UNIVERSITY OF
BIRMINGHAM

Information Intensive Service Operations: Links between service Concept,
customer Inputs and service Process design

by

Michael Wainaina Githii

A thesis submitted to the
University of Birmingham
for the degree of
DOCTOR OF
PHILOSOPHY

Birmingham Business School
Department of Procurement & Operations Management
2016

ABSTRACT

This study purposed to look into the relationships between service *concept*, customer *inputs* and service *process* design (CI&P constructs) in information intensive service (IIS) systems from a service process execution viewpoint. A review of service operations literature hints to several researchable gaps. First, although service design and development has been studied at process level, how the CI&P constructs relate and explain each other and implications therein to operations and operational management decisions is not clear. Extant literature provides unstructured and incomplete picture of these relationships. For instance, whereas customer inputs are multidimensional, most studies refer to the sole attribute of customer contact with little reference to other important service dimensions such as information intensity. This study explores the combined influence of different customer inputs to design of service delivery process and service concept. Second, specific features linking service delivery process to the IIS product package and the role of customer inputs are empirically assessed. More so in emergent internet based services that are different from both face-to-face and services delivered through telephone platforms. These services pose new operational management - structure and infrastructure - challenges to service operations management (SOM) decision making. Considering the recentness of IIS phenomenon and nature of investigation, multiple-embedded case study research design is deemed appropriate for theory building and extension. Towards contributions to extant SOM theory, the study develops six propositions linking different attributes of operations transformational process in design of services. Contributions of the study are presented at three levels; (i) identification of process design features for IIS, (ii) establishment of links between elements of the transformation model for IIS, and (iii) highlighting of the role and implication of information intensity to understanding of service classification and management of service operations. To the practitioner, the study

demystifies the fundamental problem of IIS delivery that bases its decisions on marketing considerations, giving little regard to operations management. It suggests that operations managers should evaluate customer inputs brought into a service process because this helps the understanding of customer requirements [service concepts], service delivery processes and the service environment in its entirety.

DEDICATION

To God for making 2016 my annus mīrābilis

ACKNOWLEDGEMENTS

Sometime in late 2009, I made THE decision to embark on a PhD *safari*[1] to the UK. As the legendary Chinese saying goes – the safari of thousand miles commenced a year later with the aim of furthering my understanding of Service Operations Management from the process perspective. As expected the safari has been thorny but with support of many individuals/entities, it has come to fruitful end. I would like to thank these individuals who I put into two levels; academic and social/economic.

At the academic level, my special thanks go to my main supervisor Dr. Yufeng Zhang for his wisdom and guidance that gave direction to this study. Without his support and understanding that self-sponsored students face challenges from many directions, this safari would have terminated long before it began. I am also grateful to my second supervisor, Dr. Paul Forrester, the then Head of Procurement and Operations Management Department, and Dr. Joe Sanderson for thoughtful comments during annual reviews. I must express my gratitude to BBS research office led by Marleen and Beverly for frequent e-mail updates and general communique that made life at the university manageable.

At social level, I express my gratitude to many people: colleagues; Vima (Indonesia), Inya (Nigeria), Ali (Iran), Shaven (Cameroon), and Thanh (Vietnam) for the many moments we exchanged ideas; friends in UK; Dr. Samuel Mwaura (and his wife Betty), Dr. Jesse Kigozi (Uganda), Dr. Jack Mwimali, Daniel Kimani (London), David Zekpah (Ghana), Martha Omollo, Kennedy Agele (South Sudan) and many others that could not be listed here due to

---

[1] 'Safari' is a popular Swahili word for journey

List of Figures

List of Tables

Key Words and Abbreviations

Key Words

Information Intensive Services (IIS)
Service Concept
Service Delivery Process
Customer Inputs

Abbreviations

ACD	Automatic Call Distributor
AHT	Average Handling Time
ASA	Average Speed of Answer
B2B	Business-to-Business
B2C	Business-to-Consumer
BBS	Birmingham Business School
BO	Back Office
BPM	Business Process Management
BPO	Business Process Outsourcing
CCM	Customer Contact Model
CI	Customer Inputs
CI&P	Concept, Inputs & Process
CPO	Customer Processing Operations
CRM	Customer Relationship Management
CTI	Computer-Telephony Integration
DI	Direct Interaction
ERP	Enterprise Resource Planning
FCR	First Call Resolution
FO	Front Office
GDL	Goods Dominant Logic
GDP	Gross Domestic Product
GNP	Gross National Product
HDI	Human Development Index
ICR	Intelligent Character Recognition
IHIP	Intangibility, Heterogeneity, Inseparability and Perishability
IMP	Industrial Marketing and Purchasing
IP	Inputs-Process
IPO	Information Processing Operations
IT	Information Technology
ITES	Information Technology Enabled Services
ITO	Information Technology Outsourcing
IVR	Interactive Voice Response
KPO	Knowledge Process Outsourcing
MPO	Materials Processing Operations
NSD	New Service Development/Design
OCR	Optical Character Recognition

OECD	Organisation for Economic Co-operation and Development
OM	Operations Management
OMR	Optical Mark Recognition
P2P	Person-to-Person
PC	Process-Concept
PCN	Process-Chain-Network
QA	Quality Analyst
QM	Quality Management
S-D Logic	Service-Dominant Logic
SI	Surrogate Interaction
SLA	Service Level Agreement
SOM	Service Operations Management
TL	Team Leader
TNA	Turn Around Time
UNDP	United Nations Development Programme
UST	Unified Service Theory
WFM	Work Force Management

1 CHAPTER ONE - INTRODUCTION

This chapter introduces the research topic, presents the contextual aspects and addresses the motivation behind the study. Section 1.1 highlights the dynamic nature of the service operations environment and emergent considerations that warrant a study. Section 1.2 states the research goals and question. Section 1.3 describes the research approach adopted and the scope of the study. Section 1.4 highlights the key contributions of the research while section 1.5 lists all the chapters that make up the thesis.

1.1 Rationale for the research

The general management principles that help bridge the gap between the realized and the normative service value are pooled into the interdisciplinary concept of service management. Service management is as heterogeneous as the concept of services and thus confounding to define (Grönroos, 1994). The fundamental facets of service management however require an understanding of customer expectations and how organizations produce and deliver utility (Fitzsimmons and Fitzsimmons, 2013) as characterised by the new service development (NSD) step sequence (Johnson et al., 2000; Scheuing and Johnson, 1989). According to Dörner et al. (2011), organizations enhance service innovation by reducing NSD into three phases: *definition* of new services, stating what the organization wants to develop and for whom; *development* of new services, describing the service package, service provision process and service prerequisite [i.e., the service, process and system design (Johnson et al., 2000)]; and *launch* new services, introducing the new service where and when the customer requires. Since the definition and launch phases involve marketing processes, service management is the sum total of the disciplines of service operations management (SOM) and

services marketing. Services marketing entails promoting and selling 'invisible' services whilst SOM refers to work, decisions and obligations of people [operations managers] in service entities tasked to deliver service to customers (Johnston and Clark, 2008). SOM does not only entail designing of the product or service but also the designing and managing of processes that configure internal and external inputs to realise customer expectations within limits of operations standards of the organization.

The design of a production process, however, can constrain the design of products/services and vice versa because the two processes are not mutually exclusive. It is relatively easier to separate product and process designs in non-service operations as compared to service operations (Slack et al., 2010). This is because service production and service consumption are 'inseperable' due to customer's role [or customer inputs] in the production process (Seppänen et al., 2015). Sampson et al. (2010b) present a case of an entrepreneur whose initial business is to offer customers an authentic Italian dining experience. Due to its superior recipes, Italian soup [offered as part of the food] provides competitive advantage to the restaurant. Consequently, the entrepreneur closes down the restaurant and pre-packages the soup [as a product], marketing it through a retail chain. The authors go to great length to explain the challenges of managing customer inputs and production process in the case of restaurant [service] venture compared to the pre-packaged soup. The study highlights the implications of customer inputs to service production processes. Whilst the authors make clear the distinction between service processes and non-services processes, further understanding of implications of customer inputs to different service contexts is required.

As the world continually becomes more connected through the internet, service firms shift focus towards the importance of process reconfiguration for competitive advantage. There are several drivers highlighted in literature: *(i) Unavoidable variability* – modern customers demand bespoke services with distinctive taste and bring into the production process varied inputs requiring right system balance. *(ii) Non-face-to-face business-to-business [B2B] interactions* - SOM researchers rely upon direct customer contact, cumulatively referred to as customer influence, to define service process (Chase, 1978; Kellogg and Nie, 1995; Maister and Lovelock, 1982; Schmenner, 1986; Shostack, 1984). The customer contact model (Chase, 1978; 1981; Chase and Tansik, 1983) continually influences service operations design decisions. Fundamental to the model is premise that service interactions entail business-to-customer (B2C) interface, leading to service research that largely focuses on this context (Slack et al., 2004). However, recent advances in technologies that support virtual operations (Voss, 2003) through the internet and other modes of interaction loosely referred to as indirect, symbolic or surrogate interaction (Apte and Mason, 1995; Froehle and Roth, 2004; Sampson and Froehle, 2006; Sampson et al., 2010b) in B2B service contexts are gaining prominence. Chase and Apte (2007) call for research to test applicability of customer contact model to these new interactions. *(iii) Emergency of outsourced electronically transmitted services (Metters, 2008) in the wider international service operations* - Chase and Apte (2007) identify management of operations in information intensive services, global business outsourcing and service design as high-potential research areas for SOM. Youngdahl and Ramaswamy (2008) observe that service operations delivery structures in offshore work remain unaddressed. Whitaker et al. (2008) find offshore outsourcing of front office (FO) services, unlike back office (BO) services, to have negative effect on customer satisfaction. These studies conjecture that where transactions are between businesses, well-designed

service operations delivery models could lead to better results (Niranjan and Metri, 2008). This is because the nature of inputs processed in most outsourced B2B electronically transmitted services is information-intensive (Apte and Mason, 1995; Karmarkar and Apte, 2007; Morris and Johnston, 1987). *(iv) Dynamic nature of the service supply chain* - The traditional manufacturing input-transformation-output model (Jacobs et al., 2009) or process view (Slack et al., 2009) suggests that suppliers feed the transformation process with inputs that are processed into outputs which are then distributed to the consumers – a view related to the concept of value chain. Supply chain management, on the other hand, is anchored on a related upstream-downstream river analogy. This linear view that dominates the supply chain management (Spekman et al., 1998) discipline has been the basis for the unidirectional supply chain. However, Sampson (2000) and Sampson and Froehle (2006) challenge this notion arguing that service supply chains are bidirectional – a view supplemented by the concept of service triads (van der Valk and van Iwaarden, 2011). In service triads, service providers receive direct instructions (inputs) from clients and client's customer (Menor and Johnson, 2012) despite lack of direct contract between the service provider and client's customer. Despite the conflicting interests, service providers must meet expectations of both parties (Niranjan and Metri, 2008). For instance in call centre arrangements, client firms aim at realising cost effectiveness but the callers interest is in service quality (Gilmore and Carson, 1993; Gilmore and Moreland, 2000). This study considers these contemporary service industry practices because "*Extant service supply chain / service operations research does not sufficiently capture these unique characteristics of service triads.*" *(van de Valk and van Weele, 2011).*

SOM literature contains important research works; some based on manufacturing perspectives and others based on generic view of different classes of services. Common to these studies is that they are conducted at a service firm [service production facility] level which is different from the emergent contexts that are based on a service *process level perspective.* Wemmerlöv (1990) and Sampson and Froehle (2006) recognise the need for studies in service design delivery systems at process level. Since the nature of process steps is defined by interaction between service provider and customer, service delivery process design provides good alternative for capturing the essence of SOM. Sampson et al. (2010a) posit that service innovation and competitive advantage are inherent to the sequence of activities that make up a service process. Sampson et al. (2010b) refer to this sequence as process DNA and suggests three process types: firm-led decoupled processes, undertaken at the back-office of the provider firm; interactive process, occurring at the firm's front-office with the customer providing inputs into the service provider's processes; and customer-led decoupled processes, independently undertaken by the customer. It is these process characteristics together with the number of steps in a service process that determine the complexity of a service process (Hill, 2005) and possible number of permutations through which services can be delivered. It is up to the service provider in consultation with customer to decide on the optimal sequence. It is conjectured that different service offerings have different process DNAs and should be designed differently. Sampson et al. (2010b) advocate for continuous evolution of these process activities in order to realize process innovation. Indeed, Sampson (2012a) coined the term 'deservitization', meaning that the level of direct interaction between the client and service provider is reduced such that most activities are processed in the surrogate interaction region. Deservitization is of two types; (a) *service commoditization*, where innovation is realised by moving some process activities from the region of direct interaction towards

provider's regions of surrogate interaction or even into independent processing zone, or (b) *service disintermediation*, that entails the customer taking more control of most activities of the service process (ibid, 2012a). The servitization-deservitization concept can positively influence service design decision as far as the aspects of service standardisation vis-à-vis service customization and process efficiency are concerned.

Emergent seminal works such as the Service-Dominant Logic (Vargo and Lusch, 2004a) of marketing and the increasingly popular operations management (OM) UST [unified service theory (Sampson and Froehle, 2006)] provide new scholarly insights regarding the uniqueness of service operations in comparison to traditional manufacturing operations. However, the implication of these service ideas to management of service delivery and realisation of strategic competitiveness in this emergent business world remains empirically unclear. Business managers require insights that could help organise information about different services in a way that enhances strategic changes to positioning of services. Noteworthy, despite the value of these new suggestions, research studies are mainly theoretical with limited empirical focus. To enhance understanding of service design theories at process level, the key process steps for each service offering ought to be summarised and compared in terms of managerial decisions. Indeed, the empirical confirmation that success of information technology enabled services [ITES] is related to process standardisation (Wullenweber et al., 2008) could be enhanced by a study of the information intensiveness aspect of process standardisation.

Overall it could be argued that services are understood or classified in terms of various service dimensions found in services marketing and SOM service classification literature (Shafti et al.,

2007) or in terms of service positioning matrices that match service processes to service packages (Kellogg and Nie, 1995). These service classification schemes have limitations (Verma, 2000) that could be addressed by varying the unit of analysis from organisational to process level and by addressing the totality of the service concept rather than its discrete components.

1.2 The Research Question and Objectives

Although literature suggests that strategic fit between service concept and service delivery process leads to improved customer satisfaction (Karwan and Markland, 2006; Roth and Menor, 2003), how specific attributes ought to be matched is yet to be conceptualised. To this end, two aspects related to ecology of services: service classifications and the architectural elements of SOM should be revisited. The objective of this research therefore is to make contribution by filling two gaps in SOM research; (i) add to and enhance existing approaches for classifying services in a way that stimulates service innovation. Since conventional literature lacks unanimity and clarity in articulating the perceived complexity of service concept, this study deconstructs each service case under study to the *what* [service concept] and the *how* [service delivery process] and matches the inherent components to *customer inputs*. Misalignment between components of a service process is known to negatively affect service delivery performance (Silvestro and Silvestro, 2003) and according to Kellogg and Nie (1995), service design should be understood in terms of linkages between service package mix and process delivery design characteristics. (ii) Through the open-system view of services, the study will provide an understanding that encompasses not only the past and current services but services of the future. Therefore, this study is undertaken in the neo-futuristic information intensive service context (Riedl et al., 2009).

7

This thesis is organised to answer the research question: *What are the implications of synchrony among customer inputs, service delivery system characteristics and service concepts on operations and operational actions in information intensive services?*

The corresponding objectives of this study are:

- To identify process design features of information intensive services

- To understand links between customer inputs, service delivery process and service outcomes for different information intensive service offerings

- To explore role of information intensity as a component of customer inputs

- To draw managerial/operational implications and insights relevant to information intensive service providers

1.3 Research approach and scope of the study

De Vaus (2001) posits that social science research is open to four research methodologies; case studies, cross-sectional surveys, longitudinal research and experiments. Based on the assumptions of the phenomenological school of thought (Husserl, 1970) and the emergent paradigm (Deetz, 1996), this study adopts inductive case study approach of theory building because the aim is to generate rich information to explain the service Concept, customer Inputs and service Process (CI&P) fit in various service scenarios. By reviewing literature, a priori conceptual framework relating the attributes of the CI&P constructs are developed from which the case study protocol (Appendix E) is generated to guide fieldwork. Empirical studies are carried out in three world class companies based in Kenya to exhibit the CI&P fit. In each company four service offerings (data services, research services, call centre services and training services) are studied. A single unit of analysis (i.e., the 'operate' process of the

service offering) is deemed appropriate to the research question to yield rich insights (Winch, 2014). Indeed, recent studies (Menor and Johnson, 2012; Ponsignon et al., 2007) recommend end-to-end process view of services. Data is collected through document analysis and real time observation of operations and interviews (a total of 52 interviewees - senior, middle and lower level employees – conducted over a period of 18 months with each lasting between 90 – 120 minutes). Concurrent to data collection is data analysis conducted at two levels; (i) within case, in three stages – data condensation, data display and drawing and verification of conclusions, and (ii) cross-case where resemblances and divergences between constructs of the various cases are identified (Eisenhardt, 1989).

1.4 Key research contributions

There are several ways of presenting outcomes of qualitative case studies; propositions, framework, or descriptive insights (Barrat et al., 2011). The outcomes of the current study are stated in form of future testable propositions (Grütter et al., 2002; Krajewski et al., 2005). The study investigates SOM in little-understood process design in IIS background leading up to the following major contributions:

- The studied service delivery process features [such as employee skills, employee discretion, automation, facilities and staff hiring and training] concur with extant literature that no one service delivery framework fits all service offerings. However, it is established that IIS are different from traditional contact services. For instance, (i) customer contact provides partial explanation of requisite levels of employee skills, suggesting that customer contact and knowledge embedded in service process collectively provide exhaustive explanation of employee skills, and (ii) it is not

necessarily accurate to state that services delivered by employees with high interpersonal skills require high employee discretion.

▪ Whilst the link between service concept and customer inputs is, at 'operate' process level, clear in non-information intensive services, it is non-existent in IIS. This suggests that elements of operations transformation model of IIS are different from those of the traditional customer interactive service processes. Specifically, it suggests that at the 'operate' process level, IIS service delivery process is unidirectional just like non-service [manufacturing] processes. This theoretically implies that IIS exhibit assembly line inclinations and could efficiently be delivered using principles of mass manufacturing.

▪ The study challenges widely held SOM notion that service customization is related to customer contact. The emergent relationship suggests that whereas customer influence provides a partial explanation of customization, actions of both the customer and the service provider fully depict the service dimension of customization.

▪ A theory on role of customer inputs; particularly information intensity, present in a service process emerges, suggesting that aspects of customer inputs such as how a service is consumed [and not necessarily the level of customer contact] define customer interaction at process level.

▪ While agreeing with UST's provision that services should be understood at process level, this study suggests that each service process has a core activity [thereby referred to as *the-activity-within-the-process [TAWTP]*] that is the back-bone that holds the process together and that all other activities are secondary and supplementary to it. It suggests that understanding how TAWTP is consumed forms the best basis for service classification. The study provides an IIS OM conceptual typology showing how

contingencies governing service delivery - customer consumption action and service provider processing action – create explicit conditions necessary for definition and understanding of service process design dimensions and decisions.

1.5 Structure of the Thesis

This thesis is divided into two sections; *theoretical* chapters, and *empirical* chapters. Theoretical chapters introduce the reader to the work and help the limit scope of the study. The need for the study, important background literature and research methodology adopted are presented. Empirical section has five chapters; chapters four, five and six that provide first-order concepts (Van Maanen, 1979) for ex-ante aspects of service concept, customer inputs and service delivery process data as collected from each case firm while chapters seven and eight present second-order concepts that aim to build theory based on the first-order concepts. Specifically; *Chapter one*, provides background and motivation to this study. It highlights the importance of contextual information intensive service environment, research objectives and key contributions. *Chapter two* reviews literature on service classification and "Information Services" with the aim of setting up context of study. In a view to developing study constructs, literature about constituent elements of the service process; service delivery process, service concept and customer inputs is reviewed, culminating into the conceptual framework for the study. *Chapter three* presents research methodology adopted for empirical study. Three aspects are discussed; philosophical position, justification of case study research design, and fieldwork in terms of data collection and analysis approaches adopted. *Chapter four* presents in detail the empirical findings of service concept in each case per organization, yielding to within-case deductions. *Chapter five* presents in detail the empirical findings of customer inputs in each case per organization, yielding to within-case deductions. *Chapter six*

presents in detail the empirical findings of service delivery process in each case per organization, yielding to within-case deductions. *Chapter seven* consolidates findings from chapter five, six and seven into cross-case deductions. The emergent contribution to theory is highlighted through pattern matching, resulting into 24 observations. *Chapter eight* provides discussion of the main findings. Comparison of findings to literature is undertaken, leading to development of six research propositions. It provides conclusions and contributions of the study to knowledge and practice and terminates with statement of limitations and suggestions for future research.

