | 2.362 | .411 |

a. t cannot be computed because the standard deviation is 0.

Table H.19: One sample statistics t tested — Q 29, 30 to 52 & 58 to 177

| One Sample Test | | | | | | |
|---|---|---|---|---|---|---|
| | Test Value = 0 | | | | | |
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Q 29. Strategic Importance | 18.189 | 30 | .000 | 5.581 | 4.95 | 6.21 |
| Q30_Degree_30_out | 11.691 | 30 | .000 | 2.677 | 2.21 | 3.15 |
| Q35_Org_plan_add_out | 17.800 | 32 | .000 | 5.424 | 4.80 | 6.04 |
| Q36_Org_Out_bus_strat | 15.150 | 32 | .000 | 4.879 | 4.22 | 5.53 |
| Q37_Org_Out_tec_strat | 18.063 | 32 | .000 | 5.182 | 4.60 | 5.77 |
| Q38_CIO_instr_out | 18.167 | 30 | .000 | 5.516 | 4.90 | 6.14 |
| Q39_CIO_Excellent | 11.790 | 32 | .000 | 3.182 | 2.63 | 3.73 |
| Q40_CIO_Effective_p4 | 13.994 | 32 | .000 | 3.970 | 3.39 | 4.55 |
| Q41_IH_lack_strate_p5 | 8.018 | 32 | .000 | 3.061 | 2.28 | 3.84 |
| Q42_IH_lack_rigour | 7.722 | 32 | .000 | 3.061 | 2.25 | 3.87 |
| Q43_IH_Pro_creep | 11.392 | 32 | .000 | 4.273 | 3.51 | 5.04 |
| Q44_H_Cost_inc | 10.619 | 32 | .000 | 4.091 | 3.31 | 4.88 |
| Q45_IH_Time_inc | 10.875 | 32 | .000 | 3.848 | 3.13 | 4.57 |
| Q46_OUT_lose_pr | 11.043 | 32 | .000 | 3.848 | 3.14 | 4.56 |
| Q47_OUT_lose_re | 10.762 | 32 | .000 | 3.818 | 3.10 | 4.54 |
| Q48_OUT_own_pr_p5 | 9.317 | 32 | .000 | 3.364 | 2.63 | 4.10 |
| Q49_CO_Strategic_Imp_supp_p6 | 10.944 | 32 | .000 | 2.606 | 2.12 | 3.09 |
| Q50_CO_Strategic_development | 11.768 | 32 | .000 | 2.939 | 2.43 | 3.45 |
| Q59_OUT_im_Qual | 11.736 | 32 | .000 | 2.212 | 1.83 | 2.60 |
| Q60_OUT_SDT | 8.722 | 32 | .000 | 2.697 | 2.07 | 3.33 |
| Q61_OUT_red_cost | 10.011 | 30 | .000 | 2.774 | 2.21 | 3.34 |
| Q62_OUT_Bene_BP | 9.800 | 32 | .000 | 3.030 | 2.40 | 3.66 |
| Q63_Vendor_skilled_it | 11.968 | 32 | .000 | 3.606 | 2.99 | 4.22 |

**...cont'd**

| One Sample Test | | | | | | |
|---|---|---|---|---|---|---|
| | Test Value = 0 | | | | | |
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Q64_Vendor_sk_BP | 10.298 | 32 | .000 | 2.364 | 1.90 | 2.83 |
| Q65_Out_com_add | 10.467 | 30 | .000 | 2.516 | 2.03 | 3.01 |
| Q66_Out_comp | 15.454 | 32 | .000 | 4.939 | 4.29 | 5.59 |
| Q67_Out_lo_it | 23.709 | 32 | .000 | 5.697 | 5.21 | 6.19 |
| Q68_Management_imp_succ | 24.357 | 32 | .000 | 5.879 | 5.39 | 6.37 |
| Q69_Relationship_buss_SF | 17.733 | 32 | .000 | 5.030 | 4.45 | 5.61 |
| Q70_Rigorous_Internal_req_p8 | 37.143 | 32 | .000 | 5.909 | 5.59 | 6.23 |
| Q71_Choosing_wro_Venp_p9 | 18.413 | 32 | .000 | 5.091 | 4.53 | 5.65 |
| Q72_Vendor_man | 29.394 | 32 | .000 | 6.000 | 5.58 | 6.42 |
| Q73_Support_enh | 31.895 | 32 | .000 | 5.667 | 5.30 | 6.03 |
| Q74_operation_exp | 20.353 | 32 | .000 | 5.242 | 4.72 | 5.77 |
| Q75_onshore_bet_qua | 12.570 | 32 | .000 | 4.515 | 3.78 | 5.25 |
| Q76_response_bus | 22.753 | 32 | .000 | 5.242 | 4.77 | 5.71 |
| Q77_Out_flexibility | 14.583 | 32 | .000 | 4.061 | 3.49 | 4.63 |
| Q78_Out_regulator | 8.103 | 32 | .000 | 2.697 | 2.02 | 3.37 |
| Q79_staff_morale | 15.662 | 32 | .000 | 5.152 | 4.48 | 5.82 |
| Q80_bus_lost_exper | 20.084 | 32 | .000 | 5.697 | 5.12 | 6.27 |
| Q81_bus_lost_cont | 14.253 | 32 | .000 | 4.182 | 3.58 | 4.78 |
| Q82_Org_supp_decresed | 15.108 | 32 | .000 | 4.182 | 3.62 | 4.75 |
| Q83_Mark_forces_impr | 11.288 | 32 | .000 | 3.545 | 2.91 | 4.19 |
| Q84_Out_Win_WIN_p9 | 14.477 | 32 | .000 | 3.303 | 2.84 | 3.77 |
| Q85_Out_bus_p10 | 11.179 | 32 | .000 | 3.606 | 2.95 | 4.26 |
| Q86_Out__internal_it_staff | 8.784 | 32 | .000 | 2.758 | 2.12 | 3.40 |

**...cont'd**

<table>
<tr><td colspan="7" align="center"><b>One Sample Test</b></td></tr>
<tr><td></td><td colspan="6" align="center">Test Value = 0</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td colspan="2" align="center">95% Confidence Interval of the Difference</td></tr>
<tr><td></td><td>t</td><td>df</td><td>Sig. (2-tailed)</td><td>Mean Difference</td><td>Lower</td><td>Upper</td></tr>
<tr><td>Q87_Most_internal_Staff_trans</td><td>10.124</td><td>32</td><td>.000</td><td>4.061</td><td>3.24</td><td>4.88</td></tr>
<tr><td>Q88_Percent_internal_transfer</td><td>4.522</td><td>30</td><td>.000</td><td>2.194</td><td>1.20</td><td>3.18</td></tr>
<tr><td>Q89_Percent_offshore</td><td>10.207</td><td>30</td><td>.000</td><td>4.226</td><td>3.38</td><td>5.07</td></tr>
<tr><td>Q90_Percent_onshore</td><td>8.878</td><td>30</td><td>.000</td><td>4.258</td><td>3.28</td><td>5.24</td></tr>
<tr><td>Q91_Out_ser_var</td><td>24.946</td><td>32</td><td>.000</td><td>5.545</td><td>5.09</td><td>6.00</td></tr>
<tr><td>Q92_Bus_sat_partner</td><td>13.019</td><td>32</td><td>.000</td><td>2.909</td><td>2.45</td><td>3.36</td></tr>
<tr><td>Q93_Rel_out_ven_strong</td><td>13.966</td><td>32</td><td>.000</td><td>3.909</td><td>3.34</td><td>4.48</td></tr>
<tr><td>Q94_Out_part_KPI_94</td><td>20.352</td><td>32</td><td>.000</td><td>4.273</td><td>3.85</td><td>4.70</td></tr>
<tr><td>Q95_Comm_out_posit</td><td>16.081</td><td>32</td><td>.000</td><td>4.273</td><td>3.73</td><td>4.81</td></tr>
<tr><td>Q96_Dev_maj_cha_decreased</td><td>9.245</td><td>32</td><td>.000</td><td>2.970</td><td>2.32</td><td>3.62</td></tr>
<tr><td>Q97_Qual_min_decre</td><td>9.726</td><td>32</td><td>.000</td><td>2.576</td><td>2.04</td><td>3.12</td></tr>
<tr><td>Q98_Qua_deliv_ic</td><td>11.062</td><td>32</td><td>.000</td><td>2.879</td><td>2.35</td><td>3.41</td></tr>
<tr><td>Q99_Qual_docum_ic</td><td>8.704</td><td>32</td><td>.000</td><td>2.879</td><td>2.21</td><td>3.55</td></tr>
<tr><td>Q100_Qual_tran_ic_p10</td><td>7.904</td><td>32</td><td>.000</td><td>2.152</td><td>1.60</td><td>2.71</td></tr>
<tr><td>Q101_Out100_partner_bene_p11</td><td>11.433</td><td>32</td><td>.000</td><td>3.152</td><td>2.59</td><td>3.71</td></tr>
<tr><td>Q102_Out_par_assist</td><td>9.653</td><td>32</td><td>.000</td><td>3.000</td><td>2.37</td><td>3.63</td></tr>
<tr><td>Q103_Out_par_sincere</td><td>15.065</td><td>32</td><td>.000</td><td>4.667</td><td>4.04</td><td>5.30</td></tr>
<tr><td>Q104_Out_pat_ethical</td><td>16.227</td><td>32</td><td>.000</td><td>4.667</td><td>4.08</td><td>5.25</td></tr>
<tr><td>Q105_Relationship_trust</td><td>12.072</td><td>32</td><td>.000</td><td>3.061</td><td>2.54</td><td>3.58</td></tr>
<tr><td>Q106_Relationship_contract</td><td>16.936</td><td>32</td><td>.000</td><td>4.424</td><td>3.89</td><td>4.96</td></tr>
<tr><td>Q107_Out_Partner_commitments</td><td>16.240</td><td>32</td><td>.000</td><td>4.242</td><td>3.71</td><td>4.77</td></tr>
<tr><td>Q108_Out_Par_relationship</td><td>27.086</td><td>32</td><td>.000</td><td>5.394</td><td>4.99</td><td>5.80</td></tr>
</table>

**...cont'd**

| One Sample Test | | | | | | |
|---|---|---|---|---|---|---|
| | Test Value = 0 | | | | | |
| | | | | Mean Differen ce | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | | Lower | Upper |
| Q109_Bus108_comm_relationship | 9.898 | 32 | .000 | 3.030 | 2.41 | 3.65 |
| Q110_Both_sustain | 16.186 | 32 | .000 | 4.212 | 3.68 | 4.74 |
| Q111_Both_freely_excha | 14.896 | 32 | .000 | 3.909 | 3.37 | 4.44 |
| Q112_Corporate_clashes | 13.804 | 32 | .000 | 4.182 | 3.56 | 4.80 |
| Q113_Diff_rules_disagreements | 12.916 | 32 | .000 | 4.121 | 3.47 | 4.77 |
| Q114_Diff_processes_disagreeme nts | 14.316 | 32 | .000 | 4.121 | 3.53 | 4.71 |
| Q115_the_Per_Rev | 21.944 | 32 | .000 | 5.121 | 4.65 | 5.60 |
| Q116_Feedback_review_p11 | 14.382 | 32 | .000 | 4.879 | 4.19 | 5.57 |
| Q117_Problem_Sol_join_p12 | 15.593 | 32 | .000 | 4.455 | 3.87 | 5.04 |
| Q118_Decis_joint_exe | 16.799 | 32 | .000 | 3.970 | 3.49 | 4.45 |
| Q119_Comm_business_strong | 19.839 | 32 | .000 | 4.152 | 3.73 | 4.58 |
| Q120_Busin_works_well | 15.852 | 32 | .000 | 3.848 | 3.35 | 4.34 |
| Q121_Out_ven_team | 17.558 | 32 | .000 | 4.636 | 4.10 | 5.17 |
| Q122_Off_accurate | 11.306 | 32 | .000 | 4.303 | 3.53 | 5.08 |
| Q123_Out_ven_accurate | 13.633 | 32 | .000 | 3.606 | 3.07 | 4.14 |
| Q124_Out_ven_complete | 10.000 | 32 | .000 | 2.879 | 2.29 | 3.47 |
| Q125_Out_ven_credible | 13.919 | 32 | .000 | 4.061 | 3.47 | 4.65 |
| Q126_Out_comm_timely | 13.799 | 32 | .000 | 3.455 | 2.94 | 3.96 |
| Q127_Out_ven_efficiently | 14.588 | 30 | .000 | 3.871 | 3.33 | 4.41 |
| Q128_Out_leadership | 11.044 | 32 | .000 | 2.697 | 2.20 | 3.19 |
| Q129_Out_quality_work | 11.726 | 32 | .000 | 3.333 | 2.75 | 3.91 |
| Q130_within_budget | 20.448 | 32 | .000 | 4.545 | 4.09 | 5.00 |

**...cont'd**

<table>
<tr><th colspan="7">One Sample Test</th></tr>
<tr><td rowspan="4"></td><td colspan="6">Test Value = 0</td></tr>
<tr><td rowspan="3">t</td><td rowspan="3">df</td><td rowspan="3">Sig. (2-tailed)</td><td rowspan="3">Mean Differen ce</td><td colspan="2">95% Confidence Interval of the Difference</td></tr>
<tr><td>Lower</td><td>Upper</td></tr>
<tr><td></td><td></td></tr>
<tr><td>Q131_litt_bus_man</td><td>12.217</td><td>32</td><td>.000</td><td>2.273</td><td>1.89</td><td>2.65</td></tr>
<tr><td>Q132_funct_supp</td><td>12.520</td><td>32</td><td>.000</td><td>2.364</td><td>1.98</td><td>2.75</td></tr>
<tr><td>Q133_Proj_goals</td><td>16.866</td><td>32</td><td>.000</td><td>3.909</td><td>3.44</td><td>4.38</td></tr>
<tr><td>Q134_inn_creative</td><td>11.857</td><td>32</td><td>.000</td><td>3.030</td><td>2.51</td><td>3.55</td></tr>
<tr><td>Q135_Ven_Bus_Pro_p12</td><td>11.031</td><td>32</td><td>.000</td><td>2.727</td><td>2.22</td><td>3.23</td></tr>
<tr><td>Q136_Bus_Diff_inter_staff_p13</td><td>9.980</td><td>32</td><td>.000</td><td>3.879</td><td>3.09</td><td>4.67</td></tr>
<tr><td>Q137_Cost_inter_incre</td><td>11.573</td><td>32</td><td>.000</td><td>2.909</td><td>2.40</td><td>3.42</td></tr>
<tr><td>Q138_Cost_train_incre</td><td>9.125</td><td>32</td><td>.000</td><td>2.545</td><td>1.98</td><td>3.11</td></tr>
<tr><td>Q139_lost_interest</td><td>15.872</td><td>32</td><td>.000</td><td>4.152</td><td>3.62</td><td>4.68</td></tr>
<tr><td>Q140_Out_Part_perf</td><td>9.066</td><td>32</td><td>.000</td><td>2.848</td><td>2.21</td><td>3.49</td></tr>
<tr><td>Q141_Term_Conp_p13</td><td>8.785</td><td>32</td><td>.000</td><td>3.273</td><td>2.51</td><td>4.03</td></tr>
<tr><td>Q142_Cha_lack_of_support_p14</td><td>8.450</td><td>32</td><td>.000</td><td>4.061</td><td>3.08</td><td>5.04</td></tr>
<tr><td>Q143_When_made_difficult</td><td>7.694</td><td>32</td><td>.000</td><td>3.576</td><td>2.63</td><td>4.52</td></tr>
<tr><td>Q144_When_withheld_infor</td><td>8.047</td><td>32</td><td>.000</td><td>3.636</td><td>2.72</td><td>4.56</td></tr>
<tr><td>Q145_When_held_documentation</td><td>7.763</td><td>32</td><td>.000</td><td>3.606</td><td>2.66</td><td>4.55</td></tr>
<tr><td>Q146_After_another_contract</td><td>6.759</td><td>32</td><td>.000</td><td>3.636</td><td>2.54</td><td>4.73</td></tr>
<tr><td>Q147_TT_PV_info</td><td>6.505</td><td>32</td><td>.000</td><td>3.212</td><td>2.21</td><td>4.22</td></tr>
<tr><td>Q148_TT_other_previous</td><td>8.256</td><td>32</td><td>.000</td><td>3.909</td><td>2.94</td><td>4.87</td></tr>
<tr><td>Q149_TT_Lack_Documentation</td><td>9.380</td><td>32</td><td>.000</td><td>4.455</td><td>3.49</td><td>5.42</td></tr>
<tr><td>Q150_TT_Lack_internal_process</td><td>9.845</td><td>32</td><td>.000</td><td>4.455</td><td>3.53</td><td>5.38</td></tr>
<tr><td>Q151_TT_Lack_staff</td><td>8.086</td><td>32</td><td>.000</td><td>3.758</td><td>2.81</td><td>4.70</td></tr>
</table>

**...cont'd**

| One Sample Test | | | | | | |
|---|---|---|---|---|---|---|
| | Test Value = 0 | | | | | |
| | | | | Mean Differen ce | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | | Lower | Upper |
| Q132_LOS_Reluct | 6.764 | 32 | .000 | 3.394 | 2.37 | 4.42 |
| Q153_LOS_local | 7.772 | 32 | .000 | 3.697 | 2.73 | 4.67 |
| Q154_LOS_lacking | 9.065 | 32 | .000 | 4.333 | 3.36 | 5.31 |
| Q155_LOS_inhouse | 7.529 | 32 | .000 | 3.545 | 2.59 | 4.50 |
| Q156_LOS_policies_p14 | 7.121 | 32 | .000 | 3.394 | 2.42 | 4.36 |
| Q157_Int_Team_time_p15 | 10.339 | 30 | .000 | 3.968 | 3.18 | 4.75 |
| Q158_we_Hire_Exp | 8.011 | 28 | .000 | 3.276 | 2.44 | 4.11 |
| Q159_Service_IP | 6.937 | 28 | .000 | 1.897 | 1.34 | 2.46 |
| Q160_Back_sourc_skills | 5.737 | 28 | .000 | 2.586 | 1.66 | 3.51 |
| Q161_In_house_different | 7.510 | 28 | .000 | 3.448 | 2.51 | 4.39 |
| Q162_In_house_simpler_process | 7.913 | 28 | .000 | 4.241 | 3.14 | 5.34 |
| Q163_DIS_busin_preform | 6.160 | 28 | .000 | 2.103 | 1.40 | 2.80 |
| Q164_DIS_performance | 6.661 | 28 | .000 | 2.724 | 1.89 | 3.56 |
| Q165_DIS_internal_staff | 5.576 | 28 | .000 | 2.724 | 1.72 | 3.72 |
| Q166_DIS_internal_process | 6.021 | 28 | .000 | 2.862 | 1.89 | 3.84 |
| Q167_DIS_internal_staff_availa | 6.932 | 28 | .000 | 3.552 | 2.50 | 4.60 |
| Q168_DIS_not_applicable | | | | | | |
| Q169_we_Lost_Sign_Mon | 7.872 | 28 | .000 | 4.172 | 3.09 | 5.26 |
| Q170_After_Swit_Out_Part_p15 | 6.463 | 28 | .000 | 2.966 | 2.03 | 3.91 |
| Q171_When_Con_Swit_p16 | 8.706 | 32 | .000 | 3.667 | 2.81 | 4.52 |
| Q172_Rele_Dev_Lost | 11.368 | 32 | .000 | 4.636 | 3.81 | 5.47 |

| One Sample Test | | | | | | |
|---|---|---|---|---|---|---|
| | Test Value = 0 | | | | | |
| | | | | | 95% Confidence Interval of the Difference | |
| | | | Sig. (2- | Mean Differen | | |
| | t | df | tailed) | ce | Lower | Upper |
| Q173_Lost_Know | 11.586 | 32 | .000 | 4.758 | 3.92 | 5.59 |
| Q174_NST_setup | 11.814 | 32 | .000 | 4.515 | 3.74 | 5.29 |
| Q175_NST_internal_Process | 11.974 | 32 | .000 | 4.545 | 3.77 | 5.32 |
| Q176_NST_provide_support | 7.556 | 32 | .000 | 2.818 | 2.06 | 3.58 |
| Q177_NST_Addi_Train_p16 | 9.065 | 32 | .000 | 3.727 | 2.89 | 4.56 |

Table H.20: One sample test t tested — Q 29, 30 to 52 & 58 to 177

# Appendix I — Results of t Test
# (Employee/Manager)

## List of Tables

T test for independent samples as outlined in Chapter 5 section 5.4 (as outlined by Kinnear, & Gray p 197, 2008).

**Group Statistics — Resources**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q 29. Strategic Importance | Employee | 14 | 4.86 | 1.916 | .512 |
| | Management | 17 | 6.18 | 1.286 | .312 |
| Q30_Degree_30_out | Employee | 14 | 3.07 | 1.141 | .305 |
| | Management | 17 | 2.35 | 1.320 | .320 |
| Q35_Org_plan_add_out | Employee | 16 | 5.50 | 1.592 | .398 |
| | Management | 17 | 5.35 | 1.935 | .469 |
| Q36_Org_Out_bus_strat | Employee | 16 | 5.25 | 1.390 | .348 |
| | Management | 17 | 4.53 | 2.183 | .529 |
| Q37_Org_Out_tec_strat | Employee | 16 | 5.38 | 1.204 | .301 |
| | Management | 17 | 5.00 | 2.000 | .485 |
| Q38_CIO_instr_out | Employee | 14 | 5.07 | 1.900 | .508 |
| | Management | 17 | 5.88 | 1.453 | .352 |
| Q39_CIO_Excellent | Employee | 16 | 3.00 | 1.673 | .418 |
| | Management | 17 | 3.35 | 1.455 | .353 |
| Q40_CIO_Effective_p4 | Employee | 16 | 3.88 | 1.928 | .482 |
| | Management | 17 | 4.06 | 1.345 | .326 |
| Q41_IH_lack_strate_p5 | Employee | 16 | 3.75 | 2.324 | .581 |
| | Management | 17 | 2.41 | 1.906 | .462 |
| Q42_IH_lack_rigour | Employee | 16 | 3.38 | 2.217 | .554 |
| | Management | 17 | 2.76 | 2.359 | .572 |
| Q43_IH_Pro_creep | Employee | 16 | 4.94 | 1.948 | .487 |
| | Management | 17 | 3.65 | 2.206 | .535 |
| Q44_H_Cost_inc | Employee | 16 | 5.13 | 2.029 | .507 |
| | Management | 17 | 3.12 | 1.965 | .477 |
| Q45_IH_Time_inc | Employee | 16 | 4.25 | 2.236 | .559 |
| | Management | 17 | 3.47 | 1.807 | .438 |
| Q46_OUT_lose_pr | Employee | 16 | 4.31 | 1.991 | .498 |
| | Management | 17 | 3.41 | 1.970 | .478 |
| Q47_OUT_lose_re | Employee | 16 | 4.19 | 2.105 | .526 |
| | Management | 17 | 3.47 | 1.972 | .478 |
| Q48_OUT_own_pr_p5 | Employee | 16 | 3.88 | 2.156 | .539 |
| | Management | 17 | 2.88 | 1.933 | .469 |

Table I.1: Group statistics — Resources Q 29, 30, 35 to 48

**Independent Samples Test — Resources**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | | | | Lower | Upper |
| Q 29. Strategic Importance | Equal variances assumed | 4.475 | .043 | -2.286 | 29 | .030 | -1.319 | .577 | -2.500 | -.139 |
| | Equal variances not assumed | | | -2.200 | 21.982 | .039 | -1.319 | .600 | -2.563 | -.076 |
| Q30_Degree_30_out | Equal variances assumed | .002 | .968 | 1.602 | 29 | .120 | .718 | .449 | -.199 | 1.636 |
| | Equal variances not assumed | | | 1.625 | 28.912 | .115 | .718 | .442 | -.186 | 1.623 |
| Q35_Org_plan_add_out | Equal variances assumed | 2.601 | .117 | .238 | 31 | .814 | .147 | .619 | -1.115 | 1.409 |
| | Equal variances not assumed | | | .239 | 30.476 | .813 | .147 | .615 | -1.109 | 1.403 |
| Q36_Org_Out_bus_strat | Equal variances assumed | 3.009 | .093 | 1.123 | 31 | .270 | .721 | .642 | -.588 | 2.029 |
| | Equal variances not assumed | | | 1.138 | 27.348 | .265 | .721 | .633 | -.578 | 2.019 |
| Q37_Org_Out_tec_strat | Equal variances assumed | 3.932 | .056 | .647 | 31 | .522 | .375 | .579 | -.807 | 1.557 |
| | Equal variances not assumed | | | .657 | 26.505 | .517 | .375 | .571 | -.797 | 1.547 |
| Q38_CIO_instr_out | Equal variances assumed | .928 | .343 | -1.347 | 29 | .188 | -.811 | .602 | -2.042 | .420 |
| | Equal variances not assumed | | | -1.312 | 24.009 | .202 | -.811 | .618 | -2.086 | .465 |
| Q39_CIO_Excellent | Equal variances assumed | .034 | .855 | -.648 | 31 | .522 | -.353 | .545 | -1.464 | .759 |
| | Equal variances not assumed | | | -.645 | 29.799 | .524 | -.353 | .547 | -1.471 | .765 |
| Q40_CIO_Effective_p4 | Equal variances assumed | 2.293 | .140 | -.319 | 31 | .752 | -.184 | .576 | -1.358 | .990 |
| | Equal variances not assumed | | | -.316 | 26.647 | .755 | -.184 | .582 | -1.379 | 1.011 |

**...cont'd**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
|---|---|---|---|---|---|---|---|---|---|---|
| Q41_IH_lack_strate_p5 | Equal variances assumed | 2.486 | .125 | 1.814 | 31 | .079 | 1.338 | .738 | -.167 | 2.843 |
| | Equal variances not assumed | | | 1.803 | 29.078 | .082 | 1.338 | .742 | -.180 | 2.856 |
| Q42_IH_lack_rigour | Equal variances assumed | .126 | .725 | .765 | 31 | .450 | .610 | .798 | -1.018 | 2.238 |
| | Equal variances not assumed | | | .766 | 31.000 | .449 | .610 | .797 | -1.015 | 2.235 |
| Q43_IH_Pro_creep | Equal variances assumed | 2.581 | .118 | 1.777 | 31 | .085 | 1.290 | .726 | -.191 | 2.772 |
| | Equal variances not assumed | | | 1.783 | 30.883 | .084 | 1.290 | .724 | -.186 | 2.766 |
| Q44_H_Cost_inc | Equal variances assumed | .234 | .632 | 2.887 | 31 | .007 | 2.007 | .695 | .589 | 3.425 |
| | Equal variances not assumed | | | 2.884 | 30.725 | .007 | 2.007 | .696 | .587 | 3.427 |
| Q45_IH_Time_inc | Equal variances assumed | .640 | .430 | 1.105 | 31 | .278 | .779 | .706 | -.660 | 2.219 |
| | Equal variances not assumed | | | 1.097 | 28.877 | .282 | .779 | .710 | -.674 | 2.232 |
| Q46_OUT_lose_pr | Equal variances assumed | .142 | .708 | 1.306 | 31 | .201 | .901 | .690 | -.506 | 2.307 |
| | Equal variances not assumed | | | 1.306 | 30.837 | .201 | .901 | .690 | -.507 | 2.308 |
| Q47_OUT_lose_re | Equal variances assumed | .171 | .682 | 1.010 | 31 | .320 | .717 | .710 | -.730 | 2.164 |
| | Equal variances not assumed | | | 1.008 | 30.506 | .321 | .717 | .711 | -.734 | 2.168 |
| Q48_OUT_own_pr_p5 | Equal variances assumed | 1.047 | .314 | 1.394 | 31 | .173 | .993 | .712 | -.459 | 2.445 |
| | Equal variances not assumed | | | 1.390 | 30.117 | .175 | .993 | .714 | -.466 | 2.451 |

Table I.2: Independent samples test — Resources Q 29, 30, 35 to 48

**Group Statistics — About Contract**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q49_CO_Strategic_Imp_supp_p6 | Employee | 16 | 3.19 | 1.377 | .344 |
| | Management | 17 | 2.06 | 1.144 | .277 |
| Q50_CO_Strategic_development | Employee | 16 | 3.38 | 1.360 | .340 |
| | Management | 17 | 2.53 | 1.419 | .344 |
| Q51_CO_vendor_clauses | Employee | 14 | 1.00 | .000[a] | .000 |
| | Management | 15 | 1.00 | .000[a] | .000 |
| Q52_CO_ven_Additional_costs | Employee | 16 | 5.31 | 1.138 | .285 |
| | Management | 17 | 5.29 | 1.724 | .418 |

a. t cannot be computed because the standard deviations of both groups are 0.

Table I.3: Group statistics — About contract Q 49 to 52

**Independent Samples Test — About Contract**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q49_CO_Strategic_Imp_supp_p6 | Equal variances assumed | .000 | .992 | 2.567 | 31 | .015 | 1.129 | .440 | .232 | 2.025 |
| | Equal variances not assumed | | | 2.553 | 29.249 | .016 | 1.129 | .442 | .225 | 2.033 |
| Q50_CO_Strategic_development | Equal variances assumed | .106 | .747 | 1.745 | 31 | .091 | .846 | .485 | -.143 | 1.834 |
| | Equal variances not assumed | | | 1.748 | 30.988 | .090 | .846 | .484 | -.141 | 1.832 |
| Q52_CO_ven_Additional_costs | Equal variances assumed | 4.065 | .053 | .036 | 31 | .972 | .018 | .512 | -1.026 | 1.062 |
| | Equal variances not assumed | | | .036 | 27.880 | .971 | .018 | .506 | -1.018 | 1.054 |

Table I.4: Independent samples test — About contract Q 49 to 52

**Group Statistics — Benefits**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q58_Out_Shor_LC_p8 | Employee | 16 | 2.56 | 1.094 | .273 |
| | Management | 17 | 1.65 | .996 | .242 |
| Q59_OUT_im_Qual | Employee | 16 | 2.56 | 1.153 | .288 |
| | Management | 17 | 1.88 | .928 | .225 |
| Q60_OUT_SDT | Employee | 16 | 3.25 | 1.949 | .487 |
| | Management | 17 | 2.18 | 1.468 | .356 |
| Q61_OUT_red_cost | Employee | 14 | 3.21 | 1.369 | .366 |
| | Management | 17 | 2.41 | 1.622 | .394 |
| Q62_OUT_Bene_BP | Employee | 16 | 3.88 | 1.746 | .437 |
| | Management | 17 | 2.24 | 1.437 | .349 |
| Q63_Vendor_skilled_it | Employee | 16 | 4.38 | 1.204 | .301 |
| | Management | 17 | 2.88 | 1.867 | .453 |
| Q64_Vendor_sk_BP | Employee | 16 | 2.81 | 1.223 | .306 |
| | Management | 17 | 1.94 | 1.298 | .315 |
| Q65_Out_com_add | Employee | 14 | 2.79 | .893 | .239 |
| | Management | 17 | 2.29 | 1.611 | .391 |
| Q66_Out_comp | Employee | 16 | 5.19 | 1.276 | .319 |
| | Management | 17 | 4.71 | 2.257 | .547 |
| Q67_Out_lo_it | Employee | 16 | 5.31 | 1.352 | .338 |
| | Management | 17 | 6.06 | 1.345 | .326 |
| Q68_Management_imp_succ | Employee | 16 | 5.56 | 1.031 | .258 |
| | Management | 17 | 6.18 | 1.629 | .395 |
| Q69_Relationship_buss_SF | Employee | 16 | 3.88 | 1.544 | .386 |
| | Management | 17 | 6.12 | .697 | .169 |
| Q70_Rigorous_Internal_req_p8 | Employee | 16 | 5.69 | 1.014 | .254 |
| | Management | 17 | 6.12 | .781 | .189 |

Table I.5: Group statistics — Benefits Q 58 to 70

## Independent Samples Test — Benefits

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q58_Out_Shor_LC_p8 | Equal variances assumed | .328 | .571 | 2.516 | 31 | .017 | .915 | .364 | .173 | 1.657 |
| | Equal variances not assumed | | | 2.509 | 30.271 | .018 | .915 | .365 | .171 | 1.660 |
| Q59_OUT_im_Qual | Equal variances assumed | .074 | .788 | 1.873 | 31 | .071 | .680 | .363 | -.061 | 1.421 |
| | Equal variances not assumed | | | 1.860 | 28.816 | .073 | .680 | .366 | -.068 | 1.428 |
| Q60_OUT_SDT | Equal variances assumed | .994 | .326 | 1.794 | 31 | .083 | 1.074 | .598 | -.147 | 2.294 |
| | Equal variances not assumed | | | 1.779 | 27.846 | .086 | 1.074 | .604 | -.163 | 2.310 |
| Q61_OUT_red_cost | Equal variances assumed | 1.562 | .221 | 1.469 | 29 | .153 | .803 | .546 | -.315 | 1.920 |
| | Equal variances not assumed | | | 1.494 | 28.972 | .146 | .803 | .537 | -.296 | 1.901 |
| Q62_OUT_Bene_BP | Equal variances assumed | .008 | .931 | 2.952 | 31 | .006 | 1.640 | .555 | .507 | 2.772 |
| | Equal variances not assumed | | | 2.935 | 29.125 | .006 | 1.640 | .559 | .497 | 2.782 |
| Q63_Vendor_skilled_it | Equal variances assumed | 17.296 | .000 | 2.710 | 31 | .011 | 1.493 | .551 | .369 | 2.616 |
| | Equal variances not assumed | | | 2.745 | 27.533 | .011 | 1.493 | .544 | .378 | 2.607 |
| Q64_Vendor_sk_BP | Equal variances assumed | .007 | .932 | 1.982 | 31 | .056 | .871 | .440 | -.025 | 1.768 |
| | Equal variances not assumed | | | 1.986 | 31.000 | .056 | .871 | .439 | -.024 | 1.766 |
| Q65_Out_com_add | Equal variances assumed | 12.384 | .001 | 1.018 | 29 | .317 | .492 | .483 | -.496 | 1.479 |
| | Equal variances not assumed | | | 1.074 | 25.747 | .293 | .492 | .458 | -.450 | 1.433 |
| Q66_Out_comp | Equal variances assumed | 3.967 | .055 | .748 | 31 | .460 | .482 | .644 | -.832 | 1.795 |
| | Equal variances not assumed | | | .760 | 25.569 | .454 | .482 | .634 | -.822 | 1.785 |
| Q67_Out_lo_it | Equal variances assumed | .321 | .575 | -1.589 | 31 | .122 | -.746 | .470 | -1.704 | .212 |
| | Equal variances not assumed | | | -1.589 | 30.857 | .122 | -.746 | .470 | -1.705 | .212 |

**...cont'd**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q68_Management _imp_succ | Equal variances assumed | .372 | .546 | -1.284 | 31 | .209 | -.614 | .478 | -1.589 | .361 |
| | Equal variances not assumed | | | -1.301 | 27.247 | .204 | -.614 | .472 | -1.582 | .354 |
| Q69_Relation ship _buss_SF | Equal variances assumed | 7.860 | .009 | -5.434 | 31 | .000 | -2.243 | .413 | -3.084 | -1.401 |
| | Equal variances not assumed | | | -5.323 | 20.591 | .000 | -2.243 | .421 | -3.120 | -1.365 |
| Q70_Rigorou s_ Internal_req_ p8 | Equal variances assumed | 1.908 | .177 | -1.370 | 31 | .181 | -.430 | .314 | -1.071 | .210 |
| | Equal variances not assumed | | | -1.359 | 28.185 | .185 | -.430 | .317 | -1.078 | .218 |

Table I.6: Independent samples test — Benefits Q 58 to 70

**Group Statistics – Issues with Outsourcing Partner**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q71_Choosing_wro_Ve np_p9 | Employee | 16 | 4.69 | 1.537 | .384 |
| | Management | 17 | 5.47 | 1.586 | .385 |
| Q72_Vendor_man | Employee | 16 | 5.31 | 1.302 | .326 |
| | Management | 17 | 6.65 | .493 | .119 |
| Q73_Support_enh | Employee | 16 | 4.94 | .772 | .193 |
| | Management | 17 | 6.35 | .702 | .170 |
| Q74_operation_exp | Employee | 16 | 4.81 | .750 | .188 |
| | Management | 17 | 5.65 | 1.869 | .453 |
| Q75_onshore_bet_qua | Employee | 16 | 4.13 | 1.893 | .473 |
| | Management | 17 | 4.88 | 2.205 | .535 |
| Q76_response_bus | Employee | 16 | 4.81 | 1.328 | .332 |
| | Management | 17 | 5.65 | 1.222 | .296 |
| Q77_Out_flexibility | Employee | 16 | 3.94 | 1.436 | .359 |
| | Management | 17 | 4.18 | 1.776 | .431 |
| Q78_Out_regulator | Employee | 16 | 2.63 | 1.708 | .427 |
| | Management | 17 | 2.76 | 2.137 | .518 |
| Q79_staff_morale | Employee | 16 | 4.06 | 1.948 | .487 |
| | Management | 17 | 6.18 | 1.131 | .274 |
| Q80_bus_lost_exper | Employee | 16 | 5.31 | 1.537 | .384 |
| | Management | 17 | 6.06 | 1.676 | .406 |
| Q81_bus_lost_cont | Employee | 16 | 4.06 | 1.569 | .392 |
| | Management | 17 | 4.29 | 1.829 | .444 |

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q82_Org_supp_decresed | Employee | 16 | 4.06 | .680 | .170 |
| | Management | 17 | 4.29 | 2.144 | .520 |
| Q83_Mark_forces_impr | Employee | 16 | 4.00 | 1.592 | .398 |
| | Management | 17 | 3.12 | 1.933 | .469 |
| Q84_Out_Win_WIN_p9 | Employee | 16 | 3.13 | 1.147 | .287 |
| | Management | 17 | 3.47 | 1.463 | .355 |

Table I.7: Group statistics — Issues with outsourcing partner Q 71 to 84

**Independent Samples Test –Issues with Outsourcing Partner**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | | |
| | | | | | | | | | Lower | Upper | |
| Q71_ Choosing_ wro_Ven p_p9 | Equal variances assumed | .243 | .626 | -1.439 | 31 | .160 | -.783 | .544 | -1.893 | .327 | |
| | Equal variances not assumed | | | -1.440 | 30.970 | .160 | -.783 | .544 | -1.892 | .326 | |
| Q72_ Vendor_ man | Equal variances assumed | 24.108 | .000 | -3.940 | 31 | .000 | -1.335 | .339 | -2.025 | -.644 | |
| | Equal variances not assumed | | | -3.848 | 18.989 | .001 | -1.335 | .347 | -2.060 | -.609 | |
| Q73_ Support_ enh | Equal variances assumed | .651 | .426 | -5.517 | 31 | .000 | -1.415 | .257 | -1.939 | -.892 | |
| | Equal variances not assumed | | | -5.500 | 30.253 | .000 | -1.415 | .257 | -1.941 | -.890 | |
| Q74_ operatio n_exp | Equal variances assumed | 4.631 | .039 | -1.663 | 31 | .106 | -.835 | .502 | -1.858 | .189 | |
| | Equal variances not assumed | | | -1.701 | 21.280 | .103 | -.835 | .491 | -1.854 | .185 | |
| Q75_ onshore _bet_qu a | Equal variances assumed | .995 | .326 | -1.056 | 31 | .299 | -.757 | .717 | -2.221 | .706 | |
| | Equal variances not assumed | | | -1.061 | 30.755 | .297 | -.757 | .714 | -2.214 | .699 | |

**...cont'd**

**Independent Samples Test –Issues with Outsourcing Partner**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
|---|---|---|---|---|---|---|---|---|---|---|
| Q76_ response_ bus | Equal variances assumed | .382 | .541 | -1.881 | 31 | .069 | -.835 | .444 | -1.740 | .071 |
| | Equal variances not assumed | | | -1.876 | 30.359 | .070 | -.835 | .445 | -1.743 | .074 |
| Q77_ Out_flexibi lity | Equal variances assumed | 1.565 | .220 | -.423 | 31 | .675 | -.239 | .564 | -1.390 | .912 |
| | Equal variances not assumed | | | -.426 | 30.336 | .673 | -.239 | .561 | -1.384 | .906 |
| Q78_Out_ regulator | Equal variances assumed | 1.148 | .292 | -.207 | 31 | .838 | -.140 | .676 | -1.519 | 1.239 |
| | Equal variances not assumed | | | -.208 | 30.233 | .837 | -.140 | .671 | -1.511 | 1.231 |
| Q79_staff _ morale | Equal variances assumed | 3.850 | .059 | -3.841 | 31 | .001 | -2.114 | .550 | -3.237 | -.991 |
| | Equal variances not assumed | | | -3.782 | 23.783 | .001 | -2.114 | .559 | -3.268 | -.960 |
| Q80_bus_ lost_exper | Equal variances assumed | .098 | .756 | -1.331 | 31 | .193 | -.746 | .561 | -1.890 | .398 |
| | Equal variances not assumed | | | -1.334 | 30.982 | .192 | -.746 | .559 | -1.887 | .395 |
| Q81_bus_ lost_cont | Equal variances assumed | .470 | .498 | -.389 | 31 | .700 | -.232 | .595 | -1.445 | .982 |
| | Equal variances not assumed | | | -.391 | 30.750 | .698 | -.232 | .592 | -1.440 | .977 |
| Q82_Org_ supp_decr esed | Equal variances assumed | 18.38 3 | .000 | -.413 | 31 | .683 | -.232 | .561 | -1.376 | .913 |
| | Equal variances not assumed | | | -.423 | 19.368 | .677 | -.232 | .547 | -1.375 | .912 |
| Q83_Mark _ forces_im pr | Equal variances assumed | 3.255 | .081 | 1.426 | 31 | .164 | .882 | .619 | -.379 | 2.144 |
| | Equal variances not assumed | | | 1.435 | 30.483 | .161 | .882 | .615 | -.373 | 2.137 |
| Q84_Out_ Win_WIN_ p9 | Equal variances assumed | 4.488 | .042 | -.752 | 31 | .458 | -.346 | .460 | -1.283 | .592 |
| | Equal variances not assumed | | | -.757 | 30.057 | .455 | -.346 | .456 | -1.277 | .586 |

Table I.8: Independent samples test — Issues with outsourcing partner Q 71 to 84

**Group Statistics — Relationship with Vendor / Outsourcing Partner**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q85_Out_bus_p10 | Employee | 16 | 4.19 | 1.834 | .458 |
| | Management | 17 | 3.06 | 1.749 | .424 |
| Q86_Out__internal _it_staff | Employee | 16 | 3.13 | 1.708 | .427 |
| | Management | 17 | 2.41 | 1.873 | .454 |
| Q87_Most_internal _Staff_trans | Employee | 16 | 3.44 | 2.250 | .563 |
| | Management | 17 | 4.65 | 2.262 | .549 |
| Q91_Out_ser_var | Employee | 16 | 5.56 | .727 | .182 |
| | Management | 17 | 5.53 | 1.663 | .403 |
| Q92_Bus_sat_part ner | Employee | 16 | 2.94 | .998 | .249 |
| | Management | 17 | 2.88 | 1.536 | .373 |
| Q93_Rel_out_ven_ strong | Employee | 16 | 3.50 | 1.414 | .354 |
| | Management | 17 | 4.29 | 1.724 | .418 |
| Q94_Out_part_KPI _94 | Employee | 16 | 4.38 | 1.025 | .256 |
| | Management | 17 | 4.18 | 1.380 | .335 |
| Q95_Comm_out_p osit | Employee | 16 | 4.50 | 1.033 | .258 |
| | Management | 17 | 4.06 | 1.886 | .458 |
| Q96_Dev_minor_c ha_decreased | Employee | 16 | 3.25 | 1.770 | .443 |
| | Management | 17 | 2.71 | 1.929 | .468 |
| Q97_Qual_major_c ha_decreased | Employee | 16 | 2.69 | 1.401 | .350 |
| | Management | 17 | 2.47 | 1.663 | .403 |
| Q98_Qua_deliv_ic | Employee | 16 | 3.25 | 1.342 | .335 |
| | Management | 17 | 2.53 | 1.586 | .385 |
| Q99_Qual_docum_ ic | Employee | 16 | 3.56 | 1.965 | .491 |
| | Management | 17 | 2.24 | 1.640 | .398 |
| Q100_Qual_tran_ic _p10 | Employee | 16 | 2.63 | 1.586 | .397 |
| | Management | 17 | 1.71 | 1.448 | .351 |

Table I.9: Group statistics — Relationship with vendor/outsourcing partner Q 85 to 100

**Independent Samples Test — Relationship with Vendor / Outsourcing Partner**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q85_Out_bus_p10 | Equal variances assumed | .038 | .847 | 1.810 | 31 | .080 | 1.129 | .624 | -.143 | 2.401 |
| | Equal variances not assumed | | | 1.807 | 30.631 | .081 | 1.129 | .625 | -.146 | 2.403 |
| Q86_Out__internal_it_staff | Equal variances assumed | .092 | .764 | 1.141 | 31 | .263 | .713 | .625 | -.562 | 1.988 |
| | Equal variances not assumed | | | 1.144 | 30.973 | .261 | .713 | .623 | -.558 | 1.985 |
| Q87_Most_internal_Staff_trans | Equal variances assumed | .028 | .868 | -1.539 | 31 | .134 | -1.210 | .786 | -2.812 | .393 |
| | Equal variances not assumed | | | -1.539 | 30.899 | .134 | -1.210 | .786 | -2.812 | .393 |
| Q91_Out_ser_var | Equal variances assumed | 7.260 | .011 | .073 | 31 | .942 | .033 | .452 | -.889 | .955 |
| | Equal variances not assumed | | | .075 | 22.190 | .941 | .033 | .442 | -.884 | .950 |
| Q92_Bus_sat_partner | Equal variances assumed | 5.532 | .025 | .121 | 31 | .904 | .055 | .454 | -.871 | .981 |
| | Equal variances not assumed | | | .123 | 27.636 | .903 | .055 | .448 | -.864 | .974 |
| Q93_Rel_out_ven_strong | Equal variances assumed | .441 | .512 | -1.442 | 31 | .159 | -.794 | .551 | -1.918 | .329 |
| | Equal variances not assumed | | | -1.450 | 30.455 | .157 | -.794 | .547 | -1.912 | .323 |

**... cont'd**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q94_Out_part_KPI_94 | Equal variances assumed | 1.050 | .313 | .467 | 31 | .644 | .199 | .425 | -.669 | 1.066 |
| | Equal variances not assumed | | | .471 | 29.455 | .641 | .199 | .421 | -.663 | 1.060 |
| Q95_Comm_out_posit | Equal variances assumed | 14.551 | .001 | .826 | 31 | .415 | .441 | .534 | -.649 | 1.531 |
| | Equal variances not assumed | | | .840 | 25.098 | .409 | .441 | .525 | -.641 | 1.523 |
| Q96_Dev_minor_cha_decreased | Equal variances assumed | .039 | .845 | .843 | 31 | .406 | .544 | .646 | -.773 | 1.861 |
| | Equal variances not assumed | | | .845 | 30.983 | .405 | .544 | .644 | -.769 | 1.858 |
| Q97_Qual_major_cha_decreased | Equal variances assumed | .468 | .499 | .404 | 31 | .689 | .217 | .537 | -.878 | 1.312 |
| | Equal variances not assumed | | | .406 | 30.643 | .687 | .217 | .534 | -.873 | 1.307 |
| Q98_Qua_deliv_ic | Equal variances assumed | .945 | .338 | 1.405 | 31 | .170 | .721 | .513 | -.326 | 1.767 |
| | Equal variances not assumed | | | 1.412 | 30.669 | .168 | .721 | .510 | -.321 | 1.762 |
| Q99_Qual_docum_ic | Equal variances assumed | 1.432 | .241 | 2.111 | 31 | .043 | 1.327 | .629 | .045 | 2.609 |
| | Equal variances not assumed | | | 2.099 | 29.308 | .045 | 1.327 | .632 | .035 | 2.620 |
| Q100_Qual_tran_ic_p10 | Equal variances assumed | 1.125 | .297 | 1.740 | 31 | .092 | .919 | .528 | -.158 | 1.996 |
| | Equal variances not assumed | | | 1.735 | 30.285 | .093 | .919 | .530 | -.162 | 2.000 |

Table I.10: Independent samples test — Relationship with vendor/outsourcing partner Q 85 to 100

**Group Statistics — Impact of Outsourcing**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q101_Out_partner_bene_p11 | Employee | 16 | 3.75 | 1.238 | .310 |
| | Management | 17 | 2.59 | 1.698 | .412 |
| Q102_Out_par_assist | Employee | 16 | 3.38 | 1.586 | .397 |
| | Management | 17 | 2.65 | 1.935 | .469 |
| Q103_Out_par_sincere | Employee | 16 | 4.56 | 1.094 | .273 |
| | Management | 17 | 4.76 | 2.278 | .553 |
| Q104_Out_pat_ethical | Employee | 16 | 5.38 | .806 | .202 |
| | Management | 17 | 4.00 | 1.969 | .477 |
| Q105_Relationship_trust | Employee | 16 | 3.00 | 1.414 | .354 |
| | Management | 17 | 3.12 | 1.536 | .373 |
| Q106_Relationship_contract | Employee | 16 | 4.19 | 1.424 | .356 |
| | Management | 17 | 4.65 | 1.579 | .383 |
| Q107_Out_Partner_commitme nts | Employee | 16 | 4.19 | .911 | .228 |
| | Management | 17 | 4.29 | 1.929 | .468 |
| Q108_Out_Par_relationship | Employee | 16 | 5.06 | .998 | .249 |
| | Management | 17 | 5.71 | 1.213 | .294 |
| Q109_Bus108_comm_relation ship | Employee | 16 | 3.13 | 1.628 | .407 |
| | Management | 17 | 2.94 | 1.919 | .466 |
| Q110_Both_sustain | Employee | 16 | 4.38 | 1.310 | .328 |
| | Management | 17 | 4.06 | 1.676 | .406 |
| Q111_Both_freely_excha | Employee | 16 | 3.44 | 1.413 | .353 |
| | Management | 17 | 4.35 | 1.498 | .363 |
| Q112_Corporate_clashes | Employee | 16 | 3.88 | 1.360 | .340 |
| | Management | 17 | 4.47 | 2.035 | .493 |
| Q113_Diff_rules_disagreement s | Employee | 16 | 3.94 | 1.692 | .423 |
| | Management | 17 | 4.29 | 1.993 | .483 |
| Q114_Diff_processes_disagre ements | Employee | 16 | 3.88 | 1.544 | .386 |
| | Management | 17 | 4.35 | 1.766 | .428 |
| Q115_the_Per_Rev | Employee | 16 | 4.94 | 1.289 | .322 |
| | Management | 17 | 5.29 | 1.404 | .340 |
| Q116_Feedback_review_p11 | Employee | 16 | 3.94 | 2.112 | .528 |
| | Management | 17 | 5.76 | 1.300 | .315 |
| Q117_Problem_Sol_join_p12 | Employee | 16 | 4.44 | 1.788 | .447 |
| | Management | 17 | 4.47 | 1.546 | .375 |

**...cont'd**

**Group Statistics — Impact of Outsourcing**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q118_Decis_joint_exe | Employee | 16 | 4.13 | 1.408 | .352 |
| | Management | 17 | 3.82 | 1.334 | .324 |
| Q119_Comm_business_strong | Employee | 16 | 3.88 | .885 | .221 |
| | Management | 17 | 4.41 | 1.417 | .344 |
| Q120_Busin_works_well | Employee | 16 | 4.00 | 1.549 | .387 |
| | Management | 17 | 3.71 | 1.263 | .306 |
| Q121_Out_ven_team | Employee | 16 | 4.56 | 1.861 | .465 |
| | Management | 17 | 4.71 | 1.160 | .281 |
| Q122_Off_accurate | Employee | 16 | 3.38 | 2.062 | .515 |
| | Management | 17 | 5.18 | 1.976 | .479 |
| Q123_Out_ven_accurate | Employee | 16 | 4.13 | .957 | .239 |
| | Management | 17 | 3.12 | 1.799 | .436 |
| Q124_Out_ven_complete | Employee | 16 | 2.88 | 1.857 | .464 |
| | Management | 17 | 2.88 | 1.495 | .363 |
| Q125_Out_ven_credible | Employee | 16 | 4.19 | 1.515 | .379 |
| | Management | 17 | 3.94 | 1.853 | .449 |
| Q126_Out_comm_timely | Employee | 16 | 4.06 | .854 | .213 |
| | Management | 17 | 2.88 | 1.654 | .401 |
| Q127_Out_ven_efficiently | Employee | 16 | 4.06 | .998 | .249 |
| | Management | 15 | 3.67 | 1.877 | .485 |
| Q128_Out_leadership | Employee | 16 | 3.06 | 1.181 | .295 |
| | Management | 17 | 2.35 | 1.539 | .373 |
| Q129_Out_quality_work | Employee | 16 | 3.69 | 1.195 | .299 |
| | Management | 17 | 3.00 | 1.936 | .470 |
| Q130_within_budget | Employee | 16 | 4.38 | .719 | .180 |
| | Management | 17 | 4.71 | 1.649 | .400 |
| Q131_litt_bus_man | Employee | 16 | 2.81 | .834 | .209 |
| | Management | 17 | 1.76 | 1.033 | .250 |
| Q132_funct_supp | Employee | 16 | 2.63 | .957 | .239 |
| | Management | 17 | 2.12 | 1.166 | .283 |
| Q133_Proj_goals | Employee | 16 | 3.81 | .834 | .209 |
| | Management | 17 | 4.00 | 1.696 | .411 |
| Q134_inn_creative | Employee | 16 | 3.56 | .964 | .241 |
| | Management | 17 | 2.53 | 1.700 | .412 |
| Q135_Ven_Bus_Pro_p12 | Employee | 16 | 3.13 | 1.025 | .256 |
| | Management | 17 | 2.35 | 1.656 | .402 |

Table I.11: Group statistics — Impact of outsourcing Q 101 to 135

**Independent Samples Test — Impact of Outsourcing**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
|---|---|---|---|---|---|---|---|---|---|---|
| Q101_Out_partner_bene_p11 | Equal variances assumed | 2.955 | .096 | 2.234 | 31 | .033 | 1.162 | .520 | .101 | 2.223 |
| | Equal variances not assumed | | | 2.255 | 29.236 | .032 | 1.162 | .515 | .109 | 2.215 |
| Q102_Out_par_assist | Equal variances assumed | 2.144 | .153 | 1.178 | 31 | .248 | .728 | .618 | -.533 | 1.989 |
| | Equal variances not assumed | | | 1.185 | 30.450 | .245 | .728 | .614 | -.526 | 1.982 |
| Q103_Out_par_sincere | Equal variances assumed | 6.002 | .020 | -.322 | 31 | .750 | -.202 | .629 | -1.484 | 1.080 |
| | Equal variances not assumed | | | -.328 | 23.302 | .746 | -.202 | .617 | -1.477 | 1.072 |
| Q104_Out_pat_ethical | Equal variances assumed | 4.854 | .035 | 2.595 | 31 | .014 | 1.375 | .530 | .294 | 2.456 |
| | Equal variances not assumed | | | 2.653 | 21.484 | .015 | 1.375 | .518 | .299 | 2.451 |
| Q105_Relationship_trust | Equal variances assumed | 1.269 | .269 | -.228 | 31 | .821 | -.118 | .515 | -1.168 | .933 |
| | Equal variances not assumed | | | -.229 | 30.987 | .820 | -.118 | .514 | -1.165 | .930 |

**...cont'd**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q106_Relationship_contract | Equal variances assumed | .476 | .495 | -.876 | 31 | .388 | -.460 | .525 | -1.529 | .610 |
| | Equal variances not assumed | | | -.879 | 30.950 | .386 | -.460 | .523 | -1.526 | .607 |
| Q107_Out_Partner_commitments | Equal variances assumed | 15.650 | .000 | -.201 | 31 | .842 | -.107 | .531 | -1.189 | .976 |
| | Equal variances not assumed | | | -.205 | 23.093 | .839 | -.107 | .520 | -1.183 | .969 |
| Q108_Out_Par_relationship | Equal variances assumed | 2.490 | .125 | -1.658 | 31 | .107 | -.643 | .388 | -1.435 | .148 |
| | Equal variances not assumed | | | -1.668 | 30.477 | .106 | -.643 | .386 | -1.431 | .144 |
| Q109_Bus108_comm_relationship | Equal variances assumed | .403 | .530 | .296 | 31 | .769 | .184 | .621 | -1.084 | 1.451 |
| | Equal variances not assumed | | | .297 | 30.685 | .768 | .184 | .618 | -1.078 | 1.445 |
| Q110_Both_sustain | Equal variances assumed | 2.724 | .109 | .601 | 31 | .552 | .316 | .526 | -.757 | 1.389 |
| | Equal variances not assumed | | | .606 | 30.023 | .549 | .316 | .522 | -.750 | 1.382 |

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q111_Both_freely_excha | Equal variances assumed | .971 | .332 | -1.804 | 31 | .081 | -.915 | .508 | -1.951 | .120 |
| | Equal variances not assumed | | | -1.807 | 30.999 | .080 | -.915 | .507 | -1.949 | .118 |
| Q112_Corporate_clashes | Equal variances assumed | 4.674 | .038 | -.982 | 31 | .334 | -.596 | .606 | -1.833 | .641 |
| | Equal variances not assumed | | | -.994 | 28.055 | .329 | -.596 | .599 | -1.823 | .632 |
| Q113_Diff_rules_disagreements | Equal variances assumed | .598 | .445 | -.552 | 31 | .585 | -.357 | .646 | -1.673 | .960 |
| | Equal variances not assumed | | | -.555 | 30.691 | .583 | -.357 | .642 | -1.667 | .954 |
| Q114_Diff_processes_disagreements | Equal variances assumed | .219 | .643 | -.826 | 31 | .415 | -.478 | .579 | -1.659 | .703 |
| | Equal variances not assumed | | | -.829 | 30.843 | .413 | -.478 | .576 | -1.654 | .698 |
| Q115_the_Per_Rev | Equal variances assumed | 1.025 | .319 | -.759 | 31 | .454 | -.357 | .470 | -1.315 | .602 |
| | Equal variances not assumed | | | -.761 | 30.984 | .453 | -.357 | .469 | -1.313 | .600 |

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | Sig. (2-tailed) | Mean Differenc e | Std. Error Differenc e | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | | | | | Lower | Upper |
| Q116_Fee dback_revi ew_p11 | Equal variances assumed | 4.056 | .053 | -3.013 | 31 | .005 | -1.827 | .607 | -3.064 | -.590 | |
| | Equal variances not assumed | | | -2.970 | 24.667 | .007 | -1.827 | .615 | -3.095 | -.559 | |
| Q117_Prob lem_Sol_joi n_p12 | Equal variances assumed | .002 | .962 | -.057 | 31 | .955 | -.033 | .581 | -1.218 | 1.151 | |
| | Equal variances not assumed | | | -.057 | 29.735 | .955 | -.033 | .583 | -1.225 | 1.159 | |
| Q118_Deci s_joint_exe | Equal variances assumed | .022 | .883 | .632 | 31 | .532 | .301 | .477 | -.672 | 1.275 | |
| | Equal variances not assumed | | | .630 | 30.584 | .533 | .301 | .478 | -.674 | 1.277 | |
| Q119_Com m_busines s_strong | Equal variances assumed | 2.768 | .106 | -1.295 | 31 | .205 | -.537 | .414 | -1.382 | .308 | |
| | Equal variances not assumed | | | -1.313 | 27.057 | .200 | -.537 | .409 | -1.375 | .302 | |
| Q120_Busi n_works_w ell | Equal variances assumed | .982 | .329 | .599 | 31 | .553 | .294 | .491 | -.707 | 1.295 | |
| | Equal variances not assumed | | | .596 | 29.000 | .556 | .294 | .494 | -.716 | 1.304 | |

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Mean Differenc e | Std. Error Differenc e | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | | | | Lower | Upper |
| Q121_Out_ven_team | Equal variances assumed | 3.426 | .074 | -.267 | 31 | .791 | -.143 | .536 | -1.237 | .950 | |
| | Equal variances not assumed | | | -.264 | 24.861 | .794 | -.143 | .544 | -1.263 | .977 | |
| Q122_Off_accurate | Equal variances assumed | .380 | .542 | -2.563 | 31 | .015 | -1.801 | .703 | -3.235 | -.368 | |
| | Equal variances not assumed | | | -2.560 | 30.663 | .016 | -1.801 | .704 | -3.237 | -.365 | |
| Q123_Out_ven_accurate | Equal variances assumed | 9.384 | .005 | 1.989 | 31 | .056 | 1.007 | .506 | -.025 | 2.040 | |
| | Equal variances not assumed | | | 2.024 | 24.696 | .054 | 1.007 | .498 | -.018 | 2.033 | |
| Q124_Out_ven_complete | Equal variances assumed | .104 | .749 | -.013 | 31 | .990 | -.007 | .585 | -1.201 | 1.186 | |
| | Equal variances not assumed | | | -.012 | 28.824 | .990 | -.007 | .589 | -1.213 | 1.198 | |
| Q125_Out_ven_credible | Equal variances assumed | .230 | .635 | .416 | 31 | .680 | .246 | .591 | -.960 | 1.453 | |
| | Equal variances not assumed | | | .419 | 30.428 | .678 | .246 | .588 | -.953 | 1.446 | |

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | | Lower | Upper |
| Q126_Out_comm_timely | Equal variances assumed | 20.686 | .000 | 2.551 | 31 | .016 | 1.180 | .463 | | .236 | 2.124 |
| | Equal variances not assumed | | | 2.597 | 24.270 | .016 | 1.180 | .454 | | .243 | 2.117 |
| Q127_Out_ven_efficiently | Equal variances assumed | 8.979 | .006 | .740 | 29 | .465 | .396 | .535 | | -.698 | 1.490 |
| | Equal variances not assumed | | | .726 | 21.024 | .476 | .396 | .545 | | -.738 | 1.529 |
| Q128_Out_leadership | Equal variances assumed | 4.230 | .048 | 1.479 | 31 | .149 | .710 | .480 | | -.269 | 1.688 |
| | Equal variances not assumed | | | 1.491 | 29.836 | .146 | .710 | .476 | | -.263 | 1.682 |
| Q129_Out_quality_work | Equal variances assumed | 5.354 | .027 | 1.218 | 31 | .232 | .688 | .565 | | -.464 | 1.839 |
| | Equal variances not assumed | | | 1.235 | 26.880 | .228 | .688 | .557 | | -.455 | 1.830 |
| Q130_within_budget | Equal variances assumed | 6.645 | .015 | -.739 | 31 | .466 | -.331 | .448 | | -1.245 | .583 |
| | Equal variances not assumed | | | -.754 | 22.147 | .459 | -.331 | .439 | | -1.240 | .578 |

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | | Lower | Upper |
| Q131_litt_bus_man | Equal variances assumed | 2.762 | .107 | 3.194 | 31 | .003 | 1.048 | .328 | | .379 | 1.717 |
| | Equal variances not assumed | | | 3.215 | 30.328 | .003 | 1.048 | .326 | | .383 | 1.713 |
| Q132_funct_supp | Equal variances assumed | 3.055 | .090 | 1.361 | 31 | .183 | .507 | .373 | | -.253 | 1.268 |
| | Equal variances not assumed | | | 1.369 | 30.459 | .181 | .507 | .371 | | -.249 | 1.264 |
| Q133_Proj_goals | Equal variances assumed | 9.601 | .004 | -.399 | 31 | .693 | -.188 | .470 | | -1.146 | .771 |
| | Equal variances not assumed | | | -.407 | 23.621 | .688 | -.188 | .461 | | -1.140 | .765 |
| Q134_inn_creative | Equal variances assumed | 7.655 | .009 | 2.129 | 31 | .041 | 1.033 | .485 | | .043 | 2.023 |
| | Equal variances not assumed | | | 2.163 | 25.611 | .040 | 1.033 | .478 | | .051 | 2.015 |
| Q135_Ven_Bus_Pro_p12 | Equal variances assumed | 5.680 | .023 | 1.598 | 31 | .120 | .772 | .483 | | -.213 | 1.757 |
| | Equal variances not assumed | | | 1.621 | 26.914 | .117 | .772 | .476 | | -.206 | 1.750 |

Table I.12: Independent samples test — Impact of outsourcing Q 101 to 135

**Group Statistics — Switching Costs**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q136_Bus_Diff_inter_staff_p13 | Employee | 16 | 2.63 | 1.544 | .386 |
| | Management | 17 | 5.06 | 2.164 | .525 |
| Q137_Cost_inter_incre | Employee | 16 | 2.56 | 1.365 | .341 |
| | Management | 17 | 3.24 | 1.480 | .359 |
| Q138_Cost_train_incre | Employee | 16 | 2.69 | 1.621 | .405 |
| | Management | 17 | 2.41 | 1.622 | .394 |
| Q139_lost_interest | Employee | 16 | 3.88 | 1.408 | .352 |
| | Management | 17 | 4.41 | 1.583 | .384 |
| Q140_Out_Part_perf | Employee | 16 | 3.50 | 1.966 | .492 |
| | Management | 17 | 2.24 | 1.437 | .349 |
| Q141_Term_Conp_p13 | Employee | 16 | 2.88 | 1.928 | .482 |
| | Management | 17 | 3.65 | 2.317 | .562 |

Table I.13: Group statistics — Switching costs Q 136 to 141

**Independent Samples Test — Switching Costs**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q136_Bus _Diff_inter _staff_p13 | Equal variances assumed | 3.132 | .087 | -3.698 | 31 | .001 | -2.434 | .658 | -3.776 | -1.091 |
| | Equal variances not assumed | | | -3.736 | 28.951 | .001 | -2.434 | .652 | -3.766 | -1.101 |
| Q137_Co st_inter_in cre | Equal variances assumed | .433 | .515 | -1.355 | 31 | .185 | -.673 | .497 | -1.685 | .340 |
| | Equal variances not assumed | | | -1.358 | 30.989 | .184 | -.673 | .495 | -1.683 | .337 |
| Q138_Co st_train_in cre | Equal variances assumed | .306 | .584 | .488 | 31 | .629 | .276 | .565 | -.877 | 1.428 |
| | Equal variances not assumed | | | .488 | 30.881 | .629 | .276 | .565 | -.877 | 1.428 |
| Q139_lost _interest | Equal variances assumed | .064 | .801 | -1.026 | 31 | .313 | -.537 | .523 | -1.603 | .530 |
| | Equal variances not assumed | | | -1.030 | 30.908 | .311 | -.537 | .521 | -1.599 | .526 |
| Q140_Out _Part_perf | Equal variances assumed | .177 | .677 | 2.119 | 31 | .042 | 1.265 | .597 | .047 | 2.482 |
| | Equal variances not assumed | | | 2.099 | 27.387 | .045 | 1.265 | .603 | .029 | 2.500 |
| Q141_Ter m_Conp_ p13 | Equal variances assumed | .815 | .373 | -1.037 | 31 | .308 | -.772 | .745 | -2.291 | .746 |
| | Equal variances not assumed | | | -1.043 | 30.559 | .305 | -.772 | .740 | -2.283 | .739 |

Table I.14: Independent samples test — Switching costs Q 136 to 141

**Group Statistics — Changing Outsourcing Partner / Benefits**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q142_Cha_lack_of_support_p14 | Employee | 16 | 4.69 | 2.651 | .663 |
| | Management | 17 | 3.47 | 2.809 | .681 |
| Q143_When_made_difficult | Employee | 16 | 4.19 | 2.664 | .666 |
| | Management | 17 | 3.00 | 2.622 | .636 |
| Q144_When_withheld_infor | Employee | 16 | 3.94 | 2.265 | .566 |
| | Management | 17 | 3.35 | 2.914 | .707 |
| Q145_When_held_documentation | Employee | 16 | 3.88 | 2.446 | .612 |
| | Management | 17 | 3.35 | 2.914 | .707 |
| Q146_After_another_contract | Employee | 16 | 5.06 | 2.516 | .629 |
| | Management | 17 | 2.29 | 3.037 | .736 |
| Q147_TT_PV_info | Employee | 16 | 3.63 | 2.680 | .670 |
| | Management | 17 | 2.82 | 3.005 | .729 |
| Q148_TT_other_previous | Employee | 16 | 4.88 | 2.247 | .562 |
| | Management | 17 | 3.00 | 2.872 | .697 |
| Q149_TT_Lack_Documentation | Employee | 16 | 5.00 | 2.129 | .532 |
| | Management | 17 | 3.94 | 3.172 | .769 |
| Q150_TT_Lack_internal_process | Employee | 16 | 5.19 | 2.040 | .510 |
| | Management | 17 | 3.76 | 2.927 | .710 |
| Q151_TT_Lack_staff | Employee | 16 | 4.94 | 1.843 | .461 |
| | Management | 17 | 2.65 | 2.893 | .702 |
| Q152_LOS_Reluct | Employee | 16 | 4.38 | 2.579 | .645 |
| | Management | 17 | 2.47 | 2.918 | .708 |
| Q153_LOS_local | Employee | 16 | 4.75 | 2.206 | .552 |
| | Management | 17 | 2.71 | 2.867 | .695 |
| Q154_LOS_lacking | Employee | 16 | 5.88 | 1.455 | .364 |
| | Management | 17 | 2.88 | 2.913 | .706 |
| Q155_LOS_inhouse | Employee | 16 | 4.69 | 2.213 | .553 |
| | Management | 17 | 2.47 | 2.741 | .665 |
| Q156_LOS_policies_p14 | Employee | 16 | 4.50 | 2.658 | .665 |
| | Management | 17 | 2.35 | 2.448 | .594 |

Table I.15: Group Statistics — Changing outsourcing partners/benefits Q 142 to 156

### Independent Samples Test — Changing Outsourcing Partner / Benefits

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q142_Cha_lack_of_support_p14 | Equal variances assumed | .525 | .474 | 1.278 | 31 | .211 | 1.217 | .952 | -.725 | 3.159 |
| | Equal variances not assumed | | | 1.280 | 30.999 | .210 | 1.217 | .950 | -.722 | 3.155 |
| Q143_When_made_difficult | Equal variances assumed | .526 | .474 | 1.290 | 31 | .207 | 1.188 | .920 | -.690 | 3.065 |
| | Equal variances not assumed | | | 1.290 | 30.811 | .207 | 1.188 | .921 | -.691 | 3.066 |
| Q144_When_withheld_infor | Equal variances assumed | 3.123 | .087 | .641 | 31 | .527 | .585 | .913 | -1.277 | 2.446 |
| | Equal variances not assumed | | | .645 | 29.962 | .524 | .585 | .906 | -1.265 | 2.434 |
| Q145_When_held_documentation | Equal variances assumed | 1.411 | .244 | .556 | 31 | .583 | .522 | .940 | -1.394 | 2.439 |
| | Equal variances not assumed | | | .559 | 30.619 | .581 | .522 | .935 | -1.385 | 2.429 |
| Q146_After_another_contract | Equal variances assumed | 3.006 | .093 | 2.842 | 31 | .008 | 2.768 | .974 | .782 | 4.755 |
| | Equal variances not assumed | | | 2.858 | 30.528 | .008 | 2.768 | .968 | .792 | 4.745 |
| Q147_TT_PV_info | Equal variances assumed | 1.814 | .188 | .807 | 31 | .426 | .801 | .994 | -1.225 | 2.828 |
| | Equal variances not assumed | | | .810 | 30.918 | .424 | .801 | .990 | -1.218 | 2.821 |

**...cont'd**

**...cont'd**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | | |
| | | | | | | | | | Lower | Upper |
| Q148_TT_other_previous | Equal variances assumed | 3.390 | .075 | 2.079 | 31 | .046 | 1.875 | .902 | .036 | 3.714 |
| | Equal variances not assumed | | | 2.095 | 30.030 | .045 | 1.875 | .895 | .047 | 3.703 |
| Q149_TT_Lack_Documentation | Equal variances assumed | 9.778 | .004 | 1.119 | 31 | .272 | 1.059 | .947 | -.872 | 2.989 |
| | Equal variances not assumed | | | 1.132 | 28.115 | .267 | 1.059 | .935 | -.857 | 2.975 |
| Q150_TT_Lack_internal_process | Equal variances assumed | 8.076 | .008 | 1.610 | 31 | .117 | 1.423 | .884 | -.379 | 3.225 |
| | Equal variances not assumed | | | 1.628 | 28.642 | .115 | 1.423 | .874 | -.366 | 3.211 |
| Q151_TT_Lack_staff | Equal variances assumed | 11.081 | .002 | 2.693 | 31 | .011 | 2.290 | .850 | .556 | 4.025 |
| | Equal variances not assumed | | | 2.729 | 27.349 | .011 | 2.290 | .839 | .569 | 4.012 |

**...cont'd**

**...cont'd**

|  |  | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | | |
|  |  |  |  |  |  |  |  |  | Lower | Upper |
| Q152_LOS_Reluct | Equal variances assumed | 2.151 | .153 | 1.982 | 31 | .056 | 1.904 | .961 | -.056 | 3.864 |
|  | Equal variances not assumed |  |  | 1.989 | 30.886 | .056 | 1.904 | .957 | -.048 | 3.857 |
| Q153_LOS_local | Equal variances assumed | 5.209 | .029 | 2.285 | 31 | .029 | 2.044 | .895 | .219 | 3.869 |
|  | Equal variances not assumed |  |  | 2.303 | 29.858 | .028 | 2.044 | .888 | .231 | 3.857 |
| Q154_LOS_lacking | Equal variances assumed | 25.354 | .000 | 3.696 | 31 | .001 | 2.993 | .810 | 1.341 | 4.644 |
|  | Equal variances not assumed |  |  | 3.766 | 23.820 | .001 | 2.993 | .795 | 1.352 | 4.633 |
| Q155_LOS_inhouse | Equal variances assumed | 2.004 | .167 | 2.546 | 31 | .016 | 2.217 | .871 | .441 | 3.993 |
|  | Equal variances not assumed |  |  | 2.563 | 30.321 | .016 | 2.217 | .865 | .451 | 3.982 |
| Q156_LOS_policies_p14 | Equal variances assumed | .102 | .752 | 2.415 | 31 | .022 | 2.147 | .889 | .334 | 3.960 |
|  | Equal variances not assumed |  |  | 2.409 | 30.365 | .022 | 2.147 | .891 | .328 | 3.966 |

Table I.16: Independent Samples Test — Changing Outsourcing Partners/ Benefits Q 142 to 156

**Group Statistics — Back Sourcing / Switching Costs**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q157_Int_Team_time_p15 | Employee | 14 | 4.43 | 1.399 | .374 |
| | Management | 17 | 3.59 | 2.575 | .625 |
| Q158_we_Hire_Exp | Employee | 13 | 3.77 | 1.922 | .533 |
| | Management | 16 | 2.88 | 2.391 | .598 |
| Q159_Service_IP | Employee | 13 | 2.23 | 1.363 | .378 |
| | Management | 16 | 1.63 | 1.544 | .386 |
| Q160_Back_sourc_skills | Employee | 13 | 3.15 | 1.994 | .553 |
| | Management | 16 | 2.13 | 2.705 | .676 |
| Q161_In_house_different | Employee | 13 | 3.85 | 1.864 | .517 |
| | Management | 16 | 3.13 | 2.895 | .724 |
| Q162_In_house_simpler_process | Employee | 13 | 5.31 | 1.377 | .382 |
| | Management | 16 | 3.38 | 3.500 | .875 |
| Q163_DIS_busin_preform | Employee | 13 | 2.85 | 1.463 | .406 |
| | Management | 16 | 1.50 | 1.932 | .483 |
| Q164_DIS_performance | Employee | 13 | 3.92 | 1.498 | .415 |
| | Management | 16 | 1.75 | 2.236 | .559 |
| Q165_DIS_internal_staff | Employee | 13 | 3.62 | 2.293 | .636 |
| | Management | 16 | 2.00 | 2.733 | .683 |
| Q166_DIS_internal_process | Employee | 13 | 3.31 | 2.136 | .593 |
| | Management | 16 | 2.50 | 2.875 | .719 |
| Q167_DIS_internal_staff_availa | Employee | 13 | 4.38 | 2.063 | .572 |
| | Management | 16 | 2.88 | 3.117 | .779 |
| Q168_DIS_not_applicable | Employee | | | | |
| | Management | | | | |
| Q169_we_Lost_Sign_Mon | Employee | 13 | 5.15 | 1.345 | .373 |
| | Management | 16 | 3.38 | 3.500 | .875 |

**...cont'd**

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**Group Statistics — Back Sourcing / Switching Costs**

| | Position | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Q170_After_Swit_Out_Part_p15 | Employee | 13 | 4.00 | 1.633 | .453 |
| | Management | 16 | 2.13 | 2.754 | .688 |
| Q171_When_Con_Swit_p16 | Employee | 16 | 4.38 | 1.746 | .437 |
| | Management | 17 | 3.00 | 2.806 | .681 |
| Q172_Rele_Dev_Lost | Employee | 16 | 5.38 | .885 | .221 |
| | Management | 17 | 3.94 | 3.030 | .735 |
| Q173_Lost_Know | Employee | 16 | 4.63 | 1.708 | .427 |
| | Management | 17 | 4.88 | 2.891 | .701 |
| Q174_NST_setup | Employee | 16 | 4.50 | 1.414 | .354 |
| | Management | 17 | 4.53 | 2.787 | .676 |
| Q175_NST_internal_Process | Employee | 16 | 4.69 | 1.448 | .362 |
| | Management | 17 | 4.41 | 2.740 | .665 |
| Q176_NST_provide_support | Employee | 16 | 3.94 | 1.914 | .478 |
| | Management | 17 | 1.76 | 1.821 | .442 |
| Q177_NST_Addi_Train_p16 | Employee | 16 | 4.25 | 1.807 | .452 |
| | Management | 17 | 3.24 | 2.751 | .667 |