2 CHAPTER TWO – SERVICE OPERATIONS MANAGEMENT LITERATURE REVIEW

The purpose of this chapter is to review literature that informs relationships between the CI&P constructs of SOM. It is organised into three main sections. Section 2.1 looks at service classification dimensions found in three important service defining theories developed by SOM researchers; the UST, the IHIP (Intangibility, Heterogeneity, Inseparability and Perishability) model and the customer contact model (CCM). It is suggested that information intensity provides a useful conceptual dimension in the understanding of services. Section 2.2 discusses the strategic landscape of SOM that entails 3 architectural elements; target market, service delivery system and the service concept, defining the attributes of each element and how they ought to be aligned. Section 2.3 evaluates literature about the relationships that exist between the CI&P constructs and discusses the extant understanding of these relationships culminating to a conceptual framework for the study.

2.1 Service Classifications

Service classifications relate to categorisation of service organisations on the basis of shared commonalities. According to Hambrick, "to classify things is to know one or two key attributes about an object and then infer (sometimes reliably, sometimes not so reliably) other attributes of the object." (Hambrick, 1984 pp.27). Wemmerlöv (1990) postulate that many problems in service management are related to inadequate study efforts towards understanding of service classifications. Cook et al. (1999) highlighted the use of classifications in SOM theory building. There are many SOM classifications in literature based on numerous service characteristics/features. These characteristics are referred to as "service dimensions" (Silvestro et al., 1992). Given the many service dimensions, hundreds if

13

not thousands of permutations of services are possible. Indeed Meyer et al (1993) argue that increasing the number of dimensions makes classifications complex and unmanageable. To avoid complexity, two dimensional service classifications are the norm. However, trade-off between reality and simplification (Meyer et al., 1993) should be done cautiously because service classifications are by themselves not valuable but managerial insights therein are (Snyder et al. 1982) and thus service classifications should be matched with appropriate service delivery design attributes, i.e., "… once a service organization, or parts thereof, has been characterised, a set of matching organizational design attributes can be prescribed" (Wemmerlöv, 1990 pp.23). Indeed, service classifications aim at bringing out the management challenges inherent in different service classes and strategic positioning of services for productivity management (Shafti et al., 2007; Verma, 2000).

2.1.1 Service dimensions extracted from underpinning operations management theories

Different service management researchers use different dimensions to classify services. Appendix L highlights key service categorisation dimensions and the associated literature sources. Of these service features, customer influence is the main distinctive feature of service processes (Kellogg and Nie, 1995). According to the unified service theory (UST), production processes entail either service processing or manufacturing. However, how the two processes differ is debateable. Several constructs such as *tangibility*, ratio of physical aspects to intangible aspects and nature of inputs processed distinguish between these two process types. Although there are several service models that explain this distinction, most of them are presented in the context of service marketing. In OM, there are three models that stand out; IHIP model by Sasser et al. (1978), CCM (customer contact model) by Chase (1978) and customer inputs model (Lovelock, 1983; Sampson and Froehle, 2006; Wemmerlöv, 1990).

14

Since the discipline of economics long existed before the fields of marketing and operations management, it provides a good background to distinguishing manufacturing from services. Marketing and OM have borrowed and benefitted hugely from economists. Say (1803) defines economics as a discipline that addresses issues related to producing, distributing and consuming wealth. Wealth connotes abundance of goods and services that satisfy human needs and entails what operations management and marketing do. Traditionally, operations management (manufacturing) focused on production of goods whereas marketing focused on distribution of commodities as opposed to services. This outlook is known as goods dominant logic (GDL) and derives its roots from Smith (1776) (Vargo et al., 2008). GDL has been challenged by marketing researchers, claiming it is passé and that the alternative view referred to as service-dominant (S-D) logic (Vargo and Lusch, 2004a) is preferable. Such efforts towards understanding the dominant and service skewed global economy are welcome. Fascinatingly, Sampson et al. (2010b) alludes that the marketing S-D logic is deficient since it does not provide a theory of strategy (Porter, 1991). That it fails to address customer value realization and organizational failure and success and is not helpful to managerial decision making. Sampson et al. (2010b) observes that a service defining theory should not aim at breaking away from the 'goods' vantage point just for the sake of it, but should enhance understanding of services and subsequent effective and efficient delivery of those services. Although production and operations management researchers have continually resisted autonomous study of service operations management (Nie and Kellogg, 1999), recently Sampson and Froehle (2006) developed an operations management perspective called the unified service theory (UST). The theory advocates for a middle ground (Figure 2-1) perspective that distinguishes service processes from non-service processes in a way that aids decision making in organisations.

Goods Dominant Logic

- Operand resources
- Tangibles
- Inside-out
- Static
- Services are 'tertiary'
- Value is embedded in goods

Services Dominant Logic

- Operant resources
- Intangibles
- Outside-in
- Dynamic
- Goods are 'tertiary'
- Value is co-created

Unified Services Theory
Customer inputs
- Body / mind
- Property
- information

Non-service processes
- Decoupled

Service processes
- Presence of customer inputs

Figure 2-1: Fusion and Comparison of GDL, S-D logic and the UST

According to Vargo and Lusch (2004a), GDL and S-D logics are at opposite ends of a continuum. The point of departure between the two logics is in the treatment of productive resources. Whereas the 'hard' traditional factors of production (land, labour, capital and technology) are central to GDL, S-D logic is driven by the 'soft' resources such as skills and knowledge. Constantin and Robert (1994) refer to 'hard' resources as operand resources because they are acted upon to produce the desired utility. Operant resources or 'soft' resources are employed to act on other resources (ibid, 1994). Proponents of GDL believe utility is entrenched in the physical output of the production system. This proposition implies that services are 'tertiary' or secondary to goods. The contrarian view by S-D logic is that value is co-created and that goods enrich value creation.

The Unified Services Theory (UST)

The UST is founded on the premise that service processes are distinguishable from non-service processes (Sampson and Froehle, 2006) and that the GDL and S-D logics are unhelpful. According to UST, the difference between a service and a manufacturing process is explained by presence or absence of inputs brought into the process by the customer. This observation echoes the IHIP's heterogeneity dimension which is defined in terms of either; the *level of service complexity* - the composition of a service in terms of number of activities from its start to finish, and the *nature of inputs* that are transformed in delivery of that service which could be customers, information or materials (Hill, 2005). UST states that customer inputs are not only the sole necessary conditions for distinguishing service processes from non-service (manufacturing) processes but undeniably sufficient (Sampson and Froehle, 2006). Furthermore, Sampson et al (2010a, 2010b) propose that value and innovation are inherent to service process activities. These activities make up the DNA of a service process. Indeed, the strength of UST is in its possession of theory of strategy, meaning it not only provides an explanation of what comprises of service processes but supports decision making (Sampson and Froehle, 2006). UST is founded on the central theme that the presence and implications thereof of customer inputs, distinguish non-service process from service process. This relates to concept of co-production which is widely covered in service operations literature. Customers bring three inputs to the production or delivery system; their body/mind through direct interaction, their goods or their information (Lovelock, 1983; Sampson and Froehle, 2006; Wemmerlöv, 1990) through surrogate interaction (Sampson, 2012b). UST considers service as processes (Shostack, 1987) rather than outcomes (Harvey, 1998) and these processes make use of inputs brought by customers. In summary, the UST suggests that

optimal service delivery systems can be realised only if service operations managers distinguish between service processes and non-services processes.

The IHIP model

This model consists of four characteristics; Intangibility, Heterogeneity, Inseparability and Perishability (IHIP), that distinguish manufactured goods from service products. The model's four characteristics do not originate from marketing and operations disciplines but are traced to classical and neoclassical economics (Lovelock and Gummesson, 2004). The four characteristics were not always referred to using those exact words. For instance, intangibility was referred to as immateriality (ibid, 2004). However, the first authors to have all the four constructs as a set were Sasser et al. (1978) although inseparability was termed simultaneity. According to the IHIP model (1) *Intangibility* is the most unique characteristic of services (Edgett and Parkinson, 1993) and is defined in terms of absence of sensory dimensions such as smell, touch, see and hear (Bateson, 1977; Sasser et al., 1978). This means services can neither be taken home after purchase nor dropped to the floor. (2) *Heterogeneity* means that services exhibit variability both inter- and intra-organisation and between individual employees (Sasser et al., 1978). Lovelock and Gummesson (2004) believe the word variability is more suitable than heterogeneity. To service providers, variability is a challenge to service standardisation attempts and realization of consistent performance from time to time (Edgett and Parkinson, 1993; Zeithaml et al., 1985). (3) *Inseparability* in services means that production and consumption happen simultaneously. In other words, the service provider has to physically interact with the service consumer during service delivery (Kotler, 1982). (4) *Perishability* means that unlike goods, services cannot be produced and stored for use in

future (Edgett and Parkinson, 1993). Therefore demand and capacity management should be well managed to ensure optimal value to the service provider.

Lately, the IHIP model has encountered criticism from Lovelock and Gummesson (2004), Vargo and Lusch (2004b) and other researchers. Lovelock and Gummesson (2004) contend that the IHIP characteristics are not generalizable to all services just like the antonymous characteristics are not applicable to all goods. It is therefore flawed to distinguish services from material goods using the IHIP model (ibid, 2004). Nie and Kellogg (1999) posit that although intangibility is the most important service marketing dimension, operations management decision making is dominated by customer influence. Spring and Araujo (2009) are of the view that the IHIP model aggravates the residual definition of services (Judd, 1964) because the four characteristics are antonymous characteristics of material goods. Given the criticism against the IHIP model, this study will seek to establish relevant characteristics for services and more so the IIS. In a paper about OM in information intensive economy, Karmarkar and Apte (2007) opine that the IHIP characteristics; particularly intangibility and inseparability, do not apply to information services. They observe that: *"There are numerous other examples of information processes that combine characteristics of both services and ''manufacturing'' in that they exhibit some or all of tangibility, remote delivery, inventories, and the decoupling of production and consumption." (ibid, 2007 pp.446)*

The Customer Contact model (CCM)

The role of the customer in understanding of services and service process is well researched on in OM. In a survey of studies undertaken by OM scholars, Nie and Kellogg (1999) found that customer influence had the most impact on organisational operations when compared to

labour intensity and the four IHIP characteristics. Customer contact model (Chase, 1978; 1981; Chase and Tansik, 1983) classifies service delivery systems on the basis of extent of customer contact, which ranges from high to low. Whereas Chase (1978) defined customer contact as "*the physical presence of the customer in the system,* " (ibid, 1978 pp.138) , Chase (1981) definition of facility efficiency presents customer contact as proportion of time in which the customer has direct contact with the service delivery system to the total time taken to create the service. The thesis of the contact model is that potential for efficiency of service delivery system is contingent on the level of customer contact. Higher level of customer contact implies lower service delivery efficiency. Chase (1981) provided twelve propositions about high contact service delivery systems, Figure 2-2. These propositions relate to service process characteristics ranging from people skills, performance measurement, reward systems, service location, capacity-demand considerations, and so on.

The propositions suggest that the technical core of the main production process should be insulated from external environmental forces to ensure consistency in production throughput and quality (Chase, 1981). This alludes to the need to embrace decoupling strategy. Decoupling is associated with separating the front-office, point of interaction with the customer, from the back-office, internal operations that are invisible to the customer. The customer contact model "… seeks to specify how to decouple and regroup organizational subunits in services in light of the unique influence that the physical presence of the customer has on the operation of the organization" (Chase and Tansik, 1983 pp.1037).

OM CHARACTERISTICS OF HIGH CONTACT SERVICES–SOME PROPOSITIONS

1. The service product is multidimensional (time, place, atmosphere) and hence its quality is in the eye of the beholder.

2. The direct worker is part of the service product.

3. Demand for the service is often instantaneous and hence cannot be stored.

4. Because production is generally customer initiated, an optimal balance between service system demand and resources is difficult to achieve.

5. Changes in the capacity of the system affect the nature of the service product.

6. The production schedule has a direct, personal effect on the consumer.

7. Only part of the service can be kept in inventory.

8. Verbal skills and knowledge of policy are usually required of the service worker.

9. Wage payments must usually be related to labor hours spent rather than output.

10. It is assumed that service system capacity is at its long run level when the system first opens.

11. A service system malfunction will have an immediate, direct effect on the customer.

12. The location of the service system modifies its value to the customer.

Figure 2-2: Propositions for high contact service systems (Chase, 1981 pp.702)

The justification is that when the back office is freed from customer caused variability, operational efficiency improves. However, this argument is interpreted to mean that the technical core can be buffered from the customer without any consequences. This leads to questioning of the effectiveness of the model. For instance, Wemmerlöv (1990) called for clarity on whether instances where the customer is within the system but does not interact with employees vis-à-vis interaction that entails actual exchange of information with employees are the same. Schmenner (1986) observed that high visibility or longer time in contact is not tantamount to high interaction. He was of the view that whereas visibility is related to physical presence of the customer, interaction is a measure of customisation or interventions made by the customer to the service delivery process. Haywood-Farmer (1988)

partially addressed this challenge by using three-dimensional argument for service quality. He suggested that appropriate combination of three constructs; degree of customisation, labour intensity and contact/interaction provides valuable insights for service process design decision. Lately, SOM researchers have sought clarification on the position of non-face-to-face synchronous communication between the organisation providing the service and the customer by use of telephone, fax and other such conversation media (Mersha, 1990; Sampson et al., 2010a). Exploration of the impact of these different contact types could lead to new managerial insights. At the moment, it is not clear if organizations should design different service delivery processes for each contact archetype (Zomerdijk and Vries, 2007). Chase and Apte (2007) posit that since the customer contact model is pre-internet, its applicability to interactions in virtual environments via e-mail or internet chats require further exploration. As it is today, the term customer contact remains equivocal.

In summary, it is clear that none of the three theories highlighted above relates service classification dimensions to the three (CI&P) aspects of a service 'operate' process. Individual components are addressed paying little attention to intra CI&P constructs linkages (Goldstein et al., 2002; Silvestro and Silvestro, 2003; Zomerdijk and Vries, 2007), leading to study outcomes that lack theory of strategy (Porter, 1991). For instance, the UST focuses on and argues that customer inputs sufficiently distinguish service processes from manufacturing. The IHIP model compares incomparable features of the service delivery process with those of the service package and customer inputs giving rise to questions such as - does intangibility refer to abstract nature of inputs such as knowledge and skills or outputs which could also be intangible? While it addresses aspects of the three constructs the customer contact model does not consider customer dimensions such as information intensity.

2.1.2 Information intensiveness as a service dimension

Although transition of economies from *agriculture* to *manufacturing* to *services* is not a recent occurrence, the evolution of service sector from 'material' services to 'information' services is on-going (Godin, 2008; Karmarkar and Apte, 2007). This kind of service segmentation connotes service heterogeneity characteristic (Sasser et al., 1978) and explains inconsistencies in services (Lovelock and Gummesson, 2004). Literal reading means 'material' services are high in physical element whilst 'information' services entail information exchange (Morris and Johnston, 1987). While this could be correct, the detailed meaning is much more complex. In addition to material and information aspects of services, the other important classification dimension is customer contact. Most traditional OM service classification schemes and the classical transformation process are based on customer contact. As highlighted in the previous sub-section, seminal service(s) studies such as Chase (1978), Maister and Lovelock (1982), Lovelock (1983), Schmenner (1986), Shostack (1987), Silvestro et al. (1992), and Kellogg and Nie (1995) are based on customer contact or its variant customer interaction/influence. Since most of the service classifications schemes were developed pre-internet (Chase and Apte, 2007), customer contact and interaction were understood to be the most important dimensions in service process design. However, there are research studies that go beyond customer contact, Table 2-1. These studies consider three dimensions; interaction, information intensity and physical [material] manipulations in classifying services.

Author	Service Aspect	Comment
Lovelock (1983)	Classification based on tangibility of service action and direct recipient of service: ▪ Tangible service actions delivered to customer body ▪ Tangible service actions delivered to customer possessions ▪ Intangible service actions delivered to customer body ▪ Intangible service actions delivered to customer possessions.	Provides service examples for each cluster but ambiguously presents information services
Morris and Johnston (1987)	An operation should be characterised by its inputs: ▪ Customer processing operation (CPO) ▪ Information processing operation (IPO) ▪ Materials processing operation (MPO)	CPO and IPO are service processes whereas MPO represents manufacturing process
Perrow (1967) & Wemmerlöv (1990)	▪ Goods processing organizations ▪ People changing organizations ▪ Symbol processing organizations	Choice of technology is influenced by work environment and latitude in employee action
Apte and Mason (1995)	▪ Physical actions ▪ *Information* actions ▪ Interpersonal actions	These actions are not mutually exclusive
Kiyomizu (1994) (as discussed in Abe, 2005)	The business function and operations services category can be divided into: ▪ Labour-intensive services ▪ Commodity-goods/equipment providing services ▪ Money handling services ▪ *Information* handling services	Information handling includes gathering, processing, producing, storing, and transmitting information
Sampson and Froehle (2006)	Service processes take in two types of customer inputs, either: ▪ Non-self-customer inputs (tangible property, goods, and *information*), or ▪ Self-customer inputs (physical self/body and customer's mind/consciousness)	A manufacturing process is a non-service process because it lacks customer inputs

Table 2-1: Service classifications based on inputs processed

For information intensive services, customer as well as other inputs are provided in form of instructions, requests or documentations. Service provision entails the provider pooling complete set of relevant information and data about the customer requirements and delivering them in timely and accurate manner (Ojasalo, 2002). Furthermore, outputs of the process are also provided in informational form as shown in figure 2-3.

INPUTS/RESOURCES	VALUE ADDING PROCESS	OUTCOME/PRODUCT
- Specific knowledge of the problem or application area - Knowledge and ability of applying methods of solving the problem and fulfilling the need	- Obtaining relevant information and data of the need/problem at hand (diagnosis) - Planning the solution or product (design of solution/product) - Implementing the solution or realizing the product	- Mostly information and increased knowledge - May also include tangible elements, such as documents or equipment, however the core value is based on information - E.g. new marketing plan, new software system, new organizational structure, logistical solution, on-line database solution

Figure 2-3: Process view of Information Intensive Services (ibid, 2002)

An economy dominated by information intensive services is referred to as information economy, implying that the nature of resource inputs and inherent processing manipulations into customer required outputs are informational. Early efforts towards understanding the structure and size of information economies were undertaken in the U.S by Machlup (1962a) and Porat and Rubin (1977). The two studies, however, are incommensurable because whilst Porat and Rubin (1977) adopted the U.S income accounting framework to measure the service sector, Machlup (1962b) used a varied version of the framework (Karmarkar and Apte, 2007). More recently, Apte and Nath (2007) conducted a study following Porat and Rubin (1977)'s approach to estimate the contribution of the information sector to the U.S GNP. Table 2-2 shows the contribution of information services to U.S GNP as determined by these studies in specified years. The studies by Porat and Rubin (1977) and Apte and Nath (2007) distinguish the contribution that emanates from two sectors of the information economy i.e., primary and secondary sectors, Figure 2-4. Although both sectors produce information services, the output of primary sector is distributed to and consumed across market interfaces whereas secondary

sector provides government with information to enhance public administration. As such, the output of secondary sector is not traded in the market. Interestingly, using the detailed data from Apte and Nath (2007), Karmarkar and Apte (2007) showed that the 63% contribution to GNP by the information sector in 1997 is split into two; 10% is associated with information products like computers, CDs, and software whereas 53% comes from informational services such as education, telecommunications and professional services.

Author	Year	% contribution of the information economy to U.S GNP
Machlup (1962a)	1958	29
Porat and Rubin (1977)	1967	46
Apte and Nath (2007)	1992	56
Apte and Nath (2007)	1997	63

Table 2-2: Contribution of Information sector to U.S GNP[2]

Sector	1967	1992	1997
Primary	200,025 (25.1%)	2,055,950 (33.0%)	2,940,121 (35.2%)
Secondary	168,073 (21.1%)	1,427,119 (22.9%)	2,317,419 (27.8%)
Information [Total value added]	368,098 (46.3%)	3,483,069 (55.9%)	5,257,540 (63.0%)
Non-information [Total value added]	427,290 (53.7%)	2,750,836 (44.1%)	3,088,106 (37.0%)
Total GNP	795,388 (100.0%)	6,233,905 (100.0%)	8,345,646 (100.0%)

Figure 2-4: Contribution of information subsectors to U.S GNP (Apte and Nath, 2007).

The 37% contribution to GNP by non-information services is also split with 6% raised from material products - defined as the traditional manufacturing - and the remainder 31% emanating from material services such as transportation, construction, retailing, tourism and

---

[2] The approach by Machlup, F. (1962a) **The Production and Distribution of Knowledge in the United States**. Princeton, NJ: Princeton University Press., does not facilitate breakdown of the 29% contribution.

so on. Indeed, Karmarkar and Apte (2007) conceptualised important operations issues such as production processes, quantity and quality measures, costing and valuation in the information sector/economy that require further research. An example of emergent information sector is the service offshoring and internationalisation. The increasing opportunities and capability for automating and digitizing service processes known as business process standardisation (Wullenweber et al., 2008) has led to growth of service offshoring. These advances are enabled by internet connectivity supported by high speed fibre, improved bandwidth connections and standard software like SAP and Oracle. According to Clark Jr et al. (1995), the allure to source information services to other countries can be explained by four dominant forces: (1) Technological forces; (2) Technological management forces; (3) Industry considerations; and (4) Organizational forces. Clark Jr et al. (1995) classify technological forces into two groups; service enablers and demand enhancers. Service enablers refer to information systems and technologies that enable service commoditization (Davenport, 2005; Sampson, 2012a; Sen and Shiel, 2006) allowing therein standardized services to be accessed by wide-ranging customers. Service enablers may as well refer to the technology that supports the firm's organization ability, e.g., technologies that distinguish management from *operations* and from *delivery* of information services (Clark Jr et al., 1995). Demand enhancers relate to the rationale and reasons for increased global offshoring. These are threefold; (i) technology has made it easy for the head-quarter or clients to manage remote operations (Stratman, 2008), (ii) the increased competitive pressure such as customers demanding variety in products - requires that providers share skills, technology and resources along supply chains or in some instances with competitors - a concept prevalently referred to as coopetition (Wilhelm, 2011), and (iii) the locational benefits (Aksin and Masini, 2008; Lewin and Peeters, 2006). The foremost locational driver of offshoring is cost arbitrage

(Metters, 2008; Metters and Verma, 2008; Namasivayam, 2004) which is well pronounced by transaction cost economics (Williamson, 1979). Since offshored work is highly labour-intense and labour cost indices show huge price differentials across countries, colocation of work from developed to developing countries realises cost arbitrage (Apte and Mason, 1995). Cost arbitrage in outsourcing arises from economies of scale and scope enjoyed by the service providers (Levina and Ross, 2003; Loh and Venkatraman, 1992). Secondly, for complex knowledge services the rationale is far from cost advantages (Youngdahl and Ramaswamy, 2008) but allied to access of specialised professional skills (Apte and Mason, 1995; Namasivayam, 2004; Sen and Shiel, 2006; Zhang et al., 2008). Thirdly, as noted by Zhang et al. (2008), access to new markets is one of the main driving forces for global engineering networks (GENs)/captive centres. Hence, offshoring gives firms in developed countries foothold to markets with high growth potential in emerging countries (Apte and Mason, 1995). Fourthly, reduced turnaround time benefits due to time zone difference (Bhat et al., 2010; Quinn, 1992) are considered in offshore decision. For instance, Nairobi has a 7 hour time zone difference with respect to Washington, DC, USA and as many as 13+ hours with respect to Honolulu in Hawaii, USA. Further, some countries such as Ireland and several Caribbean countries, provide irresistible tax advantages making global clients, particularly U.S firms, to offshore outsource from such destinations (Metters and Verma, 2008). Technology management forces relate to general trends in the world of information technology. Industry forces are about occurrences such as emergent third party providers and increased number of talents leaving institutions of higher learning. Organizational forces relate to internal happenings within outsourcing client entities.

What then is an IIS? According to Hart (1998), the importance of definitions in social sciences is that they put boundaries in the scope of words or concepts being studied and also remove ambiguities. The root of definitions can be traced in the classic works of sociologists such as Ferdinand Tönnies, Emile Durkheim, Max Weber and Karl Marx in the 1880s (ibid, 1998). Metters (2008) studied the idea of offshoring and outsourcing of electronically transmitted services and combined the concept of outsourcing/offshoring with service information intensiveness to develop the concept of outsourced information intensive services. Similarly, *a priori,* though topsy-turvy, an IIS is defined as a service that meets the threshold of information intensiveness (Apte and Mason, 1995) and can effectively and efficiently be delivered, meaning IIS have highest proportion of total activity processing time spent working on information and the remainder of the time is spent on either physical manipulation, interacting with the customer or '*muda*'[3]. This study will seek to develop a more precise empirical definition of IIS.

2.2   Elements of a service process

The strategic planning landscape of SOM, involves finding the right alignment of three architectural elements (figure 2-5); target market, service concept and service delivery system design (Heskett et al., 1997; Metters et al., 2009; Roth and Menor, 2003).

---

[3] Muda is Japanese word that means waste and is widely used in the concept of lean operations
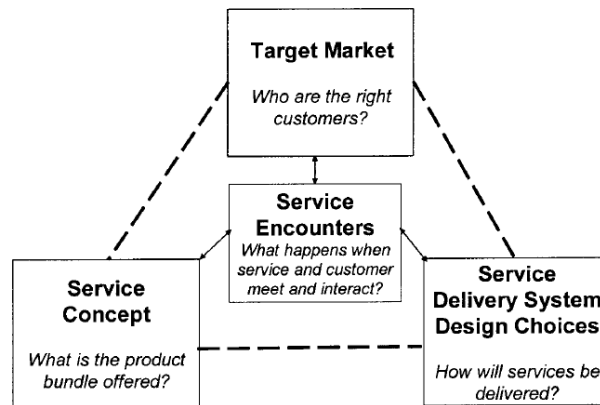
Figure 2-5: Basics of operations strategy (Roth and Menor, 2003 pp.147)

Operationalization of construct measures of a study is challenging to empirical researchers (Bagozzi et al., 1991) because it relates to quality measure of case study design, referred to as construct validity (Yin, 2009). To manage this challenge, two steps approach followed by Terry Hill in product and service profiling (see Hill, 2000; Hill, 2005; Hill and Menda, 1998) is advisable: (i) identification of few but key input, process and output dimensions relevant to each element, and (ii) breaking down each of the dimensions to its specific characteristics. This approach is adhered to in the following sub-sections.

2.2.1 Service delivery system

Service delivery process is the means to realisation of service value through technology (Kingman-Brundage, 1991). Process strategy comprises the way organizations compete through effective and efficient utilisation of resources, process changes and adjustments, customer handling and vertical integration (Russell and Taylor, 2003). Several management study disciplines such as marketing, OM and SOM have addressed delivery process design decisions, with each having own outlook. Marketing researchers are mainly concerned with

30

designing product/service exchange systems that support information sharing and customer satisfaction to win and retain customers. OM has varied literature about manufacturing processes with emphasis on flexibility of production equipment, assembly and customization technologies. SOM studies highlight the distinguishing features of service designs in high-to-low customer contact systems, focusing on service design issues; structural and infrastructural at a highly generic level (Chase, 1978). At the operational level, service delivery systems articulate technical as well as business dimensions (Hill, 2005). Engineering, research and development and information technology experts are responsible for the technical part while operations management is concerned with how the business dimension supports integration of process technology with people skills, knowledge and other operand resources to meet organizational and market needs (ibid, 2005).

Aspects of Service Delivery Process

Similar to manufacturing systems (Slack, 1989), dimensions of service delivery systems entail a configuration of two interactive resource clusters; structural resources, and infrastructural resources (Johansson and Olhager, 2004; Quinn, 1992; Roth and Menor, 2003; Tax and Stuart, 1997):

- *Structural resources* – involve the hardware aspects of the service delivery system including technology, facility layout/location, and equipment.

- *Infrastructural resources* – involve the 'soft' or behavioural/people aspects of the service delivery system including employee skills, discretion/empowerment, hiring, and training.

In attempting to better understand service delivery process from specific dimensions, the dimensions relevant to this study are discussed next.

31

Employee skills

Following the definition that service processes are actions that integrate resources to create value, employee skills and knowledge could be defined as operant resources (Constantin and Robert, 1994) because they are used in processing of other resources. The CCM model categorises employee skills according to technical complexity dimension such that those skills that are used at the BO are referred to as technical skills while those utilised at the FO are termed interpersonal skills. Diagnostic skills cut across the BO-FO configuration and entail experience and knowledge necessary for decision making. In order to compare different service systems, employee skill levels are measured in a high-low continuum scale. Indeed, the main distinguishing characteristic of knowledge as well as professional services from other services is the level of skills utilised during service delivery (Miles et al., 1995). Educational qualifications such as degree, diploma, certificate and high school achieved are surrogate measures of employee skill levels.

Employee discretion

Employee discretion is defined in terms of choices made by employees in developing optimal procedures for undertaking tasks (March and Simon, 1958). It is the level of personal judgement allowed to employees during their work (Rolfe, 1990). Whereas marketing discipline associates employee discretion with the concept of employee empowerment (Kelley, 1993), OM considers it as an important service design dimension (Silvestro et al., 1992). However, its implications to service operations practice are still unclear (Bowen and Lawler III, 1995). This construct is measured by evaluating the degree of personal judgement allowed to employees executing different service processes. It could be realised by answering

the question – 'do employees follow a pre-conceived decision making templates, do they escalate decisions to supervisors/seniors and to what extent they make decisions?'

Employee hiring and training

Schmenner (1986) considers hiring and training of employees as major challenges facing service operations managers. Roth and Menor (2003) suggest that this infrastructural question ought to be addressed through carefully crafted virtuous cycle. Hiring is the process whereby right employees are identified and selected for employment before commencement of requisite training. According to Kellogg and Nie (1995), different service processes demand distinct kinds of hiring and training procedures. For instance, hiring and training for business process outsourcing (BPO) firms is unique because process tasks are undertaken as service delivery goes on (Bhasin, 2011) i.e., to successfully deliver BPO/ITES services, for every newly secured client, employees are hired and trained. Hiring entails screening potential employees in-house or delegating to third party firms whilst training involves interdisciplinary tasks, interpersonal skills or repetitive versus skill based tasks (Kellogg and Nie, 1995).

Technology

According to Levitt (1976), services are industrialised using hard, soft or hybrid technologies[4]. The mix of technologies requires different combinations and organisations of people, machinery, tools and procedures, connoting complexity of services and level of quality of service delivery. Perrow (1970) suggested that complex services have high degree

---

[4] The reader is invited to peruse: Thomas (1978), Froehle and Roth (2004) and Johnston and Clark (2008), for further insights.

of task variability and little analysability. Hill (2005) defines service complexity in terms of the number of steps that make up the end-to-end service process, similar to Sampson et al. (2010a)'s process DNA concept.

Other SOM authors have argued that value (service innovation) in service delivery can be realised by choreographing technology on critical but problematic steps (Edvardsson and Olsson, 1996) or moving some steps from the front-office into the back-office through a procedure known as service commoditization. Alternatively, the contrary procedure referred to as service disintermediation could be undertaken whereby some activities are moved from back-office into the front-office (Sampson, 2012a). In Thompson (1998)'s words, BO steps are controllable and easy to optimise whereas FO steps are uncontrollable and are affected by customer demand heterogeneity. In other words, service innovation is achieved by breaking down complex services into intrinsic activities and subsequently reconfiguring the relations, shape, direction and interdependencies between activities. This resonates well with supply chain design principles where value is realised through the configuration decision (Slack et al., 2010). The decision entails changing the shape of or cutting off some players from the network. To capture process steps, this study will adopt the PCN logic (Sampson, 2012b) in laying down the process steps for each study case. The PCN diagram shows the process steps for which the service provider has absolute control and where control is shared with the customer. Specifically, the processes that entail direct interaction (DI) with the customer, surrogate interaction (SI) with the customer's resources and those that are independently processed (IP) by the provider (ibid, 2012b) are captured. For each process category, the explicit process design features are identified. Technology is measured on the basis of

whether it is designed to deliver effective or efficient services (Kellogg and Nie, 1995) or in terms of process automation; labour vis-à-vis equipment.

Facilities

Two important aspects of the facility infrastructure are found in SOM literature:

- *Facility layout* − this is related to the BO-FO decoupling decision whereby high customer contact service systems are laid out for different objectives [SOM objectives are defined under service concept] from low customer contact systems. This construct is evaluated by answering the questions; 'what is the motivation behind facility arrangement and set-up?' and 'does layout take customer or internal outlook?'

- *Facility location* − is a decision regarding proximity of the service delivery system to customers, labour, infrastructure and centralisation/decentralisation concept. This concept is measured by evaluating where service processing takes place and the reason why it matters to clients.

Table 2-3 provides a summary of the structure-infrastructure elements of a service process.

People:	- Diagnostic
▪ Skills/knowledge	- Interpersonal
	- Technical
▪ Discretion	- Freedom in execution/ employee personal judgement
Hiring and training	*Hiring*
	- Screens potential employees in-house
	- Delegate hiring to outside firms
	Training
	- Interdisciplinary tasks and interpersonal skills
	- Repetitive, skill based tasks
Infrastructure:	- Use
▪ Technology	- Effectiveness enhancing
	- Efficiency enhancing
▪ Facilities	- Layout/ Security
	- Location

Table 2-3: Dimensions of Service Process

2.2.2 Target market

Target market entails entities that potentially derive benefits from a service offering i.e., customers. It sets the external context [such as volume implications, service mix, order winners and qualifiers] against which internal operations processes are defined (Hill and Hill, 2012). Customers not only differ in demographics, psychographics and demands but also in terms of their roles within the service life cycle; providing ideas and stating demands during NSD process, integrating resources in the transformation process, and receiving service outputs. As such, customers' surrogates such as *type* of customer inputs, type of customer inputs *variability* brought into the firm's service delivery system (Frei, 2006) and *volume* of customer inputs (Silvestro et al., 1992) should be clearly understood. These concepts are discussed below and a summary provided in Table 2-4.

 Customer Inputs

According to the unified service theory, service firms process customers' possessions. These possessions are either the customers themselves (body or mind) or their physical commodities or information. Sampson (2012b) refers to relationships where service providing firms act on customers' bodies or minds as *direct interactions* whereas those that process customers' commodity or information as *surrogate interactions*. This means that direct interactions entail processing of customers' "self" inputs i.e., the customer is present in-person or indirectly (Apte and Mason, 1995) whilst surrogate or symbolic interactions process "non-self" customer inputs (Sampson and Froehle, 2006). If not well managed, customer inputs could cause disturbance to the service delivery system leading to inefficiencies (Chase, 1978). Disturbance, also referred to as variability (Buzacott, 2000) is of five different types: (1) customer arrival variability i.e., random customer arrival times leading to differences; (2)

customer request variability i.e., scope of variety in customer demands; (3) customer capability variability i.e., customers possess different levels of ability; (4) customer effort variability i.e., customers exertion, toil and energy used during the process; and (5) customer subjective preference variability i.e., customer's perception and thus satisfaction is personal (Frei, 2006). Larsson and Bowen (1989b) suggest that variabilities arise because provider organizations lack complete information regarding *what* the customers may want, *how* they may want it processed, *when* they may want it delivered, and from what *location*. According to the current study, these aspects are consistent with Frei's categorization of variability. The 'what' aspect take after request variability, the 'when' is about arrival, whereas the 'how' explains customer capability differences. Consequently, these three categorises are considered relevant and will be addressed in the study.

Other important customer input dimensions found in literature are; (i) service *variety* and *volume* (Silvestro et al., 1992) and, (ii) emergent concept of service *triads*. Service variety relates to the number of products on offer to the customer, similar to the customer's choices dimension. As such, variety is a suitable dimension of service concept/package (Kellogg and Nie, 1995), because it helps establish whether service offerings differ [or otherwise] in terms of volume of customer inputs. Silvestro et al. (1992) define volume in terms of number of customers. For this study, the definition is slightly varied to include customer time and effort (De Ruyter and Wetzels, 2000; Johnson and Clark, 2001) utilised during the co-production process. Service triad refers to existence of three players in an outsourcing relationship; client, service provider and the consumer. First to address this concept were Niranjan and Metri (2008) in a study of service quality aspects in outsourcing scene. The concept has been embraced by scholars in purchasing and supply management resulting to several peer

reviewed journal articles (Choi and Wu, 2009; Dubois and Fredriksson, 2008; Li and Choi, 2009; van der Valk and van Iwaarden, 2011; Williamson, 2008). More recently the concept has elicited interest in operations management. For instance, in 2012 there was a call in the Journal of Operations Management for researchers to consider studies in service triads. Relevant to the extant study is the observation that there is need to address the question of "*what happens to the locus and control of NSD when the day-to-day contact is between service provider and end-customer?*" (Spring and Schoenherr, 2012 pp.2). Indeed, Menor and Johnson (2012) theorized the applicability of service management and SOM concepts to the concept of service triads and more so in outsourced context. They were alive to the fact that the service provider is faced with two sets of customer demands; one from the client with whom the provider has signed a contract and, the other from the customer who has the penultimate say about quality and utility of the service offering. This put together with the need to address the above question (Spring and Schoenherr, 2012), implies that the triadic nature of services is an important customer input dimension.

Type of customer input (Chase, 1978; Haywood-Farmer, 1988; Sampson and Froehle, 2006)	- Information
	   ▪ Intensity (Apte and Mason, 1995)
	   ▪ Volume
	   ▪ Equivocality (Daft and Lengel, 1986)
	- Body / mind
	- Triadic (Li and Choi, 2009; Niranjan and Metri, 2008)

Type of customer disturbance (Frei, 2006; Larsson and Bowen, 1989b)	- Arrival - when - Request - what - Capability - how
Volume of customer inputs (Silvestro et al., 1992)	- High - Medium - Low

Table 2-4: Dimensions of customer inputs

2.2.3 Service concept

Roth and Menor (2003) scent trail the term service concept to Sasser et al. (1978)'s SOM textbook that defines service concept as the sum of relative utility inherent in each component of the service bundle offered to the consumer. Johnston and Clark (2008) suggest that service concept has two views; (i) as viewed by customers in evaluating services before procuring, and (ii) as viewed by the service provider in measuring the value of the service product. Service concept supports the provider entity during: integration of various organisational departments that deliver the service; evaluation of considered adjustments to the service delivery system; and driving organisational competitive priorities (ibid, 2008). The service concept ensures integration of customer requirements with provider resources such as people, technological configurations and process flows. Goldstein et al. (2002) explain the meaning of service concept and show how it contributes to the design of service delivery systems. Borrowing from Edvardsson and Olsson (1996), service concept should be viewed in light of the 'what' of the customer and the 'how' of the provider. In other words, providers of services should be clear about what needs to be done to satisfy customers and how it should be done (Roth and Menor, 2003). Kellogg and Nie (1995) describe service creation, design and delivery in terms of customer influence and service concept by level of *customization*. Nonetheless, there seems to be variations in these definitions (Lally and Fynes, 2006). For example, service concept is defined as the organisational proposition to customers (Heskett, 1986), detailed layout of what the customers want and how they want it delivered (Edvardsson and Olsson, 1996) or the unifying factor of service marketing and service operations deliverables (Goldstein et al., 2002). To illustrate this diversity of definitions, the following quotes have been extracted from SOM literature:

"The design of the service delivery system should support the realisation of the service concept (Heskett et al., 1990; Clark et al., 2000; Johnston and Clark, 2001)."(Silvestro and Silvestro, 2003 pp.402)

"The service concept (and its development) is a core task in managing service operations. It can be used as a central tool in the design, delivery and improvement of services, yet its potential is often underutilised." (Johnston and Clark, 2005b pp.37)

"The service concept defines the how and the what of service design, and helps mediate between customer needs and an organization's strategic intent." (Goldstein et al., 2002 pp.121)

The many meanings attached to the term service concept, as exemplified by the three quotes above, arise from the interdisciplinary composition of the authors; some taking the service marketing standpoint and others the SOM perspective. The first quote takes the view that customer demands are supreme but ignores fundamental organisational objectives that should be achieved, going against observations made in the service profit chain (Heskett et al., 1994) that an organisation has to grow revenue and register profits in addition to meeting customer needs. It implies that service concept is an outcome, akin to the view by Sasser et al. (1978) – that the main elements of service concept include physical items, sensual and psychological benefits, facilitating information and peripheral/supporting services (Edvardsson and Olsson, 1996; Roth and Menor, 2003) that are offered to the customer. The second quote combines *what* of customer demands with *how* aspect of service delivery suggesting total service view is the best way of defining service concept. The definition of service concept by Johnston and Clark (2008) fits this thinking because it includes the aspects of: service operations – how the service is delivered; customer direct experience during the interaction phase; service outcome – benefits realised by the customer, and; perceptions of the customer about value. This definition is well suited to recent calls for interdisciplinary service research (Ostrom et al.,

2010) since it uses notion of service concept to integrate service marketing with service operations (Karmarkar, 1996; Tatikonda and Montoya-Weiss, 2001). The third quote just like the second, advocates for a definition of service concept that incorporates both the *process* and the *outcome* but with each having own ground. It breaks down the elements of the service concept, as presented in the second view, into respective constituent parts (Goldstein et al., 2002) leading to a spectrum of *customised - standardised* service concepts (Ponsignon et al., 2011). Indeed, Apte and Vepsäläinen (1993) classify financial services, into mass transaction services and customised services, based on this view, suggesting that the extent of value of services [as perceived by consumers] is an important service classification dimension (Tinnilä and Vepsäläinen, 1995). This final view, as explained by Johnston and Clark (2008), is applicable to operational [micro] level of study.