Table I.17: Group statistics — Back sourcing/switching costs Q 157 to 177

**Independent Samples Test — Back sourcing / Switching Costs**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q157_Int_Team_ time_p15 | Equal variances assumed | 4.595 | .041 | 1.093 | 29 | .283 | .840 | .769 | -.732 | 2.412 |
| | Equal variances not assumed | | | 1.154 | 25.489 | .259 | .840 | .728 | -.657 | 2.338 |
| Q158_we_Hire_ Exp | Equal variances assumed | 3.167 | .086 | 1.091 | 27 | .285 | .894 | .820 | -.787 | 2.576 |
| | Equal variances not assumed | | | 1.117 | 27.000 | .274 | .894 | .801 | -.749 | 2.537 |
| Q159_Service_IP | Equal variances assumed | .272 | .606 | 1.106 | 27 | .278 | .606 | .548 | -.518 | 1.729 |
| | Equal variances not assumed | | | 1.121 | 26.777 | .272 | .606 | .540 | -.503 | 1.715 |
| Q160_Back_sour c_skills | Equal variances assumed | 3.632 | .067 | 1.141 | 27 | .264 | 1.029 | .902 | -.821 | 2.879 |
| | Equal variances not assumed | | | 1.178 | 26.792 | .249 | 1.029 | .874 | -.764 | 2.822 |
| Q161_In_house_ different | Equal variances assumed | 8.979 | .006 | .776 | 27 | .445 | .721 | .930 | -1.187 | 2.629 |
| | Equal variances not assumed | | | .811 | 25.811 | .425 | .721 | .890 | -1.108 | 2.550 |
| Q162_In_house_ simpler_process | Equal variances assumed | 103.694 | .000 | 1.872 | 27 | .072 | 1.933 | 1.033 | -.186 | 4.052 |
| | Equal variances not assumed | | | 2.024 | 20.340 | .056 | 1.933 | .955 | -.057 | 3.922 |

**...cont'd**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q163_DIS_busin_preform | Equal variances assumed | .319 | .577 | 2.073 | 27 | .048 | 1.346 | .649 | .013 | 2.679 |
| | Equal variances not assumed | | | 2.134 | 26.898 | .042 | 1.346 | .631 | .051 | 2.641 |
| Q164_DIS_performance | Equal variances assumed | .407 | .529 | 2.995 | 27 | .006 | 2.173 | .725 | .685 | 3.662 |
| | Equal variances not assumed | | | 3.120 | 26.167 | .004 | 2.173 | .696 | .742 | 3.604 |
| Q165_DIS_internal_staff | Equal variances assumed | .463 | .502 | 1.699 | 27 | .101 | 1.615 | .951 | -.336 | 3.566 |
| | Equal variances not assumed | | | 1.731 | 26.957 | .095 | 1.615 | .933 | -.300 | 3.530 |
| Q166_DIS_internal_process | Equal variances assumed | 5.076 | .033 | .841 | 27 | .408 | .808 | .961 | -1.164 | 2.779 |
| | Equal variances not assumed | | | .867 | 26.827 | .394 | .808 | .932 | -1.104 | 2.720 |
| Q167_DIS_internal_staff_availa | Equal variances assumed | 8.907 | .006 | 1.497 | 27 | .146 | 1.510 | 1.008 | -.559 | 3.578 |
| | Equal variances not assumed | | | 1.561 | 26.064 | .130 | 1.510 | .967 | -.477 | 3.497 |
| Q168_DIS_not_applicable | Equal variances assumed | | | | | | | | | 34.274 |
| | Equal variances not assumed | | | | | | | | | 37.686 |

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Q169_we_Lost_Sign_Mon | Equal variances assumed | 130.068 | .000 | 1.727 | 27 | .096 | 1.779 | 1.030 | -.335 | 3.892 |
| | Equal variances not assumed | | | 1.870 | 20.114 | .076 | 1.779 | .951 | -.204 | 3.762 |
| Q170_After_Swit_Out_Part_p15 | Equal variances assumed | 3.581 | .069 | 2.161 | 27 | .040 | 1.875 | .868 | .095 | 3.655 |
| | Equal variances not assumed | | | 2.275 | 24.951 | .032 | 1.875 | .824 | .178 | 3.572 |
| Q171_When_Con_Swit_p16 | Equal variances assumed | 13.764 | .001 | 1.677 | 31 | .104 | 1.375 | .820 | -.297 | 3.047 |
| | Equal variances not assumed | | | 1.700 | 27.001 | .101 | 1.375 | .809 | -.284 | 3.034 |
| Q172_Rele_Dev_Lost | Equal variances assumed | 53.237 | .000 | 1.819 | 31 | .079 | 1.434 | .788 | -.173 | 3.041 |
| | Equal variances not assumed | | | 1.868 | 18.866 | .077 | 1.434 | .768 | -.174 | 3.041 |
| Q173_Lost_Know | Equal variances assumed | 4.646 | .039 | -.309 | 31 | .760 | -.257 | .834 | -1.957 | 1.443 |
| | Equal variances not assumed | | | -.313 | 26.218 | .756 | -.257 | .821 | -1.944 | 1.430 |
| Q174_NST_setup | Equal variances assumed | 6.462 | .016 | -.038 | 31 | .970 | -.029 | .777 | -1.614 | 1.555 |
| | Equal variances not assumed | | | -.039 | 24.036 | .970 | -.029 | .763 | -1.603 | 1.545 |
| Q175_NST_internal_Process | Equal variances assumed | 5.656 | .024 | .358 | 31 | .723 | .276 | .770 | -1.295 | 1.846 |
| | Equal variances not assumed | | | .364 | 24.592 | .719 | .276 | .757 | -1.284 | 1.836 |
| Q176_NST_provide_support | Equal variances assumed | .072 | .790 | 3.342 | 31 | .002 | 2.173 | .650 | .847 | 3.499 |
| | Equal variances not assumed | | | 3.337 | 30.615 | .002 | 2.173 | .651 | .844 | 3.501 |
| Q177_NST_Addi_Train_p16 | Equal variances assumed | 13.728 | .001 | 1.244 | 31 | .223 | 1.015 | .816 | -.649 | 2.679 |
| | Equal variances not assumed | | | 1.259 | 27.805 | .218 | 1.015 | .806 | -.636 | 2.666 |

Table I.18: Independent Samples Test — Back Sourcing / Switching Costs Q 157 to 177

# Appendix J — Iterations

## List of Tables

## J.1 Resources (5 iterations)

**Factor / Component 1 (Internal Strategic)**

38. Chief Information Officer was instrumental in the outsourcing decision

41. In-house IT support before outsourcing had − Lack of IT strategic direction

42. In-house IT support before outsourcing had − Lack of rigour

43. In-house IT support before outsourcing had − Project scope creep

44. In-house IT support before outsourcing had − Cost increases

45. In-house IT support before outsourcing had − Timelines increase

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .899 | .897 | 6 |

Table J.1: Reliability Statistics Internal Strategic

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.989 | 3.194 | 5.516 | 2.323 | 1.727 | 0.724 | 6 |
| Item Variances | 4.299 | 2.858 | 5.228 | 2.370 | 1.829 | 0.712 | 6 |
| Inter-Item Covariances | 2.571 | 1.030 | 4.047 | 3.017 | 3.929 | 0.985 | 6 |
| Inter-Item Correlations | 0.592 | 0.277 | 0.927 | 0.650 | 3.344 | 0.036 | 6 |

Table J.2: Summary Item Statistics Internal Strategic

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 514.645 | 30 | 17.155 | | |
| Within People | Between Items | 112.172 | 5 | 22.434 | 12.985 | .000 |
| | Residual | 259.161 | 150 | 1.728 | | |
| | Total | 371.333 | 155 | 2.396 | | |
| Total | | 885.978 | 185 | 4.789 | | |

Grand Mean = 3.99

**ANOVA with Cochran's Test =** 46.822

Table J.3: ANOVA Internal Strategic

**Factor / Component 2 (Lose Control)**

46. Outsourcing projects and support has caused organisation − To lose control of projects

47. Outsourcing projects and support has caused organisation − To lose control of requirements

48. Outsourcing projects and support has caused organisation − To lose ownership of projects.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .947 | .947 | 3 |

Table J.4: Reliability Statistics Lose Control

**Summary Item Statistics**

|  | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.677 | 3.364 | 3.848 | 0.485 | 1.144 | 0.074 | 3 |
| Item Variances | 4.154 | 4.008 | 4.301 | 0.294 | 1.073 | 0.022 | 3 |
| Inter-Item Covariances | 3.553 | 3.307 | 3.693 | 0.386 | 1.117 | 0.037 | 3 |
| Inter-Item Correlations | 0.856 | 0.796 | 0.897 | 0.100 | 1.126 | 0.002 | 3 |

Table J.5: Summary Item Statistics Lose Control

**ANOVA**

|  | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 360.323 | 32 | 11.260 |  |  |
| Within People Between Items | 4.869 | 2 | 2.434 | 4.050 | 0.022 |
| Residual | 38.465 | 64 | 0.601 |  |  |
| Total | 43.333 | 66 | 0.657 |  |  |
| Total | 403.657 | 98 | 4.119 |  |  |

Grand Mean = 3.68

Table J.6: ANOVA Lose Control

**Factor / Component 3 (CIO performance)**

39. Chief Information Officer has delivered excellent IT solutions

40. Chief Information Officer is considered effective

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .594 | .594 | 2 |

Table J.7: Reliability Statistics CIO performance

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.576 | 3.182 | 3.970 | 0.788 | 1.248 | 0.310 | 2 |
| Item Variances | 2.529 | 2.403 | 2.655 | 0.252 | 1.105 | 0.032 | 2 |
| Inter-Item Covariances | 1.068 | 1.068 | 1.068 | 0.000 | 1.000 | 0.000 | 2 |
| Inter-Item Correlations | 0.423 | 0.423 | 0.423 | 0.000 | 1.000 | 0.000 | 2 |

Table J.8: Summary Item Statistics CIO performance

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 115.121 | 32 | 3.598 | | |
| Within People Between Items | 10.242 | 1 | 10.242 | 7.010 | 0.012 |
| Residual | 46.758 | 32 | 1.461 | | |
| Total | 57.000 | 33 | 1.727 | | |
| Total | 172.121 | 65 | 2.648 | | |

Grand Mean = 3.58

Table J.9: ANOVA CIO performance

## Factor / Component 4 (Outsourcing Strategy)

35. Organisation is planning additional IT outsourcing in near future.

36. Organisation's outsourcing is aligned to business strategy

37. Organisation's outsourcing is aligned to technology strategy

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .685 | .688 | 3 |

## Table J.10: Reliability Statistics Outsourcing Strategy

**Summary Item Statistics**

|  | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 5.162 | 4.879 | 5.424 | .545 | 1.112 | .075 | 3 |
| Item Variances | 3.068 | 2.716 | 3.422 | .706 | 1.260 | .125 | 3 |
| Inter-Item Covariances | 1.290 | .866 | 2.085 | 1.220 | 2.409 | .380 | 3 |
| Inter-Item Correlations | .423 | .267 | .684 | .417 | 2.559 | .041 | 3 |

Table J.11: Summary Item Statistics Outsourcing Strategy

**ANOVA**

|  | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 180.747 | 32 | 5.648 |  |  |
| Within People Between Items | 4.929 | 2 | 2.465 | 1.387 | .257 |
| Residual | 113.737 | 64 | 1.777 |  |  |
| Total | 118.667 | 66 | 1.798 |  |  |
| Total | 299.414 | 98 | 3.055 |  |  |

Grand Mean = 5.16

Table J.12: ANOVA Outsourcing Strategy

## J.2 Details of Contracts

Only one component was extracted. The solution cannot be rotated.

**Benefits (8 iterations)**

**Factor / Component 1(Outsourcing Improvement)**

58. Outsourcing partner has shortened development life cycle

60. Outsourcing partner has improved service delivery times

64. Vendor is skilled in business processes

65. Outsourcing has created a competitive advantage between internal business units and outsourcing companies

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .873 | .876 | 4 |

Table J.13: Reliability Statistics Outsourcing Improvement

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2.387 | 2.161 | 2.516 | .355 | 1.164 | .024 | 4 |
| Item Variances | 1.710 | 1.273 | 2.052 | .778 | 1.611 | .105 | 4 |
| Inter-Item Covariances | 1.079 | .781 | 1.376 | .596 | 1.763 | .041 | 4 |
| Inter-Item Correlations | .639 | .517 | .850 | .333 | 1.643 | .014 | 4 |

Table J.14: Summary Item Statistics Outsourcing Improvement

**ANOVA**

|  | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 148.419 | 30 | 4.947 | | |
| Within People Between Items | 2.258 | 3 | .753 | 1.194 | .317 |
| Residual | 56.742 | 90 | .630 | | |
| Total | 59.000 | 93 | .634 | | |
| Total | 207.419 | 123 | 1.686 | | |

Grand Mean = 2.39

Table J.15: ANOVA Outsourcing Improvement

**Factor / Component 2 (Outsourcing Beneficial)**

61. Outsourcing partner has reduced total cost

62. Outsourcing has been beneficial from a business perspective

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .870 | .870 | 2 |

Table J.16: Reliability Statistics Outsourcing Beneficial

**Summary Item Statistics**

|  | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2.774 | 2.774 | 2.774 | .000 | 1.000 | .000 | 2 |
| Item Variances | 2.314 | 2.247 | 2.381 | .133 | 1.059 | .009 | 2 |
| Inter-Item Covariances | 1.781 | 1.781 | 1.781 | .000 | 1.000 | .000 | 2 |
| Inter-Item Correlations | .770 | .770 | .770 | .000 | 1.000 | .000 | 2 |

Table J.17: Summary Item Statistics Outsourcing Beneficial

**ANOVA**

|  | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 122.839 | 30 | 4.095 | | |
| Within People Between Items | .000 | 1 | .000 | .000 | 1.000 |
| Residual | 16.000 | 30 | .533 | | |
| Total | 16.000 | 31 | .516 | | |
| Total | 138.839 | 61 | 2.276 | | |

Grand Mean = 2.77

Table J.18: ANOVA Outsourcing Beneficial

## Factor / Component 3 (Outsourcing Quality)

59. Outsourcing partner has improved quality of application

63. Vendor is skilled in IT applications

66. Outsourcing has created a complex supply chain

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .558 | .563 | 3 |

Table J.19: Reliability Statistics Outsourcing Quality

**Summary Item Statistics**

|  | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.586 | 2.212 | 4.939 | 2.727 | 2.233 | 1.860 | 3 |
| Item Variances | 2.513 | 1.172 | 3.371 | 2.199 | 2.876 | 1.384 | 3 |
| Inter-Item Covariances | .744 | .201 | 1.288 | 1.087 | 6.415 | .236 | 3 |
| Inter-Item Correlations | .301 | .101 | .405 | .304 | 4.013 | .024 | 3 |

Table J.20: Summary Item Statistics Outsourcing Quality

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 128.020 | 32 | 4.001 | | |
| Within People Between Items | 122.747 | 2 | 61.374 | 34.683 | .000 |
| Residual | 113.253 | 64 | 1.770 | | |
| Total | 236.000 | 66 | 3.576 | | |
| Total | 364.020 | 98 | 3.714 | | |

Grand Mean = 3.59

Table J.21: ANOVA Outsourcing Quality

**Factor / Component 4 (Outsourcing Management)**

68. Management support for outsourcing is important for success.

(Only one component was extracted. The solution cannot be rotated).

## J.3 Issues with Outsourcing Partner (6 iterations)

**Factor / Component 1 (Vendor Management)**

72. Vendor management is very important and requires ongoing supervision

73. Support and enhancement of projects requires ongoing supervision

80. Business has lost expertise with outsourcing

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .775 | .796 | 3 |

Table J.22: Reliability Statistics Vendor Management

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 5.788 | 5.667 | 6.000 | .333 | 1.059 | .034 | 3 |
| Item Variances | 1.691 | 1.042 | 2.655 | 1.614 | 2.549 | .726 | 3 |
| Inter-Item Covariances | .903 | .625 | 1.083 | .458 | 1.733 | .048 | 3 |
| Inter-Item Correlations | .566 | .522 | .651 | .129 | 1.247 | .004 | 3 |

Table J.23: Summary Item Statistics Vendor Management

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 111.879 | 32 | 3.496 | | |
| Within People Between Items | 2.242 | 2 | 1.121 | 1.423 | .248 |
| Residual | 50.424 | 64 | .788 | | |
| Total | 52.667 | 66 | .798 | | |
| Total | 164.545 | 98 | 1.679 | | |

Grand Mean = 5.79

Table J.24: ANOVA Vendor Management

**Factor / Component 2 (Staff Morale)**

75. Onshore work is of better quality than offshore work

79. Staff morale has decreased with outsourcing

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .665 | .667 | 2 |

Table J.25: Reliability Statistics Staff Morale

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.833 | 4.515 | 5.152 | .636 | 1.141 | .202 | 2 |
| Item Variances | 3.914 | 3.570 | 4.258 | .688 | 1.193 | .236 | 2 |
| Inter-Item Covariances | 1.951 | 1.951 | 1.951 | .000 | 1.000 | .000 | 2 |
| Inter-Item Correlations | .500 | .500 | .500 | .000 | 1.000 | .000 | 2 |

Table J.26: Summary Item Statistics Staff Morale

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 187.667 | 32 | 5.865 | | |
| Within People Between Items | 6.682 | 1 | 6.682 | 3.404 | .074 |
| Residual | 62.818 | 32 | 1.963 | | |
| Total | 69.500 | 33 | 2.106 | | |
| Total | 257.167 | 65 | 3.956 | | |

Grand Mean = 4.83

Table J.27: ANOVA Staff Morale

**Factor / Component 3 (Organisational Support)**

74. Operation and expense management of vendor requires ongoing supervision

82. Organisational support from outsourcing partner has decreased over time

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .652 | .654 | 2 |

Table J.28: Reliability Statistics Organisational Support

**Summary Item Statistics**

|  | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.712 | 4.182 | 5.242 | 1.061 | 1.254 | .562 | 2 |
| Item Variances | 2.359 | 2.189 | 2.528 | .339 | 1.155 | .057 | 2 |
| Inter-Item Covariances | 1.142 | 1.142 | 1.142 | .000 | 1.000 | .000 | 2 |
| Inter-Item Correlations | .485 | .485 | .485 | .000 | 1.000 | .000 | 2 |

Table J.29: Summary Item Statistics Organisational Support

**ANOVA**

|  | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 112.030 | 32 | 3.501 | | |
| Within People | Between Items | 18.561 | 1 | 18.561 | 15.253 | .000 |
| | Residual | 38.939 | 32 | 1.217 | | |
| | Total | 57.500 | 33 | 1.742 | | |
| Total | | 169.530 | 65 | 2.608 | | |

Grand Mean = 4.71

Table J.30: ANOVA Organisational Support

**Factor / Component 4 (Outsourcing win/win)**

77. Outsourcing partner / vendor is able to provide flexibility with staffing

84. Outsourcing allows win/win in that business can concentrate on business and leave outsourcing partner to manage their contracted items

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .656 | .665 | 2 |

Table J.31: Reliability Statistics Outsourcing win/win

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.682 | 3.303 | 4.061 | .758 | 1.229 | .287 | 2 |
| Item Variances | 2.138 | 1.718 | 2.559 | .841 | 1.490 | .354 | 2 |
| Inter-Item Covariances | 1.044 | 1.044 | 1.044 | .000 | 1.000 | .000 | 2 |
| Inter-Item Correlations | .498 | .498 | .498 | .000 | 1.000 | .000 | 2 |

Table J.32: Summary Item Statistics Outsourcing win/win

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 101.818 | 32 | 3.182 | | |
| Within People Between Items | 9.470 | 1 | 9.470 | 8.651 | .006 |
| Residual | 35.030 | 32 | 1.095 | | |
| Total | 44.500 | 33 | 1.348 | | |
| Total | 146.318 | 65 | 2.251 | | |

Grand Mean = 3.68

Table J.33: ANOVA Outsourcing win/win

**Factor / Component 5 (Outsourcing Problems)**

71. Choosing wrong vendor has caused ongoing problems

79. Staff morale has decreased with outsourcing

81. Business has lost control with outsourcing

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .723 | .721 | 3 |

Table J.34: Reliability Statistics Outsourcing Problems

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.808 | 4.182 | 5.152 | .970 | 1.232 | .295 | 3 |
| Item Variances | 2.978 | 2.523 | 3.570 | 1.047 | 1.415 | .288 | 3 |
| Inter-Item Covariances | 1.386 | .955 | 2.159 | 1.205 | 2.262 | .360 | 3 |
| Inter-Item Correlations | .462 | .318 | .678 | .360 | 2.131 | .029 | 3 |

Table J.35: Summary Item Statistics Outsourcing Problems

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 184.020 | 32 | 5.751 | | |
| Within People Between Items | 19.475 | 2 | 9.737 | 6.118 | .004 |
| Residual | 101.859 | 64 | 1.592 | | |
| Total | 121.333 | 66 | 1.838 | | |
| Total | 305.354 | 98 | 3.116 | | |

Grand Mean = 4.81

Table J.36: ANOVA Outsourcing Problems

### J.4 Relationship between Vendor and Outsourcing Partner (17 iterations)

**Factor / Component 1 (Outsourcing Vendor)**

101. Outsourcing partner made decisions beneficial to us

102. Outsourcing partner provides assistance to business above contract requirements

120. Business support team works well with outsourcing vendor

122. Offshore outsourcing vendor are responsible for large portions of system development

128. Outsourcing vendor provided leadership

129. Outsourcing vendor provided quality work

131. Outsourcing vendor requires little business management

132. Outsourcing vendor requires little functional support

134. Outsourcing vendor was innovative and creative

135. Outsourcing vendor has improved business productivity

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .763 | .831 | 10 |

Table J.37: Reliability Statistics Outsourcing Vendor

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.073 | 2.273 | 4.303 | 2.030 | 1.893 | .400 | 10 |
| Item Variances | 2.355 | 1.142 | 4.780 | 3.638 | 4.186 | 1.114 | 10 |
| Inter-Item Covariances | .573 | -2.547 | 2.250 | 4.797 | -.883 | 1.240 | 10 |
| Inter-Item Correlations | .330 | -.736 | .772 | 1.507 | -1.049 | .176 | 10 |

Table J.38: Summary Item Statistics Outsourcing Vendor

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 240.255 | 32 | 7.508 | | |
| Within People Between Items | 118.800 | 9 | 13.200 | 7.408 | .000 |
| Residual | 513.200 | 288 | 1.782 | | |
| Total | 632.000 | 297 | 2.128 | | |
| Total | 872.255 | 329 | 2.651 | | |

Grand Mean = 3.07

Table J.39: ANOVA Outsourcing Vendor

**Factor / Component 2 (Outsourcing Vendor 2)**

103. Outsourcing partner is sincere in providing service

104. Outsourcing partner is ethical

107. Outsourcing partner keeps contract commitments

118. Decision making is a joint exercise between business and outsourcing vendor

123. Outsourcing vendor's communications are accurate

125. Outsourcing vendor's communications are credible

126. Outsourcing vendor's communications are timely

127. Outsourcing vendor operated efficiently

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .946 | .947 | 8 |

Table J.40: Reliability Statistics Outsourcing Vendor 2

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.056 | 3.516 | 4.710 | 1.194 | 1.339 | .191 | 8 |
| Item Variances | 2.499 | 1.966 | 3.252 | 1.286 | 1.654 | .217 | 8 |
| Inter-Item Covariances | 1.711 | 1.052 | 2.400 | 1.348 | 2.282 | .113 | 8 |
| Inter-Item Correlations | .690 | .450 | .876 | .426 | 1.947 | .012 | 8 |

Table J.41: Summary Item Statistics Outsourcing Vendor 2

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 434.210 | 30 | 14.474 | | |
| Within People Between Items | 41.468 | 7 | 5.924 | 7.515 | .000 |
| Residual | 165.532 | 210 | .788 | | |
| Total | 207.000 | 217 | .954 | | |
| Total | 641.210 | 247 | 2.596 | | |

Grand Mean = 4.06

Table J.42: ANOVA Outsourcing Vendor 2

**Factor / Component 3 (Vendor Problems)**

112. Corporate culture clashes between outsourcing partner and business are an ongoing issue

113. Different business rules between business and outsourcing partner causes disagreements

114. Different business processes between business and outsourcing partner causes disagreement

124. Outsourcing vendor's communications are complete

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .511 | .484 | 4 |

Table J.43: Reliability Statistics Vendor Problems

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.826 | 2.879 | 4.182 | 1.303 | 1.453 | .399 | 4 |
| Item Variances | 2.964 | 2.735 | 3.360 | .625 | 1.229 | .089 | 4 |
| Inter-Item Covariances | .613 | -1.790 | 2.922 | 4.712 | -1.633 | 4.658 | 4 |
| Inter-Item Correlations | .190 | -.622 | .964 | 1.586 | -1.550 | .526 | 4 |

Table J.44: Summary Item Statistics Vendor Problems

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 153.742 | 32 | 4.804 | | |
| Within People | Between Items | 39.538 | 3 | 13.179 | 5.605 | .001 |
| | Residual | 225.712 | 96 | 2.351 | | |
| | Total | 265.250 | 99 | 2.679 | | |
| Total | | 418.992 | 131 | 3.198 | | |

Grand Mean = 3.83

Table J.45: ANOVA Vendor Problems

**Factor / Component 4 (Business and Vendor)**

110. Both outsourcing partner and business commit resources to sustain relationship

115. The outsourcer's performance is reviewed on a regular basis

119. Communication between business and outsourcing vendor is strong

130. Outsourcing vendor provided work within budget

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .820 | .829 | 4 |

Table J.46: Reliability Statistics Business and Vendor

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.508 | 4.152 | 5.121 | .970 | 1.234 | .197 | 4 |
| Item Variances | 1.777 | 1.445 | 2.235 | .790 | 1.547 | .114 | 4 |
| Inter-Item Covariances | .947 | .756 | 1.186 | .430 | 1.569 | .031 | 4 |
| Inter-Item Correlations | .547 | .392 | .686 | .294 | 1.750 | .018 | 4 |

Table J.47: Summary Item Statistics Business and Vendor

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 147.742 | 32 | 4.617 | | |
| Within People Between Items | 19.538 | 3 | 6.513 | 7.843 | .000 |
| Residual | 79.712 | 96 | .830 | | |
| Total | 99.250 | 99 | 1.003 | | |
| Total | 246.992 | 131 | 1.885 | | |

Grand Mean = 4.51

Table J.48: ANOVA Business and Vendor

## Factor / Component 5 (Relationship)

108. Outsourcing partner is committed to relationship

111. Both outsourcing partner and business freely exchange information

117. Problem solving is a joint exercise between business and outsourcing vendor

122. Offshore outsourcing vendor are responsible for large portions of system development

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .183 | .403 | 4 |

Table J.49: Reliability Statistics Relationship

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.515 | 3.909 | 5.394 | 1.485 | 1.380 | .396 | 4 |
| Item Variances | 2.764 | 1.309 | 4.780 | 3.472 | 3.653 | 2.143 | 4 |
| Inter-Item Covariances | .146 | -1.330 | 1.199 | 2.528 | -.902 | 1.003 | 4 |
| Inter-Item Correlations | .144 | -.371 | .583 | .954 | -1.574 | .167 | 4 |

Table J.50: Summary Item Statistics Relationship

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 102.470 | 32 | 3.202 | | |
| Within People Between Items | 39.212 | 3 | 13.071 | 4.993 | .003 |
| Residual | 251.288 | 96 | 2.618 | | |
| Total | 290.500 | 99 | 2.934 | | |
| Total | 392.970 | 131 | 3.000 | | |

Grand Mean = 4.52

Table J.51: ANOVA Relationship

**Factor / Component 6 (Communication)**

116. Feedback is provided to the outsourcer following a review

122. Offshore outsourcing vendor are responsible for large portions of system development

126. Outsourcing vendor's communications are timely

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| -.172 | -.521 | 3 |

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Table J.52: Reliability Statistics Communication

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.212 | 3.455 | 4.879 | 1.424 | 1.412 | .513 | 3 |
| Item Variances | 3.549 | 2.068 | 4.780 | 2.712 | 2.311 | 1.885 | 3 |
| Inter-Item Covariances | -.182 | -1.506 | 1.850 | 3.356 | -1.229 | 2.555 | 3 |
| Inter-Item Correlations | -.129 | -.537 | .434 | .972 | -.808 | .203 | 3 |

Table J.53: Summary Item Statistics Communication

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 101.879 | 32 | 3.184 | | |
| Within People Between Items | 33.879 | 2 | 16.939 | 4.540 | .014 |
| Residual | 238.788 | 64 | 3.731 | | |
| Total | 272.667 | 66 | 4.131 | | |
| Total | 374.545 | 98 | 3.822 | | |

Grand Mean = 4.21

Table J.54: ANOVA Communication

**Factor / Component 7 (Relationship)**

105. Relationship between outsourcing partner and business is based on trust

133. Outsourcing vendor was able to meet project goals

135. Outsourcing vendor has improved business productivity

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .717 | .724 | 3 |

Table J.55: Reliability Statistics Relationship

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2.687 | 2.273 | 3.061 | .788 | 1.347 | .156 | 3 |
| Item Variances | 1.760 | 1.142 | 2.121 | .979 | 1.857 | .289 | 3 |
| Inter-Item Covariances | .807 | .420 | 1.080 | .659 | 2.568 | .095 | 3 |
| Inter-Item Correlations | .466 | .270 | .606 | .336 | 2.245 | .024 | 3 |

Table J.56: Summary Item Statistics Relationship

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 107.960 | 32 | 3.374 | | |
| Within People Between Items | 10.323 | 2 | 5.162 | 5.415 | .007 |
| Residual | 61.010 | 64 | .953 | | |
| Total | 71.333 | 66 | 1.081 | | |
| Total | 179.293 | 98 | 1.830 | | |

Grand Mean = 2.69

Table J.57: ANOVA Relationship

## Factor / Component 8 (Committed)

109. Business units are committed to relationship with outsourcing partners

115. The outsourcer's performance is reviewed on a regular basis

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| -.056 | -.058 | 2 |

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Table J.58: Reliability Statistics Committed

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.076 | 3.030 | 5.121 | 2.091 | 1.690 | 2.186 | 2 |
| Item Variances | 2.445 | 1.797 | 3.093 | 1.295 | 1.721 | .839 | 2 |
| Inter-Item Covariances | -.066 | -.066 | -.066 | .000 | 1.000 | .000 | 2 |
| Inter-Item Correlations | -.028 | -.028 | -.028 | .000 | 1.000 | .000 | 2 |

Table J.59: Summary Item Statistics Committed

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 76.121 | 32 | 2.379 | | |
| Within People | Between Items | 72.136 | 1 | 72.136 | 28.724 | .000 |
| | Residual | 80.364 | 32 | 2.511 | | |
| | Total | 152.500 | 33 | 4.621 | | |
| Total | | 228.621 | 65 | 3.517 | | |

Grand Mean = 4.08

Table J.60: ANOVA Committed

## J.5 Switching Costs (5 iterations)

**Factor / Component 1 (Vendor processes)**

138. Cost of training internal IT staff increased after outsourcing functions

141. Terminated contracts led to revised vendor management processes

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .634 | .652 | 2 |

Table J.61: Reliability Statistics Vendor processes

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2.909 | 2.545 | 3.273 | .727 | 1.286 | .264 | 2 |
| Item Variances | 3.574 | 2.568 | 4.580 | 2.011 | 1.783 | 2.023 | 2 |
| Inter-Item Covariances | 1.659 | 1.659 | 1.659 | .000 | 1.000 | .000 | 2 |
| Inter-Item Correlations | .484 | .484 | .484 | .000 | 1.000 | .000 | 2 |

Table J.62: Summary Item Statistics Vendor processes

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 167.455 | 32 | 5.233 | | |
| Within People | Between Items | 8.727 | 1 | 8.727 | 4.558 | .041 |
| | Residual | 61.273 | 32 | 1.915 | | |
| | Total | 70.000 | 33 | 2.121 | | |
| Total | | 237.455 | 65 | 3.653 | | |

Grand Mean = 2.91

Table J.63: ANOVA Vendor processes

**Factor / Component 2 (Internal Staff)**

136. Business found it difficult to hire internal IT staff after outsourcing

137. Cost of retaining internal IT staff increased after outsourcing functions

**Factor / Component 3 (Internal Staff 2)**

139. Internal IT staff lost interest after outsourcing of other functions

140. Other outsourcing partner's performance improved after a contract was terminated

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .599 | .606 | 2 |

Table J.64: Reliability Statistics Internal Staff

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.500 | 2.848 | 4.152 | 1.303 | 1.457 | .849 | 2 |
| Item Variances | 2.758 | 2.258 | 3.258 | 1.000 | 1.443 | .500 | 2 |
| Inter-Item Covariances | 1.180 | 1.180 | 1.180 | .000 | 1.000 | .000 | 2 |
| Inter-Item Correlations | .435 | .435 | .435 | .000 | 1.000 | .000 | 2 |

Table J.65: Summary Item Statistics Internal Staff

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 126.000 | 32 | 3.938 | | |
| Within People | Between Items | 28.015 | 1 | 28.015 | 17.758 | .000 |
| | Residual | 50.485 | 32 | 1.578 | | |
| | Total | 78.500 | 33 | 2.379 | | |
| Total | | 204.500 | 65 | 3.146 | | |

Grand Mean = 3.50

Table J.66: ANOVA Internal Staff

## J.6 Changing outsourcing partner / Benefits / Switching costs (9 iterations)

**Factor / Component 1 (Changing Partner)**

142. Changing outsourcing partner caused transition costs to be high due to lack of support from previous vendor

143. When changing outsourcing partner, the previous vendor made it difficult to discontinue contract

146. After changing outsourcing partner we decided not to give previous vendor another contract

151. Transition time for new provider to become productive was affected by lack of suitable staff

154. Level of service decreased after switching outsourcing vendor due to in-house staff lacking system knowledge

155. Level of service decreased after switching outsourcing vendor due to in-house had to learn how IT systems worked

156. Level of service decreased after switching outsourcing vendor due to the need for new policies

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .941 | .941 | 7 |

Table J.67: Reliability Statistics Changing Partner

**Summary Item Statistics**

|  | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.758 | 3.394 | 4.333 | .939 | 1.277 | .108 | 7 |
| Item Variances | 7.683 | 7.127 | 9.551 | 2.424 | 1.340 | .717 | 7 |
| Inter-Item Covariances | 5.326 | 2.411 | 7.830 | 5.419 | 3.247 | 1.693 | 7 |
| Inter-Item Correlations | .693 | .330 | .936 | .607 | 2.839 | .025 | 7 |

Table J.68: Summary Item Statistics Changing Partner

**ANOVA**

|  |  | Sum of Squares | Df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People |  | 1268.424 | 32 | 39.638 |  |  |
| Within People | Between Items | 21.394 | 6 | 3.566 | 1.513 | .176 |
|  | Residual | 452.606 | 192 | 2.357 |  |  |
|  | Total | 474.000 | 198 | 2.394 |  |  |
| Total |  | 1742.424 | 230 | 7.576 |  |  |

Grand Mean = 3.76

Table J.69: ANOVA Changing Partner

**Factor / Component 2 (Transition time)**

148. Transition time for new provider to become productive was affected by other problems with previous vendor

149. Transition time for new provider to become productive was affected by lack of documentation

150. Transition time for new provider to become productive was affected by lack of internal processes

151. Transition time for new provider to become productive was affected by lack of suitable staff

153. Level of service decreased after switching outsourcing vendor due to lack of local processes

154. Level of service decreased after switching outsourcing vendor due to in-house staff lacking system knowledge

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .945 | .945 | 6 |

Table J.70: Reliability Statistics Transition time

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.101 | 3.697 | 4.455 | .758 | 1.205 | .124 | 6 |
| Item Variances | 7.289 | 6.756 | 7.542 | .786 | 1.116 | .088 | 6 |
| Inter-Item Covariances | 5.390 | 3.792 | 6.771 | 2.979 | 1.786 | .749 | 6 |
| Inter-Item Correlations | .741 | .505 | .924 | .418 | 1.828 | .015 | 6 |

Table J.71: Summary Item Statistics Transition time

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 1095.646 | 32 | 34.239 | | |
| Within People | Between Items | 20.525 | 5 | 4.105 | 2.162 | .061 |
| | Residual | 303.808 | 160 | 1.899 | | |
| | Total | 324.333 | 165 | 1.966 | | |
| Total | | 1419.980 | 197 | 7.208 | | |

Grand Mean = 4.10

Table J.72: ANOVA Transition time

**Factor / Component 3 (Costs of changing partner)**

142. Changing outsourcing partner caused transition costs to be high due to lack of support from previous vendor

144. When changing outsourcing partner the previous vendor withheld vital information

145. When changing outsourcing partner the previous vendor withheld documentation

147. Transition time for new provider to become productive was affected by previous vendor withholding information

152. Level of service decreased after switching outsourcing vendor due to reluctance of previous vendor to help

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .948 | .949 | 5 |

Table J.73: Reliability Statistics Costs of changing partner

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.582 | 3.212 | 4.061 | .848 | 1.264 | .101 | 5 |
| Item Variances | 7.567 | 6.739 | 8.309 | 1.570 | 1.233 | .417 | 5 |
| Inter-Item Covariances | 5.934 | 4.600 | 6.930 | 2.330 | 1.506 | .528 | 5 |
| Inter-Item Correlations | .790 | .578 | .989 | .411 | 1.711 | .015 | 5 |

Table J.74: Summary Item Statistics Costs of changing partner

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 1001.745 | 32 | 31.305 | | |
| Within People | Between Items | 13.358 | 4 | 3.339 | 2.045 | .092 |
| | Residual | 209.042 | 128 | 1.633 | | |
| | Total | 222.400 | 132 | 1.685 | | |
| Total | | 1224.145 | 164 | 7.464 | | |