Traditionally, OM views value from *operations performance objectives* lenses whereas customisation connotes ability of a firm to match and deliver products as required by individual clients. Skaggs and Huffman (2003) refer to a firm's ability to customise as *service adaptability*. Another service offering differentiating mechanisms found in literature is *service focus* (Johnston, 1996; Skaggs and Huffman, 2003), connoting a firm's extent or breadth of specialisation in a service offering as compared to competitors. Table 2-5 presents summary of relevant elements of the service concept found in SOM literature that require further exploration.

Characteristics of service concept	Service package		Source
Operational objective	Cost	Service	Kellogg and Nie (1995); Metters and Vargas (2000); Porter (1980); Stauss and Jedrassczyk (2008); Youngdahl and Ramaswamy (2008)
Service adaptability	- Process / procedures change from client to client - Customer say - Volume of information required from each client - Similarity from client to client		Tinnilä and Vepsäläinen (1995); Sousa and Voss (2001); Skaggs and Huffman (2003); Kellogg and Nie (1995)
Service focus	Narrow	Wide	Johnston (1996); Skaggs and Huffman (2003)

Table 2-5: Elements of the Service Concept

Operations performance objectives

These are measured through competitive priorities such as cost, quality, speed, flexibility, innovation and dependability (Slack et al., 2010). Debate on whether an organisation can competitively deliver all the objectives simultaneously (Hill, 2005; Skinner, 1974) is as old as operations management and is beyond the scope of this study. In relation to service outsourcing, cost dimension is the most studied (Levina and Ross, 2003). Indeed from ITES perspective, Stauss and Jedrassczyk (2008) observe, performance can be evaluated in terms of the central maxim of the process which could be cost orientation vis-à-vis customer service orientation. Customer service orientation stands for factors beyond cost benefits i.e., a concoction of other competitive priorities including quality, speed and innovation. In this study, the term 'service' as an operational objective is defined as advocated by Metters and Vargas (2000): *"... the collection of service concepts that are distinct from a cost minimization perspective ... we intend to capture the various non-cost minimization strategies that have been articulated."*(Metters and Vargas, 2000 pp.665)

However, the consumer perspective is conventionally, particularly in economics, two dimensional; consumers as *individuals* and consumers as *firms* (Patinkin, 1973) with marketing establishing it through the Industrial Marketing and Purchasing (IMP) group (Ford et al., 2003). OM researchers also believe utility should be viewed from the perspectives of both the provider and the consumer (Roth and Menor, 2003) but seem to largely interpret service concept from the consumer as an individual view with little research in B2B sphere (Staughton and Johnston, 2005). For this study, since most outsourced relationships are B2B notwithstanding the B2C element in delivery of services that are triadic in nature, the service operational objective category will be captured through the generic dimensions of B2B relationships (Staughton and Johnston, 2005) shown in Table 2-6. The table presents a six cluster OM utility, capturing both the cost and the customer service orientation dimensions in detail.

Relational objectives of OM	Aspects
Traditional operational performance dimensions	Responsiveness, quality, cost, dependability, reliability, flexibility
Operational process criteria	Quality systems, progress reporting, technical procedures, project management
Contract related issues	Contract definition, statements of risk, payment of invoices, milestones, contract terms and conditions, progress meetings contract period, conditions of contract
Partner's organisation employees	Calibre, attitude and quality of staff, personalities, motivation, professionalism
Way of working	Top level communications, trust, integrity, working style, problem resolution, behaviour, attitude to relationship, management style
Competitive environment	Partner's organisation image, business fit, strategic direction, access to opportunities, links with other organisations, understanding of the market

Table 2-6: Operational objectives in B2B services (Staughton and Johnston, 2005 pp.326)

Service adaptability

This concept addresses degree of standardisation vis-à-vis customization (Skaggs and Huffman, 2003) of the service concept. High adaptability is present if service process is tailored to meet discrete customer requirements (Silvestro et al., 1992). Service processes delivering services whose characteristics are known a priori without direct influence of the customer suggest standardised service concept (Sousa and Voss, 2001). This construct is measured by evaluating extent of process alteration to meet specific client requirements, customer say or influence during co-production and comparison of the service offering from client-to-client.

Service focus

Is defined as 'a narrow product mix for a particular market niche' (Skinner, 1974 pp.114). An organisation can choose to focus on any of the five methodical levels; service encounter, delivery system, site, business or service concept level (Johnston, 1996). At service concept level, four service concepts are identified based on two dimensions of focus – target customer segments served and range of services offered (Heskett et al., 1990), Figure 2-6. The resultant four service concepts are: service focused, providing few services to many markets; market focused, providing numerous services to few target groups in the market; service and market focused, providing few services to few specific groups in the market; and unfocused, providing wide range of services to many markets.

	narrow	wide
many	Service focused	Unfocused Everything for everyone
few	Service and market focused	Market focused

many

Number of markets served

few

Service focused

Unfocused
Everything for everyone

Service and market focused

Market focused

narrow   **Range of services**   wide

Figure 2-6: Service Concepts based on Focus (Johnston, 1996)

2.3 Links between constituent elements of a transformation process

Armistead et al. (1995 pp.47) posit that OM as a '… subject is based on the concept of managing the transformation process'. Although, separately, the three elements; service package structure, service process and the delivery system design, of the input-transformation-output model continue to get attention from SOM researchers, the research is at infancy and lacks clarity on the interdependencies among the elements (Kellogg and Nie, 1995; Ponsignon et al., 2011; Wemmerloev, 1990). For instance, the following four operations-managerial issues/questions, deduced from the transformation model, are relevant to contemporary SOM and should be studied: (i) each of the three generic phases; inputs, transformation process, and outcomes has features that distinguish manufacturing from service operations. Deconstruction of the delivery system into inputs or resources [*what*] and delivery process [*how*] constituent parts is important (Goldstein et al., 2002) but transformation process should be understood as a package (Sasser et al., 1978). IHIP (Intangibility, Heterogeneity, Inseparability and Perishability) service model, for instance, compares aspects of different components that belong to different phases (Laine et al., 2006), (ii) there are three types of transformed resources; materials, information and customers.

According to Wemmerlöv (1990) and Morris and Johnston (1987), material-transforming operations (MPO), information-processing operations (IPO) and customer-processing operations (CPO) should be managed differently. Whereas manufacturing transformation processes are largely MPO (ibid, 1987), service operations are associated with CPO (Chase, 1978). The unified service theory (UST) argues that customer inputs brought into transformation process distinguish service from non-service processes (Sampson and Froehle, 2006) and that the inputs are either customers themselves, their possessions or information (ibid, 2006). Little research is directed towards the IPO context, specifically in relation to integration of inputs (resources), service delivery process and service product (outcome), (iii) characteristics of transformation phase are widely documented in manufacturing and traditional SOM research. Hayes and Wheelwright (1979) introduced process life cycle stages, showing relation between product phases. Hill (2000) developed a matrix linking manufacturing process characteristics to market requirements based on activity level. Characteristics related to nature of service are outlined in SOM literature (Buzacott, 2000; Chase, 1981; Johansson and Olhager, 2004; Kellogg and Nie, 1995; Maister and Lovelock, 1982; Schmenner, 1986; Silvestro et al., 1992) and used to classify services., and (iv) due to business process reengineering movement of 1990s (Hammer and Champy, 1993), the concept of transformation process has continued to gain prominence (Hammer, 2007).

SOM positioning matrices are used to match attributes of the service product to characteristics of the process with the aim of establishing optimal performance mix (Collier and Meyer, 2000). While in practice the process dimension integrates the service firm's own production factors with the external uncertainties arising from customer introducing themselves into the process to effectively deliver the expected customer outcome (Bullinger et al., 2003), studies

of interdependencies between *what* and *how* aspects of service design (Goldstein et al., 2002) emphasis structural and infrastructural components of the process dimension with little acknowledgement of specific customer dynamics. Sampson and Froehle (2006) argue that the nature of customer inputs provides sufficient background in definition of service processes. Similar arguments have been put forth regarding significance influence that the level of customization has on service package (Ponsignon et al., 2011; Zomerdijk and Vries, 2007). Empirical evidence suggests that the level of service customization is inversely related to degree of mechanisation i.e., highly customized services are better delivered through "people-based" rather than "equipment-based" service operations systems (Apte and Vepsäläinen, 1993; Huete and Roth, 1988; Ponsignon et al., 2011). Degree of mechanization denotes extent to which service processes are automated as well as employees' skill levels requirements (Thomas, 1978). Wemmerlöv (1990) in explaining the implications of service concept on service design, considers technology as an important consideration. But even more important is customer contact which is the pre-dominant dimension in financial service operations studies. The thesis is that physical presence of the customer in service delivery system impacts operations efficiency leading to high operational costs. Technology in its simplest and original sense means everything that is used in the operational transformation process. In other words, it entails all *"the work done in organizations"* (Perrow, 1967; Perrow, 1970). These routine processes can be characterised by rigidity and fluidity attributes (Wemmerlöv, 1990). Wemmerlöv (1990) provides broad and diverse service classification scheme that encompasses most of the service attributes presented by other SOM authors. Rigid service processes offer customers few task choices, do not require high levels of technical knowledge, are largely undertaken at the BO, workers have little room for deviating from work processes and procedures, customer demand is fairly homogeneous, can undertake several customers

47

simultaneously and do not take long time to deliver. On the other hand, fluid service processes offer customers many task pathways, require high levels of technical knowledge, high degree of coupling between the service provider's employees and the customers, workers have more discretion, customer demand is fairly heterogeneous, and can serve only a single customer at a time and take long time to deliver. In theory, it seems easy and obvious that the three constructs should be consistently aligned. In reality however, alignment is difficult to achieve. The value of the alignment in understanding services deserves special attention, more so in emergent information intensive service marketspaces.

Empirical research on the governing mechanism that aligns CI&P elements for strategic competitiveness of a service firm is still in embryonic stage. This thesis seeks to explore the extent of relevancy of service characteristics found in literature to IIS contexts. Table 2-7 provides summary of SOM literature that addresses the three phases in various service contexts. Terminologies such as resources instead of inputs, service system for service process or transformation, and service concept or package or customer benefits instead of outputs are used interchangeably in literature.

Author	Source	Context	Process phases	Fit
Sasser et al. (1978)	Book	SOM	- Service concept - Service delivery system - Service levels	Process - concept
Heskett (1987)	Harvard Business Review	Service Design	- Target market - Service concept - Operating strategy - Service delivery system	Process - concept
Kingman-Brundage et al. (1995)	International Journal of Service Industry Management	Service Logic	- Service concept - Core logics – customer, technical and employee - Organisational	Concept - inputs

48

				culture	
Edvardsson and Olsson (1996)	Service Industries Journal	NSD	- Service concept - Service system (resource structure) - Service process	Process – concept Concept - inputs
Goldstein et al. (2002)	Journal of Operations Management	Service design	- Service strategy - Resources - Service delivery system - Outcomes and experience - Performance - Measurement - Feedback - Service concept	Concept - inputs
Roth and Menor (2003)	Production and Operations Management	SOM	- Target market - Service concept - Service delivery system	Process – concept
Bullinger et al. (2003)	International Journal of Production Economics	Service engineering (NSD)	- Resources - Processes - Products	Inputs -process
Silvestro and Silvestro (2003)	International Journal of Operations and Production Management	NSD	- Service concept - Service delivery system design - Operations objectives	Process – concept
Karwan and Markland (2006)	Journal of Operations Management	Service design	- Service strategy - Inputs - Service delivery system - Outputs - Performance - Measurement - Constituents - Feedback	Concept - inputs
Sampson et al. (2010b)	Journal of Applied Management and Entrepreneurship	Service innovation	- Resources - Process - Customer benefit	Process - concept
Ponsignon et al. (2011)	International Journal of Operations and Production Management	Service Design	- Delivery system - Service concept	Process - concept
Ponsignon et al. (2012)	Total Quality Management	Literature Review	- Process design - Service concept - Customer inputs	Process - concept
Table 2-7: Phases of a transformation process					

Ponsignon et al. (2012) refer to findings of an empirical study done by Ponsignon et al. (2011) that suggested service process design is contingent upon service concept and customer inputs. They identify several SOM studies that relate service concept to service process design. Sasser et al. (1978) are accredited for developing the idea and coining the name service concept. Their contribution was that service operations managers should not only define organisation's offerings in terms of the holistic package offered to customers but the relative value of each single component inherent to the package. The service offering should be linked to the service delivery system and the performance expectations of the customers. Internal operations should be detached from the customer with requisite alignment mediated by marketing function. Heskett (1987)'s strategic service vision model is centered on linear relationship flow from the *target market* to *service concept* to *OM strategy* to *service delivery system*, respectively mediated by *market positioning*, *policies and procedures*, and *integration*. Central to the model is that the service concept considers both the external demands of the customers and the internal process capabilities of the organisation. It is argued that high performing firms need to replicate the model internally with the employees taking the place of the target market/customers. Internal process capabilities entail paying attention to the role of employees. Kingman-Brundage et al. (1995) posit that any SOM logic that does not integrate all the components of the service system; the service logic and industrial logic drives organisational performance southwards. They propose a service logic that brings together the customer, employees and work procedures, programs and policies. The model brings out two perspectives of customer influence; (i) as consumers, customers are interested in knowing how to get what they want, and (ii) as co-producers, their role and how they should undertake it. Kingman-Brundage et al. (1995) were of the view that service concept, although should be integrated to, is independent of the service process. They emphasise the role of employees and

importance of recruitment, training and motivation to service system design. Edvardsson and Olsson (1996) give insights about prerequisites in design of quality services and argue that the customer should be the centre of focus. They identify service concept, service system and service process as necessary prerequisites that should be ring-fenced by customer orientation [customer outcome and customer process]. Since the customer process delivers customer outcome/value, it could be inferred that customer outcome influences customer process. As earlier observed, a customer process entails aspects of co-production as well as service encounter and interaction which connote that customer provided inputs are influenced by the expected service outcomes. Edvardsson and Olsson look at *"the customer as the recipient and judge of the service in terms of added value and quality – the customer outcome; and the customer as co-producer of the service in his partially unique manner – the customer process" (Edvardsson and Olsson, 1996 pp.146)* i.e., services entail two customer perspectives, an argument that portends the view that "*processes describe the actions taken to integrate resources ... to produce customer benefit"* (Sampson et al., 2010a). This implies, two different organizations with equivalent resources are unlikely to satisfy customers' expectations in exactly the same way because there are vast process step permutations and as such each arrangement could lead to different outcomes. Goldstein et al. (2002) suggest that organizations that place service concept at the centre of service delivery process are likely to strike the right balance between shareholders' value and customers' expectations. The highlight of the work is a proposed model for service design that adds two new elements to the three phases of traditional input-process-output model; *service strategy* before the inputs phase, and, *performance measures* after the outputs phase. Service strategy suggests that organisations should consider market hierarchy and requisite relationships with customers before making input choices. Performance measures allude to the need to evaluate the

delivery system upon every production cycle. The model suggests that service concept precedes inputs. Roth and Menor (2003) summarise SOM concepts with the following statement: *"Different service concepts and markets require different approaches to the design and management of services (Chase et al., 1998; Schmenner, 1986)."* (ibid, 2003 pp.148). Their proposed paradigm; service strategy triad advocates integration of market requirements, service concepts and the delivery system. Organisations win the service game by addressing concerns such as: who the right customers are, what product bundle is offered to the customers and how service delivery is done. The answers to these questions not only define the service encounter but also explain what happens when service and customer meet and interact. Customers cause variability to the service process during these encounters. Indeed, understanding the encounters is important because they define services. According to Sampson et al. (2010a),a service is "*a firm-customer interactive resource-integration process.*" Bullinger et al. (2003) suggest that engineering methods can be used in new service development. They claim services are characterised by three considerations: (i) resource considerations regarding both internal and external productive factors, (ii) process considerations related to activities that integrate all the resources, and (iii) customer outcome considerations. Activities in each consideration should be documented with the specific interrelationships mapped, a logic akin to the unified service theory. Silvestro and Silvestro (2003) highlight the importance of explicitly congregating the service system design characteristics around the service concept. They observe that "the design of the service delivery system should support the realisation of the service concept …" (Silvestro and Silvestro, 2003 pp.402). Karwan and Markland (2006) refer to public sector context in testing the applicability of the Goldstein et al. (2002)'s model. They redefine two aspects of the model: the *strategy* aspect because public sector aims at delivering equitable services more

effectively and differs from profit making enterprises (Berman, 1998), and; the *delivery process* aspect because of uniqueness of public sector FO-BO configurations. Service providers process customer provided inputs for the benefit of particular customers (Sampson et al., 2010b). This is in line with the unified service theory (UST) that provides a unified definition, using customer inputs, of all services irrespective of context. They argue that customer value is subsequent to service design and that service design is founded on the interaction between the service provider and the customer. Ponsignon et al. (2011) through an empirical study show that service concept influences the design characteristics of the delivery process. This supports Wemmerlöv (1990)'s theoretical observation that highly fluid services require higher employee skills and more employee divergence than rigid ones. Further, they show that design of FO-BO system is influenced by the service concept rather than solely by efficiency goals, suggesting that service design is contingent upon service concept. One of the limitations is that the study takes an 'outside-in' perspective, a market-led view that advocates for continuous development and review of the operations strategy to ensure consistency with changes in the market environment (Hill, 2000; Platts and Gregory, 1990; Porter, 1980). This suggests that service process is influenced by service concept. Ponsignon et al. (2011) recommend an 'inside-out' perspective commonly referred to as operations-led view (Barney, 1991; Mills et al., 2002; Prahalad and Hamel, 1990) involving an audit of operations resources, that drive firm's performance, accumulated over time could provide contrary findings and help formulate a new way forward. They observe that *"while the inside-out perspective has not been considered, it is important to recognise that the relationship between service concept and service delivery system design is not always unidirectional" (Ponsignon et al., 2011 pp.344).* Indeed, blending of outside-in and inside-out outlooks (Lillis and Lane, 2007) could prove valuable in developing new perspectives of the relationships between the

three constructs of study. The main deduction from these studies is that there is clear relationship between the CI&P constructs of a service process.

In theory building, it is important to have conceptual framework that shows a priori interdependencies between constructs of interest (Eisenhardt, 1989; Miles and Huberman, 1994). Whetten (1989) highlights four essential elements in theory building: *what* are the constructs of interest; *how* do these constructs relate to each other; *why* were the constructs considered important and what is the justification for the said relationships between them?; *who, where, when* and in what context do these descriptions and explanations apply? Here below, addressed are *what* and *how* elements of theory development.

Based on an analysis of service operations literature, there is evidence to suggest that the three phases of the service transformation process are cyclic and interdependent such that the nature of the service product/package [**concept**] influences the resources[**inputs**] that go into the service process/delivery system [**process**]. Figure 2-7 provides a hypothesised synchronous relationship between the constructs − a conceptual framework herein referred to as CI&P framework. A plus sign indicates a match between an attribute of a service process and a specific aspect of the customer inputs or service concept. A minus sign shows mismatch. Mark of asterisk means the mix is considered a gray area and requires further investigation. Considering that de-coupling of back office from front office operations helps operational costs optimisation decision (Metters and Vargas, 2000), there is a good match between improved cost efficiency and rigid service processes (Levitt, 1972; Wemmerlöv, 1990). Rigid service processes, particularly in business-to-business relationship, emphasise delivery of standardised service levels stated in contractual agreements and focus on a narrow breadth of

service offerings. On the other hand, fluid service processes involve high degree of customer participation, lending themselves to service concepts that utilise high calibre employees to deliver non-cost oriented operational efficiencies [such as good quality service], delivering a wide breadth of customised service concepts. The service concept dimensions for other service [lying within the rigidity-fluidity continuum- hereby referred to as others] processes are not clearly stated in literature. However, they could as well be lumped together and be referred to as service shop processes (Silvestro et al., 1992)   and or mass services (Schmenner, 1986).
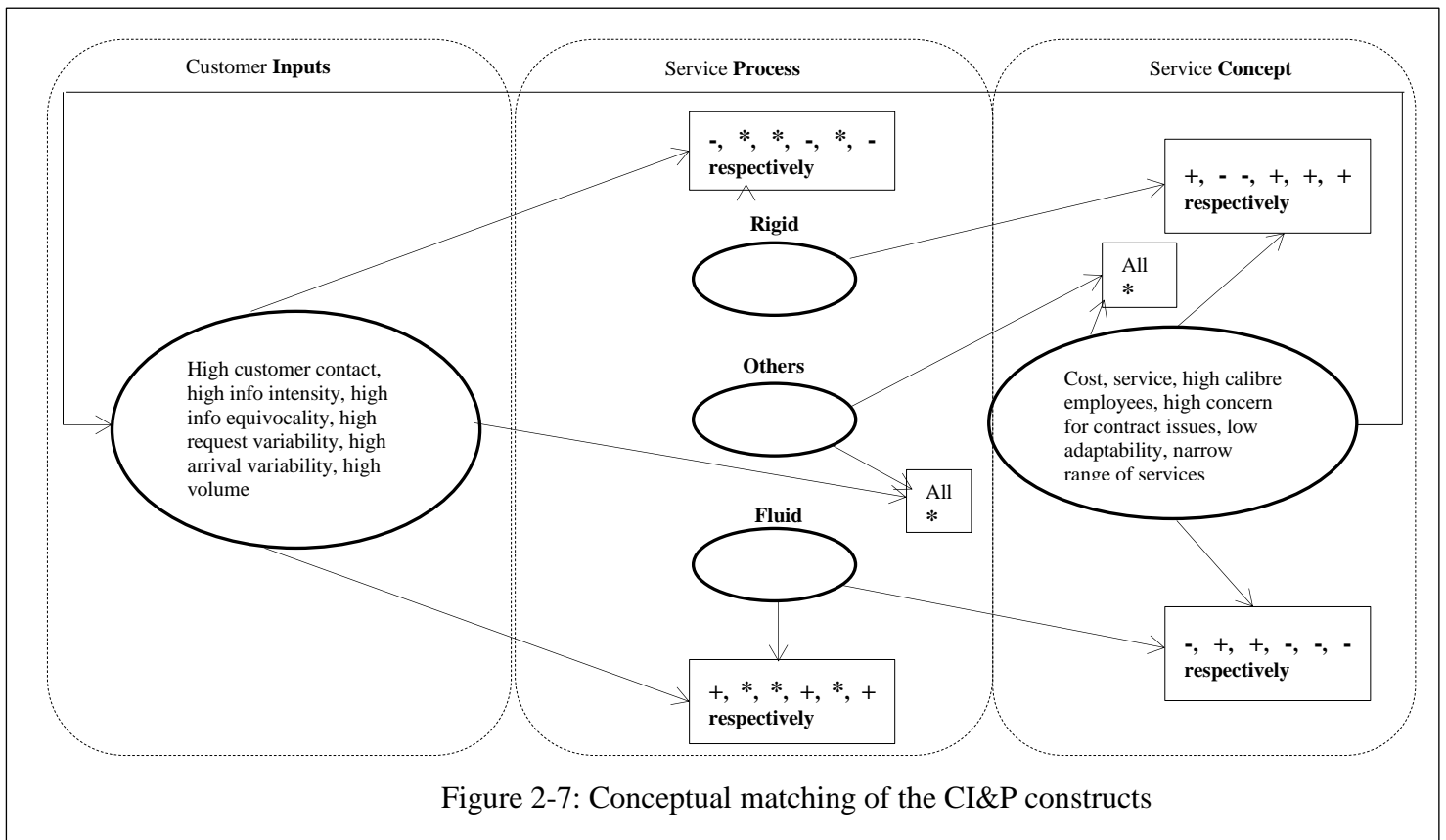
Figure 2-7: Conceptual matching of the CI&P constructs

In regard to customer inputs, rigid service delivery processes lend themselves to low levels of customer inputs [such as customer contact (Chase and Tansik, 1983), arrival variability

(Buzacott, 2000) and customer time and effort (De Ruyter and Wetzels, 2000)]. Higher levels of these customer inputs are applicable to fluid service delivery processes. Little is known about the match between service shop delivery process and customer inputs. Silvestro et al. (1992) suggests that service shop processes entail medium levels of customer inputs dimensions. The model consolidates the operate process for rigid and fluid services as deduced from the literature reviewed and as understood from the aims of this research, suggesting a clear relationship between service delivery process and service concept. However, the implication of customer inputs to the relationship, and more so to the '*others'* category, remains unclear. In case study the, "… investigator may not specify the set of independent and dependent variables in advance" (Benbasat et al., 1987 pp.371). The framework therefore implicitly shows correlation, with no intention to address causation, between the CI&P constructs. Since these 3 constructs address major aspects in the scope of service design in SOM, an understanding of how they relate to each other in different service categories goes a long to answer the main research question.

2.4 Summary of Chapter 2

Literature shows there are relationships between organisational vision, market needs, service offerings and design of delivery systems, suggesting that the modus of customer involvement [customer inputs] impacts firm productivity [service delivery process], performance and customer satisfaction [service concept] (Bitner et al., 1997). This justifies the notion of "customer-supplier duality" and hints at bidirectional nature of service supply chains (Sampson, 2000). The unanswered questions relate to *the* exact nature of the relationship between the various attributes of the CI&P constructs.

3 CHAPTER THREE – RESEARCH METHODOLOGY

The purpose of this study is to explore and understand the service delivery considerations for the emergent phenomenon of information services outsourcing summarized into the research question; *what are the implications of synchrony among customer inputs, service delivery system characteristics and service concepts on operations and operational actions in information intensive services?* On the basis of the a priori conceptual framework developed in chapter 2, the appropriateness of case study research design is established with the resolve to develop propositions relating to the interdependencies between the constructs of the framework. This methodology chapter is split into 5 sections. Section 3-1 presents the research paradigm embraced for the study. Section 3-2 summarises the fieldwork methodology adopted and in particular the case study design and the inherent tools and procedures from a SOM perspective. Section 3-3 refers to literature to develop a conceptual classification of services that enables extraction of relevant IIS cases for this study. Section 3-4 defines the unit of analysis and the process of data collection. Section 3-5 evaluates data analysis techniques pursued and provides a detailed discussion. Summary of the chapter is provided in section 3-6.

3.1 Research Paradigm

The credibility of research study depends on how the researcher justifies his or her philosophical position, meaning; (i) basic beliefs or world view, and (ii) choices in relation to the interconnected ontological, epistemological and methodological questions (Guba and Lincoln, 1994; Healy and Perry, 2000).

Ontological and Epistemological Assumptions

Research philosophy is useful since: it enhances the researcher's understanding of research design in terms of the relevant evidence that is needed to answer the questions at hand; it helps in choosing the most applicable research designs to the study; and, expands the researcher's scope of thinking which could lead to innovative research designs (Easterby-Smith et al., 2002). Since different disciplines, entities, and individuals view how the world works differently, it is imperative that each study's philosophical assumptions be concisely stated (Creswell, 2013).

Ontological arguments consist set of assumptions that form a vision in the researcher's mind about; how the world works (Gerring, 2004), or the nature of being (Easterby-Smith et al., 2002). The breadth of ontology varies between two perceptions; (i) *realism*, assumes that objective truth exists externally, and (ii) *relativism*, assumes humans are only capable of finding subjective meanings rather than truth (Blaikie, 2007), meaning that the findings are contingent upon context of the investigation and the researcher.

Epistemological arguments relate to "how we make knowledge" (Dillon and Wals, 2006 pp.550) and are characterised by two traditions that sit on opposite ends of the philosophical continuum; *objectivism* and *subjectivism*. Objectivism states that access to reality happens independent of the researcher whereas to subjectivism knowledge of reality exists in the researcher's mind and is subject to interpretation (Johnson and Duberley, 2000).

Ontological beliefs influence the epistemology and as such philosophical paradigm is determined by ontological and epistemological assumptions (Easterby-Smith et al., 2002). A fusion of realism and objectivism indicates *positivism paradigm*, arguing that social world has

58

external existence and the properties of social entities should be studied and measured separate from the investigating researcher (Saunders et al., 2012). This means data collection devoid of researcher's biasness and 'objective'. On the other hand, relativism and subjectivism indicate *interpretivism paradigm,* referring to social world inseparable from the social actors and complex to allow for objectivity (Easterby-Smith et al., 2002). Given that in the social world, the 'feelings' researcher is interested in feelings, emotions and attitudes of social actors (Saunders et al., 2012), interpretivism position lays emphasis on subjective interpretation of data rather than objective reality. Further clarification is provided by Searle (1995)[5] through an illustrative demonstration.

Flick (2014) views ontology using theoretical lenses, meaning that reality exists as idea in social actor's mind. He asserts that understanding of these visions, ideas or ontology from process perspective incorporates the epistemological principle into the study more comprehensively. Consequently, positivist philosophy lends itself to linear process of research designed for theory testing and validation. This type of research process begins with theory, generates hypotheses to be tested, operationalization, and sampling to ensure representativeness and generalizability to the population, data collection, data analysis and interpretation and terminates at theory validation (ibid, 2014). In the contrary, interpretivist philosophy entails circular research process presented in Figure 3-1. Since the circular research process begins with preliminary assumptions and terminates with new or extension of existing theory, it suits the grounded theory (Glaser and Strauss, 1967) approach (Flick,

---

[5] "For example, the statement 'Mt. Everest is more beautiful than Mt. Whitney' is about ontologically objective entities, but makes a subjective judgment about them. On the other hand, the statement 'I now have a pain in my lower back' reports an epistemically objective fact in the sense that it is made true by the existence of an actual fact that is not dependent on any stance, attitudes, or opinions of observers. However, the phenomenon itself, the actual pain, has a subjective mode of existence" (Searle, 1995 pp.8-9)

2014). A major highlight of the approach is the suggestion that the approach's contribution to theory development is realised through study of individual cases that are then cross-compared.
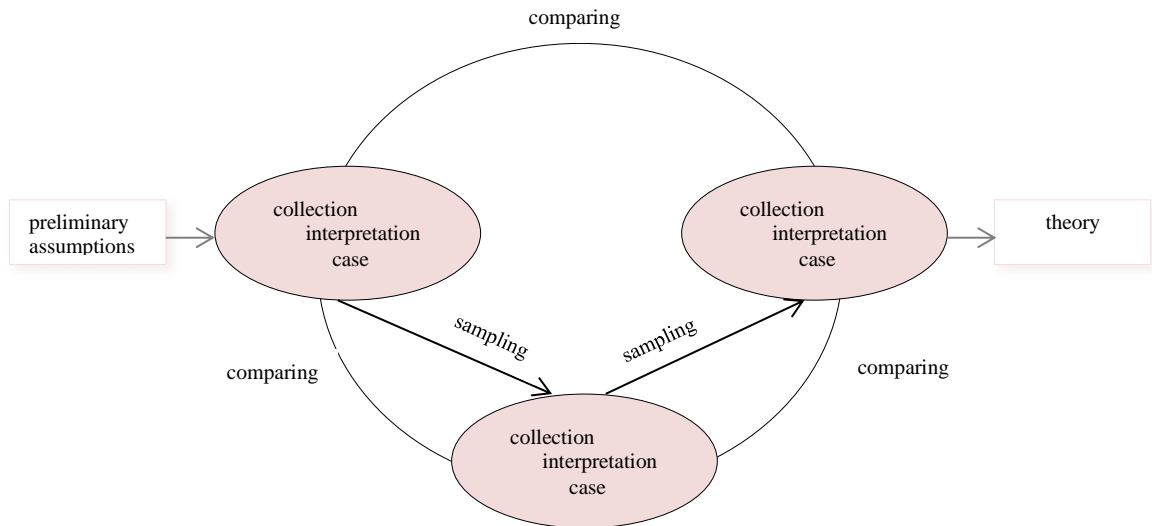
Figure 3-1: Circular Research Process (Flick, 2014)

It is noted that between these two extremes of philosophical positions, there are various compromise paradigms such as post-positivism (Letourneau and Allen, 1999) and critical theory (Denzin and Lincoln, 2000). Also referred to as critical realism, post-positivism (Letourneau and Allen, 1999) recognizes subjectivism in unravelling the truth about an external real world (da Graça Moura and Martins, 2008; Guba, 1990). In other words, there exists an objective ontology that is established through subjective epistemology. Critical theorists on the other hand, believe passage of time and dynamic factors such as culture, politics, and economics distort reality and thus what exists is historical reality (Guba and Lincoln, 1994). Access to such ontology is realised by way of the investigator interacting with the phenomenon being investigated and interpreting it (ibid, 1994).

The last dimension of methodological questions - relates to the strategy and plan that helps the researcher to link desired research findings to the tools of doing research, meaning the procedures to be followed in data collection and analysis.

Philosophical Position of the Study

The traditional philosophical positivist position is found to dominate service research studies (Tronvoll et al., 2011). Based on new developments in service research, particularly the process view of services (Sampson, 2012b; Vargo and Lusch, 2004a) and interdisciplinary service science (Spohrer and Maglio, 2008), Tronvoll et al. (2011) suggest, in a new paradigmatic framework, three underutilised research paradigms; hermeneutic, dialogic and monologic, that service researchers should use to advance theory in the area. They observe that service research paradigms in extant literature are classified in terms of two epistemological aspects: *nature of relationships* or the researcher's perceptions of the relationships between the research participants; that could be static or dynamic, and; *origin of concepts and problems* (Deetz, 1996); which relates to the role of research participants in the development of the research design, Table 3-1.

The three paradigms; hermeneutic, dialologic and monologic are akin to realism, critical theory and constructivism (Denzin and Lincoln, 2000; Lincoln and Guba, 1985; Riege, 2003) paradigms respectively. Since the preliminary research idea and formulation of the research problem arose from review of literature and interaction with the ITES firms, this research's paradigm is emergent rather than a priori (Deetz, 1996). The objective of the study is to unearth that which is beneath the service delivery systems for outsourced IIS leading to experiential knowledge rather than 'theoretically codified' knowledge (Deetz, 1996).

Nature of relationships	Dynamic	Static
Paradigm	**Dialogic and Monologic**	**Positivistic and Hermeneutic**
Epistemology	Participants considered to be part of the research	Participants are considered to be passive
Description	High exchange of knowledge Dialogue with participants Complex Time is essential	Low exchange of knowledge Standardised Systems based Time is not essential
Research methods	Dynamic and time capture methods	Snapshot methods
Origin of concepts and problems	**Emergent**	**A priori**
Paradigm	**Hermeneutic and Dialogic**	**Positivistic and Monologic**
Epistemology	Obtain phenomenological insight, revelation, and open language system	Obtain a fixed language system and construct a positivist science
Description	Not theory driven Local narrative Situational practical knowledge Changeability and meaning as central concerns Sees the strange Proceeds from the other	Theory driven Grand narrative of progress and emancipation Generalizable theoretical knowledge Rationality and truth as central concerns Sees the familiar Proceeds from the self
Research methods	Exploration of pure subjectivity	Lab experiments, surveys

Table 3-1: Research paradigms (Deetz, 1996; Tronvoll et al., 2011)

Unlike the a priori approach that is largely theory dependant and aims at verifying or falsifying some hypothesis, the emergent conceptualisation is atheoretical. We are conscious that emergent epistemology could be seen as vulnerable by some observers especially those who believe in grounded theory (Glaser and Strauss, 2009). The criticism being that the current research is framed from extant theoretical underpinnings of service delivery system design. Although that is partially true, this research formation is fortified by advocates of multi-paradigm position who are of the view that despite having divergences, paradigms have similarities in some aspects (Sanderson, 2013). For instance, Healy and Perry (2000) and Colquitt and Zapata-Phelan (2007) show using charts that a study's contribution is more than just theory building or theory testing and that the two are not mutually exclusive. Colquitt and

Zapata-Phelan (2007) observe that being high on theory building does not preclude theory testing and suggest that research contribution to knowledge fits into five categories; builders, testers, expanders, qualifiers and reporters. The first three categories are, respectively, high in theory building and low in theory testing, high in theory testing and low in theory building, and high in theory building and testing. Qualifiers are moderate in both theory building and theory testing whereas reporters are low on both. Colquitt and Zapata-Phelan (2007)'s explanation is buoyed by Weick (1995)'s observation that research studies fit in a point within a theory building-theory testing continuum. Indeed, the idea of commencing a research from a 'clean slate' as suggested by grounded theory has been challenged and labelled impractical (Eisenhardt, 1989; Voss et al., 2002). For that reason, despite this study relying on extant OM service design literature particularly in generating the research constructs, it is positioned as theory builder.

As mentioned at the beginning of this chapter, knowledge of the researcher's ontology and epistemology helps in choosing the right research design for a study (Easterby-Smith et al., 2002). Research design is the systematic network that links research questions, data collection, data analysis and research conclusions (Yin, 2009). Since this research aims to explore how service delivery is undertaken in the natural outsourced environments, the aspects identified and highlighted in colour, Table 3-1, show the ontological, epistemological and methodological positioning of the study. Indeed, the researcher had direct interaction with the interviewees and agreed with them on meanings of many social constructs that existed at the work place. This reflects realist or hermeneutic paradigm that is characterised by static and emergent approaches.

The origin of concepts and problems

Emergent

Hermeneutic | This research | Dialogic

The nature of relationships Static ← → Dynamic

Positivist | Monologic

A priori
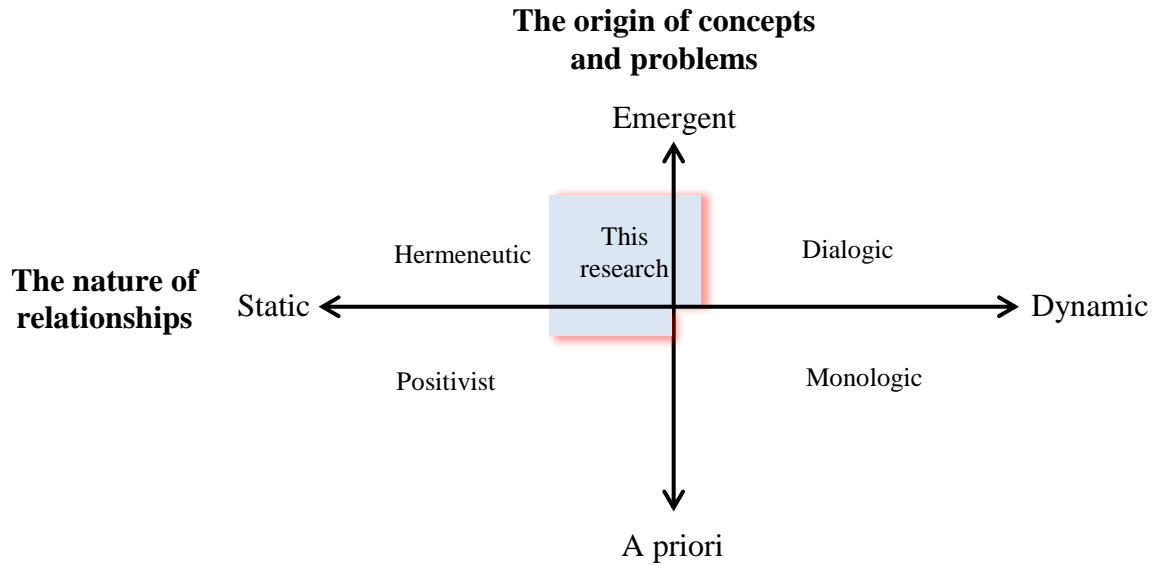
Figure 3-2: Philosophical paradigm (Tronvoll et al., 2011)

Figure 3-2 positions our philosophical assumptions based on Tronvoll et al. (2011)'s paradigmatic classification of service research studies. According to Tronvoll et al. (2011) the emergent approach is based on the phenomenological school of thought (Husserl, 1970) that uses social constructions through open language narratives to explain the situation in context. The nature of relationship is deemed static but about dynamic and hence the closeness of our position to the vertical axis in the figure. Static means that a phenomenon is studied at a given fixed point. However, it is rare for researchers to contact all the social actors at one moment hence the small element of dynamism. Our study is no exception to this reality since we had to severally interact with the interviewees particularly where we thought concepts had not fully developed.

3.2 Research Design

Research design refers to explicit statement of the type of evidence that should be gathered to answer the research question at hand, it entails much more than procedural steps that have to be followed from the beginning to the end of a study (De Vaus, 2001). According to Yin (2009), research design addresses the logic rather than the logistics of the research. Research design provides the basis on which quality of research is measured. This is because weak designs lead to collection of weak evidence and drawing of unconvincing conclusions and suboptimal answering of research question(s) (De Vaus, 2001). Social science gurus generally refer to four types of research designs; experiments, case study, cross sectional surveys and longitudinal research designs (De Vaus, 2001), but there could be slight variants in operations management, Table 3-2 . For instance, there is no much difference between case study research and action research. Westbrook (1995) posits that the difference between the two lies in the role-position of the researcher in the research context. That whereas the researcher is part of the researched in action research, in case study research he or she is an independent observer (Benbasat et al., 1987). OM scholars such as Slack et al. (2004) and Chase and Prentis (1987) have suggested that debate on research design in OM should refocus attention to pragmatic ways of reconciling theory and practice. These calls are more explicit compared to many others from OM scholars that have used confusing terminologies such as theoretical versus empirical, deductive versus inductive, qualitative versus quantitative, or rationalist versus empiricist. For instance, Meredith (1998) characterized the theoretical versus empirical categorisation a misnomer because empirical studies could also be theory oriented. Yin (2009) finds it unfortunate, when research designs are equated to research methods e.g., when survey design is associated with quantitative data and case study design with qualitative data (De Vaus, 2001). For that reason, it is not our intention to engage in this 'everlasting' debate.