Grand Mean = 3.58

Table J.75: ANOVA Costs of changing partner

## J.7 Back sourcing / Switching costs (11 iterations)

**Factor / Component 1 (Discontinuation of outsourcing)**

157. Internal team required considerable time to be productive

163. The discontinuation of outsourcing contract has detrimental effect on business performance

164. The discontinuation of outsourcing contract has detrimental effect on IT performance

165. The discontinuation of outsourcing contract has detrimental effect in unexpected ways

166. The discontinuation of outsourcing contract has detrimental effect on internal processes

167. The discontinuation of outsourcing contract has detrimental effect on internal staff availability

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .910 | .915 | 6 |

Table J.76: Reliability Statistics Discontinuation of outsourcing

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2.977 | 2.103 | 3.897 | 1.793 | 1.852 | .416 | 6 |
| Item Variances | 5.688 | 3.382 | 7.613 | 4.232 | 2.251 | 2.553 | 6 |
| Inter-Item Covariances | 3.571 | 1.904 | 5.222 | 3.318 | 2.743 | .887 | 6 |
| Inter-Item Correlations | .642 | .354 | .854 | .500 | 2.415 | .018 | 6 |

Table J.77: Summary Item Statistics Discontinuation of outsourcing

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 659.241 | 28 | 23.544 | | |

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Within People | Between Items | 60.322 | 5 | 12.064 | 5.699 | .000 |
| | Residual | 296.345 | 140 | 2.117 | | |
| | Total | 356.667 | 145 | 2.460 | | |
| Total | | 1015.908 | 173 | 5.872 | | |

Grand Mean = 2.98

Table J.78: ANOVA Discontinuation of outsourcing

## Factor / Component 2 (Back-sourcing Cost)

160. Back-sourcing required new skills

169. We lost significant money due to time and effort of building relationship with previous vendor

170. After switching outsourcing contract, replacement IT staff were difficult to find

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .866 | .870 | 3 |

Table J.79: Reliability Statistics Back-sourcing Cost

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.241 | 2.586 | 4.172 | 1.586 | 1.613 | .686 | 3 |
| Item Variances | 6.716 | 5.894 | 8.148 | 2.254 | 1.382 | 1.549 | 3 |
| Inter-Item Covariances | 4.581 | 4.002 | 5.328 | 1.325 | 1.331 | .368 | 3 |
| Inter-Item Correlations | .690 | .578 | .755 | .178 | 1.308 | .008 | 3 |

Table J.80: Summary Item Statistics Back-sourcing Cost

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Between People | 444.598 | 28 | 15.878 | | |
| Within People    Between Items | 39.793 | 2 | 19.897 | 9.321 | .000 |
| Residual | 119.540 | 56 | 2.135 | | |
| Total | 159.333 | 58 | 2.747 | | |
| Total | 603.931 | 86 | 7.022 | | |

Grand Mean = 3.24

Table J.81: ANOVA Back-sourcing Cost

## Factor / Component 3 (Sourcing Skills)

158. We hired experienced staff who produced results quickly

159. Service from internal provider is worse than previous outsourcing provider

160. Back-sourcing required new skills

161. In-house development requires different processes

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .801 | .805 | 4 |

Table J.82: Reliability Statistics Sourcing Skills

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2.802 | 1.897 | 3.448 | 1.552 | 1.818 | .503 | 4 |
| Item Variances | 4.756 | 2.167 | 6.113 | 3.946 | 2.820 | 3.282 | 4 |
| Inter-Item Covariances | 2.387 | 1.227 | 4.978 | 3.751 | 4.058 | 1.833 | 4 |
| Inter-Item Correlations | .508 | .289 | .829 | .540 | 2.866 | .034 | 4 |

Table J.83: Summary Item Statistics Sourcing Skills

**ANOVA**

|  | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 333.690 | 28 | 11.917 |  |  |
| Within People Between Items | 43.750 | 3 | 14.583 | 6.156 | .001 |
| Residual | 199.000 | 84 | 2.369 |  |  |
| Total | 242.750 | 87 | 2.790 |  |  |
| Total | 576.440 | 115 | 5.013 |  |  |

Grand Mean = 2.80

Table J.84: ANOVA Sourcing Skills

**Factor / Component 4 (In-house process)**

158. We hired experienced staff who produced results quickly

162. In-house development is simpler process

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .656 | .672 | 2 |

Table J.85: Reliability Statistics In-house process

**Summary Item Statistics**

|  | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.759 | 3.276 | 4.241 | .966 | 1.295 | .466 | 2 |
| Item Variances | 6.591 | 4.850 | 8.333 | 3.483 | 1.718 | 6.065 | 2 |
| Inter-Item Covariances | 3.217 | 3.217 | 3.217 | .000 | 1.000 | .000 | 2 |
| Inter-Item Correlations | .506 | .506 | .506 | .000 | 1.000 | .000 | 2 |

Table J.86: Summary Item Statistics In-house process

**ANOVA**

|  | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 274.621 | 28 | 9.808 |  |  |
| Within People    Between Items | 13.517 | 1 | 13.517 | 4.006 | .055 |
| Residual | 94.483 | 28 | 3.374 |  |  |
| Total | 108.000 | 29 | 3.724 |  |  |
| Total | 382.621 | 57 | 6.713 |  |  |

Grand Mean = 3.76

Table J.87: ANOVA In-house process

## J.8 Switching costs / setup costs / sunk costs

### Factor / Component 1 (Internal cost)

171. When contract switched additional internal employees required

172. Relationship developed with previous vendor was lost

173. Lost knowledge and transition costs to switch vendors were significant

174. New support team required considerable setup time

175. New support team required additional internal processes

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .921 | .923 | 5 |

Table J.88: Reliability Statistics Internal cost

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.424 | 3.667 | 4.758 | 1.091 | 1.298 | .188 | 5 |
| Item Variances | 5.297 | 4.756 | 5.854 | 1.098 | 1.231 | .235 | 5 |
| Inter-Item Covariances | 3.709 | 2.708 | 4.886 | 2.178 | 1.804 | .439 | 5 |
| Inter-Item Correlations | .706 | .510 | .950 | .440 | 1.863 | .022 | 5 |

Table J.89: Summary Item Statistics Internal cost

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 644.303 | 32 | 20.134 | | |
| Within People | Between Items | 24.848 | 4 | 6.212 | 3.914 | .005 |
| | Residual | 203.152 | 128 | 1.587 | | |
| | Total | 228.000 | 132 | 1.727 | | |
| Total | | 872.303 | 164 | 5.319 | | |

Grand Mean = 4.42

Table J.90: ANOVA Internal cost

**Factor / Component 2 (Support Training)**

176. New support team required little time or effort to provide support

177. New support team required additional training

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha based on standardised Items | N of Items |
|---|---|---|
| .781 | .784 | 2 |

Table J.91: Reliability Statistics Support Training

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.273 | 2.818 | 3.727 | .909 | 1.323 | .413 | 2 |
| Item Variances | 5.085 | 4.591 | 5.580 | .989 | 1.215 | .489 | 2 |
| Inter-Item Covariances | 3.261 | 3.261 | 3.261 | .000 | 1.000 | .000 | 2 |
| Inter-Item Correlations | .644 | .644 | .644 | .000 | 1.000 | .000 | 2 |

Table J.92: Summary Item Statistics Support Training

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between People | 267.091 | 32 | 8.347 | | |
| Within People Between Items | 13.636 | 1 | 13.636 | 7.477 | .010 |
| Residual | 58.364 | 32 | 1.824 | | |
| Total | 72.000 | 33 | 2.182 | | |
| Total | 339.091 | 65 | 5.217 | | |

Grand Mean = 3.27

Table J.93: ANOVA Support Training

# Appendix K — Factor Analysis

# List of Tables

To reduce number of measurement items and remove redundant items Factor Analysis was performed based on 33.

| This Study | Questions | Removed Questions | Reliability |
|---|---|---|---|
| Organisation Quality | Q 24 to 48<br>Q 71 to 84 | Q 32,33, 34,35, & 37<br>Q 82,83, 74, 77 & 78 | .727 |
| Knowledge Sharing | Q 142 to 156 | | .959 |
| Outsourcing Success | Q 85 to 100 | Q 87, 88, 90 & 96 | .784 |
| Partnership Quality | Q 101 to 135 | | .883 |

Table K.1: Summary of Factor Analysis

## K.1 Organisation Quality

| Organisation Quality | Q 24 to 48<br>Q 71 to 84 | Q 32,33, 34,35, & 37<br>Q 82,83, 74, 77 & 78 | .727 |
|---|---|---|---|

**Descriptive Statistics**

| | Mean | Std. Deviation | Analysis N |
|---|---|---|---|
| Outsource strategically important IT | 1.19 | .396 | 27 |
| Q 25. Switched Outsourcing Vendors | 1.19 | .396 | 27 |
| Q 26. Renewed with current Vendor | 1.11 | .320 | 27 |
| Back Sourced | 1.70 | .465 | 27 |
| Q 28. Kept In House | 1.41 | .501 | 27 |
| Q 29. Strategic Importance | 5.59 | 1.824 | 27 |
| Degree_30_out_30 | 2.63 | 1.305 | 27 |
| Develop_31_on_off_31 | 2.85 | .456 | 27 |
| Org_Out_bus_strat_36 | 4.63 | 1.925 | 27 |
| CIO_instr_out_38 | 5.67 | 1.664 | 27 |
| CIO_Excellent_39 | 3.37 | 1.597 | 27 |
| CIO_40_Effective_p4_40 | 3.67 | 1.441 | 27 |
| IH_41_lack_strate_p5_41 | 3.15 | 2.143 | 27 |
| IH_lack_rigour_42 | 3.15 | 2.248 | 27 |
| IH_Pro_creep_43 | 4.04 | 2.175 | 27 |
| IH_Cost_inc_44 | 3.89 | 1.987 | 27 |
| IH_Time_inc_45 | 3.81 | 1.922 | 27 |
| OUT_lose_pr_46 | 4.11 | 1.968 | 27 |
| OUT_lose_re_47 | 4.00 | 1.961 | 27 |
| OUT_own_pr_p5_48 | 3.52 | 2.119 | 27 |

**...cont'd**

| | Mean | Std. Deviation | Analysis N |
|---|---|---|---|
| Choosing_wro_Venp_p9_71 | 5.11 | 1.761 | 27 |
| Vendor_man_72 | 6.00 | 1.109 | 27 |
| Support_enh_73 | 5.59 | 1.047 | 27 |
| operation_exp_74 | 5.30 | 1.436 | 27 |
| onshore_bet_qua_75 | 4.56 | 1.739 | 27 |
| response_bus_76 | 5.22 | 1.340 | 27 |
| staff_morale_79 | 5.33 | 1.414 | 27 |
| bus_lost_exper_80 | 5.48 | 1.718 | 27 |
| bus_lost_cont_81 | 4.22 | 1.553 | 27 |
| Out_Win_WIN_p9_84 | 3.59 | 1.217 | 27 |

Table K.2: Descriptive Statistics of Organisation Quality

**Correlation Matrices (a,b)**

| Correlation | Outsource strategically important IT | Q 25. Switched Outsourcing Vendors | Q 26. Renewed with current Vendor | Back Sourced | Q 28. Kept In House | Q 29. Strategic Importance | Degree_30_out_30 | Develop_31_on_off_31 | Org_Out_bus_strat_36 |
|---|---|---|---|---|---|---|---|---|---|
| Outsource strategically important IT | 1.000 | 1.000 | .135 | .309 | -.201 | -.690 | -.011 | -.268 | .194 |
| Q 25. Switched Outsourcing Vendors | 1.000 | 1.000 | .135 | .309 | -.201 | -.690 | -.011 | -.268 | .194 |
| Q 26. Renewed with current Vendor | .135 | .135 | 1.000 | .229 | -.053 | .146 | .102 | -.410 | .319 |
| Back Sourced | .309 | .309 | .229 | 1.000 | .208 | -.420 | -.061 | .148 | .130 |
| Q 28. Kept In House | -.201 | -.201 | -.053 | .208 | 1.000 | .315 | -.113 | -.399 | -.556 |
| Q 29. Strategic Importance | -.690 | -.690 | .146 | -.420 | .315 | 1.000 | -.163 | -.075 | -.286 |
| Degree_30_out_30 | -.011 | -.011 | .102 | -.061 | -.113 | -.163 | 1.000 | -.354 | .127 |
| Develop_31_on_off_31 | -.268 | -.268 | -.410 | .148 | -.399 | -.075 | -.354 | 1.000 | .110 |
| Org_Out_bus_strat_36 | .194 | .194 | .319 | .130 | -.556 | -.286 | .127 | .110 | 1.000 |
| CIO_instr_out_38 | .156 | .156 | -.577 | -.331 | .031 | -.059 | .153 | -.270 | -.160 |
| CIO_Excellent_39 | .252 | .252 | -.084 | -.054 | -.004 | -.290 | .548 | -.450 | .397 |
| CIO_40_Effective_p4_40 | .315 | .315 | -.167 | .076 | .142 | -.390 | .300 | -.429 | .425 |
| IH_41_lack_strate_p5_41 | .148 | .148 | -.025 | .046 | -.273 | -.417 | .845 | -.134 | .275 |
| IH_lack_rigour_42 | .054 | .054 | -.024 | -.103 | -.261 | -.229 | .517 | -.128 | .493 |
| IH_Pro_creep_43 | .304 | .304 | -.172 | .087 | -.262 | -.413 | .303 | .006 | .261 |
| IH_Cost_inc_44 | .565 | .565 | -.161 | -.037 | -.301 | -.533 | -.016 | -.019 | .230 |
| IH_Time_inc_45 | .502 | .502 | -.153 | -.064 | -.278 | -.472 | .002 | -.032 | .209 |
| OUT_lose_pr_46 | .022 | .022 | .529 | .121 | .226 | -.019 | .166 | -.324 | -.354 |
| OUT_lose_re_47 | .000 | .000 | .367 | .000 | .000 | -.086 | -.030 | -.086 | -.306 |
| OUT_own_pr_p5_48 | -.027 | -.027 | .252 | .240 | .156 | -.063 | -.123 | .083 | -.555 |

a Determinant = .000

b This matrix is not positive definite.

Table K.3: Correlation Matrix of Organisational Quality (cont'd)

**...cont'd**

| Correlation | CIO_instr_out_38 | CIO_Excellent_39 | CIO_40_Effective_p4_40 | IH_41_lack_strate_p5_41 | IH_lack_rigour_42 | IH_Pro_creep_43 | IH_Cost_inc_44 | IH_Time_inc_45 |
|---|---|---|---|---|---|---|---|---|
| Outsource strategically important IT | .156 | .252 | .315 | .148 | .054 | .304 | .565 | .502 |
| Q 25. Switched Outsourcing Vendors | .156 | .252 | .315 | .148 | .054 | .304 | .565 | .502 |
| Q 26. Renewed with current Vendor | -.577 | -.084 | -.167 | -.025 | -.024 | -.172 | -.161 | -.153 |
| Back Sourced | -.331 | -.054 | .076 | .046 | -.103 | .087 | -.037 | -.064 |
| Q 28. Kept In House | .031 | -.004 | .142 | -.273 | -.261 | -.262 | -.301 | -.278 |
| Q 29. Strategic Importance | -.059 | -.290 | -.390 | -.417 | -.229 | -.413 | -.533 | -.472 |
| Degree_30_out_30 | .153 | .548 | .300 | .845 | .517 | .303 | -.016 | .002 |
| Develop_31_on_off_31 | -.270 | -.450 | -.429 | -.134 | -.128 | .006 | -.019 | -.032 |
| Org_Out_bus_strat_36 | -.160 | .397 | .425 | .275 | .493 | .261 | .230 | .209 |
| CIO_instr_out_38 | 1.000 | .511 | .385 | .187 | .281 | .461 | .465 | .473 |
| CIO_Excellent_39 | .511 | 1.000 | .825 | .455 | .520 | .372 | .280 | .299 |
| CIO_40_Effective_p4_40 | .385 | .825 | 1.000 | .315 | .372 | .188 | .215 | .213 |
| IH_41_lack_strate_p5_41 | .187 | .455 | .315 | 1.000 | .746 | .659 | .383 | .399 |
| IH_lack_rigour_42 | .281 | .520 | .372 | .746 | 1.000 | .833 | .452 | .469 |
| IH_Pro_creep_43 | .461 | .372 | .188 | .659 | .833 | 1.000 | .758 | .765 |
| IH_Cost_inc_44 | .465 | .280 | .215 | .383 | .452 | .758 | 1.000 | .991 |
| IH_Time_inc_45 | .473 | .299 | .213 | .399 | .469 | .765 | .991 | 1.000 |
| OUT_lose_pr_46 | -.329 | -.234 | -.407 | .051 | -.230 | -.118 | -.007 | .016 |
| OUT_lose_re_47 | -.283 | -.270 | -.517 | -.073 | -.157 | .000 | .079 | .102 |
| OUT_own_pr_p5_48 | -.429 | -.514 | -.672 | -.187 | -.356 | -.138 | -.168 | -.164 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.3: Correlation Matrix of Organisational Quality (cont'd)

**...cont'd**

| Correlation | OUT_lose_pr_46 | OUT_lose_re_47 | OUT_own_pr_p5_48 | Choosing_wro_Venp_p9_71 | Vendor_man_72 | Support_enh_73 | operation_exp_74 | onshore_bet_qua_75 | response_bus_76 | bus_lost_exper_80 | bus_lost_cont_81 | Out_Win_WIN_p9_84 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Outsource strategically important IT | .022 | .000 | -.027 | -.637 | -.525 | -.460 | -.100 | .124 | -.371 | -.306 | -.070 | -.237 |
| Q 25. Switched Outsourcing Vendors | .022 | .000 | -.027 | -.637 | -.525 | -.460 | -.100 | .124 | -.371 | -.306 | -.070 | -.237 |
| Q 26. Renewed with current Vendor | .529 | .367 | .252 | .045 | -.433 | -.663 | -.074 | -.046 | .120 | -.450 | .103 | -.175 |
| Back Sourced | .121 | .000 | .240 | -.240 | -.447 | -.257 | -.324 | .496 | -.260 | -.392 | -.331 | .050 |
| Q 28. Kept In House | .226 | .000 | .156 | .426 | .415 | .255 | -.174 | -.049 | -.140 | .523 | .572 | .220 |
| Q 29. Strategic Importance | -.019 | -.086 | -.063 | .745 | .608 | .453 | .107 | .086 | .731 | .593 | .386 | -.095 |
| Degree_30_out_30 | .166 | -.030 | -.123 | .119 | -.106 | -.509 | .102 | -.177 | -.347 | -.260 | -.110 | .240 |
| Develop_31_on_off_31 | -.324 | -.086 | .083 | -.074 | -.152 | .352 | -.048 | .302 | .308 | -.004 | -.495 | -.113 |
| Org_Out_bus_strat_36 | -.354 | -.306 | -.555 | -.555 | -.324 | -.307 | -.014 | .041 | -.176 | -.526 | -.744 | .130 |
| CIO_instr_out_38 | -.329 | -.283 | -.429 | -.157 | .542 | .383 | .494 | .133 | -.069 | .314 | .119 | -.051 |
| CIO_Excellent_39 | -.234 | -.270 | -.514 | -.453 | .000 | -.228 | .353 | -.188 | -.435 | -.039 | -.252 | .437 |
| CIO_40_Effective_p4_40 | -.407 | -.517 | -.672 | -.485 | .096 | -.119 | -.136 | -.184 | -.677 | -.072 | -.344 | .555 |
| IH_41_lack_strate_p5_41 | .051 | -.073 | -.187 | -.188 | -.162 | -.486 | .010 | .060 | -.521 | -.354 | -.241 | .142 |
| IH_lack_rigour_42 | -.230 | -.157 | -.356 | -.373 | .000 | -.169 | .224 | .116 | -.394 | -.159 | -.230 | .248 |
| IH_Pro_creep_43 | -.118 | .000 | -.138 | -.513 | -.064 | -.111 | .366 | .391 | -.320 | -.139 | -.116 | -.067 |
| IH_Cost_inc_44 | -.007 | .079 | -.168 | -.667 | -.105 | -.189 | .335 | .185 | -.308 | -.153 | -.017 | -.322 |
| IH_Time_inc_45 | .016 | .102 | -.164 | -.641 | -.072 | -.173 | .355 | .204 | -.282 | -.100 | .014 | -.313 |
| OUT_lose_pr_46 | 1.000 | .877 | .761 | .274 | -.352 | -.481 | .151 | -.277 | -.010 | -.210 | .596 | -.414 |
| OUT_lose_re_47 | .877 | 1.000 | .851 | .067 | -.460 | -.300 | .355 | -.293 | .088 | -.160 | .531 | -.419 |
| OUT_own_pr_p5_48 | .761 | .851 | 1.000 | .211 | -.458 | -.213 | .099 | -.102 | .120 | -.092 | .501 | -.273 |

a   Determinant = .000

b   This matrix is not positive definite.

Table K.3: Correlation Matrix of Organisational Quality (cont'd)

**...cont'd**

| Correlation | Outsource strategically important IT | Q 25. Switched Outsourcing Vendors | Q 26. Renewed with current Vendor | Back Sourced | Q 28. Kept In House | Q 29. Strategic Importance | Degree_30 _out_30 | Develop _31_on _off_31 | Org_Out_ bus_strat _36 |
|---|---|---|---|---|---|---|---|---|---|
| Choosing_wro_Venp_p9_71 | -.637 | -.637 | .045 | -.240 | .426 | .745 | .119 | -.074 | -.555 |
| Vendor_man_72 | -.525 | -.525 | -.433 | -.447 | .415 | .608 | -.106 | -.152 | -.324 |
| Support_enh_73 | -.460 | -.460 | -.663 | -.257 | .255 | .453 | -.509 | .352 | -.307 |
| operation_exp_74 | -.100 | -.100 | -.074 | -.324 | -.174 | .107 | .102 | -.048 | -.014 |
| onshore_bet_qua_75 | .124 | .124 | -.046 | .496 | -.049 | .086 | -.177 | .302 | .041 |
| response_bus_76 | -.371 | -.371 | .120 | -.260 | -.140 | .731 | -.347 | .308 | -.176 |
| staff_morale_79 | -.458 | -.458 | -.510 | -.546 | .398 | .606 | -.264 | -.040 | -.546 |
| bus_lost_exper_80 | -.306 | -.306 | -.450 | -.392 | .523 | .593 | -.260 | -.004 | -.526 |
| bus_lost_cont_81 | -.070 | -.070 | .103 | -.331 | .572 | .386 | -.110 | -.495 | -.744 |
| Out_Win_WIN_p9_84 | -.237 | -.237 | -.175 | .050 | .220 | -.095 | .240 | -.113 | .130 |

a Determinant = .000

b This matrix is not positive definite.

Table K.3: Correlation Matrix of Organisational Quality (cont'd)

| Correlation | CIO_instr_o ut_38 | CIO_ Excelle nt_39 | CIO_40_ Effective _p4_40 | IH_41 _lack_ strate_p 5_41 | IH_lack _rigour _42 | IH_Pro_cr eep_43 | IH_Cost_inc _44 | IH_Time_in c_45 |
|---|---|---|---|---|---|---|---|---|
| Choosing_wro_Venp_p9_71 | -.157 | -.453 | -.485 | -.188 | -.373 | -.513 | -.667 | -.641 |
| Vendor_man_72 | .542 | .000 | .096 | -.162 | .000 | -.064 | -.105 | -.072 |
| Support_enh_73 | .383 | -.228 | -.119 | -.486 | -.169 | -.111 | -.189 | -.173 |
| operation_exp_74 | .494 | .353 | -.136 | .010 | .224 | .366 | .335 | .355 |
| onshore_bet_qua_75 | .133 | -.188 | -.184 | .060 | .116 | .391 | .185 | .204 |
| response_bus_76 | -.069 | -.435 | -.677 | -.521 | -.394 | -.320 | -.308 | -.282 |
| staff_morale_79 | .425 | -.159 | -.113 | -.296 | -.089 | -.092 | -.137 | -.075 |
| bus_lost_exper_80 | .314 | -.039 | -.072 | -.354 | -.159 | -.139 | -.153 | -.100 |
| bus_lost_cont_81 | .119 | -.252 | -.344 | -.241 | -.230 | -.116 | -.017 | .014 |
| Out_Win_WIN_p9_84 | -.051 | .437 | .555 | .142 | .248 | -.067 | -.322 | -.313 |

a Determinant = .000

b This matrix is not positive definite.

Table K.3: Correlation Matrix of Organisational Quality (cont'd)

**...cont'd**

| Correlation | OUT_ lose_ pr_46 | OUT_lo se_re_4 7 | OUT_o wn_pr_ p5_48 | Choosin g_wro_ Venp_p 9_71 | Vendor_ man_72 | Support _enh_73 | operatio n_exp_7 4 |
|---|---|---|---|---|---|---|---|
| Choosing_wro_Venp_p9_71 | .274 | .067 | .211 | 1.000 | .472 | .297 | -.135 |
| Vendor_man_72 | -.352 | -.460 | -.458 | .472 | 1.000 | .662 | .097 |
| Support_enh_73 | -.481 | -.300 | -.213 | .297 | .662 | 1.000 | .083 |
| operation_exp_74 | .151 | .355 | .099 | -.135 | .097 | .083 | 1.000 |
| onshore_bet_qua_75 | -.277 | -.293 | -.102 | -.059 | .080 | .235 | -.099 |
| response_bus_76 | -.010 | .088 | .120 | .478 | .207 | .396 | .324 |
| staff_morale_79 | -.194 | -.111 | -.111 | .463 | .735 | .796 | .063 |
| bus_lost_exper_80 | -.210 | -.160 | -.092 | .401 | .565 | .690 | .096 |
| bus_lost_cont_81 | .596 | .531 | .501 | .469 | .268 | .105 | .176 |
| Out_Win_WIN_p9_84 | -.414 | -.419 | -.273 | -.175 | .114 | -.045 | -.192 |

a Determinant = .000

b This matrix is not positive definite.

Table K.3: Correlation Matrix of Organisational Quality (cont'd)

| Correlation | onshore_bet _qua_75 | response_bu s_76 | bus_lost_ exper_80 | bus_lost_ cont_81 | Out_Win _WIN_p9 _ 84 |
|---|---|---|---|---|---|
| Choosing_wro_Venp_p9_71 | -.059 | .478 | .401 | .469 | -.175 |
| Vendor_man_72 | .080 | .207 | .565 | .268 | .114 |
| Support_enh_73 | .235 | .396 | .690 | .105 | -.045 |
| operation_exp_74 | -.099 | .324 | .096 | .176 | -.192 |
| onshore_bet_qua_75 | 1.000 | .308 | .100 | -.218 | -.307 |
| response_bus_76 | .308 | 1.000 | .386 | .160 | -.508 |
| staff_morale_79 | .063 | .325 | .865 | .526 | -.074 |
| bus_lost_exper_80 | .100 | .386 | 1.000 | .506 | -.031 |
| bus_lost_cont_81 | -.218 | .160 | .506 | 1.000 | -.317 |
| Out_Win_WIN_p9_84 | -.307 | -.508 | -.031 | -.317 | 1.000 |

a Determinant = .000

b This matrix is not positive definite.

Table K.3: Correlation Matrix of Organisational Quality

**Communalities**

|  | Initial | Extraction |
|---|---|---|
| Outsource strategically important IT | 1.000 | .944 |
| Q 25. Switched Outsourcing Vendors | 1.000 | .944 |
| Q 26. Renewed with current Vendor | 1.000 | .943 |
| Back Sourced | 1.000 | .946 |
| Q 28. Kept In House | 1.000 | .935 |
| Q 29. Strategic Importance | 1.000 | .974 |
| Degree_30_out_30 | 1.000 | .876 |
| Develop_31_on_off_31 | 1.000 | .942 |
| Org_Out_bus_strat_36 | 1.000 | .891 |
| CIO_instr_out_38 | 1.000 | .826 |
| CIO_Excellent_39 | 1.000 | .891 |
| CIO_40_Effective_p4_40 | 1.000 | .954 |
| IH_41_lack_strate_p5_41 | 1.000 | .988 |
| IH_lack_rigour_42 | 1.000 | .833 |
| IH_Pro_creep_43 | 1.000 | .955 |
| IH_Cost_inc_44 | 1.000 | .908 |
| IH_Time_inc_45 | 1.000 | .885 |
| OUT_lose_pr_46 | 1.000 | .938 |
| OUT_lose_re_47 | 1.000 | .956 |
| OUT_own_pr_p5_48 | 1.000 | .960 |
| Choosing_wro_Venp_p9_71 | 1.000 | .950 |
| Vendor_man_72 | 1.000 | .845 |
| Support_enh_73 | 1.000 | .919 |
| operation_exp_74 | 1.000 | .871 |
| onshore_bet_qua_75 | 1.000 | .954 |
| response_bus_76 | 1.000 | .923 |
| staff_morale_79 | 1.000 | .902 |
| bus_lost_exper_80 | 1.000 | .777 |
| bus_lost_cont_81 | 1.000 | .958 |
| Out_Win_WIN_p9_84 | 1.000 | .863 |

Extraction Method: Principal Component Analysis.

Table K.4: Communalities of Factor analysis

**Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 8.020 | 26.734 | 26.734 | 8.020 | 26.734 | 26.734 | 5.413 | 18.044 | 18.044 |
| 2 | 5.409 | 18.031 | 44.765 | 5.409 | 18.031 | 44.765 | 5.116 | 17.053 | 35.097 |
| 3 | 3.794 | 12.648 | 57.414 | 3.794 | 12.648 | 57.414 | 4.371 | 14.570 | 49.667 |
| 4 | 3.333 | 11.110 | 68.524 | 3.333 | 11.110 | 68.524 | 3.482 | 11.606 | 61.273 |
| 5 | 2.510 | 8.365 | 76.889 | 2.510 | 8.365 | 76.889 | 2.870 | 9.567 | 70.840 |
| 6 | 1.729 | 5.764 | 82.653 | 1.729 | 5.764 | 82.653 | 2.447 | 8.157 | 78.996 |
| 7 | 1.582 | 5.275 | 87.928 | 1.582 | 5.275 | 87.928 | 2.020 | 6.734 | 85.731 |
| 8 | 1.073 | 3.576 | 91.504 | 1.073 | 3.576 | 91.504 | 1.732 | 5.773 | 91.504 |
| 9 | .929 | 3.098 | 94.601 | | | | | | |
| 10 | .627 | 2.089 | 96.690 | | | | | | |
| 11 | .437 | 1.457 | 98.148 | | | | | | |
| 12 | .347 | 1.156 | 99.304 | | | | | | |
| 13 | .209 | .696 | 100.000 | | | | | | |
| 14 | 4.92E-016 | 1.64E-015 | 100.000 | | | | | | |
| 15 | 4.14E-016 | 1.38E-015 | 100.000 | | | | | | |
| 16 | 3.19E-016 | 1.06E-015 | 100.000 | | | | | | |
| 17 | 2.23E-016 | 7.45E-016 | 100.000 | | | | | | |
| 18 | 1.52E-016 | 5.07E-016 | 100.000 | | | | | | |
| 19 | 1.18E-016 | 3.94E-016 | 100.000 | | | | | | |
| 20 | 6.52E-017 | 2.17E-016 | 100.000 | | | | | | |
| 21 | 2.31E-017 | 7.72E-017 | 100.000 | | | | | | |
| 22 | 2.58E-033 | 8.59E-033 | 100.000 | | | | | | |
| 23 | -4.47E-018 | -1.49E-017 | 100.000 | | | | | | |
| 24 | -4.42E-017 | -1.47E-016 | 100.000 | | | | | | |
| 25 | -1.36E-016 | -4.53E-016 | 100.000 | | | | | | |
| 26 | -1.45E-016 | -4.82E-016 | 100.000 | | | | | | |
| 27 | -2.09E-016 | -6.96E-016 | 100.000 | | | | | | |
| 28 | -3.03E-016 | -1.01E-015 | 100.000 | | | | | | |
| 29 | -4.37E-016 | -1.46E-015 | 100.000 | | | | | | |
| 30 | -5.56E-016 | -1.85E-015 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

Table K.5: Total Variance Explained of Organisational Quality

**Scree Plot**
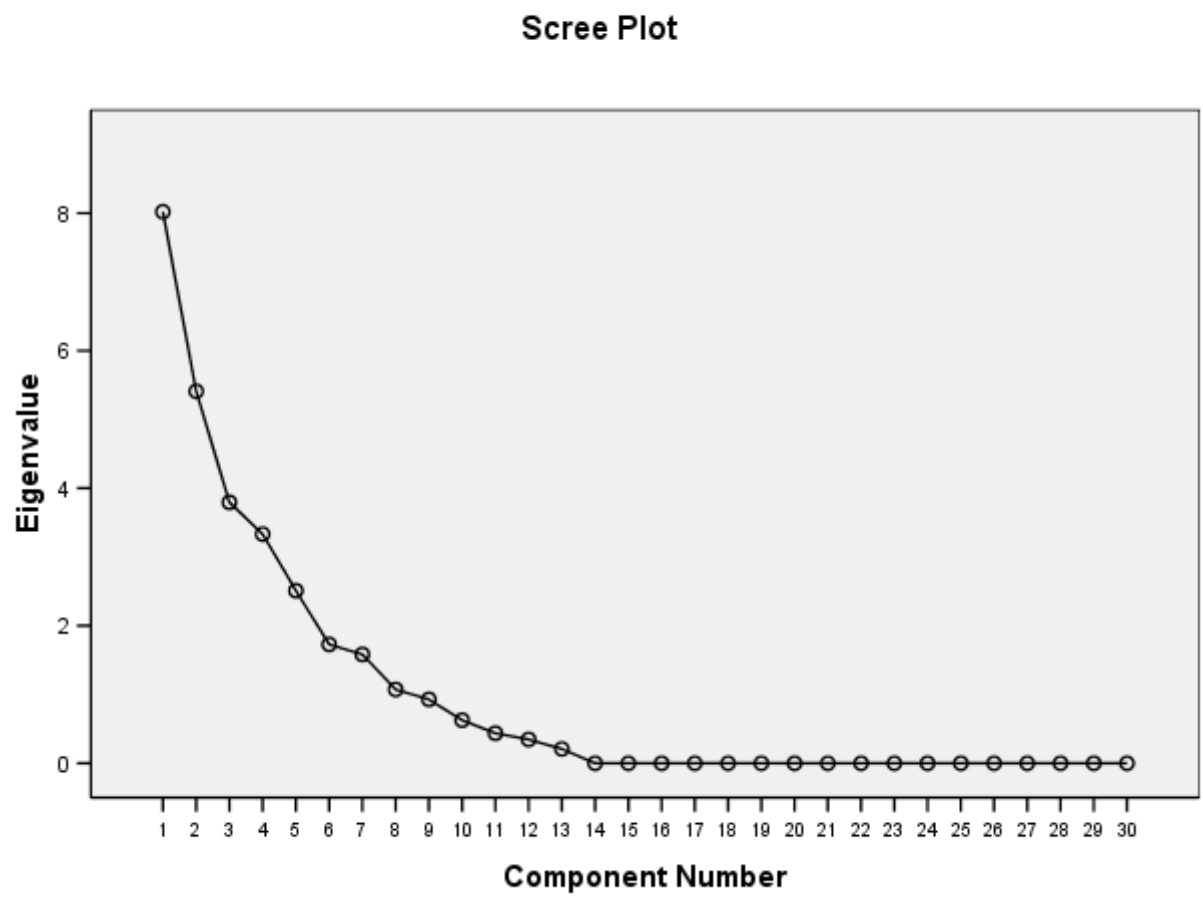
*Figure K.1: Organisational Quality Component compared to Eigenvalue*

**Component Matrix(a)**

| | Component | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Outsource strategically important IT | .674 | | | | -.521 | | | |
| Q 25. Switched Outsourcing Vendors | .674 | | | | -.521 | | | |
| Q 26. Renewed with current Vendor | | -.667 | | | | | .511 | |
| Back Sourced | | | | | | | | |
| Q 28. Kept In House | | | | | -.531 | | | |
| Q 29. Strategic Importance | -.815 | | | | | | | |
| Degree_30_out_30 | | | | .635 | | | | |
| Develop_31_on_off_31 | | | | -.751 | | | | |
| Org_Out_bus_strat_36 | .634 | | | | | | | |
| CIO_instr_out_38 | | .722 | .514 | | | | | |
| CIO_Excellent_39 | .592 | | | | | | | |
| CIO_40_Effective_p4_40 | .571 | .516 | | | | | | |
| IH_41_lack_strate_p5_41 | .642 | | | | | | | |
| IH_lack_rigour_42 | .592 | | | | | | | |
| IH_Pro_creep_43 | .632 | | | | | | | |
| IH_Cost_inc_44 | .644 | | .611 | | | | | |
| IH_Time_inc_45 | .610 | | .637 | | | | | |
| OUT_lose_pr_46 | | -.755 | | | | | | |
| OUT_lose_re_47 | | -.711 | .538 | | | | | |
| OUT_own_pr_p5_48 | | -.772 | | | | | | |
| Choosing_wro_Venp9_71 | -.816 | | | | | | | |
| Vendor_man_72 | -.506 | .730 | | | | | | |
| Support_enh_73 | -.602 | .607 | | | | | | |
| operation_exp_74 | | | .575 | | | | | |
| onshore_bet_qua_75 | | | | -.588 | | | .609 | |
| response_bus_76 | -.647 | | | | | | | |
| staff_morale_79 | -.664 | .570 | | | | | | |
| bus_lost_exper_80 | -.620 | .505 | | | | | | |
| bus_lost_cont_81 | -.509 | | .692 | | | | | |
| Out_Win_WIN_p9_84 | | | -.553 | | | | | |

Extraction Method: Principal Component Analysis.

a  8 components extracted.