Author	Research Designs in operations management
Karlsson (2008)	- Survey studies - Case research - Longitudinal field studies - Action research - Modelling and simulation
Roth (2007)	- Case studies - Survey research - Secondary and archival data sources - Experiments
Pannirselvam et al. (1999) and Filippini (1997)	- Modelling - Simulation - Survey - Theoretical / conceptual - Case study - Field study - Laboratory experimentation
Scudder and Hill (1998)	- Case study - Survey - Panel study - Database
Westbrook (1995)	- Surveys - Case research - Action research

Table 3-2: Research designs in OM literature

3.2.1 Empirical research in operations management

Roth (2007) defines empirical research from an OM context as follows:

> *"Empirical research is the systematic process of deriving and analyzing data from direct or indirect observation. One of the major tasks of OM empirical research is developing, exploring, and testing theories about phenomena of interest to operations managers."* (Roth, 2007 pp.354)

The suggestion in this definition that OM scholars should strive to undertake research within business settings, so as to develop theories that are of practical use (Boyer and Swink, 2008; Brown, 2012; Roth, 2007), is gaining a lot of acceptance going by recent events. Terry Hill, an eminent professor of OM is quoted in, an interview with, Brown (2012) observing that:

"The key to useful and useable business research, I maintain, is to investigate in-depth what happens in a few businesses and to draw conclusions based on these findings. ... For me, what I would wish to see is research conducted inside a business (one or more than one) rather than through a letter box ... (Brown, 2012 pp.382)

Empirical research is open to range of research designs, some of which, for example experiments, case studies and surveys, involve collection of primary data with the rest utilising secondary data (Boyer and Swink, 2008; Roth, 2007). Of the primary data utilising empirical research designs, survey research design has been the most used in OM for a couple of reasons:(a) it can easily be customised to particular research problem (Roth, 2007) simply by focusing data collection tool to the research question and also choosing the applicable population that is representative of the phenomenon in question, and (b) survey research has rich tradition particularly in marketing and the wider management fields (Amundson, 1998; Boyer and Swink, 2008; Flynn et al., 1990) and that explains the ease with which it is accepted and applied in OM. Survey research design is the rationalist research approach (Meredith, 1998) that is used to advance knowledge in OM. Forza (2002) identified three types of survey research; exploratory, explanatory and descriptive, each with unique objectives. However, he observed that survey typologies, as presented in his study, were suited for theoretical rather than practical contribution. However, in order to understand the various aspects of OM, scholars should consider other empirical research approaches and paradigms (Barrat et al., 2011; Boyer and Swink, 2008; Filippini, 1997; Meredith, 1998; Stuart et al., 2002; Tronvoll et al., 2011). One such approach that is getting attention of late is case study research (Barrat et al., 2011; Dubois and Araujo, 2007; Lewis, 1998; Voss et al., 2002).

3.2.2 Case study research design

The exploratory nature of the current research question calls for an in-depth investigation of the IIS phenomenon (Yin, 2003). Since service process design dimensions in the area of IIS are yet to be explored, from ontological perspective, qualitative research is considered appropriate. This is in line with the contemporary thinking in operations management (Voss et al., 2002). Case study research design is deemed appropriate because of the research context and the nature of the research questions. The nature of the main research question meets conditions necessary for case method stipulated by Yin (2009), meaning the question explores the emergent phenomenon of information intensive services and that the researcher's control over behavioural events is in the ex post facto manner. Case study research design is defined in terms of distinctive characteristics highlighted, in the upper part of Table 3-3, extracted from a highly cited peer reviewed journal paper, Benbasat et al. (1987). Summary of important methodological issues that should be considered in case study is presented at the bottom part of the table. The summary is extracted from seminal work of Eisenhardt (1989) and one recent but well received OM paper, Barrat et al. (2011).

Despite this general agreement, there are several variants to case study. For instance, some case studies utilise the grounded theory approach to develop theories in unique natural settings while others support multiplicity of cases that entail in-depth exploration of phenomena (Roth, 2007). Case research could as well be *intrinsic*, where the investigator is interested in the case itself or *instrumental*, where the aim is to build or extend theory based on something other than the case (Stake, 1995). Barrat et al. (2011) state that theory building and theory testing using case study research design can be classified, respectively, as either inductive use of qualitative case studies or deductive use of qualitative case studies. Since the

current research aims at addressing the gap in research about the linkage between customer inputs, service delivery system and the service concept in unexplored IIS phenomenon, we take the inductive case study route. In the next section, attention shifts to methodological issues raised in Table 3-3. Since the use of case study design is already justified, only the remaining issues will be addressed. The justification for the unit of analysis is provided in section 3.3 of this chapter.

CHARACTERISTICS OF A CASE STUDY Author:Benbasat et al. (1987 pp.371)
1. Phenomenon is examined in a natural setting. 2. Data are collected by multiple means. 3. One or few entities (person, group, or organization) are examined. 4. The complexity of the unit is studied intensively. 5. Case studies are more suitable for the exploration, classification and hypothesis developments stages of the knowledge building process; the investigator should have a receptive attitude towards exploration. 6. No experimental controls or manipulation are involved. 7. The investigator may not specify the set of independent and dependent variables in advance. 8. The results derived depend heavily on the integrative powers of the investigator. 9. Changes in site selection and data collection methods could take place as the investigator develops new hypotheses. 10. Case research is useful in the study of "why" and "how" questions because these deal with operational links to be traced over time rather than with frequency or incidence. 11. The focus is on contemporary events.
METHODICAL ISSUES IN CASE STUDY Eisenhardt (1989) & Barrat et al. (2011)
- Research question - Justification for the use of case study approach - Logic for sampling strategy - Number of cases; single versus multiple - Unit of analysis - Clarification about what is in use; theory or phenomenon - Data collection methods, instruments and protocols – triangulation - Data analysis – within-case and cross-case

Table 3-3: Characteristics and methodological issues of case study research design

Number of cases

Case study design requires decisions regarding the appropriate number of cases, selection of case firms as well as the adopted sampling method be made (Voss et al., 2002). Prior to sampling, the appropriate number of cases to be included which could vary from single to multiple cases has to be determined. Yin (2009) observes that single-case is justifiable under five conditions; that the case under consideration is: (a) critical and meets contextual requirements for the conceptual propositions to be tested; (b) extreme or unique that it would be difficult to find other similar ones; (c) representative of other cases and due to homogeneity a single case is enough; (d) revelatory and that it was previously inaccessible; and (e) of longitudinal nature such that a single-case is studied at two different points in time. However, single-cases have a limitation on generalizability of the findings (Voss et al., 2002). On the other hand, multiple cases are advantageous where replication is required to support an emergent theory (Eisenhardt and Graebner, 2007). Evidence from multiple sources is more convincing, leads to steadfast research outcomes (Herriott and Firestone, 1983; Miles and Huberman, 1994) and is free from investigator bias (Voss et al., 2002). By comparing findings of research in multiple entities, both internal and external validity of the research are enhanced (Riege, 2003; Yin, 2009). However, multiple cases require more time and financial resources and are individually less in depth compared to single cases (Voss et al., 2002). In consideration of the research question, multiple case are deemed better to establish the diverse views of the IIS phenomenon.

Theoretical sampling criteria and case selection

For practical, ethical and cost considerations, it is rarely possible to study entire populations of interest. Accordingly, researchers in hypothetico-deductive studies have to choose few

representative elements of the population from the sampling frame of the study (Marshall, 1996; Miles et al., 2014). The sample is chosen for statistical reasons and in most cases the method of choice is random sampling. However, the same logic is found wanting if used in 'qualitative' studies where the research objective is to unearth complex human issues rather than realise external validity (Marshall, 1996). An acceptable alternative that is relevant to the objectives of qualitative studies is theoretical sampling (Denzin and Lincoln, 2000; Eisenhardt, 1989; Glaser and Strauss, 2009; Marshall, 1996; Miles et al., 2014; Yin, 2009). Theoretical sampling refers to opportunistic or purposive sampling whereby cases are picked on the basis of their strength in supporting the stated research objective(s). For theory building, this choice criteria is known as replication logic (Eisenhardt, 1989; Voss et al., 2002) and could either be literal or theoretical. The literal replication logic enables provision of homogeneous research outcomes that explain an emergent finding (Eisenhardt and Graebner, 2007). The theoretical replication contradicts research outcomes from different research sites (Benbasat et al., 1987). Drawing from the foregoing, the research context should be carefully evaluated.

Although study of emergent services could be done in many service sub-sectors, the author had prior interaction through anecdotal practitioner research with the Kenyan ITES sector and, as an academic in the leading school of business in Kenya, was alive to operational challenges experienced by the firms. This is not unique to Kenyan ITES and indeed there have been calls from SOM researchers (Chase and Apte, 2007; Karmarkar and Apte, 2007; Youngdahl and Ramaswamy, 2008) seeking research and re-examination of manufacturing-oriented tools in light of information intensive services context.

Kenyan Context

For several decades, service sector has overtaken manufacturing in contributions to gross domestic product (GDP) of many OECD (Organisation for Economic Co-operation and Development) countries. In Hong Kong, USA, France and UK, the sector accounts for more than 70% of the GDP. This is also true to less developed countries such as Kenya and South Africa[6]. Actually, other than South Africa[7], a country more developed relative to other countries in sub-Saharan Africa, Kenya is the only country that derives more than 60% of GDP from service sector. As early as 1968, service sector accounted for 61.4% of Kenya's GDP (Blades et al., 1974). Despite the importance of service sector, most operations management studies are undertaken in the background of manufacturing/engineering and in the context of organizations in developed countries or emerging economies such as Brazil, China and India. A similar pattern is observed in information technology outsourcing (ITO), business process outsourcing (BPO) and the recent knowledge process outsourcing (KPO). For emergent OM contexts such as service offshoring, provider country characteristics influence choices and decisions made by offshoring companies from developed countries. Institutional quality and level of similarities and differences between cultures of provider and outsourcer countries impact performance variables; particularly cost and quality of service (Liu et al., 2011). Advances in technology, government's investment in BPO training and infrastructure [such as telecommunications] and incentives [such as differential tax rates, tax holidays and establishment of tax free trade zones] make provider destinations alluring. Since less developed countries exhibit distinct macro and micro economic characteristics, adequate studies are required. Potential value of conducting OM studies in such unique economies is

[6] Source: The World Factbook - 2012 - https://www.cia.gov/library/publications/the-world-factbook/index.html
[7] South Africa is one of the five major emerging economies whose acronym is BRICS (Brazil, Russia, India, China and South Africa)

documented in literature (Amoako-Gyampah and Acquaah, 2008; Badri et al., 2000). Fleury (1999) observed that operations systems in developed countries differ from those in emerging countries and suggested need to develop relevant new concepts. There are a couple of ways of defining a developed/developing country; material-centred approaches and people-centred approaches. The former entail conventional ways that focus on the per capita Gross National Product (GNP) whilst the latter and more recent is based on environmental focus that evaluates well-being of people in a country (Todaro, 1994). One popular people-centred approach is the Human Development Index (HDI) developed by United Nations Development Programme (UNDP, 1993). The index categorises countries into four; (i) very high human development, (ii) high human development, (iii) medium human development, and (iv) low human development. Most countries in sub-Saharan Africa belong to low HDI category with Kenya as the best among equals - Appendix K. Other than having low HDI and GNP/GDP compared to countries elsewhere in the world, countries in sub-Saharan Africa are not well understood by many global investors (Graham and Mann, 2013)[8].

Kenyan service sector consists of tourism, finance and information and communications technology sub-sectors as articulated in the Kenya vision 2030. The medium term plan of the vision, under the economic pillar, prioritises six subsectors of the economy that provide more than half of formal employment in Kenya and account for 57% of the GDP; agriculture, manufacturing (composed of industrial and construction sectors), wholesale and retail trade,

---

[8] "First, the continent is perceived as being inherently risky. This perception of Africa is supported by the empirical evidence of Haque, Nelson and Mathieson (2000), who find that commercial risk-rating agencies often rate African countries as riskier than warranted by the fundamentals. Second, due to lack of knowledge about countries in the continent, investment decisions are often not guided by country-specific conditions but rather based on inferences from the environment of neighbouring countries. Thus, to some extent, foreign investors evaluate African countries as if the countries in the continent constitute "one big country" (Asiedu, 2002: 114)". (Graham and Mann, 2013 pp.4)

financial services, tourism, and IT enabled services (ITES). Other than agriculture and manufacturing, the rest are service subsectors. Wholesale and retail trade, financial services and tourism have traditionally been core to Kenya's GDP (Blades et al., 1974). For instance, tourism sector had surpassed tea and coffee in export revenue by 1987 while financial sector saw increase in number of banks from 9 in 1963 to 56 banks and incipient of 63 non-bank financial institutions (Ikiara et al., 1999). Today, financial sector has experienced tremendous growth making Kenya a technology hub. This is exemplified by innovations such Safaricom's [Kenya's largest mobile-network operator] M-PESA mobile money transfer platform which is leading in the world. ITES subsector is in formative stage but captured in Kenya vision 2030. Indeed, the 2013 - 2017 medium term plan of the vision identifies projects that will advance realisation of the subsector's vision[9]. For instance, establishment of a technology city housing a BPO park and technology related infrastructure is ongoing. Importantly, relative to 5.7%[10] Kenya economic growth rate in 2013, BPO/ITES sector grew more at 6.5% and is projected to rise to 10% in next three years.

External comparison shows that, in 2015, Kenya experienced higher GDP growth than her contemporaries in sub-Saharan Africa, a trend projected to continue into immediate future, Figure 3-3.

---

[9] "To be a top off-shoring destination in Africa"
[10] The Kenya National Bureau of Statistics
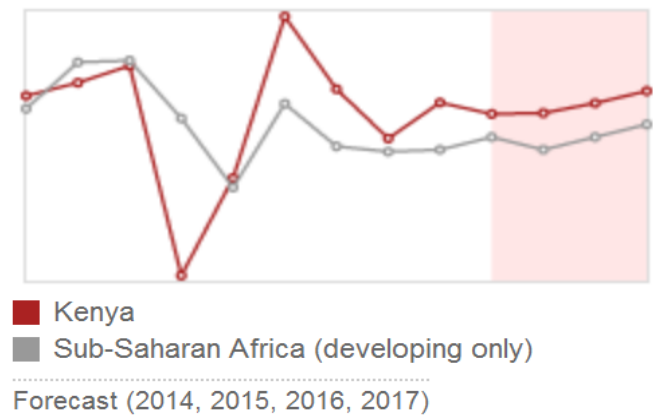
Figure 3-3: Annual GDP Growth (%)[11]

The growth is driven by the service sector because Kenyan agricultural and manufacturing sectors have been on the decline, Figure 3-4.
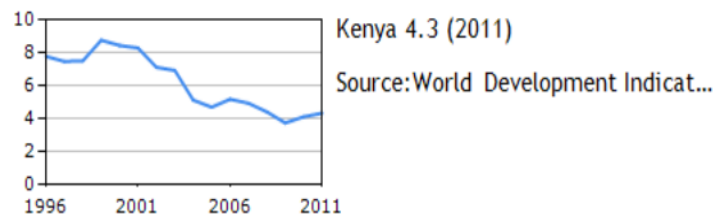
Figure 3-4: Percentage of Value Added in Manufacturing[12]

However, the growth of the Kenyan ITES sector is associated with marketing efforts of government and non-governmental entities with little effort put to improve delivery operations. This has led suboptimal competitiveness and failure to attract international clients into the country (Wanjiku, 2012). As they face reality of competition from global service providers, Kenyan firms are adopting various operations management concepts, tools and techniques towards realisation of strategic and operational objectives[13].

---

[11] Source: World Bank - http://data.worldbank.org/country/kenya#cp_wdi

[12] Source: World Bank - http://search.worldbank.org/all?qterm=kenya+gdp+by+sectors&title=&filetype=

[13] Service Management literature however alludes to the truism that organisations globally face similar operations challenges, meaning studies conducted in all parts of the globe are welcome.

Indeed, there is consensus in both business management theory and practice that due to technological advances and market dynamics [such as the emergent ITES], service systems and environment where they are processed have become complex (Neely et al., 2011) and challenging to characterise. Service operations practitioners and researchers require right perspectives to be able to reconcile intended service levels with realised actual performance levels (Lillis and Szwejczewski, 2012). Appropriateness and applicability of extant approaches to design and delivery of services has been questioned. For instance, the existing norms of service design which are founded on bringing into line two dimensions: the *outcome* dimension, also referred to as the service concept that consists of the value bundle that interests the customer and the *process* dimension, which is a detailed description of how the outcome dimension is achieved, have been put to test. These approaches are based on the belief that the technical core of service delivery systems for low contact services can be buffered from customer influence (Chase and Tansik, 1983). Emergent service logics such as the Unified Service Theory (UST) (Sampson and Froehle, 2006) suggest the need for open-systems view of service operations (Fitzsimmons and Fitzsimmons, 2013) that aligns customer inputs with the service *outcome-process* profile. Misalignment of these aspects compromises the service firm's ability to deliver its intended strategic objectives (Chew, 2013).

Aware of the need to ensure consistency between service firm's strategic vision and operational activities and resources and the objectives of this study, preliminary investigation to identify appropriate case firms in Kenya was conducted. The purpose was to explore the state of business process practices in ITES firms and find if there was need for such a study.

Semi-structured interviews were conducted with two industry practitioners, one expert from the Kenya Information and Communications Technology Board (KICTB) and two academicians in the domain of operations management. The feedback agreed with the anecdotal evidence from industry sources, suggesting presence of several formal world class[14](Schonberger) ITES firms in Kenya. Two lists of firms were obtained; one from the Kenya Information and Communications Technology Board (KICTB[15]) - a government entity and another from Kenya's IT and Outsourcing Services (KITOS) – a private sector body – both revealing the same major ITES firms in the country.

Since the nature of the research question points to study of the service delivery process rather than the entire firm as the unit of analysis (Cook et al., 1999), the author considered identifying service offerings that could fit the traditional SOM theoretical classification constructs found in literature. The objective was to derive a conceptual typology for IIS processes. The tentative SOM classification typologies and constructs found in literature were considered and are highlighted next.

Service classification constructs and typologies

The use of typologies and taxonomies is not new to OM (see for instance: Boyer et al., 2000; Bozarth and McDermott, 1998). Although the difference is not very clear, different authors have made attempts to distinguish typologies from taxonomies. Miller (1996) explained that typologies are conceptually derived (Stock and Tatikonda, 2000) whereas taxonomies are derived empirically. However, Boyer et al. (2000) disagree and term this a misconception.

[1414] "World class" relates to superior performance, winning awards and competitiveness
[15] Has since been replaced by ICT Authority (ICTA)

They argue that the difference lies in the objectives - such that "taxonomies provide comprehensive classification systems [including "good" and "bad" phenomena] while typologies only describe ideal types"(ibid, 2000 pp.603). Generally though, it is unclear how typological configurations should be developed. Miller (1996) observes that although there are no guidelines for developing typologies, three features are worthy emulating; (i) topologies should be founded on strong theoretical foundations, (ii) topologies should make contribution to knowledge, and that (iii) the categorising constructs should be coherent and provide normative outcomes.

Since service design is discussed in IIS context, it is important to understand the drivers of information service delivery. Literature indicates that success depends on customer-provider characteristics and relationships therein. Levina and Ross (2003) recognised the contribution of capabilities and core competences of service provider to the success of outsourced services delivery. However, despite these general agreements in literature, the influence of service provider characteristics appears to have largely been neglected (Borman, 2006; Dibbern et al., 2004; Lahiri and Kedia, 2009; Narayanan et al., 2011). As a result, the IIS architecture remains obscured requiring attention to be paid to the service provider's perspective. As such, traditional classification of outsourced service processes is based on industry verticals (Niranjan et al., 2007). Saxena and Bharadwaj (2009) observe that many of the available outsourced service classifications are based either on the perspective of customers or providers leading to misunderstandings and or conflict between the two. To address the problem, they recommend classifications based on how critical and complex outsourced services are as suggested by Niranjan et al. (2007). However, there are recent OM classification schemes based that give managerial insights in regard to service delivery.