Table K.6: Component Matrix for Organisational Quality

**Reproduced Correlations**

| Correlation | Outsource strategically important IT | Q 25. Switched Outsourcing Vendors | Q 26. Renewed with current Vendor | Back Sourced | Q 28. Kept In House | Q 29. Strategic Importance | Degree _30_ out_30 | Develop _31_ on_ off_ 31 | Org_ Out_bus_ strat_36 |
|---|---|---|---|---|---|---|---|---|---|
| Outsource strategically important IT | .944(b) | .944 | .162 | .311 | -.181 | -.686 | -.064 | -.272 | .229 |
| Q 25. Switched Outsourcing Vendors | .944 | .944(b) | .162 | .311 | -.181 | -.686 | -.064 | -.272 | .229 |
| Q 26. Renewed with current Vendor | .162 | .162 | .943(b) | .275 | -.056 | .121 | .181 | -.387 | .283 |
| Back Sourced | .311 | .311 | .275 | .946(b) | .204 | -.388 | -.112 | .137 | .146 |
| Q 28. Kept In House | -.181 | -.181 | -.056 | .204 | .935(b) | .312 | -.090 | -.439 | -.601 |
| Q 29. Strategic Importance | -.686 | -.686 | .121 | -.388 | .312 | .974(b) | -.137 | -.082 | -.286 |
| Degree_30_out_30 | -.064 | -.064 | .181 | -.112 | -.090 | -.137 | .876(b) | -.387 | .194 |
| Develop_31_on_off_31 | -.272 | -.272 | -.387 | .137 | -.439 | -.082 | -.387 | .942(b) | .101 |
| Org_Out_bus_strat_36 | .229 | .229 | .283 | .146 | -.601 | -.286 | .194 | .101 | .891(b) |

**...cont'd...**

| Correlation | CIO_ instr _out_38 | CIO_ Excellent _39 | CIO_40_ Effective_ p4_40 | IH_41_lac k_strate_ p5_41 | IH_ lack _rigou r_42 | IH_ Pro_creep_4 3 | IH_ Cost_ inc _44 | IH_ Time_ inc_45 | OUT_ lose_pr _46 | OUT_ lose _re_47 |
|---|---|---|---|---|---|---|---|---|---|---|
| Outsource strategically important IT | .135 | .216 | .342 | .147 | .041 | .292 | .622 | .568 | .067 | .014 |
| Q 25. Switched Outsourcing Vendors | .135 | .216 | .342 | .147 | .041 | .292 | .622 | .568 | .067 | .014 |
| Q 26. Renewed with current Vendor | -.509 | -.019 | -.163 | -.013 | -.091 | -.205 | -.200 | -.199 | .535 | .356 |
| Back Sourced | -.406 | -.094 | .059 | .039 | -.029 | .125 | -.020 | -.041 | .090 | .001 |
| Q 28. Kept In House | .081 | .015 | .135 | -.278 | -.266 | -.257 | -.354 | -.323 | .198 | .015 |
| Q 29. Strategic Importance | -.007 | -.273 | -.381 | -.419 | -.254 | -.425 | -.556 | -.503 | -.005 | -.080 |
| Degree_30_out_30 | .067 | .441 | .299 | .823 | .607 | .347 | .053 | .075 | .175 | -.016 |
| Develop_31_on_off_31 | -.235 | -.491 | -.442 | -.156 | -.098 | .032 | -.040 | -.056 | -.342 | -.074 |
| Org_Out_bus_strat_36 | -.078 | .436 | .386 | .278 | .417 | .243 | .193 | .171 | -.392 | -.347 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 80 (18.0%) nonredundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.7: Reproduced Correlations for Organisational Quality cont'd

| Correlation | OUT_own_pr_p5_48 | Choosing_wro_Venp9_71 | Vendor_man_72 | Support_enh_73 | operation_exp_74 | onshore_bet_qua_75 | response_bus_76 | staff_morale_79 | bus_lost_exper_80 | bus_lost_cont_81 | Out_Win_WIN_p9_84 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Outsource strategically important IT | -.063 | -.647 | -.462 | -.464 | -.145 | .111 | -.420 | -.447 | -.355 | -.072 | -.257 |
| Q 25. Switched Outsourcing Vendors | -.063 | -.647 | -.462 | -.464 | -.145 | .111 | -.420 | -.447 | -.355 | -.072 | -.257 |
| Q 26. Renewed with current Vendor | .258 | .087 | -.457 | -.657 | .000 | -.033 | .171 | -.551 | -.445 | .064 | -.216 |
| Back Sourced | .252 | -.283 | -.465 | -.274 | -.381 | .490 | -.281 | -.507 | -.348 | -.288 | .111 |
| Q 28. Kept In House | .198 | .402 | .385 | .263 | -.166 | .000 | -.117 | .428 | .508 | .564 | .255 |
| Q 29. Strategic Importance | -.065 | .774 | .617 | .484 | .138 | .087 | .737 | .590 | .555 | .364 | -.138 |
| Degree_30_out_30 | -.148 | .078 | -.037 | -.504 | .002 | -.213 | -.438 | -.224 | -.305 | -.059 | .272 |
| Develop_31_on_off_31 | .105 | -.092 | -.123 | .377 | -.062 | .319 | .282 | -.020 | -.077 | -.485 | -.086 |
| Org_Out_bus_strat_36 | -.514 | -.555 | -.326 | -.359 | .070 | .093 | -.111 | -.597 | -.546 | -.768 | .193 |

Extraction Method: Principal Component Analysis.

**...cont'd**

| Correlation | Outsource strategically important IT | Q 25. Switched Outsourcing Vendors | Q 26. Renewed with current Vendor | Back Sourced | Q 28. Kept In House | Q 29. Strategic Importance | Degree_30_out_30 | Develop_31_on_off_31 |
|---|---|---|---|---|---|---|---|---|
| CIO_instr_out_38 | .135 | .135 | -.509 | -.406 | .081 | -.007 | .067 | -.235 |
| CIO_Excellent_39 | .216 | .216 | -.019 | -.094 | .015 | -.273 | .441 | -.491 |
| CIO_40_Effective_p4_40 | .342 | .342 | -.163 | .059 | .135 | -.381 | .299 | -.442 |
| IH_41_lack_strate_p5_41 | .147 | .147 | -.013 | .039 | -.278 | -.419 | .823 | -.156 |
| IH_lack_rigour_42 | .041 | .041 | -.091 | -.029 | -.266 | -.254 | .607 | -.098 |
| IH_Pro_creep_43 | .292 | .292 | -.205 | .125 | -.257 | -.425 | .347 | .032 |
| IH_Cost_inc_44 | .622 | .622 | -.200 | -.020 | -.354 | -.556 | .053 | -.040 |
| IH_Time_inc_45 | .568 | .568 | -.199 | -.041 | -.323 | -.503 | .075 | -.056 |
| OUT_lose_pr_46 | .067 | .067 | .535 | .090 | .198 | -.005 | .175 | -.342 |
| OUT_lose_re_47 | .014 | .014 | .356 | .001 | .015 | -.080 | -.016 | -.074 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 80 (18.0%) nonredundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.7: Reproduced Correlations for Organisational Quality cont'd

| Correlation | Org_Out_bus_strat_36 | CIO_instr_out_38 | CIO_Excellent_39 | CIO_40_Effective_p4_40 | IH_41_lack_strate_p5_41 | IH_lack_rigour_42 | IH_Pro_creep_43 | IH_Cost_inc_44 | IH_Time_inc_45 | OUT_lose_pr_46 | OUT_lose_re_47 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CIO_instr_out_38 | -.078 | .826(b) | .462 | .391 | .192 | .392 | .498 | .535 | .556 | -.334 | -.272 |
| CIO_Excellent_39 | .436 | .462 | .891(b) | .802 | .426 | .597 | .420 | .334 | .345 | -.242 | -.276 |
| CIO_40_Effective_p4_40 | .386 | .391 | .802 | .954(b) | .303 | .392 | .214 | .206 | .191 | -.452 | -.552 |
| IH_41_lack_strate_p5_41 | .278 | .192 | .426 | .303 | .988(b) | .769 | .677 | .382 | .392 | .040 | -.075 |
| IH_lack_rigour_42 | .417 | .392 | .597 | .392 | .769 | .833(b) | .753 | .451 | .475 | -.184 | -.180 |
| IH_Pro_creep_43 | .243 | .498 | .420 | .214 | .677 | .753 | .955(b) | .762 | .777 | -.082 | .001 |
| IH_Cost_inc_44 | .193 | .535 | .334 | .206 | .382 | .451 | .762 | .908(b) | .893 | -.042 | .091 |
| IH_Time_inc_45 | .171 | .556 | .345 | .191 | .392 | .475 | .777 | .893 | .885(b) | -.028 | .104 |
| OUT_lose_pr_46 | -.392 | -.334 | -.242 | -.452 | .040 | -.184 | -.082 | -.042 | -.028 | .938(b) | .856 |
| OUT_lose_re_47 | -.347 | -.272 | -.276 | -.552 | -.075 | -.180 | .001 | .091 | .104 | .856 | .956(b) |

**...cont'd**

| Correlation | OUT_own_pr_p5_48 | Choosing_wro_Venp_p9_71 | Vendor_man_72 | Support_enh_73 | operation_exp_74 | onshore_bet_qua_75 | response_bus_76 | staff_morale_79 | bus_lost_exper_80 | bus_lost_cont_81 | Out_Win_WIN_p9_84 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CIO_instr_out_38 | -.454 | -.207 | .508 | .358 | .380 | .085 | -.116 | .485 | .433 | .183 | -.014 |
| CIO_Excellent_39 | -.527 | -.478 | .084 | -.227 | .293 | -.220 | -.513 | -.152 | -.113 | -.205 | .479 |
| CIO_40_Effective_p4_40 | -.648 | -.489 | .106 | -.144 | -.106 | -.182 | -.664 | -.145 | -.081 | -.324 | .614 |
| IH_41_lack_strate_p5_41 | -.182 | -.190 | -.141 | -.476 | .006 | .055 | -.538 | -.298 | -.388 | -.230 | .154 |
| IH_lack_rigour_42 | -.370 | -.333 | .037 | -.209 | .318 | .154 | -.340 | -.159 | -.209 | -.306 | .206 |
| IH_Pro_creep_43 | -.154 | -.493 | -.060 | -.123 | .396 | .405 | -.296 | -.111 | -.141 | -.156 | -.107 |
| IH_Cost_inc_44 | -.121 | -.655 | -.178 | -.150 | .384 | .220 | -.256 | -.126 | -.136 | -.033 | -.327 |
| IH_Time_inc_45 | -.116 | -.613 | -.135 | -.126 | .424 | .228 | -.230 | -.086 | -.100 | .000 | -.324 |
| OUT_lose_pr_46 | .802 | .255 | -.389 | -.495 | .168 | -.264 | .016 | -.195 | -.180 | .623 | -.344 |
| OUT_lose_re_47 | .855 | .078 | -.434 | -.341 | .401 | -.297 | .108 | -.166 | -.168 | .533 | -.382 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 80 (18.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.7: Reproduced Correlations for Organisational Quality cont'd

| Correlation | Outsource strategically important IT | Q 25. Switched Outsourcing Vendors | Q 26. Renewed with current Vendor | Back Sourced | Q 28. Kept In House | Q 29. Strategic Importance | Degree _30_ out_30 | Develop _31_ on_ off_ 31 | Org_ Out_bus_ strat_36 |
|---|---|---|---|---|---|---|---|---|---|
| OUT_own_pr_p5_48 | -.063 | -.063 | .258 | .252 | .198 | -.065 | -.148 | .105 | -.514 |
| Choosing_wro_Venp _p9_71 | -.647 | -.647 | .087 | -.283 | .402 | .774 | .078 | -.092 | -.555 |
| Vendor_man_72 | -.462 | -.462 | -.457 | -.465 | .385 | .617 | -.037 | -.123 | -.326 |
| Support_enh_73 | -.464 | -.464 | -.657 | -.274 | .263 | .484 | -.504 | .377 | -.359 |
| operation_exp_74 | -.145 | -.145 | .000 | -.381 | -.166 | .138 | .002 | -.062 | .070 |
| onshore_bet_qua_75 | .111 | .111 | -.033 | .490 | .000 | .087 | -.213 | .319 | .093 |
| response_bus_76 | -.420 | -.420 | .171 | -.281 | -.117 | .737 | -.438 | .282 | -.111 |
| staff_morale_79 | -.447 | -.447 | -.551 | -.507 | .428 | .590 | -.224 | -.020 | -.597 |
| bus_lost_exper_80 | -.355 | -.355 | -.445 | -.348 | .508 | .555 | -.305 | -.077 | -.546 |
| bus_lost_cont_81 | -.072 | -.072 | .064 | -.288 | .564 | .364 | -.059 | -.485 | -.768 |

**...cont'd**

| Correlation | CIO_ instr _out_38 | CIO_ Excellent _39 | CIO_40_ Effective_ p4_40 | IH_41_lac k_strate_ p5_41 | IH_ lack _rigou r_42 | IH_ Pro_cree p_43 | IH_ Cost_ inc _44 | IH_ Time_ inc_45 | OUT_ lose_pr _46 | OUT_ lose _re_47 |
|---|---|---|---|---|---|---|---|---|---|---|
| OUT_own_pr_p5_48 | -.454 | -.527 | -.648 | -.182 | -.370 | -.154 | -.121 | -.116 | .802 | .855 |
| Choosing_wro_Venp _p9_71 | -.207 | -.478 | -.489 | -.190 | -.333 | -.493 | -.655 | -.613 | .255 | .078 |
| Vendor_man_72 | .508 | .084 | .106 | -.141 | .037 | -.060 | -.178 | -.135 | -.389 | -.434 |
| Support_enh_73 | .358 | -.227 | -.144 | -.476 | -.209 | -.123 | -.150 | -.126 | -.495 | -.341 |
| operation_exp_74 | .380 | .293 | -.106 | .006 | .318 | .396 | .384 | .424 | .168 | .401 |
| onshore_bet_qua_75 | .085 | -.220 | -.182 | .055 | .154 | .405 | .220 | .228 | -.264 | -.297 |
| response_bus_76 | -.116 | -.513 | -.664 | -.538 | -.340 | -.296 | -.256 | -.230 | .016 | .108 |
| staff_morale_79 | .485 | -.152 | -.145 | -.298 | -.159 | -.111 | -.126 | -.086 | -.195 | -.166 |
| bus_lost_exper_80 | .433 | -.113 | -.081 | -.388 | -.209 | -.141 | -.136 | -.100 | -.180 | -.168 |
| bus_lost_cont_81 | .183 | -.205 | -.324 | -.230 | -.306 | -.156 | -.033 | .000 | .623 | .533 |

a  Residuals are computed between observed and reproduced correlations. There are 80 (18.0%) nonredundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.7: Reproduced Correlations for Organisational Quality cont'd

| Correlation | OUT_own_pr_p5_48 | Choosing_wro_Venp_p9_71 | Vendor_man_72 | Support_enh_73 | operation_exp_74 | onshore_bet_qua_75 | response_bus_76 | staff_morale_79 | bus_lost_exper_80 | bus_lost_cont_81 | Out_Win_WIN_p9_84 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OUT_own_pr_p5_48 | .960(b) | .225 | -.419 | -.212 | .080 | -.131 | .090 | -.121 | -.107 | .496 | -.315 |
| Choosing_wro_Venp_p9_71 | .225 | .950(b) | .458 | .276 | -.192 | -.042 | .463 | .511 | .428 | .495 | -.117 |
| Vendor_man_72 | -.419 | .458 | .845(b) | .680 | .092 | .102 | .272 | .793 | .721 | .272 | .115 |
| Support_enh_73 | -.212 | .276 | .680 | .919(b) | .099 | .248 | .419 | .764 | .718 | .109 | .023 |
| operation_exp_74 | .080 | -.192 | .092 | .099 | .871(b) | -.120 | .253 | .155 | .130 | .220 | -.180 |
| onshore_bet_qua_75 | -.131 | -.042 | .102 | .248 | -.120 | .954(b) | .276 | .051 | .104 | -.200 | -.334 |
| response_bus_76 | .090 | .463 | .272 | .419 | .253 | .276 | .923(b) | .352 | .328 | .186 | -.519 |
| staff_morale_79 | -.121 | .511 | .793 | .764 | .155 | .051 | .352 | .902(b) | .812 | .503 | -.078 |
| bus_lost_exper_80 | -.107 | .428 | .721 | .718 | .130 | .104 | .328 | .812 | .777(b) | .481 | -.051 |
| bus_lost_cont_81 | .496 | .495 | .272 | .109 | .220 | -.200 | .186 | .503 | .481 | .958(b) | -.360 |

**...cont'd**

| Correlation | Outsource strategically important IT | Q 25. Switched Outsourcing Vendors | Q 26. Renewed with current Vendor | Back Sourced | Q 28. Kept In House | Q 29. Strategic Importance | Degree_30_out_30 | Develop_31_on_off_31 | Org_Out_bus_strat_36 |
|---|---|---|---|---|---|---|---|---|---|
| Out_Win_WIN_p9_84 | -.257 | -.257 | -.216 | .111 | .255 | -.138 | .272 | -.086 | .193 |
| Outsource strategically important IT | | .056 | -.028 | -.002 | -.021 | -.004 | .053 | .004 | -.035 |
| Q 25. Switched Outsourcing Vendors | .056 | | -.028 | -.002 | -.021 | -.004 | .053 | .004 | -.035 |
| Q 26. Renewed with current Vendor | -.028 | -.028 | | -.046 | .003 | .026 | -.079 | -.023 | .036 |
| Back Sourced | -.002 | -.002 | -.046 | | .004 | -.032 | .051 | .010 | -.016 |
| Q 28. Kept In House | -.021 | -.021 | .003 | .004 | | .003 | -.023 | .040 | .045 |
| Q 29. Strategic Importance | -.004 | -.004 | .026 | -.032 | .003 | | -.026 | .006 | .000 |
| Degree_30_out_30 | .053 | .053 | -.079 | .051 | -.023 | -.026 | | .033 | -.067 |
| Develop_31_on_off_31 | .004 | .004 | -.023 | .010 | .040 | .006 | .033 | | .009 |
| Org_Out_bus_strat_36 | -.035 | -.035 | .036 | -.016 | .045 | .000 | -.067 | .009 | |
| CIO_instr_out_38 | .021 | .021 | -.068 | .075 | -.050 | -.052 | .087 | -.035 | -.082 |
| CIO_Excellent_39 | .036 | .036 | -.064 | .040 | -.018 | -.017 | .107 | .042 | -.039 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 80 (18.0%) nonredundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.7: Reproduced Correlations for Organisational Quality cont'd

| Correlation | CIO_instr_out_38 | CIO_Excellent_39 | CIO_40_Effective_p4_40 | IH_41_lack_strate_p5_41 | IH_lack_rigour_42 | IH_Pro_creep_43 | IH_Cost_inc_44 | IH_Time_inc_45 | OUT_lose_pr_46 | OUT_lose_re_47 |
|---|---|---|---|---|---|---|---|---|---|---|
| Out_Win_WIN_p9_84 | -.014 | .479 | .614 | .154 | .206 | -.107 | -.327 | -.324 | -.344 | -.382 |
| Outsource strategically important IT | .021 | .036 | -.027 | .001 | .014 | .013 | -.056 | -.066 | -.045 | -.014 |
| Q 25. Switched Outsourcing Vendors | .021 | .036 | -.027 | .001 | .014 | .013 | -.056 | -.066 | -.045 | -.014 |
| Q 26. Renewed with current Vendor | -.068 | -.064 | -.003 | -.012 | .068 | .033 | .039 | .046 | -.006 | .012 |
| Back Sourced | .075 | .040 | .018 | .007 | -.074 | -.037 | -.017 | -.023 | .031 | -.001 |
| Q 28. Kept In House | -.050 | -.018 | .007 | .005 | .005 | -.005 | .054 | .045 | .027 | -.015 |
| Q 29. Strategic Importance | -.052 | -.017 | -.009 | .002 | .026 | .012 | .023 | .031 | -.014 | -.006 |
| Degree_30_out_30 | .087 | .107 | .001 | .022 | -.089 | -.044 | -.070 | -.073 | -.008 | -.014 |
| Develop_31_on_off_31 | -.035 | .042 | .013 | .022 | -.030 | -.026 | .021 | .024 | .018 | -.012 |
| Org_Out_bus_strat_36 | -.082 | -.039 | .039 | -.003 | .076 | .018 | .038 | .039 | .038 | .042 |
| CIO_instr_out_38 | | .050 | -.006 | -.005 | -.111 | -.037 | -.070 | -.083 | .005 | -.010 |
| CIO_Excellent_39 | .050 | | .023 | .029 | -.077 | -.048 | -.054 | -.046 | .008 | .006 |

...cont'd

| Correlation | OUT_own_pr_p5_48 | Choosing_wro_Venp_p9_71 | Vendor_man_72 | Support_enh_73 | operation_exp_74 | onshore_bet_qua_75 | response_bus_76 | staff_morale_79 | bus_lost_exper_80 | bus_lost_cont_81 | Out_Win_WIN_p9_84 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Out_Win_WIN_p9_84 | -.315 | -.117 | .115 | .023 | -.180 | -.334 | -.519 | -.078 | -.051 | -.360 | .863(b) |
| Outsource strategically important IT | .036 | .009 | -.063 | .004 | .045 | .013 | .050 | -.011 | .049 | .003 | .021 |
| Q 25. Switched Outsourcing Vendors | .036 | .009 | -.063 | .004 | .045 | .013 | .050 | -.011 | .049 | .003 | .021 |
| Q 26. Renewed with current Vendor | -.006 | -.041 | .024 | -.005 | -.074 | -.013 | -.052 | .041 | -.005 | .039 | .041 |
| Back Sourced | -.012 | .043 | .018 | .017 | .057 | .006 | .021 | -.039 | -.044 | -.044 | -.061 |
| Q 28. Kept In House | -.042 | .024 | .031 | -.008 | -.008 | -.049 | -.023 | -.030 | .015 | .008 | -.035 |
| Q 29. Strategic Importance | .002 | -.029 | -.008 | -.030 | -.031 | -.001 | -.006 | .016 | .038 | .022 | .043 |
| Degree_30_out_30 | .025 | .040 | -.069 | -.004 | .100 | .036 | .091 | -.040 | .044 | -.051 | -.032 |
| Develop_31_on_off_31 | -.022 | .018 | -.029 | -.025 | .014 | -.017 | .026 | -.020 | .074 | -.010 | -.027 |
| Org_Out_bus_strat_36 | -.040 | -2.04E-005 | .001 | .053 | -.084 | -.052 | -.065 | .050 | .020 | .024 | -.063 |
| CIO_instr_out_38 | .025 | .049 | .034 | .024 | .113 | .047 | .047 | -.061 | -.119 | -.064 | -.037 |
| CIO_Excellent_39 | .014 | .025 | -.084 | -.001 | .059 | .033 | .077 | -.007 | .074 | -.047 | -.042 |

Extraction Method: Principal Component Analysis.

a Residuals are computed between observed and reproduced correlations. There are 80 (18.0%) nonredundant residuals with absolute values greater than 0.05.

b Reproduced communalities

Table K.7: Reproduced Correlations for Organisational Quality cont'd

| Correlation | Outsource strategically important IT | Q 25. Switched Outsourcing Vendors | Q 26. Renewed with current Vendor | Back Sourced | Q 28. Kept In House | Q 29. Strategic Importance | Degree _30_ out_30 | Develop _31_ on_ off_ 31 | Org_ Out_bus_ strat_36 |
|---|---|---|---|---|---|---|---|---|---|
| CIO_40_Effective_p4_40 | -.027 | -.027 | -.003 | .018 | .007 | -.009 | .001 | .013 | .039 |
| IH_41_lack_strate_p5_41 | .001 | .001 | -.012 | .007 | .005 | .002 | .022 | .022 | -.003 |
| IH_lack_rigour_42 | .014 | .014 | .068 | -.074 | .005 | .026 | -.089 | -.030 | .076 |
| IH_Pro_creep_43 | .013 | .013 | .033 | -.037 | -.005 | .012 | -.044 | -.026 | .018 |
| IH_Cost_inc_44 | -.056 | -.056 | .039 | -.017 | .054 | .023 | -.070 | .021 | .038 |
| IH_Time_inc_45 | -.066 | -.066 | .046 | -.023 | .045 | .031 | -.073 | .024 | .039 |
| OUT_lose_pr_46 | -.045 | -.045 | -.006 | .031 | .027 | -.014 | -.008 | .018 | .038 |
| OUT_lose_re_47 | -.014 | -.014 | .012 | -.001 | -.015 | -.006 | -.014 | -.012 | .042 |
| OUT_own_pr_p5_48 | .036 | .036 | -.006 | -.012 | -.042 | .002 | .025 | -.022 | -.040 |
| Choosing_wro_Venp_p9_71 | .009 | .009 | -.041 | .043 | .024 | -.029 | .040 | .018 | -2.04E-005 |

**...cont'd**

| Correlation | CIO_ instr _out_3 8 | CIO_ Excellent_3 9 | CIO_40_ Effective _ p4_40 | IH_41_lac k_strate_ p5_41 | IH_ lack _rigou r_42 | IH_ Pro_cree p_43 | IH_ Cost_ inc _44 | IH_ Time_ inc_45 | OUT_ lose_pr_4 6 | OUT_ lose _re_4 7 |
|---|---|---|---|---|---|---|---|---|---|---|
| CIO_40_Effective_p4_40 | -.006 | .023 | | .012 | -.020 | -.025 | .009 | .021 | .045 | .035 |
| IH_41_lack_strate_p5_41 | -.005 | .029 | .012 | | -.023 | -.018 | .001 | .008 | .010 | .002 |
| IH_lack_rigour_42 | -.111 | -.077 | -.020 | -.023 | | .079 | .001 | -.006 | -.046 | .023 |
| IH_Pro_creep_43 | -.037 | -.048 | -.025 | -.018 | .079 | | -.004 | -.012 | -.035 | -.001 |
| IH_Cost_inc_44 | -.070 | -.054 | .009 | .001 | .001 | -.004 | | .098 | .036 | -.013 |
| IH_Time_inc_45 | -.083 | -.046 | .021 | .008 | -.006 | -.012 | .098 | | .044 | -.002 |
| OUT_lose_pr_46 | .005 | .008 | .045 | .010 | -.046 | -.035 | .036 | .044 | | .021 |
| OUT_lose_re_47 | -.010 | .006 | .035 | .002 | .023 | -.001 | -.013 | -.002 | .021 | |
| OUT_own_pr_p5_48 | .025 | .014 | -.023 | -.005 | .014 | .016 | -.047 | -.048 | -.042 | -.004 |
| Choosing_wro_Venp_p9_7 1 | .049 | .025 | .004 | .002 | -.041 | -.020 | -.012 | -.028 | .018 | -.011 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 80 (18.0%) nonredundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.7: Reproduced Correlations for Organisational Quality cont'd

| Correlation | OUT_own_pr_p5_48 | Choosing_wro_Venp_p9_71 | Vendor_man_72 | Support_enh_73 | operation_exp_74 | onshore_bet_qua_75 | response_bus_76 | staff_morale_79 | bus_lost_exper_80 | bus_lost_cont_81 | Out_Win_WIN_p9_84 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CIO_40_Effective_p4_40 | -.023 | .004 | -.010 | .025 | -.030 | -.002 | -.014 | .032 | .009 | -.020 | -.059 |
| IH_41_lack_strate_p5_41 | -.005 | .002 | -.021 | -.010 | .004 | .005 | .017 | .002 | .033 | -.011 | -.012 |
| IH_lack_rigour_42 | .014 | -.041 | -.037 | .040 | -.094 | -.039 | -.054 | .070 | .050 | .075 | .042 |
| IH_Pro_creep_43 | .016 | -.020 | -.004 | .012 | -.031 | -.014 | -.024 | .020 | .002 | .039 | .040 |
| IH_Cost_inc_44 | -.047 | -.012 | .074 | -.038 | -.048 | -.035 | -.052 | -.011 | -.017 | .017 | .006 |
| IH_Time_inc_45 | -.048 | -.028 | .063 | -.047 | -.069 | -.024 | -.053 | .010 | .000 | .014 | .011 |
| OUT_lose_pr_46 | -.042 | .018 | .036 | .014 | -.016 | -.013 | -.026 | .001 | -.030 | -.027 | -.070 |
| OUT_lose_re_47 | -.004 | -.011 | -.026 | .042 | -.046 | .004 | -.020 | .055 | .008 | -.003 | -.037 |
| OUT_own_pr_p5_48 | | -.014 | -.039 | -.001 | .019 | .029 | .030 | .010 | .014 | .006 | .043 |
| Choosing_wro_Venp_p9_71 | -.014 | | .014 | .021 | .056 | -.016 | .016 | -.048 | -.027 | -.026 | -.058 |

**...cont'd**

| Correlation | Outsource strategically important IT | Q 25. Switched Outsourcing Vendors | Q 26. Renewed with current Vendor | Back Sourced | Q 28. Kept In House | Q 29. Strategic Importance | Degree _30_out_30 | Develop _31_on_off_ 31 | Org_ Out_bus_ strat_36 | CIO_ instr _out_38 |
|---|---|---|---|---|---|---|---|---|---|---|
| Vendor_man_72 | -.063 | -.063 | .024 | .018 | .031 | -.008 | -.069 | -.029 | .001 | .034 |
| Support_enh_73 | .004 | .004 | -.005 | .017 | -.008 | -.030 | -.004 | -.025 | .053 | .024 |
| operation_exp_74 | .045 | .045 | -.074 | .057 | -.008 | -.031 | .100 | .014 | -.084 | .113 |
| onshore_bet_qua_75 | .013 | .013 | -.013 | .006 | -.049 | -.001 | .036 | -.017 | -.052 | .047 |
| response_bus_76 | .050 | .050 | -.052 | .021 | -.023 | -.006 | .091 | .026 | -.065 | .047 |
| staff_morale_79 | -.011 | -.011 | .041 | -.039 | -.030 | .016 | -.040 | -.020 | .050 | -.061 |
| bus_lost_exper_80 | .049 | .049 | -.005 | -.044 | .015 | .038 | .044 | .074 | .020 | -.119 |
| bus_lost_cont_81 | .003 | .003 | .039 | -.044 | .008 | .022 | -.051 | -.010 | .024 | -.064 |
| Out_Win_WIN_p9_84 | .021 | .021 | .041 | -.061 | -.035 | .043 | -.032 | -.027 | -.063 | -.037 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 80 (18.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.7: Reproduced Correlations for Organisational Quality cont'd

| Correlation | CIO_Excellent_39 | CIO_40_Effective_p4_40 | IH_41_lack_strate_p5_41 | IH_lack_rigou r_42 | IH_Pro_cree p_43 | IH_Cost_inc_44 | IH_Time_inc_45 | OUT_lose_pr_46 | OUT_lose_re_47 | OUT_own_pr_p5_48 |
|---|---|---|---|---|---|---|---|---|---|---|
| Vendor_man_72 | -.084 | -.010 | -.021 | -.037 | -.004 | .074 | .063 | .036 | -.026 | -.039 |
| Support_enh_73 | -.001 | .025 | -.010 | .040 | .012 | -.038 | -.047 | .014 | .042 | -.001 |
| operation_exp_74 | .059 | -.030 | .004 | -.094 | -.031 | -.048 | -.069 | -.016 | -.046 | .019 |
| onshore_bet_qua_75 | .033 | -.002 | .005 | -.039 | -.014 | -.035 | -.024 | -.013 | .004 | .029 |
| response_bus_76 | .077 | -.014 | .017 | -.054 | -.024 | -.052 | -.053 | -.026 | -.020 | .030 |
| staff_morale_79 | -.007 | .032 | .002 | .070 | .020 | -.011 | .010 | .001 | .055 | .010 |
| bus_lost_exper_80 | .074 | .009 | .033 | .050 | .002 | -.017 | .000 | -.030 | .008 | .014 |
| bus_lost_cont_81 | -.047 | -.020 | -.011 | .075 | .039 | .017 | .014 | -.027 | -.003 | .006 |
| Out_Win_WIN_p9_84 | -.042 | -.059 | -.012 | .042 | .040 | .006 | .011 | -.070 | -.037 | .043 |

**...cont'd**

| Correlation | Choosing_wro_Ven p_p9_71 | Vendor_man_72 | Support_enh_73 | operation_exp_74 | onshore_bet_qua_75 | response_bus_76 | staff_morale_79 | bus_lost_exper_80 | bus_lost_cont_81 | Out_Win_WIN_p9_84 |
|---|---|---|---|---|---|---|---|---|---|---|
| Vendor_man_72 | .014 |  | -.018 | .005 | -.022 | -.065 | -.058 | -.156 | -.004 | -.001 |
| Support_enh_73 | .021 | -.018 |  | -.016 | -.014 | -.023 | .033 | -.027 | -.004 | -.068 |
| operation_exp_74 | .056 | .005 | -.016 |  | .020 | .071 | -.092 | -.035 | -.044 | -.013 |
| onshore_bet_qua_75 | -.016 | -.022 | -.014 | .020 |  | .033 | .011 | -.004 | -.019 | .027 |
| response_bus_76 | .016 | -.065 | -.023 | .071 | .033 |  | -.027 | .058 | -.026 | .011 |
| staff_morale_79 | -.048 | -.058 | .033 | -.092 | .011 | -.027 |  | .053 | .022 | .004 |
| bus_lost_exper_80 | -.027 | -.156 | -.027 | -.035 | -.004 | .058 | .053 |  | .025 | .020 |
| bus_lost_cont_81 | -.026 | -.004 | -.004 | -.044 | -.019 | -.026 | .022 | .025 |  | .043 |
| Out_Win_WIN_p9_84 | -.058 | -.001 | -.068 | -.013 | .027 | .011 | .004 | .020 | .043 |  |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 80 (18.0%) nonredundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.7: Reproduced Correlations for Organisational Quality

**Rotated Component Matrix(a)**

| | Component | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Outsource strategically important IT | | .870 | | | | | | |
| Q 25. Switched Outsourcing Vendors | | .870 | | | | | | |
| Q 26. Renewed with current Vendor | -.675 | | | | | .567 | | |
| Back Sourced | | | | | | | | .808 |
| Q 28. Kept In House | .508 | | | | | | | |
| Q 29. Strategic Importance | | -.703 | | | | | | |
| Degree_30_out_30 | | | | .834 | | | | |
| Develop_31_on_off_31 | | | | | | -.916 | | |
| Org_Out_bus_strat_36 | -.627 | | -.623 | | | | | |
| CIO_instr_out_38 | .634 | | | | | | | |
| CIO_Excellent_39 | | | | | -.505 | | | |
| CIO_40_Effective_p4_40 | | | -.553 | | -.653 | | | |
| IH_41_lack_strate_p5_41 | | | | .952 | | | | |
| IH_lack_rigour_42 | | | | .764 | | | | |
| IH_Pro_creep_43 | | .513 | | .653 | | | | |
| IH_Cost_inc_44 | | .843 | | | | | | |
| IH_Time_inc_45 | | .800 | | | | | | |
| OUT_lose_pr_46 | | | .866 | | | | | |
| OUT_lose_re_47 | | | .893 | | | | | |
| OUT_own_pr_p5_48 | | | .935 | | | | | |
| Choosing_wro_Venp_p9_71 | | -.710 | | | | | | |
| Vendor_man_72 | .799 | | | | | | | |
| Support_enh_73 | .760 | | | | | | | |
| operation_exp_74 | | | | | | | .873 | |
| onshore_bet_qua_75 | | | | | | | | .804 |
| response_bus_76 | | | | | .744 | | | |
| staff_morale_79 | .907 | | | | | | | |
| bus_lost_exper_80 | .830 | | | | | | | |
| bus_lost_cont_81 | .509 | | .667 | | | | | |
| Out_Win_WIN_p9_84 | | | | | -.809 | | | |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 13 iterations.

Table K.8: Rotated Component Matrix for Organisational Quality

**Component Transformation Matrix**

| Component | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1 | -.506 | .640 | -.254 | .423 | -.275 | .013 | .111 | .055 |
| 2 | .667 | .023 | -.659 | .207 | -.186 | -.067 | .188 | -.061 |
| 3 | .437 | .499 | .532 | .184 | .283 | .165 | .357 | -.089 |
| 4 | .028 | -.315 | .208 | .358 | -.484 | .637 | -.072 | -.289 |
| 5 | -.236 | -.448 | -.025 | .552 | .388 | -.258 | .430 | -.192 |
| 6 | .212 | -.099 | .303 | .474 | -.208 | -.355 | -.343 | .585 |
| 7 | -.030 | -.040 | -.276 | .136 | .512 | .602 | -.121 | .513 |
| 8 | -.075 | -.173 | .081 | -.260 | -.348 | .085 | .709 | .509 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Table K.9: Component Transformation Matrix for Organisational Quality

## K.2 Knowledge Sharing

| Knowledge Sharing | Q 142 to 156 | | .959 |
|---|---|---|---|

**Descriptive Statistics**

| | Mean | Std. Deviation | Analysis N |
|---|---|---|---|
| Cha_lack_of_support_p14_142 | 4.06 | 2.761 | 33 |
| When_made_difficult_143 | 3.58 | 2.670 | 33 |
| When_withheld_infor_144 | 3.64 | 2.596 | 33 |
| When_held_documentation_145 | 3.61 | 2.669 | 33 |
| After_another_contract_146 | 3.64 | 3.090 | 33 |
| TT_PV_info_147 | 3.21 | 2.837 | 33 |
| TT_other_previous_148 | 3.91 | 2.720 | 33 |
| TT_Lack_Documentation_149 | 4.45 | 2.728 | 33 |
| TT_Lack_internal_process_150 | 4.45 | 2.599 | 33 |
| TT_Lack_staff_151 | 3.76 | 2.670 | 33 |
| LOS_Reluct_152 | 3.39 | 2.882 | 33 |
| LOS_local_153 | 3.70 | 2.733 | 33 |
| LOS_lacking_154 | 4.33 | 2.746 | 33 |
| LOS_inhouse_155 | 3.55 | 2.705 | 33 |
| LOS_policies_p14_156 | 3.39 | 2.738 | 33 |

Table K.10: Descriptive Statistics of Knowledge Sharing

**Correlation Matrix(a)**

| Correlation | Cha_lack_of_support_p14_142 | When_made_difficult_143 | When_withheld_infor_144 | When_held_documentation_145 | After_another_contract_146 | TT_PV_info_147 | TT_other_previous_148 |
|---|---|---|---|---|---|---|---|
| Cha_lack_of_support_p14_142 | 1.000 | .928 | .814 | .767 | .757 | .669 | .484 |
| When_made_difficult_143 | .928 | 1.000 | .744 | .686 | .784 | .615 | .451 |
| When_withheld_infor_144 | .814 | .744 | 1.000 | .989 | .630 | .919 | .721 |
| When_held_documentation_145 | .767 | .686 | .989 | 1.000 | .573 | .915 | .723 |
| After_another_contract_146 | .757 | .784 | .630 | .573 | 1.000 | .587 | .487 |
| TT_PV_info_147 | .669 | .615 | .919 | .915 | .587 | 1.000 | .784 |
| TT_other_previous_148 | .484 | .451 | .721 | .723 | .487 | .784 | 1.000 |
| TT_Lack_Documentation_149 | .353 | .310 | .624 | .648 | .354 | .766 | .793 |
| TT_Lack_internal_process_150 | .292 | .335 | .516 | .527 | .364 | .593 | .824 |
| TT_Lack_staff_151 | .528 | .555 | .564 | .565 | .618 | .560 | .832 |
| LOS_Reluct_152 | .578 | .599 | .755 | .748 | .494 | .742 | .623 |
| LOS_local_153 | .168 | .213 | .389 | .403 | .209 | .565 | .703 |
| LOS_lacking_154 | .632 | .651 | .508 | .483 | .773 | .508 | .745 |
| LOS_inhouse_155 | .841 | .873 | .759 | .706 | .936 | .758 | .636 |
| LOS_policies_p14_156 | .584 | .631 | .417 | .368 | .579 | .532 | .295 |

| Correlation | TT_Lack_Documentation_149 | TT_Lack_internal_process_150 | TT_Lack_staff_151 | LOS_Reluct_152 | LOS_local_153 | LOS_lacking_154 | LOS_inhouse_155 | LOS_policies_p14_156 |
|---|---|---|---|---|---|---|---|---|
| Cha_lack_of_support_p14_142 | .353 | .292 | .528 | .578 | .168 | .632 | .841 | .584 |
| When_made_difficult_143 | .310 | .335 | .555 | .599 | .213 | .651 | .873 | .631 |
| When_withheld_infor_144 | .624 | .516 | .564 | .755 | .389 | .508 | .759 | .417 |
| When_held_documentation_145 | .648 | .527 | .565 | .748 | .403 | .483 | .706 | .368 |
| After_another_contract_146 | .354 | .364 | .618 | .494 | .209 | .773 | .936 | .579 |
| TT_PV_info_147 | .766 | .593 | .560 | .742 | .565 | .508 | .758 | .532 |
| TT_other_previous_148 | .793 | .824 | .832 | .623 | .703 | .745 | .636 | .295 |
| TT_Lack_Documentation_149 | 1.000 | .891 | .616 | .640 | .832 | .551 | .482 | .523 |
| TT_Lack_internal_process_150 | .891 | 1.000 | .782 | .647 | .838 | .665 | .461 | .409 |
| TT_Lack_staff_151 | .616 | .782 | 1.000 | .565 | .615 | .924 | .694 | .330 |
| LOS_Reluct_152 | .640 | .647 | .565 | 1.000 | .635 | .468 | .597 | .586 |
| LOS_local_153 | .832 | .838 | .615 | .635 | 1.000 | .505 | .370 | .559 |
| LOS_lacking_154 | .551 | .665 | .924 | .468 | .505 | 1.000 | .799 | .485 |
| LOS_inhouse_155 | .482 | .461 | .694 | .597 | .370 | .799 | 1.000 | .662 |
| LOS_policies_p14_156 | .523 | .409 | .330 | .586 | .559 | .485 | .662 | 1.000 |

a Determinant = 1.67E-016

Table K.11: Correlation Matrix of Knowledge Sharing

**Communalities**

| | Initial | Extraction |
|---|---|---|
| Cha_lack_of_support_p14_142 | 1.000 | .916 |
| When_made_difficult_143 | 1.000 | .900 |
| When_withheld_infor_144 | 1.000 | .965 |
| When_held_documentation_145 | 1.000 | .943 |
| After_another_contract_146 | 1.000 | .878 |
| TT_PV_info_147 | 1.000 | .923 |
| TT_other_previous_148 | 1.000 | .840 |
| TT_Lack_Documentation_149 | 1.000 | .895 |
| TT_Lack_internal_process_150 | 1.000 | .924 |
| TT_Lack_staff_151 | 1.000 | .860 |
| LOS_Reluct_152 | 1.000 | .734 |
| LOS_local_153 | 1.000 | .856 |
| LOS_lacking_154 | 1.000 | .955 |
| LOS_inhouse_155 | 1.000 | .951 |
| LOS_policies_p14_156 | 1.000 | .453 |

Extraction Method: Principal Component Analysis.

Table K.12: Communalities of Knowledge Sharing

**Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 9.610 | 64.067 | 64.067 | 9.610 | 64.067 | 64.067 | 4.627 | 30.845 | 30.845 |
| 2 | 2.161 | 14.407 | 78.474 | 2.161 | 14.407 | 78.474 | 4.507 | 30.047 | 60.892 |
| 3 | 1.221 | 8.138 | 86.611 | 1.221 | 8.138 | 86.611 | 3.858 | 25.719 | 86.611 |
| 4 | .960 | 6.403 | 93.014 | | | | | | |
| 5 | .373 | 2.487 | 95.501 | | | | | | |
| 6 | .250 | 1.666 | 97.168 | | | | | | |
| 7 | .173 | 1.155 | 98.322 | | | | | | |
| 8 | .093 | .622 | 98.944 | | | | | | |
| 9 | .071 | .474 | 99.419 | | | | | | |
| 10 | .048 | .317 | 99.736 | | | | | | |
| 11 | .021 | .143 | 99.879 | | | | | | |
| 12 | .011 | .072 | 99.951 | | | | | | |
| 13 | .004 | .027 | 99.979 | | | | | | |
| 14 | .003 | .018 | 99.996 | | | | | | |
| 15 | .001 | .004 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

Table K.13: Total variances of Knowledge Sharing

**Scree Plot**
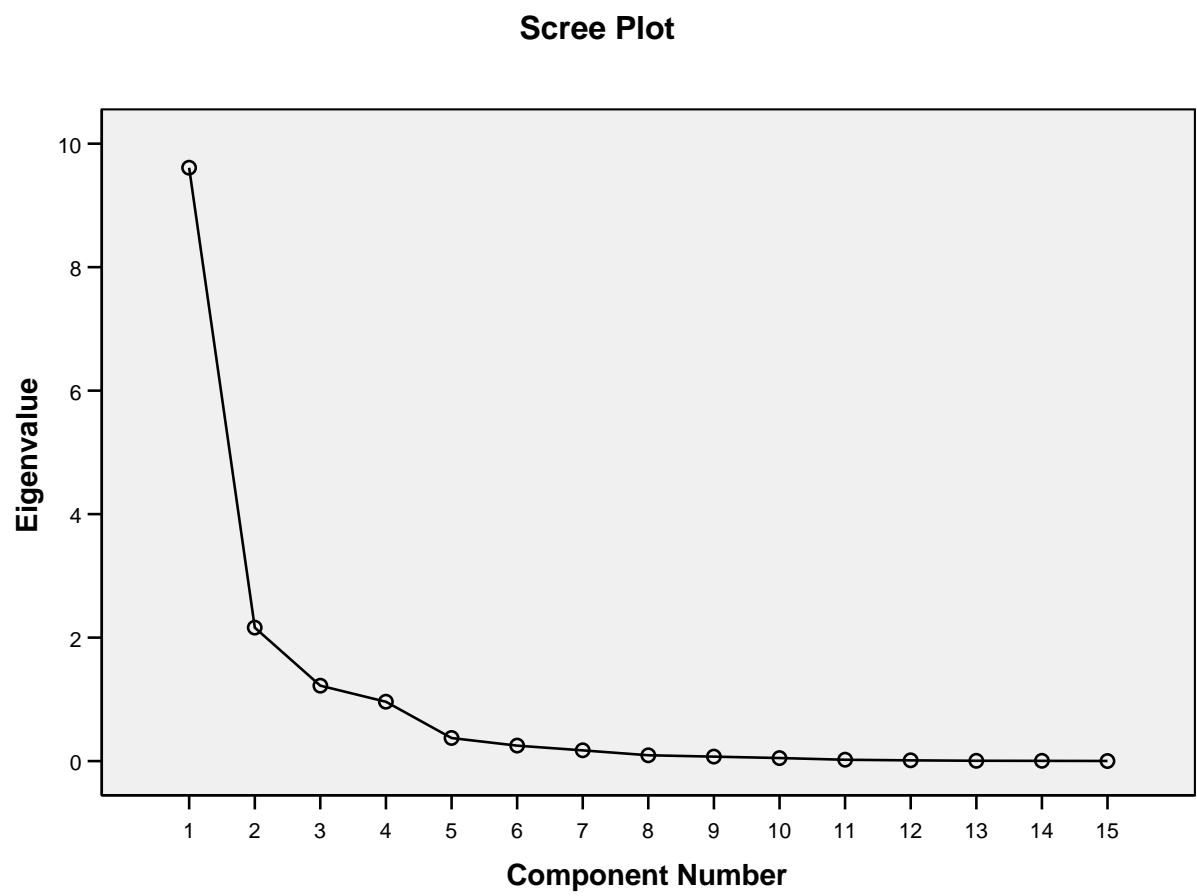


*Figure K.2: Eigenvalues of Knowledge Sharing*

**Component Matrix(a)**

|  | Component | | |
|---|---|---|---|
|  | 1 | 2 | 3 |
| Cha_lack_of_support_p14_142 | .792 | -.535 | |
| When_made_difficult_143 | .787 | -.526 | |
| When_withheld_infor_144 | .875 | | |
| When_held_documentation_145 | .855 | | |
| After_another_contract_146 | .767 | | |
| TT_PV_info_147 | .884 | | |
| TT_other_previous_148 | .847 | | |
| TT_Lack_Documentation_149 | .777 | .525 | |
| TT_Lack_internal_process_150 | .756 | .580 | |
| TT_Lack_staff_151 | .814 | | |
| LOS_Reluct_152 | .806 | | |
| LOS_local_153 | .654 | .651 | |
| LOS_lacking_154 | .808 | | .549 |
| LOS_inhouse_155 | .887 | | |
| LOS_policies_p14_156 | .651 | | |

Extraction Method: Principal Component Analysis.

a  3 components extracted.

Table K.14: Component Matrix of Knowledge Sharing

**Reproduced Correlations**

| Reproduced Correlation | Cha_lack_of_support_p14_142 | When_made_difficult_143 | When_withheld_infor_144 | When_held_documentation_145 | After_another_contract_146 | TT_PV_info_147 | TT_other_previous_148 | TT_Lack_Documentation_149 | TT_Lack_internal_process_150 | TT_Lack_staff_151 | LOS_Reluct_152 | LOS_local_153 | LOS_lacking_154 | LOS_inhouse_155 | LOS_policies_p14_156 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cha_lack_of_support_p14_142 | .916(b) | .901 | .809 | .762 | .829 | .708 | .482 | .342 | .281 | .516 | .598 | .166 | .613 | .886 | .574 |
| When_made_difficult_143 | .901 | .900(b) | .756 | .706 | .856 | .661 | .483 | .329 | .298 | .560 | .564 | .176 | .673 | .900 | .584 |
| When_withheld_infor_144 | .809 | .756 | .965(b) | .951 | .626 | .923 | .673 | .639 | .507 | .515 | .798 | .434 | .483 | .766 | .541 |
| When_held_documentation_145 | .762 | .706 | .951 | .943(b) | .572 | .921 | .677 | .661 | .523 | .496 | .798 | .459 | .446 | .719 | .516 |
| After_another_contract_146 | .829 | .856 | .626 | .572 | .878(b) | .555 | .498 | .325 | .361 | .655 | .491 | .230 | .788 | .896 | .590 |
| TT_PV_info_147 | .708 | .661 | .923 | .921 | .555 | .923(b) | .751 | .746 | .633 | .575 | .817 | .571 | .508 | .708 | .527 |
| TT_other_previous_148 | .482 | .483 | .673 | .677 | .498 | .751 | .840(b) | .840 | .846 | .765 | .715 | .784 | .690 | .626 | .510 |
| TT_Lack_Documentation_149 | .342 | .329 | .639 | .661 | .325 | .746 | .840 | .895(b) | .876 | .688 | .715 | .843 | .556 | .476 | .427 |
| TT_Lack_internal_process_150 | .281 | .298 | .507 | .523 | .361 | .633 | .846 | .876 | .924(b) | .782 | .635 | .880 | .678 | .483 | .437 |
| TT_Lack_staff_151 | .516 | .560 | .515 | .496 | .655 | .575 | .765 | .688 | .782 | .860(b) | .570 | .686 | .875 | .721 | .554 |
| LOS_Reluct_152 | .598 | .564 | .798 | .798 | .491 | .817 | .715 | .715 | .635 | .570 | .734(b) | .579 | .502 | .629 | .479 |
| LOS_local_153 | .166 | .176 | .434 | .459 | .230 | .571 | .784 | .843 | .880 | .686 | .579 | .856(b) | .558 | .354 | .354 |
| LOS_lacking_154 | .613 | .673 | .483 | .446 | .788 | .508 | .690 | .556 | .678 | .875 | .502 | .558 | .955(b) | .817 | .593 |
| LOS_inhouse_155 | .886 | .900 | .766 | .719 | .896 | .708 | .626 | .476 | .483 | .721 | .629 | .354 | .817 | .951(b) | .643 |
| LOS_policies_p14_156 | .574 | .584 | .541 | .516 | .590 | .527 | .510 | .427 | .437 | .554 | .479 | .354 | .593 | .643 | .453(b) |

Extraction Method: Principal Component Analysis.  a  Residuals are computed between observed and reproduced correlations. There are 23 (21.0%) nonredundant residuals with absolute values greater than 0.05. b  Reproduced communalities

Table K.15: Reproduced Correlations for Knowledge Sharing cont'd

**...cont'd**

| Residual(a) | Cha_lack_of_support_p14_142 | When_made_difficult_143 | When_withheld_infor_144 | When_held_documentation_145 | After_another_contract_146 | TT_PV_info_147 | TT_other_previous_148 | TT_Lack_Documentation_149 | TT_Lack_internal_process_150 | TT_Lack_staff_151 | LOS_Reluct_152 | LOS_local_153 | LOS_lacking_154 | LOS_inhouse_155 | LOS_policies_p14_156 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cha_lack_of_support_p14_142 | | .027 | .005 | .005 | -.072 | -.040 | .002 | .011 | .011 | .012 | -.020 | .002 | .019 | -.046 | .010 |
| When_made_difficult_143 | .027 | | -.013 | -.019 | -.072 | -.046 | -.032 | -.018 | .037 | -.005 | .035 | .037 | -.022 | -.027 | .047 |
| When_withheld_infor_144 | .005 | -.013 | | .038 | .003 | -.005 | .048 | -.015 | .009 | .049 | -.044 | -.045 | .025 | -.007 | -.125 |
| When_held_documentation_145 | .005 | -.019 | .038 | | .001 | -.005 | .045 | -.013 | .004 | .069 | -.050 | -.056 | .037 | -.013 | -.148 |
| After_another_contract_146 | -.072 | -.072 | .003 | .001 | | .031 | -.011 | .028 | .003 | -.038 | .003 | -.022 | -.015 | .040 | -.011 |
| TT_PV_info_147 | -.040 | -.046 | -.005 | -.005 | .031 | | .033 | .020 | -.041 | -.015 | -.074 | -.006 | -7.27E-005 | .050 | .005 |
| TT_other_previous_148 | .002 | -.032 | .048 | .045 | -.011 | .033 | | -.047 | -.022 | .067 | -.092 | -.081 | .055 | .010 | -.215 |
| TT_Lack_Documentation_149 | .011 | -.018 | -.015 | -.013 | .028 | .020 | -.047 | | .015 | -.072 | -.075 | -.011 | -.006 | .006 | .096 |
| TT_Lack_internal_process_150 | .011 | .037 | .009 | .004 | .003 | -.041 | -.022 | .015 | | -2.92E-005 | .012 | -.042 | -.013 | -.021 | -.028 |
| TT_Lack_staff_151 | .012 | -.005 | .049 | .069 | -.038 | -.015 | .067 | -.072 | -2.92E-005 | | -.004 | -.071 | .049 | -.027 | -.224 |
| LOS_Reluct_152 | -.020 | .035 | -.044 | -.050 | .003 | -.074 | -.092 | -.075 | .012 | -.004 | | .056 | -.034 | -.032 | .106 |
| LOS_local_153 | .002 | .037 | -.045 | -.056 | -.022 | -.006 | -.081 | -.011 | -.042 | -.071 | .056 | | -.052 | .015 | .206 |
| LOS_lacking_154 | .019 | -.022 | .025 | .037 | -.015 | -7.27E-005 | .055 | -.006 | -.013 | .049 | -.034 | -.052 | | -.018 | -.109 |
| LOS_inhouse_155 | -.046 | -.027 | -.007 | -.013 | .040 | .050 | .010 | .006 | -.021 | -.027 | -.032 | .015 | -.018 | | .019 |
| LOS_policies_p14_156 | .010 | .047 | -.125 | -.148 | -.011 | .005 | -.215 | .096 | -.028 | -.224 | .106 | .206 | -.109 | .019 | |

Extraction Method: Principal Component Analysis. a Residuals are computed between observed and reproduced correlations. There are 23 (21.0%) nonredundant residuals with absolute values greater than 0.05. b Reproduced communalities

Table K.15: Reproduced Correlations for Knowledge Sharing

**Rotated Component Matrix(a)**

| | Component | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Cha_lack_of_support_p14_142 | .758 | | .584 |
| When_made_difficult_143 | .814 | | |
| When_withheld_infor_144 | | | .852 |
| When_held_documentation_145 | | | .859 |
| After_another_contract_146 | .887 | | |
| TT_PV_info_147 | | | .793 |
| TT_other_previous_148 | | .762 | |
| TT_Lack_Documentation_149 | | .832 | |
| TT_Lack_internal_process_150 | | .917 | |
| TT_Lack_staff_151 | .597 | .703 | |
| LOS_Reluct_152 | | | .650 |
| LOS_local_153 | | .902 | |
| LOS_lacking_154 | .795 | .568 | |
| LOS_inhouse_155 | .846 | | |
| LOS_policies_p14_156 | .532 | | |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a  Rotation converged in 9 iterations.

Table K.16: Rotated Component Matrix for Knowledge Sharing

**Component Transformation Matrix**

| Component | 1 | 2 | 3 |
|---|---|---|---|
| 1 | .607 | .566 | .557 |
| 2 | -.577 | .797 | -.181 |
| 3 | .547 | .211 | -.810 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Table K.17: Component Transformation Matrix for Knowledge Sharing

## K.3 Outsourcing Success

| Outsourcing Success | Q 85 to 100 | Q 87, 88, 90 & 96 | .784 |
|---|---|---|---|

**Descriptive Statistics**

| | Mean | Std. Deviation | Analysis N |
|---|---|---|---|
| Out_bus_p10_85 | 3.58 | 1.911 | 31 |
| Out_internal_it_staff_86 | 2.55 | 1.650 | 31 |
| Percent_offshore_89 | 4.23 | 2.305 | 31 |
| Out_ser_var_91 | 5.52 | 1.313 | 31 |
| Bus_sat_partner_92 | 2.97 | 1.303 | 31 |
| Rel_out_ven_strong_93 | 3.90 | 1.660 | 31 |
| Out_part_KPI_94 | 4.29 | 1.243 | 31 |
| Comm_out_posit_95 | 4.23 | 1.564 | 31 |
| Qual_min_decre_97 | 2.61 | 1.564 | 31 |
| Qua_deliv_ic_98 | 2.94 | 1.526 | 31 |
| Qual_docum_ic_99 | 2.94 | 1.948 | 31 |
| Qual_tran_ic_p10_100 | 2.16 | 1.614 | 31 |

Table K.18: Descriptive Statistics of Outsourcing Success

**Correlation Matrix(a)**

| Correlation | Out_bus_p10_85 | Out_internal_it_staff_86 | Percent_offshore_89 | Out_ser_var_91 | Bus_sat_partner_92 | Rel_out_ven_strong_93 | Out_part_KPI_94 | Comm_out_posit_95 | Qual_min_decre_97 | Qual_deliv_ic_98 | Qual_docum_ic_99 | Qual_tran_ic_p10_100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Out_bus_p10_85 | 1.000 | .213 | .105 | .036 | .490 | -.066 | .151 | .311 | -.078 | .448 | .422 | .012 |
| Out_internal_it_staff_86 | .213 | 1.000 | .221 | .234 | -.131 | -.308 | .099 | -.372 | -.044 | -.012 | -.072 | .379 |
| Percent_offshore_89 | .105 | .221 | 1.000 | .180 | .258 | .276 | -.314 | .143 | .524 | .307 | -.041 | .483 |
| Out_ser_var_91 | .036 | .234 | .180 | 1.000 | -.302 | -.435 | -.176 | -.156 | .036 | -.315 | .378 | .085 |
| Bus_sat_partner_92 | .490 | -.131 | .258 | -.302 | 1.000 | .630 | .438 | .674 | .419 | .837 | .524 | .462 |
| Rel_out_ven_strong_93 | -.066 | -.308 | .276 | -.435 | .630 | 1.000 | .321 | .637 | .550 | .471 | .060 | .342 |
| Out_part_KPI_94 | .151 | .099 | -.314 | -.176 | .438 | .321 | 1.000 | .394 | .025 | .537 | .503 | .391 |
| Comm_out_posit_95 | .311 | -.372 | .143 | -.156 | .674 | .637 | .394 | 1.000 | .555 | .621 | .464 | .315 |
| Qual_min_decre_97 | -.078 | -.044 | .524 | .036 | .419 | .550 | .025 | .555 | 1.000 | .436 | .320 | .580 |
| Qual_deliv_ic_98 | .448 | -.012 | .307 | -.315 | .837 | .471 | .537 | .621 | .436 | 1.000 | .514 | .546 |
| Qual_docum_ic_99 | .422 | -.072 | -.041 | .378 | .524 | .060 | .503 | .464 | .320 | .514 | 1.000 | .427 |
| Qual_tran_ic_p10_100 | .012 | .379 | .483 | .085 | .462 | .342 | .391 | .315 | .580 | .546 | .427 | 1.000 |

a Determinant = 1.51E-005

Table K.19: Correlation of Factor analysis of Outsourcing success

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .441 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 279.449 |
| | df | 66 |
| | Sig. | .000 |

Table K.20: Correlation of Factor analysis of Outsourcing success

**Communalities**

| | Initial | Extraction |
|---|---|---|
| Out_bus_p10_85 | 1.000 | .946 |
| Out_internal_it_staff_86 | 1.000 | .907 |
| Percent_offshore_89 | 1.000 | .901 |
| Out_ser_var_91 | 1.000 | .917 |
| Bus_sat_partner_92 | 1.000 | .886 |
| Rel_out_ven_strong_93 | 1.000 | .836 |
| Out_part_KPI_94 | 1.000 | .924 |
| Comm_out_posit_95 | 1.000 | .820 |
| Qual_min_decre_97 | 1.000 | .835 |
| Qua_deliv_ic_98 | 1.000 | .862 |
| Qual_docum_ic_99 | 1.000 | .938 |
| Qual_tran_ic_p10_100 | 1.000 | .900 |

Extraction Method: Principal Component Analysis.

Table K.21: Communalities of Outsourcing Success

**Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 4.580 | 38.166 | 38.166 | 4.580 | 38.166 | 38.166 | 3.115 | 25.961 | 25.961 |
| 2 | 1.981 | 16.512 | 54.678 | 1.981 | 16.512 | 54.678 | 2.165 | 18.042 | 44.003 |
| 3 | 1.800 | 15.001 | 69.679 | 1.800 | 15.001 | 69.679 | 2.093 | 17.442 | 61.445 |
| 4 | 1.203 | 10.022 | 79.701 | 1.203 | 10.022 | 79.701 | 1.674 | 13.951 | 75.396 |
| 5 | 1.110 | 9.248 | 88.950 | 1.110 | 9.248 | 88.950 | 1.627 | 13.554 | 88.950 |
| 6 | .404 | 3.363 | 92.313 | | | | | | |
| 7 | .338 | 2.819 | 95.132 | | | | | | |
| 8 | .238 | 1.986 | 9K8 | | | | | | |
| 9 | .172 | 1.433 | 98.550 | | | | | | |
| 10 | .102 | .854 | 99.404 | | | | | | |
| 11 | .044 | .369 | 99.773 | | | | | | |
| 12 | .027 | .227 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

Table K.22: Total Variance Explained of Outsourcing Success

**Scree Plot**
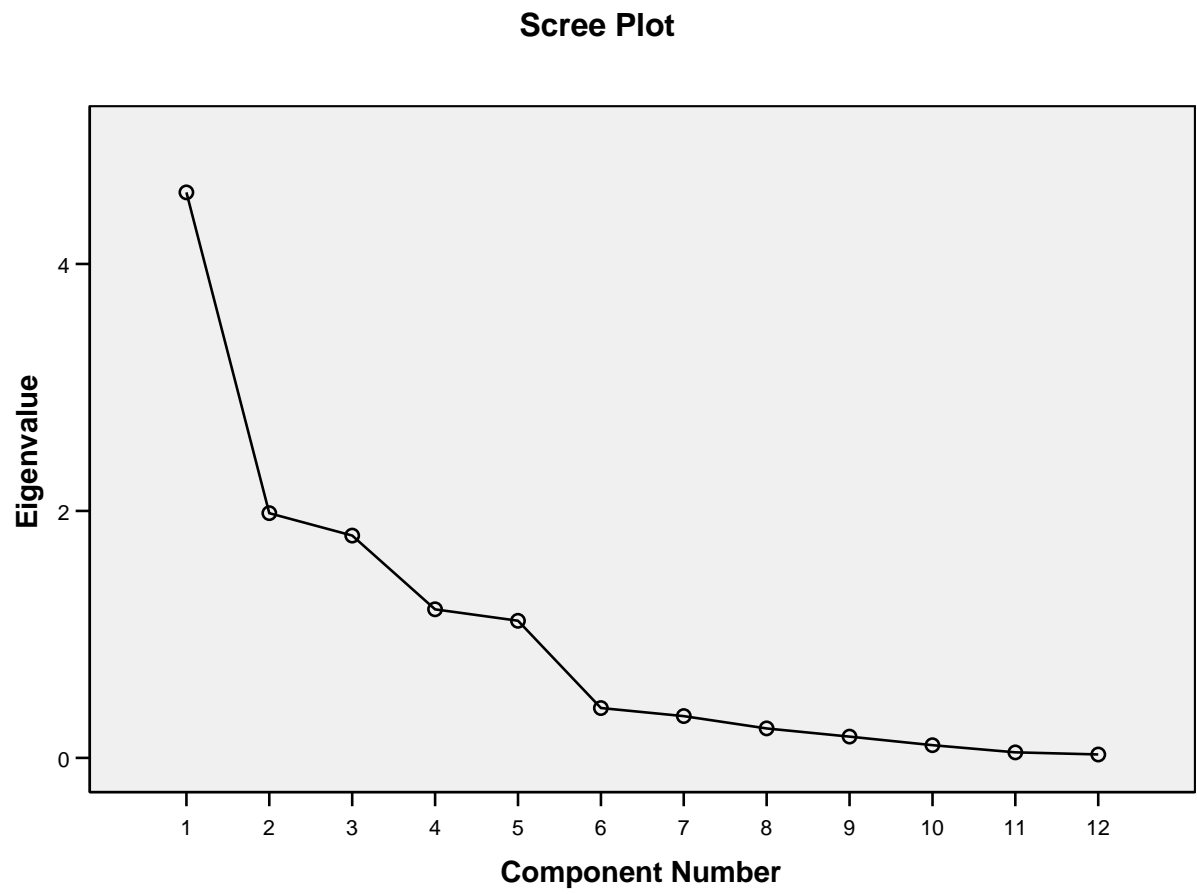


*Figure K.3: Outsourcing success Component compared to Eigenvalue*

**Component Matrix(a)**

| | Component | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Out_bus_p10_85 | | | .547 | | -.675 |
| Out_internal_it_staff_86 | | .722 | | -.603 | |
| Percent_offshore_89 | | .509 | -.630 | | |
| Out_ser_var_91 | | .723 | | .570 | |
| Bus_sat_partner_92 | .897 | | | | |
| Rel_out_ven_strong_93 | .693 | | | | |
| Out_part_KPI_94 | .549 | | .530 | | .510 |
| Comm_out_posit_95 | .809 | | | | |
| Qual_min_decre_97 | .653 | | -.542 | | |
| Qua_deliv_ic_98 | .887 | | | | |
| Qual_docum_ic_99 | .611 | | .511 | | |
| Qual_tran_ic_p10_100 | .662 | | | | |

Extraction Method: Principal Component Analysis.

a  5 components extracted.

Table K.23: Component Matrix for Outsourcing success

**Reproduced Correlations**

| Reproduced Correlation | Out_bus_p10_85 | Out_internal_it_staff_86 | Percent_offshore_89 | Out_ser_var_91 | Bus_sat_partner_92 | Rel_out_ven_strong_93 | Out_part_KPI_94 | Comm_out_posit_95 | Qual_min_decre_97 | Qua_deliv_ic_98 | Qual_docum_ic_99 | Qual_tran_ic_p10_100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Out_bus_p10_85 | .946(b) | .178 | .132 | .036 | .527 | -.110 | .139 | .275 | -.113 | .507 | .437 | .015 |
| Out_internal_it_staff_86 | .178 | .907(b) | .278 | .217 | -.118 | -.357 | .096 | -.443 | -.109 | .046 | -.043 | .432 |
| Percent_offshore_89 | .132 | .278 | .901(b) | .149 | .267 | .268 | -.373 | .164 | .613 | .276 | -.038 | .488 |
| Out_ser_var_91 | .036 | .217 | .149 | .917(b) | -.320 | -.516 | -.223 | -.177 | .097 | -.295 | .423 | .119 |
| Bus_sat_partner_92 | .527 | -.118 | .267 | -.320 | .886(b) | .612 | .472 | .748 | .455 | .856 | .500 | .449 |
| Rel_out_ven_strong_93 | -.110 | -.357 | .268 | -.516 | .612 | .836(b) | .280 | .642 | .593 | .564 | .077 | .383 |
| Out_part_KPI_94 | .139 | .096 | -.373 | -.223 | .472 | .280 | .924(b) | .367 | .053 | .545 | .538 | .438 |
| Comm_out_posit_95 | .275 | -.443 | .164 | -.177 | .748 | .642 | .367 | .820(b) | .546 | .667 | .545 | .320 |
| Qual_min_decre_97 | -.113 | -.109 | .613 | .097 | .455 | .593 | .053 | .546 | .835(b) | .438 | .307 | .630 |
| Qua_deliv_ic_98 | .507 | .046 | .276 | -.295 | .856 | .564 | .545 | .667 | .438 | .862(b) | .500 | .552 |
| Qual_docum_ic_99 | .437 | -.043 | -.038 | .423 | .500 | .077 | .538 | .545 | .307 | .500 | .938(b) | .411 |
| Qual_tran_ic_p10_100 | .015 | .432 | .488 | .119 | .449 | .383 | .438 | .320 | .630 | .552 | .411 | .900(b) |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 13 (19.0%) nonredundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.24: Reproduced Correlations for Outsourcing success cont'd

| Residual(a) | Out_bus_p10_85 | Out_internal_it_staff_86 | Percent_offshore_89 | Out_ser_var_91 | Bus_sat_partner_92 | Rel_out_ven_strong_93 | Out_part_KPI_94 | Comm_out_posit_95 | Qual_min_decre_97 | Qual_deliv_ic_98 | Qual_docum_ic_99 | Qual_tran_ic_p10_100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Out_bus_p10_85 | | .035 | -.027 | .000 | -.038 | .044 | .012 | .037 | .035 | -.059 | -.015 | -.003 |
| Out_internal_it_staff_86 | .035 | | -.057 | .018 | -.013 | .048 | .003 | .070 | .065 | -.058 | -.029 | -.054 |
| Percent_offshore_89 | -.027 | -.057 | | .032 | -.009 | .008 | .059 | -.022 | -.089 | .032 | -.003 | -.005 |
| Out_ser_var_91 | .000 | .018 | .032 | | .018 | .081 | .047 | .021 | -.062 | -.021 | -.045 | -.034 |
| Bus_sat_partner_92 | -.038 | -.013 | -.009 | .018 | | .018 | -.034 | -.074 | -.036 | -.019 | .025 | .013 |
| Rel_out_ven_strong_93 | .044 | .048 | .008 | .081 | .018 | | .041 | -.004 | -.043 | -.093 | -.017 | -.041 |
| Out_part_KPI_94 | .012 | .003 | .059 | .047 | -.034 | .041 | | .027 | -.027 | -.008 | -.035 | -.047 |
| Comm_out_posit_95 | .037 | .070 | -.022 | .021 | -.074 | -.004 | .027 | | .009 | -.046 | -.081 | -.005 |
| Qual_min_decre_97 | .035 | .065 | -.089 | -.062 | -.036 | -.043 | -.027 | .009 | | -.002 | .013 | -.050 |
| Qua_deliv_ic_98 | -.059 | -.058 | .032 | -.021 | -.019 | -.093 | -.008 | -.046 | -.002 | | .015 | -.006 |
| Qual_docum_ic_99 | -.015 | -.029 | -.003 | -.045 | .025 | -.017 | -.035 | -.081 | .013 | .015 | | .016 |
| Qual_tran_ic_p10_100 | -.003 | -.054 | -.005 | -.034 | .013 | -.041 | -.047 | -.005 | -.050 | -.006 | .016 | |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 13 (19.0%) nonredundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.24: Reproduced Correlations for Outsourcing success

**Rotated Component Matrix(a)**

| | Component | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Out_bus_p10_85 | | .954 | | | |
| Out_internal_it_staff_86 | | | | .940 | |
| Percent_offshore_89 | .762 | | | | |
| Out_ser_var_91 | | | | | .939 |
| Bus_sat_partner_92 | | .656 | | | |
| Rel_out_ven_strong_93 | .629 | | | | |
| Out_part_KPI_94 | | | .939 | | |
| Comm_out_posit_95 | | | | -.545 | |
| Qual_min_decre_97 | .889 | | | | |
| Qua_deliv_ic_98 | | .615 | | | |
| Qual_docum_ic_99 | | | .581 | | .567 |
| Qual_tran_ic_p10_100 | .755 | | | | |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 7 iterations.

Table K.25: Rotated Component Matrix for Outsourcing success

**Component Transformation Matrix**

| Component | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1 | .686 | .509 | .469 | -.185 | -.124 |
| 2 | .298 | .110 | -.117 | .674 | .656 |
| 3 | -.651 | .459 | .545 | .061 | .253 |
| 4 | .057 | -.044 | -.134 | -.710 | .687 |
| 5 | .112 | -.718 | .671 | .055 | .132 |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Table K.26: Component Transformation Matrix for Outsourcing success

## K.3 Partnership Quality

| Partnership Quality | Q 101 to 135 | | .883 |
|---|---|---|---|

**Descriptive Statistics**

| | Mean | Std. Deviation | Analysis N |
|---|---|---|---|
| Out100_partner_bene_p11_1 01 | 2.97 | 1.449 | 31 |
| Out_par_assist_102 | 2.81 | 1.662 | 31 |
| Out_par_sincere_103 | 4.58 | 1.803 | 31 |
| Out_pat_ethical_104 | 4.71 | 1.697 | 31 |
| Relationship_trust_105 | 3.06 | 1.504 | 31 |
| Relationship_contract_106 | 4.58 | 1.409 | 31 |
| Out_Partner_commitments_1 07 | 4.26 | 1.548 | 31 |
| Out_Par_relationship_108 | 5.29 | 1.101 | 31 |
| Bus108_comm_relationship_ 109 | 3.10 | 1.795 | 31 |
| Both_sustain_110 | 4.29 | 1.510 | 31 |
| Both_freely_excha_111 | 3.77 | 1.454 | 31 |
| Corporate_clashes_112 | 4.39 | 1.585 | 31 |
| Diff_rules_disagreements_11 3 | 4.32 | 1.701 | 31 |
| Diff_processes_disagreemen ts_114 | 4.32 | 1.492 | 31 |
| the_Per_Rev_115 | 5.00 | 1.291 | 31 |
| Feedback_review_p11_116 | 4.74 | 1.932 | 31 |
| Problem_Sol_join_p12_117 | 4.35 | 1.644 | 31 |
| Decis_joint_exe_118 | 3.97 | 1.402 | 31 |
| Comm_business_strong_119 | 4.10 | 1.221 | 31 |
| Busin_works_well_120 | 3.84 | 1.440 | 31 |
| Out_ven_team_121 | 4.61 | 1.564 | 31 |
| Off_accurate_122 | 4.45 | 2.173 | 31 |
| Out_ven_accurate_123 | 3.52 | 1.525 | 31 |
| Out_ven_complete_124 | 2.81 | 1.682 | 31 |
| Out_ven_credible_125 | 4.00 | 1.713 | 31 |
| Out_comm_timely_126 | 3.55 | 1.434 | 31 |
| Out_ven_efficiently_127 | 3.87 | 1.477 | 31 |
| Out_leadership_128 | 2.61 | 1.407 | 31 |
| Out_quality_work_129 | 3.16 | 1.530 | 31 |
| within_budget_130 | 4.45 | 1.261 | 31 |
| litt_bus_man_131 | 2.35 | 1.050 | 31 |
| funct_supp_132 | 2.45 | 1.060 | 31 |
| Proj_goals_133 | 3.97 | 1.354 | 31 |
| inn_creative_134 | 2.90 | 1.423 | 31 |
| Ven_Bus_Pro_p12_135 | 2.84 | 1.393 | 31 |