Attributes such as customer contact, service standardization and customization, service complexity and criticality, and knowledge embeddedness (Niranjan et al., 2007; Youngdahl and Ramaswamy, 2008) have been used to classify outsourced services.

Much earlier in study of relationship between firms and clients mediated by brokers, Maister and Lovelock (1982) identified customization and customer contact as important factors in classifying such services (Figure 3-5). Fähnrich et al. (1999) in an empirical study that used factor analysis identified intensity of contact with customer and variety of the service products (Figure 3-6) as the most important service classification attributes (Bullinger et al., 2003).
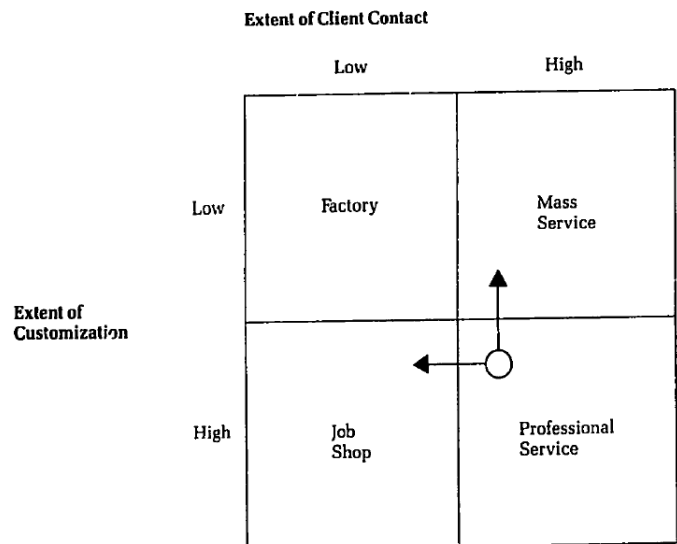
Figure 3-5: Service classification by customisation and contact (Maister and Lovelock, 1982)
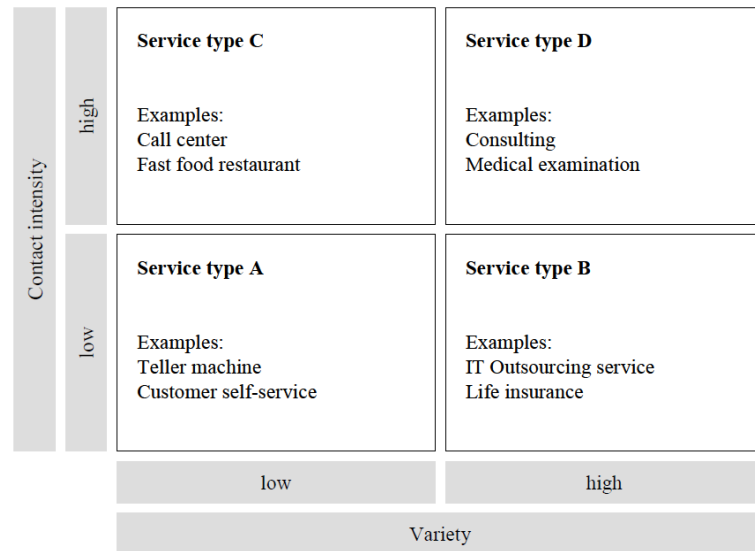
Figure 3-6: Service classification by contact intensity and variety (Fähnrich et al., 1999)

The two typologies are similar since Fähnrich et al. (1999)'s variety explicitly relates to Maister and Lovelock (1982)'s standardization-customization spectrum. It is observed that, (i) some of the examples cited in figure 3-6 are outsourced IIS. For instance, call centre is classified under service type C, and (ii) two-by-two matrices, as specified by Lovelock (1983), provide informative typological insights. As such, identifying service offering that could fit in each of the four cells would provide rich relevant information (Marshall, 1996) for the study.

However, the nature of case study is such that organisational settings are not static and an investigator may change case selection as new ideas emerge (Benbasat et al., 1987). Indeed, there was a deviation from the plan as a hypothesised typology of ITES explained next emerged.

Towards a hypothetical service classification typology

Since feedback from KICTB and KITOS showed that all the firms offered call centre services, an attempt to clearly understand what direction the research would take was considered. This led to evaluation of the service delivery processes that provides call centre services by way of PCN diagram, Figure 3-7.
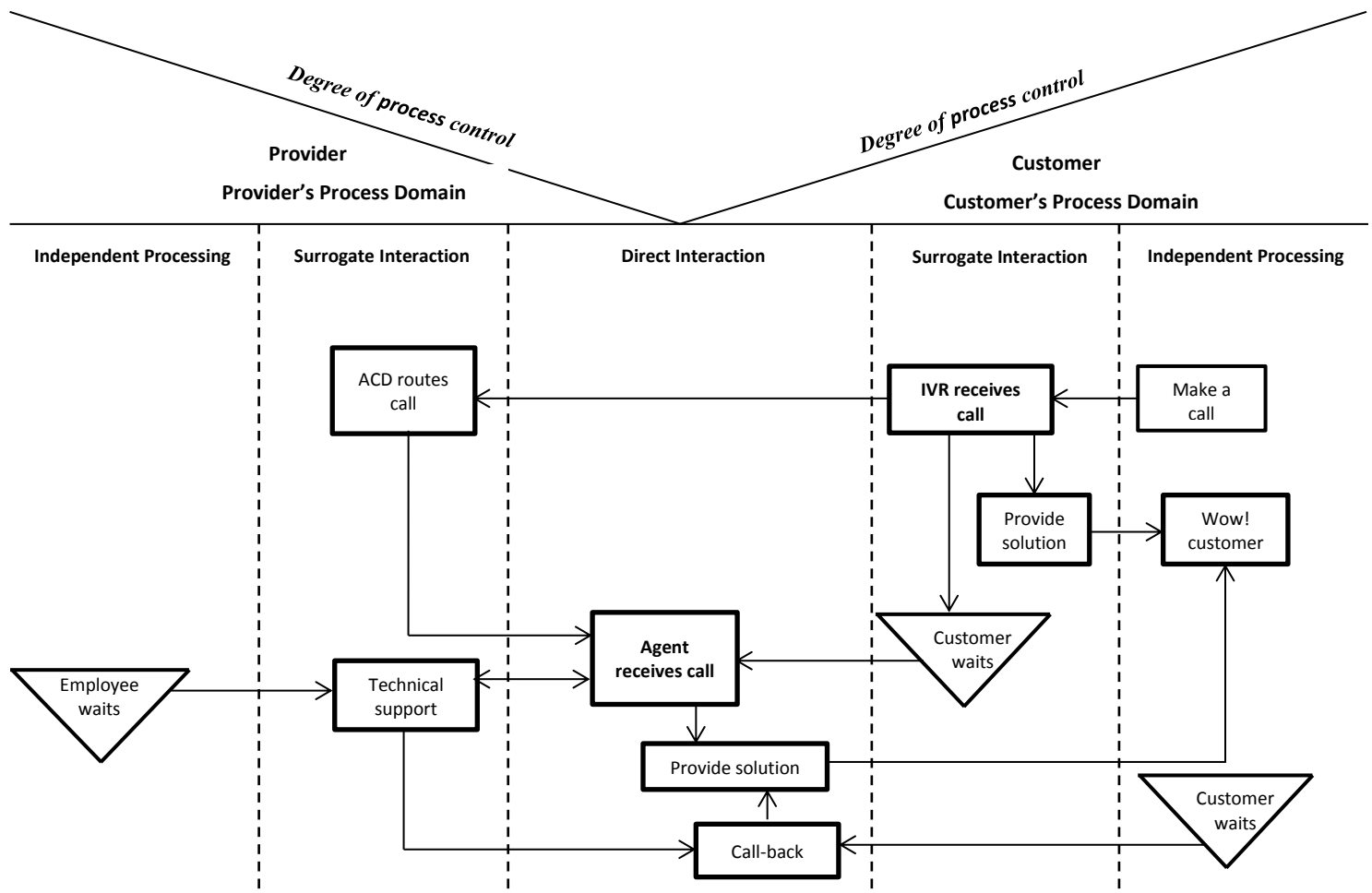
Figure 3-7: PCN Diagram for call centre service delivery process

Observation of the PCN revealed two important service operations aspects. First, IVR uses informational customer inputs to fully resolve customer queries by way of providing the caller with information, implying an informational exchange process. Second, queries that could not

be resolved through IVR and that were escalated to agents and or technical support team entailed informational customer inputs but could not be satisfactorily resolved through simple provision of information to the callers. The callers required detailed information and explanations. This observation raised the question; 'why the difference in delivery of service(s) offered by the same service process?' The difference, it was hypothesised, could be explained by the distinct service consumer and service provider roles in each operational aspect. Whereas in both cases the provider processes information, in IVR the consumer requires information while through the agent the caller seeks knowledge. Sensitized by these observations, a typology grounded on SOM literature or the happenings in the study context was required to help pick cases that could provide not only rich research information but also capture service diversity.

Indeed, as suggested by Doty and Glick (1994), typologies are important starting points for theory building. To develop conceptual typologies for ITES products, the scope of ITES on offer needed to be understood. Hence, the configuration approach by Miller and Mintzberg (1981) was adopted *'because it yields a systematic, detailed, and holistic image of reality, without attributing causation to any of the individual parts of the model'* (Ward et al., 1996 pp.602). Outsourcing of services occurs in variety of services contrary to the popular belief that they are limited to call centre and data entry services (Liu et al., 2011). A look at literature implies that the question of classification of outsourced services has largely evaded debate. However in classifications of the traditional services, standardisation-customisation continuum as a construct stands ahead of other dimensions (Bitner et al., 1997; Kellogg and Nie, 1995; Zomerdijk and Vries, 2007). Indeed, many SOM sources allude to the continuum albeit inexplicitly. Terminologies such as service variety (Bullinger et al., 2003; Fähnrich et

al., 1999; Maister and Lovelock, 1982), service routineness (Wemmerlöv, 1990) and repeat versus non-repeat services (Hill, 2005) are popular in literature, ricocheting off the continuum. A number of dimensions for ITES/BPO services categorisations are found in SOM literature. For instance, Youngdahl and Ramaswamy (2008) suggest that two service process delivery characteristics; (a) customer contact, and (b) knowledge embedded-ness could highlight the value that outsourcing customers derive from outsourcing arrangements. Consequently, they develop two service classes; *transactional* services and *solution* services. Transactional services represents simple, basic and easy to undertake back-office/front-office tasks such as payroll processing and telemarketing. Solution services are core to organization's strategy and include supply network design and managerial decisions, research and development, branding and so on. This echoes Tinnilä and Vepsäläinen (1995)'s suggestion that the driving factor in classifying information intensive services is the value of the service as perceived by the consumer of that service i.e., the degree of idiosyncrasy of the service to the consumer.

The challenge though is that service classifications that are developed from these dimensions are broad and classify services at industry or firm level (see for instance, Collier and Meyer, 1998; Schmenner, 1986). The observation above regarding the PCN call centre diagram suggests the thesis that micro-level aggregations are better because they provoke innovation at process level rather than just enable location of firms within sectors (Cook et al., 1999; Reimann, 1980; Wemmerlöv, 1990). This approach relates well with the observation that *"...the term "operations" is more closely aligned with the "processes" of the firms than the products of firms "*(Sampson, 2012b pp.183). Indeed as observed, at process level service success is facilitated by the nature of the service act (Lovelock, 1983) as defined by service

concept. *"The service concept or "service in the mind" (Clark et al., 2000) is the customer's and provider's expectation of what a service should be and the customer needs it fulfils"* (Goldstein et al., 2002 pp.131). Service at process level could be defined by; (i) value adding *actions* of the provider which could be physical, informational, or interpersonal (Apte and Mason, 1995); and (ii) the direct *recipient* of the service that could be customer's body/mind, possessions, or information (Haksever, 2013; Lovelock, 1983; Sampson and Froehle, 2006; Wemmerlöv, 1990).

Processing actions of the service provider

Morris and Johnston (1987) and Wemmerlöv (1990) suggested that service processes handle either physical items, people or information. However these three inputs do not preclude each other from the transformation process but for ease of offshoring or global disaggregation, the information aspect has to be largest (Apte and Mason, 1995). Apte and Karmarkar (2007) suggest that those service processes that utilise significant chunk of delivery time processing information and are low on people and physical items processing are good candidates for offshore outsourcing. Apte and Mason (1995) posit that the lower the customer contact in a given process, be it in-person or symbolic contact [referred, respectively, to as direct or indirect contact by Sampson et al. (2010b)], the easier it is to use information technology to deliver such a process. It is argued that physical presence which relates to time spent on physical object manipulation (Apte and Mason, 1995) limits global colocation because *'it must take place within confines of specific time and space constraints'* (Apte and Karmarkar, 2007 pp.69).

Consumption actions of service recipient

According to Bitner et al. (1997), the degree of participation of the customer explains the level of service customization. This is at best a partial explanation because low or even lack of customer participation does not mean absence of surrogate customer inputs (such as customer information or customer property). Indeed, different customer input surrogates require different service delivery processes. Consistent with the unified service theory, we suggest that full understanding of customer inputs is necessary antecedent for the customization decision (Sampson and Froehle, 2006).The role of the customer in service transformation process is two dimensional; (i) customers as suppliers of inputs into the processes and, (ii) as recipients of the process's outputs (Sampson, 2000). Customers do not only supply own bodies, minds, belongings, or information as inputs to the service process (Lovelock, 1983; Sampson and Froehle, 2006; Wemmerlöv, 1990), but are recipients of output from the service process. Customers receive the output through their bodies, minds, possessions, or information (Haksever, 2013; Hill, 1977; Lovelock, 1983). These different customer aspects require different ways of service delivery as explained by the heterogeneity characteristic of services.

Sampling within case

Considering this study is situated within the confines of IIS, Table 3-4 provides a summary of services that fall within service provider information processing actions – customer information consumption actions axis.

Provider Actions		Recipient	
		Information	Mind
	Informational	A	B
	Interactive	C	D

Table 3-4: Typology of globally outsourced IIS

To understand IIS, the decision regarding service offerings for which the a priori developed service delivery framework is to be investigated must be made. Following the typological configurations developed in table 3-4, four service delivery processes are chosen from each case company so that each of the four archetypes is represented. Unlike in the case selection where literal replication (Eisenhardt and Graebner, 2007) is considered critical, 'theoretical' replication is adopted since the objective of sampling within the cases is to unravel contradictory results in delivery processes for different service offerings (Benbasat et al., 1987). Therefore the processes chosen are those that deliver four IIS offerings; data processing services, research services, inbound voice call services, and training services that fit well into the four cells; A, B, C and D [of Table 3-4] respectively, as shown in the service typological configuration, Figure 3-8.
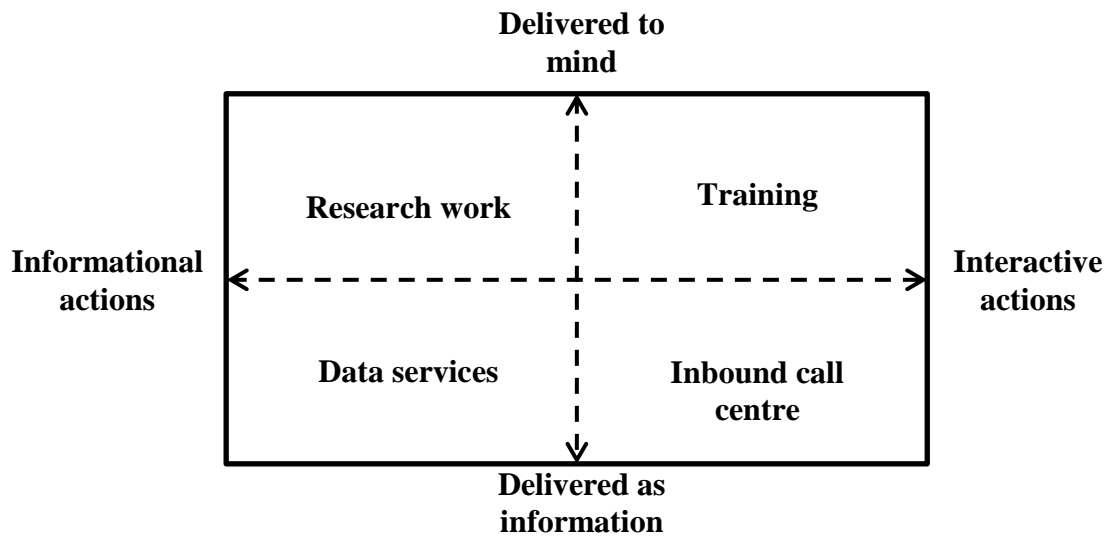
Figure 3-8: Case study service offerings

Having decided on the specific service offering to study, all six ITES firms were contacted through an e-mail (introductory letter attached – Appendix A) describing the nature of the study and the cost-benefit aspect of taking part in the study. One firm did not respond and after unsuccessful follow-up, the decision to drop that organization altogether was made. Of the remaining five firms and based on the mix of services that they offered, we settled for three firms[16]; **EVEREST**, **GIGAS** and **HUMONGOUS** that were deemed complete and representative.

A brief overview of EVEREST

EVEREST Company was formed by local and international investors who foresaw the potential of the BPO industry in Kenya. The company was established in 2004 and solely operates in Nairobi, Kenya but has sales and marketing channels in South Africa, UK, USA and India. From the beginning, **EVEREST** aimed at offering both call and contact services.

---

[16] The real names of these firms have been disguised for ethical reasons

Early into existence the company won major deals with call service clients. For instance, the firm provides call centre services to two of the four telecommunication mobile phone service providers in Kenya. This has skewed the company's offerings towards voice services despite offering wide range of services. Other services offered include: data and business analytics, end-to-end management of accounting and finance processes, IT service delivery through internet, business process improvement/re-engineering/optimization, six-sigma and quality management, debtors and collection management, human resource services from recruitment to payroll management to training services. **EVEREST** made huge investments in facilities such as ultra-modern building; cutting edge technology, and highly skilled management team. About 80% of the company's revenue is generated locally while the rest from international clients. The company is highly regarded in Kenya because of its leadership in innovative service delivery. For instance, the company won Kenya vision 2030 ICT innovation award of the year 2011.

*A brief overview of **GIGAS** BPO*

GIGAS International Inc., is not only CMMI maturity level 3 and ISO 9000:2008 quality management systems certified but also the leading software application provider in Africa. The company opened its first branch in Tanzania in 1997 as information and communications training service provider and later expanded its service offerings and geographical spread. By 2002 **GIGAS** International Inc., operated in six countries; with most of business revenue coming from local firms in these countries. Today it has presence in 19 countries; 15 of which are in Africa and the rest in Asia, Europe and the US. Although **GIGAS** BPO entered the Kenyan market back in 1999, it was not until 2006 that potential and opportunity in Information Technology Enabled Services was seen giving way to incorporation of **GIGAS**

BPO – 100% owned subsidiary of **GIGAS** International Inc., based in Kenya. Today, **GIGAS** BPO operates 24 hours every day, has 144 seats and offers services that fall into four general categories: I.T infrastructure management products that support flexible, innovative and/or flexible client operations; BPO products such as customer interactive services; training services in IT; and IT application and solution services. The Kenyan subsidiary generates half of its revenue from international clients whereas the other half is from local firms.

A brief overview of **HUMONGOUS**

HUMONGOUS Inc. prides itself as the pioneer global, professionally operated, BPO in Kenya. The firm was co-founded in 2000 by three professionals. It is headquartered in Nairobi and has a branch in USA. The firm encountered many setbacks at the beginning – ranging from government bureaucracy, politics, and technological challenges such as the use of satellite because the fibre optic cables had not arrived in Kenya (Isenberg, 2009). For the first four years the company registered negative net income. By the end of 2004 **HUMONGOUS** had not only broken-even but registered positive net income and won several major international awards for excellent performance[17] (Appendix J) . Today, the company's line of service offerings that include; (i) telesales, (ii) customer care, (iii) billing and data management, and (iv) research and has 300 scalable seats operation in Nairobi, Kenya. Although the company is locally based with no branches offshore, about 80% of revenue is generated from international clients and 20% from local clients.

---

[17] Including highest command award – Call Centre Focus in 2008

Synthesis

The three case companies differ in age, initial focus, main service offering, clientele distribution, location among other aspects, Figure 3-9.