Table K.27: Descriptive Statistics of Partnership Quality

**Correlation Matrix(a,b)**

| Correlation | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_sincere_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| Out100_partner_bene_p11_101 | 1.000 | .551 | .365 | .498 | .062 | -.546 | .271 | .027 | .347 |
| Out_par_assist_102 | .551 | 1.000 | .172 | .121 | .405 | -.207 | -.084 | -.478 | .409 |
| Out_par_sincere_103 | .365 | .172 | 1.000 | .754 | .207 | -.058 | .685 | .114 | .209 |
| Out_pat_ethical_104 | .498 | .121 | .754 | 1.000 | .112 | -.262 | .638 | .100 | .152 |
| Relationship_trust_105 | .062 | .405 | .207 | .112 | 1.000 | -.270 | .107 | -.213 | .590 |
| Relationship_contract_106 | -.546 | -.207 | -.058 | -.262 | -.270 | 1.000 | -.040 | -.327 | -.076 |
| Out_Partner_commitments_107 | .271 | -.084 | .685 | .638 | .107 | -.040 | 1.000 | .189 | .374 |

a  Determinant = .000
b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Both_ sustai n_110 | Both_fr eely_ex cha_11 1 | Corpora te_clash es_112 | Diff_rules_ disagreem ents_113 | Diff_process es_disagree ments_114 | the_P er_Re v_115 | Feedback _review_ p11_116 | Problem_ Sol_join_ p12_117 | Decis_j oint_ex e_118 |
|---|---|---|---|---|---|---|---|---|---|
| Out100_pa rtner_bene _p11_101 | .446 | .012 | -.285 | -.320 | -.211 | .214 | -.194 | .551 | .672 |
| Out_par_a ssist_102 | -.189 | .036 | -.578 | -.543 | -.512 | -.031 | .233 | .197 | .283 |
| Out_par_si ncere_103 | .107 | .001 | -.058 | .198 | .225 | .487 | -.128 | .445 | .667 |
| Out_pat_et hical_104 | .047 | -.149 | -.155 | .126 | .170 | .396 | -.532 | .480 | .570 |
| Relationshi p_trust_10 5 | .050 | .342 | -.570 | -.373 | -.426 | .069 | .304 | .179 | .254 |
| Relationshi p_contract _106 | -.615 | -.259 | .165 | .031 | .003 | -.476 | .277 | -.610 | -.395 |
| Out_Partn er_commit ments_107 | .138 | .234 | .094 | .322 | .396 | .333 | -.044 | .303 | .710 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Comm_business_strong_119 | Busin_works_well_120 | Out_ven_team_121 | Off_accurate_122 | Out_ven_accurate_123 | Out_ven_complete_124 | Out_ven_credible_125 | Out_comm_timely_126 | Out_ven_efficiently_127 |
|---|---|---|---|---|---|---|---|---|---|
| Out100_partner_bene_p11_101 | .322 | .621 | .495 | -.715 | .672 | .326 | .618 | .442 | .496 |
| Out_par_assist_102 | .141 | .321 | .047 | -.289 | .409 | .511 | .164 | .018 | .152 |
| Out_par_sincere_103 | .307 | -.040 | .508 | -.103 | .518 | .302 | .777 | .698 | .730 |
| Out_pat_ethical_104 | .062 | .048 | .408 | -.379 | .601 | .213 | .665 | .876 | .782 |
| Relationship_trust_105 | .251 | .067 | .068 | -.009 | .392 | .664 | .104 | .169 | .334 |
| Relationship_contract_106 | -.576 | -.807 | -.500 | .587 | -.610 | -.064 | -.470 | -.262 | -.315 |
| Out_Partner_commitments_107 | .163 | -.011 | .373 | -.214 | .450 | .404 | .704 | .535 | .831 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Out_leade rship_128 | Out_quality _work_129 | within_bu dget_130 | litt_bus_ man_13 1 | funct_s upp_13 2 | Proj_go als_133 | inn_crea tive_134 | Ven_Bus_P ro_p12_135 |
|---|---|---|---|---|---|---|---|---|
| Out100_partner _bene_p11_101 | .746 | .649 | .045 | .687 | .661 | .254 | .532 | .443 |
| Out_par_assist_ 102 | .680 | .721 | -.052 | .690 | .392 | .205 | .387 | .418 |
| Out_par_sincer e_103 | .223 | .207 | .350 | .064 | .416 | .527 | .075 | .198 |
| Out_pat_ethical _104 | .370 | .391 | .157 | .340 | .298 | .359 | .471 | .360 |
| Relationship_tru st_105 | .390 | .198 | .125 | .280 | .232 | .296 | .283 | .546 |
| Relationship_co ntract_106 | -.522 | -.571 | -.265 | -.459 | -.583 | -.409 | -.537 | -.834 |
| Out_Partner_co mmitments_107 | .170 | .151 | .212 | .147 | .414 | .481 | .193 | .082 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_sincere_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| Out_Par_relationship_108 | .027 | -.478 | .114 | .100 | -.213 | -.327 | .189 | 1.000 | -.436 |
| Bus108_comm_relationship_109 | .347 | .409 | .209 | .152 | .590 | -.076 | .374 | -.436 | 1.000 |
| Both_sustain_110 | .446 | -.189 | .107 | .047 | .050 | -.615 | .138 | .369 | .223 |
| Both_freely_excha_111 | .012 | .036 | .001 | -.149 | .342 | -.259 | .234 | .521 | .124 |
| Corporate_clashes_112 | -.285 | -.578 | -.058 | -.155 | -.570 | .165 | .094 | .315 | -.435 |
| Diff_rules_disagreements_113 | -.320 | -.543 | .198 | .126 | -.373 | .031 | .322 | .340 | -.425 |
| Diff_processes_disagreements_114 | -.211 | -.512 | .225 | .170 | -.426 | .003 | .396 | .387 | -.336 |
| the_Per_Rev_115 | .214 | -.031 | .487 | .396 | .069 | -.476 | .333 | .094 | .029 |
| Feedback_review_p11_116 | -.194 | .233 | -.128 | -.532 | .304 | .277 | -.044 | -.152 | .296 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Both_ sustai n_110 | Both_fr eely_ex cha_11 1 | Corpora te_clas hes_11 2 | Diff_rul es_disa greeme nts_11 3 | Diff_pro cesses_ disagre ements _114 | the_Per _Rev_1 15 | Feedback _review_ p11_116 | Proble m_Sol_j oin_p12 _117 | Decis_j oint_ex e_118 |
|---|---|---|---|---|---|---|---|---|---|
| Out_Par_rel ationship_1 08 | .369 | .521 | .315 | .340 | .387 | .094 | -.152 | .475 | .330 |
| Bus108_co mm_relation ship_109 | .223 | .124 | -.435 | -.425 | -.336 | .029 | .296 | -.023 | .306 |
| Both_sustai n_110 | 1.000 | .228 | -.076 | -.064 | -.043 | .513 | .004 | .347 | .367 |
| Both_freely _excha_111 | .228 | 1.000 | -.192 | -.212 | -.180 | .036 | .525 | .439 | .438 |
| Corporate_c lashes_112 | -.076 | -.192 | 1.000 | .768 | .819 | -.163 | -.336 | -.157 | -.174 |
| Diff_rules_di sagreement s_113 | -.064 | -.212 | .768 | 1.000 | .956 | .182 | -.359 | -.090 | .005 |
| Diff_process es_disagree ments_114 | -.043 | -.180 | .819 | .956 | 1.000 | .173 | -.363 | .033 | .101 |
| the_Per_Re v_115 | .513 | .036 | -.163 | .182 | .173 | 1.000 | .027 | .534 | .442 |
| Feedback_r eview_p11_ 116 | .004 | .525 | -.336 | -.359 | -.363 | .027 | 1.000 | -.012 | .145 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Comm_business_str ong_119 | Busin_w orks_we ll_120 | Out_ve n_team _121 | Off_ac curate _122 | Out_ven _accurat e_123 | Out_ven _comple te_124 | Out_ven _credibl e_125 | Out_co mm_tim ely_126 | Out_ven _efficient ly_127 |
|---|---|---|---|---|---|---|---|---|---|
| Out_Par_rela tionship_108 | .350 | .136 | .532 | -.140 | .186 | -.113 | .177 | .297 | .229 |
| Bus108_com m_relationshi p_109 | .193 | .200 | -.034 | -.182 | .152 | .536 | .238 | .018 | .332 |
| Both_sustain _110 | .726 | .620 | .501 | -.244 | .367 | -.003 | .490 | .155 | .197 |
| Both_freely_ excha_111 | .407 | .189 | .429 | -.030 | .265 | .472 | .054 | .013 | .172 |
| Corporate_cl ashes_112 | -.296 | -.089 | -.045 | -.091 | -.472 | -.621 | .025 | -.243 | -.177 |
| Diff_rules_dis agreements_ 113 | -.080 | -.196 | .074 | .067 | -.143 | -.420 | .252 | -.020 | .176 |
| Diff_process es_disagree ments_114 | -.054 | -.068 | .170 | -.026 | -.164 | -.399 | .313 | -.023 | .231 |
| the_Per_Rev _115 | .677 | .430 | .627 | .119 | .508 | .092 | .693 | .288 | .419 |
| Feedback_re view_p11_11 6 | .322 | -.015 | .120 | .553 | -.044 | .579 | -.141 | -.501 | -.105 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Out_lead ership_12 8 | Out_qualit y_work_12 9 | within_bu dget_130 | litt_bus_ man_13 1 | funct_s upp_13 2 | Proj_go als_133 | inn_crea tive_134 | Ven_Bus_P ro_p12_135 |
|---|---|---|---|---|---|---|---|---|
| Out_Par_relation ship_108 | -.097 | -.286 | .239 | -.409 | -.116 | .074 | -.173 | -.034 |
| Bus108_comm_r elationship_109 | .570 | .346 | .127 | .494 | .467 | .399 | .382 | .340 |
| Both_sustain_110 | .243 | .022 | .489 | .122 | .540 | .282 | .246 | .324 |
| Both_freely_exch a_111 | .217 | -.148 | .167 | -.011 | .068 | .013 | -.091 | .064 |
| Corporate_clashe s_112 | -.529 | -.247 | -.124 | -.526 | -.068 | .006 | -.633 | -.303 |
| Diff_rules_disagr eements_113 | -.503 | -.123 | .147 | -.514 | .064 | .381 | -.372 | -.034 |
| Diff_processes_di sagreements_114 | -.352 | -.024 | .062 | -.416 | .116 | .401 | -.330 | -.006 |
| the_Per_Rev_11 5 | .184 | .270 | .410 | .246 | .585 | .458 | .327 | .482 |
| Feedback_review _p11_116 | .036 | -.189 | .049 | .047 | .091 | -.054 | -.252 | -.189 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_sincere_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| Problem_Sol_join_p12_117 | .551 | .197 | .445 | .480 | .179 | -.610 | .303 | .475 | -.023 |
| Decis_joint_exe_118 | .672 | .283 | .667 | .570 | .254 | -.395 | .710 | .330 | .306 |
| Comm_business_strong_119 | .322 | .141 | .307 | .062 | .251 | -.576 | .163 | .350 | .193 |
| Busin_works_well_120 | .621 | .321 | -.040 | .048 | .067 | -.807 | -.011 | .136 | .200 |
| Out_ven_team_121 | .495 | .047 | .508 | .408 | .068 | -.500 | .373 | .532 | -.034 |
| Off_accurate_122 | -.715 | -.289 | -.103 | -.379 | -.009 | .587 | -.214 | -.140 | -.182 |
| Out_ven_accurate_123 | .672 | .409 | .518 | .601 | .392 | -.610 | .450 | .186 | .152 |
| Out_ven_complete_124 | .326 | .511 | .302 | .213 | .664 | -.064 | .404 | -.113 | .536 |
| Out_ven_credible_125 | .618 | .164 | .777 | .665 | .104 | -.470 | .704 | .177 | .238 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Both_ sustai n_110 | Both_fr eely_ex cha_11 1 | Corpora te_clas hes_11 2 | Diff_rules _disagree ments_11 3 | Diff_process es_disagree ments_114 | the_P er_Re v_115 | Feedbac k_review _p11_11 6 | Problem_ Sol_join_ p12_117 | Decis_ joint_e xe_11 8 |
|---|---|---|---|---|---|---|---|---|---|
| Problem_ Sol_join_ p12_117 | .347 | .439 | -.157 | -.090 | .033 | .534 | -.012 | 1.000 | .772 |
| Decis_joi nt_exe_1 18 | .367 | .438 | -.174 | .005 | .101 | .442 | .145 | .772 | 1.000 |
| Comm_b usiness_s trong_119 | .726 | .407 | -.296 | -.080 | -.054 | .677 | .322 | .497 | .489 |
| Busin_wo rks_well_ 120 | .620 | .189 | -.089 | -.196 | -.068 | .430 | -.015 | .546 | .377 |
| Out_ven_ team_121 | .501 | .429 | -.045 | .074 | .170 | .627 | .120 | .911 | .815 |
| Off_accur ate_122 | -.244 | -.030 | -.091 | .067 | -.026 | .119 | .553 | -.326 | -.345 |
| Out_ven_ accurate_ 123 | .367 | .265 | -.472 | -.143 | -.164 | .508 | -.044 | .669 | .788 |
| Out_ven_ complete _124 | -.003 | .472 | -.621 | -.420 | -.399 | .092 | .579 | .363 | .648 |
| Out_ven_ credible_ 125 | .490 | .054 | .025 | .252 | .313 | .693 | -.141 | .592 | .805 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Comm_business_strong_119 | Busin_works_well_120 | Out_ven_team_121 | Off_accurate_122 | Out_ven_accurate_123 | Out_ven_complete_124 | Out_ven_credible_125 | Out_comm_timely_126 | Out_ven_efficiently_127 |
|---|---|---|---|---|---|---|---|---|---|
| Problem_Sol_join_p12_117 | .497 | .546 | .911 | -.326 | .669 | .363 | .592 | .466 | .541 |
| Decis_joint_exe_118 | .489 | .377 | .815 | -.345 | .788 | .648 | .805 | .523 | .835 |
| Comm_business_strong_119 | 1.000 | .635 | .649 | .083 | .510 | .302 | .574 | .102 | .340 |
| Busin_works_well_120 | .635 | 1.000 | .504 | -.466 | .434 | .097 | .487 | -.036 | .178 |
| Out_ven_team_121 | .649 | .504 | 1.000 | -.123 | .618 | .351 | .697 | .365 | .555 |
| Off_accurate_122 | .083 | -.466 | -.123 | 1.000 | -.374 | .061 | -.322 | -.382 | -.272 |
| Out_ven_accurate_123 | .510 | .434 | .618 | -.374 | 1.000 | .612 | .715 | .659 | .770 |
| Out_ven_complete_124 | .302 | .097 | .351 | .061 | .612 | 1.000 | .301 | .211 | .607 |
| Out_ven_credible_125 | .574 | .487 | .697 | -.322 | .715 | .301 | 1.000 | .543 | .790 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Out_leade rship_128 | Out_quality _work_129 | within_bu dget_130 | litt_bus_ man_13 1 | funct_s upp_13 2 | Proj_go als_133 | inn_crea tive_134 | Ven_Bus_P ro_p12_135 |
|---|---|---|---|---|---|---|---|---|
| Problem_Sol_j oin_p12_117 | .580 | .361 | -.048 | .369 | .441 | .170 | .286 | .506 |
| Decis_joint_ex e_118 | .568 | .360 | .122 | .393 | .638 | .403 | .283 | .356 |
| Comm_busine ss_strong_119 | .372 | .223 | .664 | .206 | .532 | .506 | .255 | .460 |
| Busin_works_ well_120 | .594 | .633 | .188 | .634 | .661 | .288 | .432 | .635 |
| Out_ven_team _121 | .445 | .194 | .159 | .208 | .511 | .246 | .102 | .368 |
| Off_accurate_ 122 | -.486 | -.544 | .142 | -.423 | -.410 | -.176 | -.395 | -.416 |
| Out_ven_accur ate_123 | .531 | .478 | .222 | .548 | .552 | .331 | .608 | .543 |
| Out_ven_comp lete_124 | .503 | .246 | .011 | .493 | .313 | .173 | .326 | .242 |
| Out_ven_credi ble_125 | .387 | .458 | .401 | .371 | .772 | .604 | .301 | .447 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_since re_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| Out_comm_timely_126 | .442 | .018 | .698 | .876 | .169 | -.262 | .535 | .297 | .018 |
| Out_ven_efficiently_127 | .496 | .152 | .730 | .782 | .334 | -.315 | .831 | .229 | .332 |
| Out_leadership_128 | .746 | .680 | .223 | .370 | .390 | -.522 | .170 | -.097 | .570 |
| Out_quality_work_129 | .649 | .721 | .207 | .391 | .198 | -.571 | .151 | -.286 | .346 |
| within_budget_130 | .045 | -.052 | .350 | .157 | .125 | -.265 | .212 | .239 | .127 |
| litt_bus_man_131 | .687 | .690 | .064 | .340 | .280 | -.459 | .147 | -.409 | .494 |
| funct_supp_132 | .661 | .392 | .416 | .298 | .232 | -.583 | .414 | -.116 | .467 |
| Proj_goals_133 | .254 | .205 | .527 | .359 | .296 | -.409 | .481 | .074 | .399 |
| inn_creative_134 | .532 | .387 | .075 | .471 | .283 | -.537 | .193 | -.173 | .382 |
| Ven_Bus_Pro_p12_135 | .443 | .418 | .198 | .360 | .546 | -.834 | .082 | -.034 | .340 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Both_sustain_110 | Both_freely_excha_111 | Corporate_clashes_112 | Diff_rules_disagreements_113 | Diff_processes_disagreements_114 | the_Per_Rev_115 | Feedback_review_p11_116 | Problem_Sol_join_p12_117 | Decis_joint_exe_118 |
|---|---|---|---|---|---|---|---|---|---|
| Out_comm_timely_126 | .155 | .013 | -.243 | -.020 | -.023 | .288 | -.501 | .466 | .523 |
| Out_ven_efficiently_127 | .197 | .172 | -.177 | .176 | .231 | .419 | -.105 | .541 | .835 |
| Out_leadership_128 | .243 | .217 | -.529 | -.503 | -.352 | .184 | .036 | .580 | .568 |
| Out_quality_work_129 | .022 | -.148 | -.247 | -.123 | -.024 | .270 | -.189 | .361 | .360 |
| within_budget_130 | .489 | .167 | -.124 | .147 | .062 | .410 | .049 | -.048 | .122 |
| litt_bus_man_131 | .122 | -.011 | -.526 | -.514 | -.416 | .246 | .047 | .369 | .393 |
| funct_supp_132 | .540 | .068 | -.068 | .064 | .116 | .585 | .091 | .441 | .638 |
| Proj_goals_133 | .282 | .013 | .006 | .381 | .401 | .458 | -.054 | .170 | .403 |
| inn_creative_134 | .246 | -.091 | -.633 | -.372 | -.330 | .327 | -.252 | .286 | .283 |
| Ven_Bus_Pro_p12_135 | .324 | .064 | -.303 | -.034 | -.006 | .482 | -.189 | .506 | .356 |

a Determinant = .000

b This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Comm_business_strong_119 | Busin_works_well_120 | Out_ven_team_121 | Off_accurate_122 | Out_ven_accurate_123 | Out_ven_complete_124 | Out_ven_credible_125 | Out_comm_timely_126 | Out_ven_efficiently_127 |
|---|---|---|---|---|---|---|---|---|---|
| Out_comm_timely_126 | .102 | -.036 | .365 | -.382 | .659 | .211 | .543 | 1.000 | .695 |
| Out_ven_efficiently_127 | .340 | .178 | .555 | -.272 | .770 | .607 | .790 | .695 | 1.000 |
| Out_leadership_128 | .372 | .594 | .445 | -.486 | .531 | .503 | .387 | .241 | .392 |
| Out_quality_work_129 | .223 | .633 | .194 | -.544 | .478 | .246 | .458 | .126 | .393 |
| within_budget_130 | .664 | .188 | .159 | .142 | .222 | .011 | .401 | .190 | .247 |
| litt_bus_man_131 | .206 | .634 | .208 | -.423 | .548 | .493 | .371 | .154 | .374 |
| funct_supp_132 | .532 | .661 | .511 | -.410 | .552 | .313 | .772 | .095 | .507 |
| Proj_goals_133 | .506 | .288 | .246 | -.176 | .331 | .173 | .604 | .164 | .565 |
| inn_creative_134 | .255 | .432 | .102 | -.395 | .608 | .326 | .301 | .435 | .438 |
| Ven_Bus_Pro_p12_135 | .460 | .635 | .368 | -.416 | .543 | .242 | .447 | .196 | .411 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality cont'd

| Correlation | Out_leadership_128 | Out_quality_work_129 | within_budget_130 | litt_bus_man_131 | funct_supp_132 | Proj_goals_133 | inn_creative_134 | Ven_Bus_Pro_p12_135 |
|---|---|---|---|---|---|---|---|---|
| Out_comm_timely_126 | .241 | .126 | .190 | .154 | .095 | .164 | .435 | .196 |
| Out_ven_efficiently_127 | .392 | .393 | .247 | .374 | .507 | .565 | .438 | .411 |
| Out_leadership_128 | 1.000 | .681 | -.086 | .728 | .479 | .238 | .647 | .614 |
| Out_quality_work_129 | .681 | 1.000 | .030 | .814 | .653 | .534 | .605 | .748 |
| within_budget_130 | -.086 | .030 | 1.000 | -.075 | .291 | .595 | .025 | .195 |
| litt_bus_man_131 | .728 | .814 | -.075 | 1.000 | .570 | .172 | .715 | .565 |
| funct_supp_132 | .479 | .653 | .291 | .570 | 1.000 | .661 | .295 | .638 |
| Proj_goals_133 | .238 | .534 | .595 | .172 | .661 | 1.000 | .223 | .616 |
| inn_creative_134 | .647 | .605 | .025 | .715 | .295 | .223 | 1.000 | .581 |
| Ven_Bus_Pro_p12_135 | .614 | .748 | .195 | .565 | .638 | .616 | .581 | 1.000 |

a  Determinant = .000

b  This matrix is not positive definite.

Table K.28: Correlation Matrix of Partnership Quality

**Communalities**

| | Initial | Extraction |
|---|---|---|
| Out100_partner_bene_p11_101 | 1.000 | .936 |
| Out_par_assist_102 | 1.000 | .786 |
| Out_par_sincere_103 | 1.000 | .843 |
| Out_pat_ethical_104 | 1.000 | .945 |
| Relationship_trust_105 | 1.000 | .840 |
| Relationship_contract_106 | 1.000 | .980 |
| Out_Partner_commitments_107 | 1.000 | .883 |
| Out_Par_relationship_108 | 1.000 | .923 |
| Bus108_comm_relationship_109 | 1.000 | .873 |
| Both_sustain_110 | 1.000 | .926 |
| Both_freely_excha_111 | 1.000 | .878 |
| Corporate_clashes_112 | 1.000 | .957 |
| Diff_rules_disagreements_113 | 1.000 | .953 |
| Diff_processes_disagreements_114 | 1.000 | .964 |
| the_Per_Rev_115 | 1.000 | .885 |
| Feedback_review_p11_116 | 1.000 | .982 |
| Problem_Sol_join_p12_117 | 1.000 | .944 |
| Decis_joint_exe_118 | 1.000 | .987 |
| Comm_business_strong_119 | 1.000 | .942 |
| Busin_works_well_120 | 1.000 | .931 |
| Out_ven_team_121 | 1.000 | .952 |
| Off_accurate_122 | 1.000 | .948 |
| Out_ven_accurate_123 | 1.000 | .853 |
| Out_ven_complete_124 | 1.000 | .927 |
| Out_ven_credible_125 | 1.000 | .965 |
| Out_comm_timely_126 | 1.000 | .981 |
| Out_ven_efficiently_127 | 1.000 | .932 |
| Out_leadership_128 | 1.000 | .825 |
| Out_quality_work_129 | 1.000 | .941 |
| within_budget_130 | 1.000 | .792 |
| litt_bus_man_131 | 1.000 | .880 |
| funct_supp_132 | 1.000 | .917 |
| Proj_goals_133 | 1.000 | .914 |
| inn_creative_134 | 1.000 | .772 |
| Ven_Bus_Pro_p12_135 | 1.000 | .962 |

Extraction Method: Principal Component Analysis.

Table K.29: Communalities of Partnership Quality

**Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 12.450 | 35.572 | 35.572 | 12.450 | 35.572 | 35.572 | 7.149 | 20.426 | 20.426 |
| 2 | 5.657 | 16.163 | 51.736 | 5.657 | 16.163 | 51.736 | 6.950 | 19.858 | 40.284 |
| 3 | 3.516 | 10.044 | 61.780 | 3.516 | 10.044 | 61.780 | 4.642 | 13.262 | 53.546 |
| 4 | 3.295 | 9.415 | 71.195 | 3.295 | 9.415 | 71.195 | 3.705 | 10.587 | 64.133 |
| 5 | 2.527 | 7.219 | 78.414 | 2.527 | 7.219 | 78.414 | 3.204 | 9.154 | 73.287 |
| 6 | 1.836 | 5.245 | 83.658 | 1.836 | 5.245 | 83.658 | 2.783 | 7.951 | 81.238 |
| 7 | 1.375 | 3.928 | 87.587 | 1.375 | 3.928 | 87.587 | 1.965 | 5.614 | 86.852 |
| 8 | 1.263 | 3.608 | 91.195 | 1.263 | 3.608 | 91.195 | 1.520 | 4.343 | 91.195 |
| 9 | .871 | 2.489 | 93.684 | | | | | | |
| 10 | .699 | 1.997 | 95.681 | | | | | | |
| 11 | .546 | 1.560 | 97.241 | | | | | | |
| 12 | .382 | 1.093 | 98.334 | | | | | | |
| 13 | .268 | .766 | 99.100 | | | | | | |
| 14 | .185 | .530 | 99.630 | | | | | | |
| 15 | .130 | .370 | 100.000 | | | | | | |
| 16 | 2.86E-015 | 8.16E-015 | 100.000 | | | | | | |
| 17 | 1.34E-015 | 3.83E-015 | 100.000 | | | | | | |
| 18 | 7.64E-016 | 2.18E-015 | 100.000 | | | | | | |
| 19 | 5.79E-016 | 1.65E-015 | 100.000 | | | | | | |
| 20 | 5.40E-016 | 1.54E-015 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

Table K.30: Total Variance Explained of Partnership Quality cont'd

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 21 | 3.55E-016 | 1.01E-015 | 100.000 | | | | | | |
| 22 | 2.55E-016 | 7.30E-016 | 100.000 | | | | | | |
| 23 | 2.01E-016 | 5.73E-016 | 100.000 | | | | | | |
| 24 | 1.03E-016 | 2.93E-016 | 100.000 | | | | | | |
| 25 | 2.23E-017 | 6.37E-017 | 100.000 | | | | | | |
| 26 | -4.43E-017 | -1.27E-016 | 100.000 | | | | | | |
| 27 | -1.39E-016 | -3.97E-016 | 100.000 | | | | | | |
| 28 | -2.12E-016 | -6.05E-016 | 100.000 | | | | | | |
| 29 | -2.60E-016 | -7.43E-016 | 100.000 | | | | | | |
| 30 | -3.35E-016 | -9.57E-016 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

Table K.30: Total Variance Explained of Partnership Quality cont'd

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 31 | -4.01E-016 | -1.14E-015 | 100.000 | | | | | | |
| 32 | -5.49E-016 | -1.57E-015 | 100.000 | | | | | | |
| 33 | -6.30E-016 | -1.80E-015 | 100.000 | | | | | | |
| 34 | -6.73E-016 | -1.92E-015 | 100.000 | | | | | | |
| 35 | -1.59E-015 | -4.55E-015 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

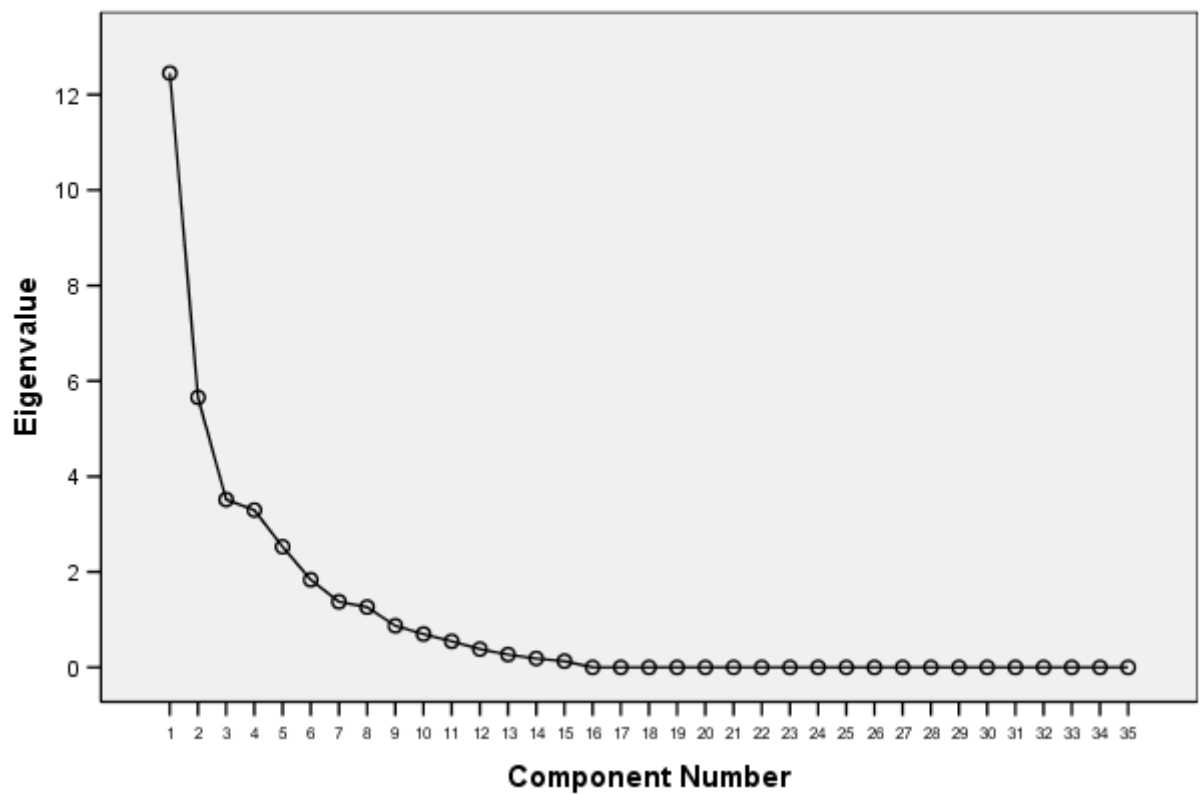Table K.30: Total Variance Explained of Partnership Quality



Figure K.4: Partnership Quality Component compared to Eigenvalue

**Component Matrix(a)**

| | Component | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Out100_partner_bene_p11_101 | .786 | | | | | | | |
| Out_par_assist_102 | | -.665 | | | | | | |
| Out_par_sincere_103 | .585 | | | .522 | | | | |
| Out_pat_ethical_104 | .634 | | | | | | | |
| Relationship_trust_105 | | | | | | | | |
| Relationship_contract_106 | -.708 | | | .579 | | | | |
| Out_Partner_commitments_107 | .527 | | | .528 | | | | |
| Out_Par_relationship_108 | | .627 | | | -.513 | | | |
| Bus108_comm_relationship_109 | | | | | | | | |
| Both_sustain_110 | | | | -.527 | | | | |
| Both_freely_excha_111 | | | .703 | | | | | |
| Corporate_clashes_112 | | .709 | | | | | | |
| Diff_rules_disagreements_113 | | .856 | | | | | | |
| Diff_processes_disagreements_114 | | .854 | | | | | | |
| the_Per_Rev_115 | .596 | | | | | | | |
| Feedback_review_p11_116 | | | .806 | | | | | |
| Problem_Sol_join_p12_117 | .737 | | | | | | | |
| Decis_joint_exe_118 | .838 | | | | | | | |
| Comm_business_strong_119 | .631 | | .539 | | | | | |
| Busin_works_well_120 | .650 | | | -.682 | | | | |
| Out_ven_team_121 | .693 | | | | | | | |
| Off_accurate_122 | | | .591 | | | | | |
| Out_ven_accurate_123 | .866 | | | | | | | |
| Out_ven_complete_124 | .551 | | | | | | | |
| Out_ven_credible_125 | .827 | | | | | | | |
| Out_comm_timely_126 | .543 | | | | | | | |
| Out_ven_efficiently_127 | .780 | | | | | | | |
| Out_leadership_128 | .750 | | | | | | | |
| Out_quality_work_129 | .680 | | | | | | | |
| within_budget_130 | | | | | | -.500 | | |
| litt_bus_man_131 | .675 | -.544 | | | | | | |
| funct_supp_132 | .778 | | | | | | | |
| Proj_goals_133 | .575 | | | | .649 | | | |
| inn_creative_134 | .627 | | | | | | | |
| Ven_Bus_Pro_p12_135 | .729 | | | | | | | |

Extraction Method: Principal Component Analysis.

a  8 components extracted.

Table K.31: Component Matrix for Partnership Quality

**Reproduced Correlations**

| Reproduced Correlation | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_sincere_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| Out100_partner_bene_p11_101 | .936 (b) | .478 | .336 | .510 | .067 | -.554 | .345 | -.006 | .394 |
| Out_par_assist_102 | .478 | .786(b) | .057 | .142 | .442 | -.218 | .001 | -.527 | .521 |
| Out_par_sincere_103 | .336 | .057 | .843 (b) | .748 | .147 | -.072 | .767 | .112 | .208 |
| Out_pat_ethical_104 | .510 | .142 | .748 | .945 (b) | .120 | -.269 | .635 | .102 | .112 |
| Relationship_trust_105 | .067 | .442 | .147 | .120 | .840 (b) | -.248 | .162 | -.135 | .549 |
| Relationship_contract_106 | -.554 | -.218 | -.072 | -.269 | -.248 | .980(b) | -.030 | -.358 | -.089 |
| Out_Partner_commitments_107 | .345 | .001 | .767 | .635 | .162 | -.030 | .883 (b) | .208 | .347 |
| Out_Par_relationship_108 | -.006 | -.527 | .112 | .102 | -.135 | -.358 | .208 | .923 (b) | -.410 |
| Bus108_comm_relationship_109 | .394 | .521 | .208 | .112 | .549 | -.089 | .347 | -.410 | .873(b) |
| Both_sustain_110 | .449 | -.108 | .136 | .062 | -.014 | -.602 | .145 | .407 | .177 |
| Both_freely_excha_111 | .050 | .000 | .001 | -.173 | .410 | -.247 | .167 | .531 | .152 |
| Corporate_clashes_112 | -.267 | -.567 | -.084 | -.158 | -.630 | .170 | .103 | .341 | -.445 |
| Diff_rules_disagreements_113 | -.331 | -.535 | .253 | .147 | -.358 | .043 | .310 | .349 | -.400 |
| Diff_processes_disagreements_114 | -.199 | -.474 | .269 | .172 | -.393 | -.009 | .367 | .370 | -.361 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | Both_ sustain_110 | Both_f reely_ excha_111 | Corp orate _clas hes_ 112 | Diff_rule s_disagr eements _113 | Diff_proce sses_disa greements _114 | the_ Per_ Rev_ 115 | Feedba ck_revie w_p11_ 116 | Problem _Sol_joi n_p12_ 117 | Decis _joint _exe_ 118 | Comm_ business _strong_ 119 |
|---|---|---|---|---|---|---|---|---|---|---|
| Out100_part ner_bene_p 11_101 | .449 | .050 | -.267 | -.331 | -.199 | .278 | -.194 | .566 | .655 | .309 |
| Out_par_ass ist_102 | -.108 | .000 | -.567 | -.535 | -.474 | .060 | .236 | .222 | .277 | .087 |
| Out_par_sin cere_103 | .136 | .001 | -.084 | .253 | .269 | .512 | -.104 | .394 | .678 | .282 |
| Out_pat_ethi cal_104 | .062 | -.173 | -.158 | .147 | .172 | .388 | -.517 | .452 | .584 | .076 |
| Relationship _trust_105 | -.014 | .410 | -.630 | -.358 | -.393 | .052 | .336 | .144 | .257 | .282 |
| Relationship _contract_10 6 | -.602 | -.247 | .170 | .043 | -.009 | -.455 | .280 | -.619 | -.393 | -.601 |
| Out_Partner _commitmen ts_107 | .145 | .167 | .103 | .310 | .367 | .255 | -.062 | .314 | .722 | .177 |
| Out_Par_rel ationship_10 8 | .407 | .531 | .341 | .349 | .370 | .151 | -.165 | .484 | .328 | .307 |
| Bus108_co mm_relation ship_109 | .177 | .152 | -.445 | -.400 | -.361 | -.034 | .317 | -.084 | .317 | .206 |
| Both_sustain _110 | .926 (b) | .290 | -.078 | -.084 | -.051 | .481 | .008 | .339 | .352 | .756 |
| Both_freely_ excha_111 | .290 | .878 (b) | -.180 | -.203 | -.165 | -.012 | .513 | .444 | .454 | .421 |
| Corporate_cl ashes_112 | -.078 | -.180 | .957 (b) | .788 | .833 | -.159 | -.321 | -.170 | -.160 | -.295 |
| Diff_rules_di sagreements _113 | -.084 | -.203 | .788 | .953(b) | .940 | .187 | -.366 | -.047 | -.014 | -.077 |
| Diff_process es_disagree ments_114 | -.051 | -.165 | .833 | .940 | .964(b) | .173 | -.366 | .045 | .097 | -.075 |

Extraction Method: Principal Component Analysis.

a Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | Busin_works_well_120 | Out_ven_team_121 | Off_accurate_122 | Out_ven_accurate_123 | Out_ven_complete_124 | Out_ven_credible_125 | Out_comm_timely_126 | Out_ven_efficiently_127 | Out_leadership_128 | Out_quality_work_129 |
|---|---|---|---|---|---|---|---|---|---|---|
| Out100_partner_bene_p11_101 | .658 | .482 | -.704 | .643 | .313 | .628 | .439 | .498 | .749 | .639 |
| Out_par_assist_102 | .350 | .065 | -.230 | .374 | .549 | .150 | -.012 | .210 | .671 | .661 |
| Out_par_sincere_103 | -.023 | .483 | -.058 | .573 | .381 | .762 | .656 | .811 | .183 | .201 |
| Out_pat_ethical_104 | .044 | .375 | -.399 | .666 | .236 | .680 | .880 | .796 | .332 | .386 |
| Relationship_trust_105 | .060 | .035 | .009 | .389 | .672 | .061 | .144 | .360 | .415 | .273 |
| Relationship_contract_106 | -.812 | -.510 | .569 | -.578 | -.058 | -.458 | -.259 | -.319 | -.561 | -.587 |
| Out_Partner_commitments_107 | -.043 | .410 | -.229 | .454 | .401 | .707 | .553 | .810 | .178 | .144 |
| Out_Par_relationship_108 | .134 | .537 | -.160 | .202 | -.123 | .204 | .302 | .205 | -.123 | -.338 |
| Bus108_comm_relationship_109 | .193 | -.083 | -.225 | .256 | .568 | .255 | .031 | .342 | .484 | .391 |
| Both_sustain_110 | .642 | .481 | -.255 | .354 | -.025 | .490 | .166 | .183 | .248 | .082 |
| Both_freely_excha_111 | .183 | .463 | .001 | .275 | .515 | .056 | .007 | .207 | .232 | -.188 |
| Corporate_clashes_112 | -.126 | -.048 | -.090 | -.467 | -.620 | -.005 | -.259 | -.175 | -.511 | -.234 |
| Diff_rules_disagreements_113 | -.179 | .085 | .063 | -.203 | -.457 | .248 | .000 | .155 | -.495 | -.109 |
| Diff_processes_disagreements_114 | -.079 | .169 | -.061 | -.154 | -.418 | .322 | -.001 | .205 | -.394 | -.024 |

Extraction Method: Principal Component Analysis.

a Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | within_budget_130 | litt_bus_man_131 | funct_supp_132 | Proj_goals_133 | inn_creative_134 | Ven_Bus_Pro_p12_135 |
|---|---|---|---|---|---|---|
| Out100_partner_bene_p11_101 | -.001 | .733 | .649 | .210 | .587 | .446 |
| Out_par_assist_102 | -.204 | .767 | .407 | .133 | .504 | .462 |
| Out_par_sincere_103 | .312 | .156 | .416 | .488 | .215 | .184 |
| Out_pat_ethical_104 | .128 | .316 | .309 | .363 | .501 | .341 |
| Relationship_trust_105 | .208 | .326 | .178 | .360 | .381 | .493 |
| Relationship_contract_106 | -.278 | -.451 | -.551 | -.436 | -.544 | -.830 |
| Out_Partner_commitments_107 | .253 | .073 | .433 | .518 | .070 | .101 |
| Out_Par_relationship_108 | .178 | -.410 | -.068 | .006 | -.195 | -.005 |
| Bus108_comm_relationship_109 | .234 | .501 | .485 | .423 | .344 | .291 |
| Both_sustain_110 | .596 | .144 | .502 | .313 | .223 | .287 |
| Both_freely_excha_111 | .100 | -.055 | .071 | .016 | -.099 | .091 |
| Corporate_clashes_112 | -.120 | -.536 | -.068 | .042 | -.591 | -.312 |
| Diff_rules_disagreements_113 | .159 | -.514 | .054 | .398 | -.419 | -.024 |
| Diff_processes_disagreements_114 | .088 | -.426 | .152 | .402 | -.406 | .001 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_sincere_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| the_Per_Rev_115 | .278 | .060 | .512 | .388 | .052 | -.455 | .255 | .151 | -.034 |
| Feedback_review_p11_116 | -.194 | .236 | -.104 | -.517 | .336 | .280 | -.062 | -.165 | .317 |
| Problem_Sol_join_p12_117 | .566 | .222 | .394 | .452 | .144 | -.619 | .314 | .484 | -.084 |
| Decis_joint_exe_118 | .655 | .277 | .678 | .584 | .257 | -.393 | .722 | .328 | .317 |
| Comm_business_strong_119 | .309 | .087 | .282 | .076 | .282 | -.601 | .177 | .307 | .206 |
| Busin_works_well_120 | .658 | .350 | -.023 | .044 | .060 | -.812 | -.043 | .134 | .193 |
| Out_ven_team_121 | .482 | .065 | .483 | .375 | .035 | -.510 | .410 | .537 | -.083 |
| Off_accurate_122 | -.704 | -.230 | -.058 | -.399 | .009 | .569 | -.229 | -.160 | -.225 |
| Out_ven_accurate_123 | .643 | .374 | .573 | .666 | .389 | -.578 | .454 | .202 | .256 |
| Out_ven_complete_124 | .313 | .549 | .381 | .236 | .672 | -.058 | .401 | -.123 | .568 |
| Out_ven_credible_125 | .628 | .150 | .762 | .680 | .061 | -.458 | .707 | .204 | .255 |
| Out_comm_timely_126 | .439 | -.012 | .656 | .880 | .144 | -.259 | .553 | .302 | .031 |
| Out_ven_efficiently_127 | .498 | .210 | .811 | .796 | .360 | -.319 | .810 | .205 | .342 |
| Out_leadership_128 | .749 | .671 | .183 | .332 | .415 | -.561 | .178 | -.123 | .484 |
| Out_quality_work_129 | .639 | .661 | .201 | .386 | .273 | -.587 | .144 | -.338 | .391 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | Both _sus tain _11 0 | Both _fre ely_ exc ha_ 111 | Corpor ate_cla shes_1 12 | Diff_rules _disagre ements_ 113 | Diff_proce sses_disag reements_ 114 | the_ Per_ Rev_ 115 | Feedba ck_revie w_p11_ 116 | Proble m_Sol _join_ p12_1 17 | Decis _joint _exe_ 118 | Comm_ busines s_stron g_119 |
|---|---|---|---|---|---|---|---|---|---|---|
| the_Per_Rev_115 | .481 | -.012 | -.159 | .187 | .173 | .885( b) | .019 | .504 | .449 | .726 |
| Feedback_review_p11_116 | .008 | .513 | -.321 | -.366 | -.366 | .019 | .982(b) | -7.95E-005 | .140 | .326 |
| Problem_Sol_join_p12_117 | .339 | .444 | -.170 | -.047 | .045 | .504 | -7.95E-005 | .944(b) | .785 | .509 |
| Decis_joint_exe_118 | .352 | .454 | -.160 | -.014 | .097 | .449 | .140 | .785 | .987(b) | .489 |
| Comm_business_strong_119 | .756 | .421 | -.295 | -.077 | -.075 | .726 | .326 | .509 | .489 | .942(b) |
| Busin_works_well_120 | .642 | .183 | -.126 | -.179 | -.079 | .440 | -.010 | .547 | .398 | .616 |
| Out_ven_team_121 | .481 | .463 | -.048 | .085 | .169 | .635 | .142 | .881 | .816 | .655 |
| Off_accurate_122 | -.255 | .001 | -.090 | .063 | -.061 | .133 | .560 | -.327 | -.342 | .068 |
| Out_ven_accurate_123 | .354 | .275 | -.467 | -.203 | -.154 | .538 | -.066 | .746 | .764 | .517 |
| Out_ven_complete_124 | -.025 | .515 | -.620 | -.457 | -.418 | .128 | .569 | .408 | .636 | .302 |
| Out_ven_credible_125 | .490 | .056 | -.005 | .248 | .322 | .701 | -.131 | .603 | .809 | .568 |
| Out_comm_timely_126 | .166 | .007 | -.259 | .000 | -.001 | .291 | -.499 | .453 | .530 | .103 |
| Out_ven_efficiently_127 | .183 | .207 | -.175 | .155 | .205 | .443 | -.120 | .570 | .831 | .336 |
| Out_leadership_128 | .248 | .232 | -.511 | -.495 | -.394 | .191 | .066 | .549 | .570 | .320 |
| Out_quality_work_129 | .082 | -.188 | -.234 | -.109 | -.024 | .305 | -.202 | .373 | .368 | .195 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | Busin_works_well_120 | Out_ven_team_121 | Off_accurate_122 | Out_ven_accurate_123 | Out_ven_complete_124 | Out_ven_credible_125 | Out_comm_timely_126 | Out_ven_efficiently_127 | Out_leadership_128 | Out_quality_work_129 |
|---|---|---|---|---|---|---|---|---|---|---|
| the_Per_Rev_115 | .440 | .635 | .133 | .538 | .128 | .701 | .291 | .443 | .191 | .305 |
| Feedback_review_p11_116 | -.010 | .142 | .560 | -.066 | .569 | -.131 | -.499 | -.120 | .066 | -.202 |
| Problem_Sol_join_p12_117 | .547 | .881 | -.327 | .746 | .408 | .603 | .453 | .570 | .549 | .373 |
| Decis_joint_exe_118 | .398 | .816 | -.342 | .764 | .636 | .809 | .530 | .831 | .570 | .368 |
| Comm_business_strong_119 | .616 | .655 | .068 | .517 | .302 | .568 | .103 | .336 | .320 | .195 |
| Busin_works_well_120 | .931(b) | .520 | -.489 | .442 | .080 | .462 | -.041 | .150 | .605 | .617 |
| Out_ven_team_121 | .520 | .952 (b) | -.144 | .671 | .365 | .708 | .370 | .569 | .392 | .217 |
| Off_accurate_122 | -.489 | -.144 | .948 (b) | -.342 | .035 | -.311 | -.359 | -.309 | -.533 | -.542 |
| Out_ven_accurate_123 | .442 | .671 | -.342 | .853(b) | .546 | .685 | .660 | .735 | .636 | .482 |
| Out_ven_complete_124 | .080 | .365 | .035 | .546 | .927(b) | .295 | .229 | .543 | .550 | .249 |
| Out_ven_credible_125 | .462 | .708 | -.311 | .685 | .295 | .965(b) | .532 | .796 | .405 | .470 |
| Out_comm_timely_126 | -.041 | .370 | -.359 | .660 | .229 | .532 | .981(b) | .713 | .264 | .121 |
| Out_ven_efficiently_127 | .150 | .569 | -.309 | .735 | .543 | .796 | .713 | .932(b) | .427 | .386 |
| Out_leadership_128 | .605 | .392 | -.533 | .636 | .550 | .405 | .264 | .427 | .825 (b) | .686 |
| Out_quality_work_129 | .617 | .217 | -.542 | .482 | .249 | .470 | .121 | .386 | .686 | .941 (b) |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | within_budget_130 | litt_bus_man_131 | funct_supp_132 | Proj_goals_133 | inn_creative_134 | Ven_Bus_Pro_p12_135 |
|---|---|---|---|---|---|---|
| the_Per_Rev_115 | .509 | .228 | .551 | .495 | .270 | .459 |
| Feedback_review_p11_116 | .051 | .032 | .085 | -.069 | -.285 | -.175 |
| Problem_Sol_join_p12_117 | -.015 | .385 | .439 | .162 | .324 | .476 |
| Decis_joint_exe_118 | .133 | .412 | .627 | .396 | .272 | .356 |
| Comm_business_strong_119 | .628 | .230 | .590 | .477 | .238 | .487 |
| Busin_works_well_120 | .173 | .579 | .701 | .321 | .411 | .651 |
| Out_ven_team_121 | .173 | .234 | .512 | .244 | .143 | .334 |
| Off_accurate_122 | .158 | -.451 | -.369 | -.170 | -.448 | -.421 |
| Out_ven_accurate_123 | .206 | .539 | .508 | .357 | .590 | .576 |
| Out_ven_complete_124 | .014 | .453 | .311 | .192 | .279 | .255 |
| Out_ven_credible_125 | .398 | .373 | .769 | .640 | .325 | .452 |
| Out_comm_timely_126 | .176 | .165 | .083 | .160 | .483 | .196 |
| Out_ven_efficiently_127 | .257 | .319 | .522 | .574 | .369 | .424 |
| Out_leadership_128 | -.072 | .790 | .556 | .213 | .619 | .599 |
| Out_quality_work_129 | -.056 | .787 | .688 | .490 | .601 | .785 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_sincere_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| within_budget_130 | -.001 | -.204 | .312 | .128 | .208 | -.278 | .253 | .178 | .234 |
| litt_bus_man_131 | .733 | .767 | .156 | .316 | .326 | -.451 | .073 | -.410 | .501 |
| funct_supp_132 | .649 | .407 | .416 | .309 | .178 | -.551 | .433 | -.068 | .485 |
| Proj_goals_133 | .210 | .133 | .488 | .363 | .360 | -.436 | .518 | .006 | .423 |
| inn_creative_134 | .587 | .504 | .215 | .501 | .381 | -.544 | .070 | -.195 | .344 |
| Ven_Bus_Pro_p12_135 | .446 | .462 | .184 | .341 | .493 | -.830 | .101 | -.005 | .291 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | Both_sustain_110 | Both_freely_excha_111 | Corporate_clashes_112 | Diff_rules_disagreements_113 | Diff_processes_disagreements_114 | the_Per_Rev_115 | Feedback_review_p11_116 | Problem_Sol_join_p12_117 | Decis_joint_exe_118 | Comm_business_strong_119 |
|---|---|---|---|---|---|---|---|---|---|---|
| within_budget_130 | .596 | .100 | -.120 | .159 | .088 | .509 | .051 | -.015 | .133 | .628 |
| litt_bus_man_131 | .144 | -.055 | -.536 | -.514 | -.426 | .228 | .032 | .385 | .412 | .230 |
| funct_supp_132 | .502 | .071 | -.068 | .054 | .152 | .551 | .085 | .439 | .627 | .590 |
| Proj_goals_133 | .313 | .016 | .042 | .398 | .402 | .495 | -.069 | .162 | .396 | .477 |
| inn_creative_134 | .223 | -.099 | -.591 | -.419 | -.406 | .270 | -.285 | .324 | .272 | .238 |
| Ven_Bus_Pro_p12_135 | .287 | .091 | -.312 | -.024 | .001 | .459 | -.175 | .476 | .356 | .487 |

Extraction Method: Principal Component Analysis.

a Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Reproduced Correlation | Busin_works_well_120 | Out_ven_team_121 | Off_accurate_122 | Out_ven_accurate_123 | Out_ven_complete_124 | Out_ven_credible_125 | Out_comm_timely_126 | Out_ven_efficiently_127 | Out_leadership_128 | Out_quality_work_129 |
|---|---|---|---|---|---|---|---|---|---|---|
| within_budget_130 | .173 | .173 | .158 | .206 | .014 | .398 | .176 | .257 | -.072 | -.056 |
| litt_bus_man_131 | .579 | .234 | -.451 | .539 | .453 | .373 | .165 | .319 | .790 | .787 |
| funct_supp_132 | .701 | .512 | -.369 | .508 | .311 | .769 | .083 | .522 | .556 | .688 |
| Proj_goals_133 | .321 | .244 | -.170 | .357 | .192 | .640 | .160 | .574 | .213 | .490 |
| inn_creative_134 | .411 | .143 | -.448 | .590 | .279 | .325 | .483 | .369 | .619 | .601 |
| Ven_Bus_Pro_p12_135 | .651 | .334 | -.421 | .576 | .255 | .452 | .196 | .424 | .599 | .785 |

**...cont'd**

| Reproduced Correlation | within_budget_130 | litt_bus_man_131 | funct_supp_132 | Proj_goals_133 | inn_creative_134 | Ven_Bus_Pro_p12_135 |
|---|---|---|---|---|---|---|
| within_budget_130 | .792(b) | -.104 | .327 | .550 | .118 | .244 |
| litt_bus_man_131 | -.104 | .880(b) | .581 | .209 | .658 | .582 |
| funct_supp_132 | .327 | .581 | .917(b) | .682 | .346 | .612 |
| Proj_goals_133 | .550 | .209 | .682 | .914(b) | .233 | .633 |
| inn_creative_134 | .118 | .658 | .346 | .233 | .772(b) | .612 |
| Ven_Bus_Pro_p12_135 | .244 | .582 | .612 | .633 | .612 | .962(b) |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual(a) | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_sincere_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| Out100_partner_bene_p11_101 | | .073 | .029 | -.012 | -.005 | .008 | -.073 | .033 | -.046 |
| Out_par_assist_102 | .073 | | .116 | -.021 | -.037 | .012 | -.084 | .049 | -.112 |
| Out_par_sincere_103 | .029 | .116 | | .006 | .060 | .013 | -.082 | .002 | .000 |
| Out_pat_ethical_104 | -.012 | -.021 | .006 | | -.008 | .008 | .003 | -.002 | .039 |
| Relationship_trust_105 | -.005 | -.037 | .060 | -.008 | | -.022 | -.054 | -.078 | .042 |
| Relationship_contract_106 | .008 | .012 | .013 | .008 | -.022 | | -.010 | .031 | .013 |
| Out_Partner_commitments_107 | -.073 | -.084 | -.082 | .003 | -.054 | -.010 | | -.019 | .028 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual(a) | Both _sust ain_ 110 | Both_f reely_ excha _111 | Corpor ate_cl ashes _112 | Diff_rule s_disagr eements _113 | Diff_proce sses_disa greements _114 | the_ Per_ Rev_ 115 | Feedba ck_revie w_p11_ 116 | Problem _Sol_joi n_p12_ 117 | Decis _joint _exe_ 118 | Comm_ busines s_strong _119 |
|---|---|---|---|---|---|---|---|---|---|---|
| Out100_ partner_b ene_p11 _101 | -.003 | -.038 | -.018 | .011 | -.012 | -.064 | .001 | -.015 | .017 | .014 |
| Out_par_ assist_10 2 | -.081 | .036 | -.011 | -.008 | -.038 | -.091 | -.002 | -.025 | .006 | .054 |
| Out_par_ sincere_ 103 | -.029 | .000 | .026 | -.055 | -.044 | -.025 | -.024 | .051 | -.011 | .024 |
| Out_pat_ ethical_1 04 | -.015 | .024 | .003 | -.021 | -.002 | .008 | -.015 | .028 | -.014 | -.014 |
| Relations hip_trust _105 | .064 | -.068 | .060 | -.016 | -.032 | .016 | -.032 | .036 | -.003 | -.031 |
| Relations hip_contr act_106 | -.013 | -.013 | -.006 | -.012 | .012 | -.021 | -.002 | .009 | -.003 | .025 |
| Out_Part ner_com mitments _107 | -.007 | .067 | -.009 | .011 | .029 | .079 | .019 | -.011 | -.011 | -.014 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual (a) | Busin_ works_ well_120 | Out_v en_tea m_121 | Off_a ccurat e_122 | Out_ve n_accur ate_123 | Out_ven _comple te_124 | Out_ve n_credi ble_125 | Out_co mm_tim ely_126 | Out_v en_eff icientl y_127 | Out_l eader ship_ 128 | Out_qu ality_w ork_12 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Out100_pa rtner_bene _p11_101 | -.037 | .012 | -.011 | .028 | .013 | -.010 | .003 | -.002 | -.003 | .010 |
| Out_par_a ssist_102 | -.029 | -.018 | -.058 | .035 | -.038 | .014 | .030 | -.058 | .009 | .060 |
| Out_par_si ncere_103 | -.017 | .025 | -.045 | -.055 | -.079 | .015 | .042 | -.081 | .040 | .006 |
| Out_pat_et hical_104 | .005 | .033 | .020 | -.065 | -.023 | -.015 | -.005 | -.013 | .038 | .005 |
| Relationshi p_trust_10 5 | .006 | .032 | -.018 | .003 | -.008 | .043 | .025 | -.026 | -.025 | -.075 |
| Relationshi p_contract _106 | .005 | .010 | .018 | -.032 | -.006 | -.012 | -.003 | .003 | .039 | .016 |
| Out_Partn er_commit ments_107 | .033 | -.037 | .015 | -.004 | .003 | -.003 | -.018 | .021 | -.008 | .007 |

**...cont'd**

| Residual(a) | within_budge t_130 | litt_bus_ma n_131 | funct_supp _132 | Proj_goals _133 | inn_creativ e_134 | Ven_Bus_Pro_ p12_135 |
|---|---|---|---|---|---|---|
| Out100_partner_be ne_p11_101 | .046 | -.046 | .012 | .044 | -.055 | -.003 |
| Out_par_assist_10 2 | .152 | -.077 | -.015 | .071 | -.117 | -.044 |
| Out_par_sincere_1 03 | .038 | -.092 | .001 | .039 | -.141 | .014 |
| Out_pat_ethical_10 4 | .029 | .024 | -.011 | -.004 | -.030 | .019 |
| Relationship_trust_ 105 | -.083 | -.045 | .054 | -.064 | -.097 | .053 |
| Relationship_contra ct_106 | .013 | -.009 | -.032 | .027 | .008 | -.004 |
| Out_Partner_commi tments_107 | -.042 | .073 | -.019 | -.037 | .123 | -.019 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual(a) | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_sincere_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| Out_Par_relationship_108 | .033 | .049 | .002 | -.002 | -.078 | .031 | -.019 | | -.026 |
| Bus108_comm_relationship_109 | -.046 | -.112 | .000 | .039 | .042 | .013 | .028 | -.026 | |
| Both_sustain_110 | -.003 | -.081 | -.029 | -.015 | .064 | -.013 | -.007 | -.039 | .046 |
| Both_freely_excha_111 | -.038 | .036 | .000 | .024 | -.068 | -.013 | .067 | -.010 | -.028 |
| Corporate_clashes_112 | -.018 | -.011 | .026 | .003 | .060 | -.006 | -.009 | -.026 | .010 |
| Diff_rules_disagreements_113 | .011 | -.008 | -.055 | -.021 | -.016 | -.012 | .011 | -.009 | -.025 |
| Diff_processes_disagreements_114 | -.012 | -.038 | -.044 | -.002 | -.032 | .012 | .029 | .017 | .026 |
| the_Per_Rev_115 | -.064 | -.091 | -.025 | .008 | .016 | -.021 | .079 | -.057 | .063 |
| Feedback_review_p11_116 | .001 | -.002 | -.024 | -.015 | -.032 | -.002 | .019 | .013 | -.021 |
| Problem_Sol_join_p12_117 | -.015 | -.025 | .051 | .028 | .036 | .009 | -.011 | -.009 | .060 |
| Decis_joint_exe_118 | .017 | .006 | -.011 | -.014 | -.003 | -.003 | -.011 | .002 | -.011 |
| Comm_business_strong_119 | .014 | .054 | .024 | -.014 | -.031 | .025 | -.014 | .043 | -.013 |
| Busin_works_well_120 | -.037 | -.029 | -.017 | .005 | .006 | .005 | .033 | .001 | .007 |
| Out_ven_team_121 | .012 | -.018 | .025 | .033 | .032 | .010 | -.037 | -.005 | .049 |
| Off_accurate_122 | -.011 | -.058 | -.045 | .020 | -.018 | .018 | .015 | .020 | .043 |
| Out_ven_accurate_123 | .028 | .035 | -.055 | -.065 | .003 | -.032 | -.004 | -.016 | -.104 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual (a) | Both_sustain_110 | Both_freely_excha_111 | Corporate_clashes_112 | Diff_rules_disagreements_113 | Diff_processes_disagreements_114 | the_Per_Rev_115 | Feedback_review_p11_116 | Problem_Sol_join_p12_117 | Decis_joint_exe_118 | Comm_business_strong_119 |
|---|---|---|---|---|---|---|---|---|---|---|
| Out_Par_relationship_108 | -.039 | -.010 | -.026 | -.009 | .017 | -.057 | .013 | -.009 | .002 | .043 |
| Bus108_comm_relationship_109 | .046 | -.028 | .010 | -.025 | .026 | .063 | -.021 | .060 | -.011 | -.013 |
| Both_sustain_110 | | -.062 | .002 | .020 | .009 | .032 | -.004 | .008 | .015 | -.030 |
| Both_freely_excha_111 | -.062 | | -.012 | -.009 | -.016 | .048 | .012 | -.005 | -.016 | -.014 |
| Corporate_clashes_112 | .002 | -.012 | | -.019 | -.013 | -.004 | -.015 | .014 | -.014 | -.001 |
| Diff_rules_disagreements_113 | .020 | -.009 | -.019 | | .016 | -.005 | .007 | -.043 | .019 | -.003 |
| Diff_processes_disagreements_114 | .009 | -.016 | -.013 | .016 | | 2.30E-005 | .002 | -.011 | .004 | .020 |
| the_Per_Rev_115 | .032 | .048 | -.004 | -.005 | 2.30E-005 | | .008 | .030 | -.007 | -.049 |
| Feedback_review_p11_116 | -.004 | .012 | -.015 | .007 | .002 | .008 | | -.012 | .004 | -.004 |
| Problem_Sol_join_p12_117 | .008 | -.005 | .014 | -.043 | -.011 | .030 | -.012 | | -.014 | -.011 |
| Decis_joint_exe_118 | .015 | -.016 | -.014 | .019 | .004 | -.007 | .004 | -.014 | | -.001 |
| Comm_business_strong_119 | -.030 | -.014 | -.001 | -.003 | .020 | -.049 | -.004 | -.011 | -.001 | |
| Busin_works_well_120 | -.022 | .006 | .037 | -.017 | .011 | -.010 | -.006 | -.001 | -.021 | .019 |
| Out_ven_team_121 | .020 | -.033 | .003 | -.012 | .001 | -.008 | -.021 | .030 | .000 | -.006 |
| Off_accurate_122 | .010 | -.031 | -.001 | .004 | .035 | -.014 | -.007 | .001 | -.003 | .015 |
| Out_ven_accurate_123 | .013 | -.010 | -.005 | .060 | -.009 | -.030 | .022 | -.077 | .024 | -.008 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual(a) | Busin_works_well_120 | Out_ven_team_121 | Off_accurate_122 | Out_ven_accurate_123 | Out_ven_complete_124 | Out_ven_credible_125 | Out_comm_timely_126 | Out_ven_efficiently_127 | Out_leadership_128 | Out_quality_work_129 |
|---|---|---|---|---|---|---|---|---|---|---|
| Out_Par_relationship_108 | .001 | -.005 | .020 | -.016 | .010 | -.028 | -.005 | .023 | .026 | .052 |
| Bus108_comm_relationship_109 | .007 | .049 | .043 | -.104 | -.032 | -.016 | -.014 | -.011 | .086 | -.045 |
| Both_sustain_110 | -.022 | .020 | .010 | .013 | .021 | .000 | -.011 | .013 | -.005 | -.060 |
| Both_freely_excha_111 | .006 | -.033 | -.031 | -.010 | -.043 | -.002 | .007 | -.035 | -.016 | .040 |
| Corporate_clashes_112 | .037 | .003 | -.001 | -.005 | -.001 | .030 | .016 | -.003 | -.018 | -.013 |
| Diff_rules_disagreements_113 | -.017 | -.012 | .004 | .060 | .037 | .004 | -.020 | .021 | -.009 | -.014 |
| Diff_processes_disagreements_114 | .011 | .001 | .035 | -.009 | .019 | -.009 | -.022 | .026 | .043 | -5.52E-006 |
| the_Per_Rev_115 | -.010 | -.008 | -.014 | -.030 | -.036 | -.007 | -.003 | -.024 | -.008 | -.035 |
| Feedback_review_p11_116 | -.006 | -.021 | -.007 | .022 | .010 | -.010 | -.002 | .014 | -.030 | .014 |
| Problem_Sol_join_p12_117 | -.001 | .030 | .001 | -.077 | -.044 | -.011 | .013 | -.029 | .031 | -.012 |
| Decis_joint_exe_118 | -.021 | .000 | -.003 | .024 | .012 | -.004 | -.006 | .004 | -.002 | -.008 |
| Comm_business_strong_119 | .019 | -.006 | .015 | -.008 | -6.39E-005 | .006 | -.001 | .004 | .052 | .028 |
| Busin_works_well_120 | | -.016 | .023 | -.008 | .017 | .024 | .005 | .028 | -.011 | .015 |
| Out_ven_team_121 | -.016 | | .020 | -.053 | -.015 | -.011 | -.005 | -.014 | .053 | -.022 |
| Off_accurate_122 | .023 | .020 | | -.033 | .026 | -.012 | -.022 | .037 | .047 | -.002 |
| Out_ven_accurate_123 | -.008 | -.053 | -.033 | | .067 | .030 | -.001 | .035 | -.105 | -.005 |

Extraction Method: Principal Component Analysis.

a Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual(a) | within_budget_130 | litt_bus_man_131 | funct_supp_132 | Proj_goals_133 | inn_creative_134 | Ven_Bus_Pro_p12_135 |
|---|---|---|---|---|---|---|
| Out_Par_relationship_108 | .060 | .001 | -.048 | .068 | .022 | -.029 |
| Bus108_comm_relationship_109 | -.106 | -.007 | -.018 | -.023 | .038 | .048 |
| Both_sustain_110 | -.106 | -.022 | .039 | -.031 | .024 | .037 |
| Both_freely_excha_111 | .067 | .044 | -.002 | -.002 | .008 | -.028 |
| Corporate_clashes_112 | -.004 | .011 | .000 | -.036 | -.043 | .009 |
| Diff_rules_disagreements_113 | -.012 | .000 | .011 | -.017 | .046 | -.009 |
| Diff_processes_disagreements_114 | -.026 | .011 | -.036 | -.001 | .076 | -.007 |
| the_Per_Rev_115 | -.099 | .018 | .034 | -.037 | .057 | .023 |
| Feedback_review_p11_116 | -.001 | .015 | .007 | .015 | .033 | -.014 |
| Problem_Sol_join_p12_117 | -.033 | -.016 | .002 | .009 | -.038 | .030 |
| Decis_joint_exe_118 | -.012 | -.019 | .011 | .007 | .010 | .000 |
| Comm_business_strong_119 | .035 | -.024 | -.058 | .029 | .018 | -.027 |
| Busin_works_well_120 | .016 | .056 | -.040 | -.033 | .020 | -.016 |
| Out_ven_team_121 | -.014 | -.026 | -.001 | .002 | -.041 | .034 |
| Off_accurate_122 | -.016 | .028 | -.041 | -.007 | .053 | .005 |
| Out_ven_accurate_123 | .016 | .009 | .044 | -.026 | .018 | -.033 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual(a) | Out100_partner_bene_p11_101 | Out_par_assist_102 | Out_par_sincere_103 | Out_pat_ethical_104 | Relationship_trust_105 | Relationship_contract_106 | Out_Partner_commitments_107 | Out_Par_relationship_108 | Bus108_comm_relationship_109 |
|---|---|---|---|---|---|---|---|---|---|
| Out_ven_complete_124 | .013 | -.038 | -.079 | -.023 | -.008 | -.006 | .003 | .010 | -.032 |
| Out_ven_credible_125 | -.010 | .014 | .015 | -.015 | .043 | -.012 | -.003 | -.028 | -.016 |
| Out_comm_timely_126 | .003 | .030 | .042 | -.005 | .025 | -.003 | -.018 | -.005 | -.014 |
| Out_ven_efficiently_127 | -.002 | -.058 | -.081 | -.013 | -.026 | .003 | .021 | .023 | -.011 |
| Out_leadership_128 | -.003 | .009 | .040 | .038 | -.025 | .039 | -.008 | .026 | .086 |
| Out_quality_work_129 | .010 | .060 | .006 | .005 | -.075 | .016 | .007 | .052 | -.045 |
| within_budget_130 | .046 | .152 | .038 | .029 | -.083 | .013 | -.042 | .060 | -.106 |
| litt_bus_man_131 | -.046 | -.077 | -.092 | .024 | -.045 | -.009 | .073 | .001 | -.007 |
| funct_supp_132 | .012 | -.015 | .001 | -.011 | .054 | -.032 | -.019 | -.048 | -.018 |
| Proj_goals_133 | .044 | .071 | .039 | -.004 | -.064 | .027 | -.037 | .068 | -.023 |
| inn_creative_134 | -.055 | -.117 | -.141 | -.030 | -.097 | .008 | .123 | .022 | .038 |
| Ven_Bus_Pro_p12_135 | -.003 | -.044 | .014 | .019 | .053 | -.004 | -.019 | -.029 | .048 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual (a) | Both_ sustai n_11 0 | Both_fr eely_e xcha_1 11 | Corpor ate_cla shes_1 12 | Diff_rules _disagree ments_11 3 | Diff_proce sses_disa greement s_ 114 | the_P er_R ev_1 15 | Feedbac k_review _p11_11 6 | Problem _Sol_joi n_p12_1 17 | Decis _joint_ exe_1 18 | Comm_b usiness_ strong_1 19 |
|---|---|---|---|---|---|---|---|---|---|---|
| Out_ve n_com plete_1 24 | .021 | -.043 | -.001 | .037 | .019 | -.036 | .010 | -.044 | .012 | -6.39E- 005 |
| Out_ve n_credi ble_12 5 | .000 | -.002 | .030 | .004 | -.009 | -.007 | -.010 | -.011 | -.004 | .006 |
| Out_co mm_ti mely_1 26 | -.011 | .007 | .016 | -.020 | -.022 | -.003 | -.002 | .013 | | -.001 |
| Out_ve n_effici ently_1 27 | .013 | -.035 | -.003 | .021 | .026 | -.024 | .014 | -.029 | .004 | .004 |
| Out_lea dership _128 | -.005 | -.016 | -.018 | -.009 | .043 | -.008 | -.030 | .031 | -.002 | .052 |
| Out_qu ality_w ork_12 9 | -.060 | .040 | -.013 | -.014 | -5.52E- 006 | -.035 | .014 | -.012 | -.008 | .028 |
| within_ budget _130 | -.106 | .067 | -.004 | -.012 | -.026 | -.099 | -.001 | -.033 | -.012 | .035 |
| litt_bus _man_ 131 | -.022 | .044 | .011 | .000 | .011 | .018 | .015 | -.016 | -.019 | -.024 |
| funct_s upp_13 2 | .039 | -.002 | .000 | .011 | -.036 | .034 | .007 | .002 | .011 | -.058 |
| Proj_go als_133 | -.031 | -.002 | -.036 | -.017 | -.001 | -.037 | .015 | .009 | .007 | .029 |
| inn_cre ative_1 34 | .024 | .008 | -.043 | .046 | .076 | .057 | .033 | -.038 | .010 | .018 |
| Ven_B us_Pro _p12_1 35 | .037 | -.028 | .009 | -.009 | -.007 | .023 | -.014 | .030 | .000 | -.027 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual (a) | Busin_works_well_120 | Out_ven_team_121 | Off_accurate_122 | Out_ven_accurate_123 | Out_ven_complete_124 | Out_ven_credible_125 | Out_comm_timely_126 | Out_ven_efficiently_127 | Out_leadership_128 | Out_quality_work_129 |
|---|---|---|---|---|---|---|---|---|---|---|
| Out_ven_complete_124 | .017 | -.015 | .026 | .067 |  | .005 | -.017 | .064 | -.047 | -.004 |
| Out_ven_credible_125 | .024 | -.011 | -.012 | .030 | .005 |  | .010 | -.005 | -.018 | -.012 |
| Out_comm_timely_126 | .005 | -.005 | -.022 | -.001 | -.017 | .010 |  | -.018 | -.023 | .005 |
| Out_ven_efficiently_127 | .028 | -.014 | .037 | .035 | .064 | -.005 | -.018 |  | -.034 | .007 |
| Out_leadership_128 | -.011 | .053 | .047 | -.105 | -.047 | -.018 | -.023 | -.034 |  | -.005 |
| Out_quality_work_129 | .015 | -.022 | -.002 | -.005 | -.004 | -.012 | .005 | .007 | -.005 |  |
| within_budget_130 | .016 | -.014 | -.016 | .016 | -.003 | .003 | .015 | -.010 | -.014 | .086 |
| litt_bus_man_131 | .056 | -.026 | .028 | .009 | .040 | -.003 | -.010 | .055 | -.062 | .026 |
| funct_supp_132 | -.040 | -.001 | -.041 | .044 | .002 | .002 | .011 | -.015 | -.077 | -.035 |
| Proj_goals_133 | -.033 | .002 | -.007 | -.026 | -.020 | -.036 | .004 | -.009 | .026 | .044 |
| inn_creative_134 | .020 | -.041 | .053 | .018 | .047 | -.024 | -.048 | .069 | .028 | .004 |
| Ven_Bus_Pro_p12_135 | -.016 | .034 | .005 | -.033 | -.012 | -.005 | .000 | -.014 | .015 | -.037 |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality cont'd

| Residual(a) | within_budget _130 | litt_bus_man _131 | funct_supp _132 | Proj_goals _133 | inn_creative _134 | Ven_Bus_Pro_p1 2_135 |
|---|---|---|---|---|---|---|
| Out_ven_complete_124 | -.003 | .040 | .002 | -.020 | .047 | -.012 |
| Out_ven_credible_125 | .003 | -.003 | .002 | -.036 | -.024 | -.005 |
| Out_comm_timely_126 | .015 | -.010 | .011 | .004 | -.048 | .000 |
| Out_ven_efficiently_127 | -.010 | .055 | -.015 | -.009 | .069 | -.014 |
| Out_leadership_128 | -.014 | -.062 | -.077 | .026 | .028 | .015 |
| Out_quality_work_129 | .086 | .026 | -.035 | .044 | .004 | -.037 |
| within_budget_130 |  | .029 | -.035 | .045 | -.093 | -.049 |
| litt_bus_man_131 | .029 |  | -.011 | -.036 | .057 | -.018 |
| funct_supp_132 | -.035 | -.011 |  | -.020 | -.050 | .026 |
| Proj_goals_133 | .045 | -.036 | -.020 |  | -.009 | -.017 |
| inn_creative_134 | -.093 | .057 | -.050 | -.009 |  | -.031 |
| Ven_Bus_Pro_p1 2_135 | -.049 | -.018 | .026 | -.017 | -.031 |  |

Extraction Method: Principal Component Analysis.

a  Residuals are computed between observed and reproduced correlations. There are 77 (12.0%) non-redundant residuals with absolute values greater than 0.05.

b  Reproduced communalities

Table K.32: Reproduced Correlations for Partnership Quality

**Rotated Component Matrix(a)**

| | Component | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Out100_partner_bene_p11_101 | .726 | | | | | | | |
| Out_par_assist_102 | .631 | | | | | | | |
| Out_par_sincere_103 | | .891 | | | | | | |
| Out_pat_ethical_104 | | .835 | | | | | | |
| Relationship_trust_105 | | | | | | | .741 | |
| Relationship_contract_106 | -.666 | | | | | | | |
| Out_Partner_commitments_107 | | .854 | | | | | | |
| Out_Par_relationship_108 | | | | | .818 | | | |
| Bus108_comm_relationship_109 | | | | | | | | -.582 |
| Both_sustain_110 | | | | .826 | | | | |
| Both_freely_excha_111 | | | | | .796 | | | |
| Corporate_clashes_112 | | | -.902 | | | | | |
| Diff_rules_disagreements_113 | | | -.917 | | | | | |
| Diff_processes_disagreements_114 | | | -.950 | | | | | |
| the_Per_Rev_115 | | | | .598 | | | | .552 |
| Feedback_review_p11_116 | | | | | | .911 | | |
| Problem_Sol_join_p12_117 | | | | | .625 | | | |
| Decis_joint_exe_118 | | .771 | | | | | | |
| Comm_business_strong_119 | | | | .785 | | | | |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a  Rotation converged in 17 iterations.

Table K.33: Rotated Component Matrix for Partnership Quality cont'd

| | Component | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Busin_works_well_120 | .805 | | | | | | | |
| Out_ven_team_121 | | | | | .586 | | | |
| Off_accurate_122 | -.632 | | | | | .516 | | |
| Out_ven_accurate_123 | | .624 | | | | | | |
| Out_ven_complete_124 | | | .503 | | | | | |
| Out_ven_credible_125 | | .757 | | | | | | |
| Out_comm_timely_126 | | .766 | | | | -.555 | | |
| Out_ven_efficiently_127 | | .889 | | | | | | |
| Out_leadership_128 | .733 | | | | | | | |
| Out_quality_work_129 | .896 | | | | | | | |
| within_budget_130 | | | | .823 | | | | |
| litt_bus_man_131 | .794 | | | | | | | |
| funct_supp_132 | .717 | | | | | | | |
| Proj_goals_133 | | | | | | | .507 | |
| inn_creative_134 | .507 | | | | | | | |
| Ven_Bus_Pro_p12_135 | .715 | | | | | | .549 | |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a  Rotation converged in 17 iterations.

Table K.33: Rotated Component Matrix for Partnership Quality

**Component Transformation Matrix**

| Component | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1 | .647 | .605 | .195 | .322 | .218 | -.025 | .154 | .041 |
| 2 | -.298 | .383 | -.760 | .236 | .208 | -.212 | -.150 | .142 |
| 3 | -.411 | .002 | .214 | .363 | .465 | .647 | .116 | .079 |
| 4 | -.414 | .680 | .215 | -.456 | -.249 | .088 | .151 | -.139 |
| 5 | .071 | -.015 | -.305 | .378 | -.672 | .360 | .400 | -.129 |
| 6 | .371 | .011 | -.410 | -.494 | .196 | .567 | -.171 | -.245 |
| 7 | .065 | .129 | .113 | .044 | -.362 | .276 | -.622 | .609 |
| 8 | .072 | -.087 | -.135 | -.335 | .101 | .014 | .584 | .711 |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Table K.34: Component Transformation Matrix for Partnership Quality

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .593 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 950.662 |
| | df | 105 |
| | Sig. | .000 |

Table K.35: KMO and Bartlett's Test of Knowledge Sharing

| Question | Text for Questions |
|---|---|
| Q. 52 | Additional cost outside of contracts are high |
| Q. 66 | Outsourcing has created a complex supply chain |
| Q. 67 | Outsourcing has decreased local IT knowledge |
| Q. 74 | Operation and expense management of vendor requires ongoing supervision |
| Q. 77 | Outsourcing partner / vendor is able to provide flexibility with staffing |
| Q. 78 | Outsourcing has allowed regulators to better manage functions |
| Q. 82 | Organisational support from outsourcing partner has decreased over time |
| Q. 83 | Market demands forces outsourcing partner to improve their performance |
| Q. 87 | Most internal IT staff were transferred to outsourcer |
| Q. 96 | Development time for major changes has decreased since outsourcing |

Table K.36: Removed Questions from Reliability Comparison UIS

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