Portraits	EVEREST	GIGAS	HUMONGOUS
Offering BPO since	2004	1999	2000
Ownership	Private Company	Private Company	Private Company
Location	Kenya with sales/marketing offices in SA, UK, USA & India	Kenya for BPOs & 8 other African countries, UAE, India, USA for other services	Kenya & USA
Services	Customer contact, collections, training and content solutions, finance and accounting, procurement, human resources and payroll, learning and training outsourcing, analytics and data management, reengineering, quality assurance, workforce management	Voice, data, knowledge process management, IT enabled services, IT training, IT solutions	Customer care, telesales, billing, data management
Employees	350	900+	600
Main service	Call centre	Data	Mixed
Clientele	Global – 80% local – 20% international	Global – 50% local – 50% international	Global – 20% local – 80% international
Facility size	40,000 sq. ft.	12,000 sq. ft.	50,000 sq. ft.
Technology partners	iEX, AVAYA, CISCO	IBM, Microsoft, ORACLE, SAP, CISCO, CompTIA, redhat, PEARSON VUE	CISCO, Microsoft

Figure 3-9: Key Organizational Portraits

3.3 Unit of Analysis

Barrat et al. (2011) observe that clearly stated unit of analysis is vital to any study because it (i) affects the nature of the research questions as well as the findings and conclusions from the

research (Yin, 2009), and (ii) eases the burden of bringing out previous research works that already exist to the extent of defining the current study in terms of boundaries of applicability of emergent theory (Dubé and Paré, 2003; Markus, 1989). Put another way, the unit of analysis has to fit the research question at hand (Flynn et al., 1990). Since the objective of this thesis is to explore and explain dimensions underlying the IIS delivery process and the possibility that different firms undertake service delivery differently, the main research question: *what are the implications of synchrony among customer inputs, service delivery system characteristics and service concepts on operations and operational actions in information intensive services*, presupposes the unit of analysis is the 'operate' process of each service offering. To capture the contextual newness of the BPO industry, embedded case design with multiple units of analysis is preferred so as to allow for literal replication. Yin (2009) refers to this as multiple-firms embedded case design. Theoretical sampling is adopted because as already stated, it supports selection of case firms that are extant research specific and collection of rich data (Eisenhardt, 1989).

The view that all operations transform inputs into valuable outputs (Hill, 2005) is not contentious. Indeed, service operations are understood, controlled and managed if simplified into input-process-output model (Fitzgerald et al., 1991; Sampson, 2012b).To transform is to change form of an object by adding value (Anil and Suresh, 2009). Strategic management through the value chain (Porter, 2008) puts transformation activities at the centre of product/service delivery. Transformation process consumes and/or integrates resources such as time, materials and information in order to produce customer value (Sampson et al., 2010a). Resources utilised, process followed, and activities undertaken differ from operation to operation. Morris and Johnston (1987) were among the first OM researchers to note that

service transformation processes exhibited dissimilar characteristics from manufacturing transformation processes and suggested that each should be managed differently. In general, operations processes can be broken down into four or three and in some cases two categories. The categorisation by CIM-OSA (1989) posited that there are three process classes called; manage, operate and support. According to Childe et al. (1994), whereas, manage processes are made up of strategic level activities that formulate the long-term aims and sets direction for the entity of interest, operate processes entail tasks that transform customer orders into customer valued products. The operate processes involve activities along the entire supply chain; from raw material acquisition to product delivery (ibid, 1994). The support processes provide resources that are peripheral but helpful to realization of the other processes. Indeed, Gibb et al. (2006) posit that support processes "*… do not, in themselves, generate value [...]are candidates for outsourcing, as third parties may be able to achieve lower operating costs through economies of scale.*" This in essence means support processes of the client are the operate processes from a service provider view point. Ideally, support processes consist mainly of non-operations function activities such as finance and accounting, information technology, and human resources (Childe et al., 1994 pp.46) amongst others. Armistead and Machin (1997) split the manage process into two thereby expanding CIM-OSA tripartite classification into four; operational, support, direction setting and managerial processes. A recent OM principle has stated that "*a process perspective can be used at three levels: the level of operation itself, the level of supply network and the level of individual processes*" (Slack et al., 2012 pp.11). The operations level entails the traditional process view that is defined by the input resource requirement, transformation processes and outputs. Process at supply network level involves realization that operations are part of a larger network and should manage relationships by working seamlessly with other entities. At the micro-level are

many individual processes that make up operations. For example, internal operations are made up of individual processes that are linked to each other through intra-organisation coordination. Other scholars view operations processes at two levels; operations and marketing leading to classifications such as diagnose and execute processes (Karmarkar and Pitbladdo, 1995) or sales and billing processes (Ponsignon et al., 2011). From the outsourcing provider's perspective the processes are categorised into three; *win, run* and *renew* phases (Perunović et al., 2012). Win phase entails having a systematic process by which the provider acquires new customers, akin to marketing discipline. Run phase highlights what needs to be done to deliver the outsourced service process the satisfaction of customers and entails what operations management does. Renew phase relates to performance or service levels that ought to be realised to guarantee renewal of contract and client retention. Perunović et al. (2012) contend that the three phases are spiralling as shown in Figure 3-10.
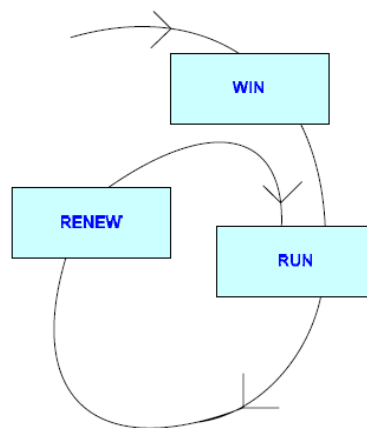
Figure 3-10: Provider's outsourcing process (Perunovic, 2008)

Although many service providers desire continuous flow of the cycle *ad infinitum*, the suggested model is rarely realised because many contractual relationships are not renewed (Holstein, 2010). The thesis herein is that this is due to lack of understanding of the fit

between operational issues related to inputs, processes and outputs of the run phase. The model is referenced in finding the inherent characteristics of the tripartite components of the transformation model, for each case, as aligned in the run phase of outsourcing process. The win and renew phases have deliberately been left out of the study for a couple of reasons:

- From anecdotal practitioner research (e.g., Media, 2007), it is probable that poor service and quality are beneath the failure of many a BPO. Indeed these are matters that lie at the centre of outsourced service providers' run phase.

- As illustrated by Figure 3-10, the three processes are cyclic with both win and renew phases feeding into the run phase. This means that service providers that consistently run efficient and effective operations meeting client expectations, win new clients and have current contracts repeatedly renewed.

The separation of win and run phases is common in service operations particularly in retail banking where activities that focus on solicitation and processing of loan application are managed differently from those involving post-loan processing (Metters and Vargas, 2000). Consequently, the run process is analogous to the 'operate' process (Beer, 1984; Smart et al., 1999). This 'operate' process is at the heart of any business organisation. Armistead and Machin (1997) observe that this process is responsible for producing that which the organisation exists to produce. It is this service delivery process that is the focus of this study and thus the unit of analysis.

Since the unit of analysis for this study is at the 'operate' level of each of the four services, the type of study designed herein is referred to as embedded multiple case study design (Yin,

2009). A summary of each unit of analysis as undertaken in practice in each of the case companies is provided in appendix C.

Evidence collection process

Case study theory building entails gathering rich empirical evidence (Eisenhardt and Graebner, 2007) that fully describes occurrences of interest in their natural setting. Table 3-5 lists key stages of the case study design in this study. Being a multiple-case study design, case study protocol (Appendix E) ensures repeatability of evidence gathering procedure across cases. Yin (2009) asserts that a well-designed case study protocol ensures validity and reliability research. The protocol provides a plan and detailed information about the research instrument, procedures and the general rules adhered to in the course of evidence collection. At the centre of the protocol are data collection methods, target respondents to provide primary data, sources of secondary data, and more importantly set of questions, developed from the conceptual framework, posed during the interview phase (Voss et al., 2002). In the first phase prior to commencement of data collection, mapping of the 'operate' process for each service was done using the instrument in Appendix B to not only capture key activities but enable understanding of *how* service delivery is undertaken, *who* undertakes it, *why*, and *what* resources are utilised. This allowed for improvement and adjustment of the initial case study protocol.

Stage	Explanation	Details
Background analysis	Prior to engaging in any case study interviews, we gathered as much information from public domain as was possible.	Desk research: - Financial reports - Web/internet search - Press reports
Prime contact and principle informant	Voss et al. (2002) posits that a prime contact is a person capable of opening doors where necessary and thus should be senior in the organization. Principle informant is the person best informed about the data being researched. For each potential case, these were identified and contact initiated.	Get more information or brief overview to supplement prior background information. Agree on: • Timescales • People, facilities and documents to be accessed • Confidentiality
Site visit	This is a visit to the site just before the actual data collection.	• Site seeing/observation • Arranging interviews
Field data collection	Entails the study of the phenomenon. This was enhanced through: - Interview instrument - Note taking, electronic audio recording	• Interviews • Document analysis • Observation
Data analysis	Raw data organization/condensation	• Prepare process diagrams • Code the data
	Analysis - within cases	• Use of matrices, tables, charts and worksheets
	Analysis - cross cases	• Draw conclusions
Consider the conceptual model	Compare with the drawn conclusions	• Make propositions

Table 3-5: Main stages of the study design

The second phase entailed gathering generic characteristics and information about the case companies and particular units of analyses. Afterwards, evaluation of the linkages between the CI&P constructs was undertaken. In other words, the study protocol adopted the process of triangulation. Triangulation entails use of multiple approaches in case studies to strengthen the research outcomes (Benbasat et al., 1987) and ensure research validity (Guion et al., 2011). Denzin (1978) identifies four categories of triangulation; (i) use of multiple sources of data, (ii) use of multiple methods of study, (iii) use of multiple theories for data analysis, and (iv) use of multiple researchers. Other than the use of multiple researchers, the other approaches were utilised.

The most commonly used data sources are interviews, documentary evidence, archival records, direct observations and physical artifacts (Benbasat et al., 1987; Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Yin, 2009). For the current study, data triangulation was achieved through semi-structured interviews, observation, review of published and unpublished documents, and through casual meetings.

Interviews

Due to the high degree of flexibility accorded to the researcher by unstructured interviews, it is difficult to repeat a study and could affect reliability. Structured interviews on the other hand do not provide room for follow-up questions and probing of the informant and are not recommended for theory building. To circumvent these limitations and enable pooling of all issues in the research protocol, semi-structured interviews provide some degree of flexibility to researcher and respondent. In each case company, potential respondents were identified and divided into three levels; senior, middle and lower, as per the traditional pyramid organisational structure. The senior level included CEOs and directors [18], middle level entailed various sectional managers, and lower level included the people doing the real job such as the agents and quality analysts[19]. In total 52 interviews were conducted over a period of 1½ years each taking 90 – 120 minutes allowing complete capture of all events during service delivery. The interviews were consistently conducted following the case study protocol. Table 3-6 provides the list of informants.

---

[18] Notice the absence of the term president - in Kenya, the term president is reserved for the country's leader
[19] Senior and middle levels officers cut across the four services

Level	EVEREST		GIGAS		HUMONGOUS	
	Position	Number (18)	Position	Number (17)	Position	Number (17)
Senior	CEO Director of I.T Analytics and BPM Director Quality and Training Director Sales	1 1 1 1	Managing Director Director of Operations and HR Director Business Development and Technology	1 1 1	CEO COO Director I.T Director Recruitment and Training Director Business Development – Africa Business Development Leader	1 1 1 1 1 1
Middle	Operations Manager Business Development Administration Reporting, Analytics, Pricing and Workforce Management	1 1 1 1	Operations Managers ITES Manager Quality Managers HR and Training Program Manager Associate Service Delivery Lead	2 1 1 1 1 1	Service Delivery Lead Project Manager Associate Delivery Leads	1 1 2
Lower	Quality Analysts Team Leaders HR Officer Agents	3 2 1 4	Quality Leaders PR Officer Agents	2 1 4	Quality Analysts Agents	3 4

Table 3-6: List of informants

Eleven of the 52 informants were uncomfortable with the interview being recorded using a digital audio recorder, therefore notes were taken as the interview progressed and a formal report written thereafter. For the 41 informants that allowed audio recording, small scale note taking was done during the interviews. Transcription of voice data into text directly followed the interviewing on the same or following day allowing for utmost capture of data in raw form. Each interview comprised 10-15 pages of text that eventually resulted into about 600 pages by the end of the process.

Observation

Direct observations were more casual than formal and there was no standard way of doing it across case firms and service offerings. The main strategy involved real time observation of infrastructure, technologies, people relations, appearances, layout and size of the production floors. For instance, phone calls were followed in the call centre by witnessing how the agents conversed and interacted with callers and how long it took. Notes were not taken during these interactions but whenever a chance arose, notes about relevant events were jotted down. More detailed notes were made immediately after leaving the site. Additional observations were made from a couple of pre- and post-shift meetings attended in two of the companies. The aim was to corroborate and raise concerns in regard to the primary data collected during interviews.

Documents

A range of published company reports, memos, brochures and leaflets, government reports, trade magazines and journals available for public consumption; either in hard or virtual form were scrutinised for relevant information. For the unpublished information, a formal request was put to the CEOs and there was some degree of success. In one company for instance, the operations manager was instructed to provide us with some confidential materials such as contracts but under supervision and with no permission for notes taking. In another, access was totally denied whilst in the other only selected documents such as organisational structures, attendance sheets, quality analyst forms and production documents were provided. These documents provided additional information that supplemented data already gathered through interviews and organization documents.

Casual meetings

In the process of walking around the sites, employees were engaged in informal talks and thereafter notes taken regarding issues of relevance that arose. Further, through friendships that developed from the interviews with some informants[20], the author held several out-of-office meetings to cement and grow friendship network.

3.4   Data Analysis

Social scientists build theory by simplifying complex data that symbolises complex social environment through data reduction tools (Miles et al., 2014). Data analysis entails making interpretations of data and is tightly interwoven with data collection (Strauss and Corbin, 1990). The data collected were largely in form of words and required different approaches of analysis from numerical data. The qualitative data collected are analysed at two levels; (i) within-case analysis, and (ii) cross-case analysis (Eisenhardt, 1989), details of which are discussed in this section. It is should be noted that the case study protocol guidelines were followed to ensure consistency of data during collection and analysis for all the cases. This eased the merging of data from different cases into single table or matrix for purposes of matching observable patterns and deducing similarities or dissimilarities between them (Yin, 2009).

3.4.1   Within-case analysis

Before undertaking cross-case data analysis, cases are analysed and understood individually. According to Miles et al. (2014), intra-case analysis involves three stages of qualitative data

---

[20] The Kenyan culture is easy and once good rapport is struck - informal meetings can be arranged

analysis tied to data collection: *data condensation*, filtering, rearranging and/or reducing by removing unnecessary data; *data display*, using matrices or schematic presentation to simplify conclusion drawing, and; *drawing and verification of conclusions*, noting of patterns and providing explanations.

Data Condensation

Data condensation refers to the process of sifting through the raw data so that only little, relevant, strong and focused data remain. Despite the process taking place throughout the fieldwork phase as suggested by Miles et al. (2014), it commences with the author immersing him[her]self into the data - reading the transcripts repeatedly, on adhoc basis, going back to the audio records and re-listening. This leads to data coding; an act of using labels which could be words or statements, to attach meaning to 'chunks' of data (Miles et al., 2014; Saldaña, 2012). According to Saldaña (2012), data coding should be done at two levels; first cycle coding that entails reducing passages of transcribed text into codes, and second cycle coding that entails moving from multiple codes to few themes/categories as the study moves towards theorising. Strauss and Corbin (1990) proposes three coding categories; open coding, axial coding, and selective coding. Open coding is the first part of coding that breaks data down to deduce concepts about a phenomenon. The emergent concepts are constantly compared to each other, for similarities and differences, and classified into abstract categories. This allows the investigator to pose questions as s/he develops cognitive and interpretive familiarity useful for explanation. Axial coding refers to the process of interconnecting the categories generated through open coding. It goes beyond identification of characteristics or attributes of the categories leading to more precise and refined categories allowing explanation of the phenomenon. The term selective coding implies an identification process.

It entails selection of a main category and chronologically relating it to categories developed under open and axial coding with the aim of extracting underpinning theoretical constructs necessary to building a discursive story line. There is a thin line between the three coding processes making it possible to move from one to the other and vice versa iteratively[21]. The current study adopted the techniques as detailed next.

The process began with an overview and organisation of data at the end of each interview. As mentioned earlier, some of the data were in form of digital audio records whilst others in form of notes. The audio data were transcribed verbatim (Crabtree, 1999) making all the data soft before printing to physical form that is friendlier for coding (Saldaña, 2012). The verbatim 'hard copy' transcripts' data were then code-segmented by relating the a priori determined attributes (Appendix G) to each sentence, sentence-by-sentence. This match of sentences to attributes resulted in condensed interview notes - Appendix F - specific to the a priori study constructs. For instance, all sentences that made reference to employee skill requirements [by way of placing the code SP-SKI, table 6-1] for a particular case were pooled together in appendix F. The last phase entailed presentation of the interview notes into matrices as explained under data display.

Data display

Data display is an activity that assembles information in an ordered and simplified way allowing the investigator to draw conclusions and take action (Miles and Huberman, 1994). Although extended text is the most popular, other ways of display such as matrices, tabulations and schematic models were used. For instance, process activities for each of the

---

[21] Codes used are attached - Appendix G

four service offerings under study were summarised by use of PCN diagrams (appendix C). The PCN diagram - an analytic tool that breaks down customer and provider processes into component steps that clearly distinguish provider-customer interactive processes from those undertaken independently will be used. The diagram has three regions: independent processing region, which does not entail interaction with other process entities under consideration; direct interaction region, where the process entity's employees interact with people from the other process entities under consideration; and surrogate interaction region, involves interaction with non-people resources of the other process entities. The more the customer contact, the lower the level of efficiency in delivery of such a process (Chase, 1978). This is due to loss of process control to the customer leading to decreased degree of process control in the direct interaction region.

Matrices were generated to compress emergent issues related to customer inputs, service process and service concept for each service offering. This approaches helped expose the a priori study constructs as reflected in the cases. The matrix convention (Miles and Huberman, 1994; Miles et al., 2014) adopted called for data in form of interview notes to be presented as matrices for each single case. This is found in the next three chapters in the form of tables 4-2 to 4-6 in chapter four, 5-2 to 5-16 in chapter five and 6-2 to 6-5 in chapter six.

Drawing and verifying conclusions

Conclusion drawing is the process of giving meaning to data displayed. By logically referring to the observable patterns, the investigator finds and attaches meaning to relationships. This study adopted permutation of methods drawn from the thirteen tactics of generating meaning; 'pattern/theme noting, seeing plausibility, clustering, metaphors making, counting, comparing

and contrasting, variable partitioning, subsuming particulars into general, factoring, noting relations between variables, finding intervening variables, building logical chain of evidence, and making conceptual coherence' (Miles et al., 2014 pp.277). The overall strategy entailed searching for patterns based on comparison of cases through PCN diagrams [appendix C] and narration therewith [appendix D] of the 12 units of analysis. This means, the corresponding service offerings across case firms as well as inter-offering comparisons were done. However, before commencement of cross case analysis, the findings for each construct of the CI&P framework were synthesised in a way that identified patterns and brought out similarities and differences among the cases.

3.4.2 Cross-case analysis

Cross-case analysis is the technique that pools knowledge from individual cases to draw conclusions by contrasting and comparing them (Khan and VanWynsberghe, 2008). There are a number of strategies available to cross case analysts. According to Eisenhardt (1989), two tactics that could be used; (a) starting with constructs in the conceptual model, find resemblances and divergences between the cases of interest, (b) picking pairs of seemingly similar or dissimilar cases, do a comparison. Else, Miles and Huberman (1994) and Ragin (1993) categorise strategies used in cross-case analysis into; (i) case-oriented strategy, and (ii) variable-oriented strategy with Miles et al. (2014) adding a third strategy, (iii) mixed strategy. In case-oriented strategy, a priori theoretical framework is applied to each case individually to test for pattern replication. The variable-oriented strategy establishes whether there are themes that are common to all cases. The mixed strategy integrates the case and variable strategies by evaluating some aspects using a framework and others through themes. The cross-case analysis for this study commenced after the case study respondents had confirmed and

approved the final intra-case analyses. Eisenhardt's first strategy that is considered similar to variable oriented strategy and analogous to Yin's explanation building (Yin, 2009) was deemed more appropriate since necessary patterns for cross-case synthesis were deducible from the findings of the within-case analysis. Observations relating various constructs and inherent service attributes of the research study will be made. In anticipation of the requirement to verify the study's conclusions, the training services case [a non-information intensive service] was studied. This will help compare findings for IIS for purposes of confirming or falsifying emergent theory.

3.4.3 Quality of the Research Design

Table 3-7 provides summary of actions taken to support realization of quality of the study.

Quality Aspect	Tactics

Construct validity	Chose appropriate case studies:
	   i. Used multiple sources of evidence
	   ii. established a chain of evidence
	   iii. had key respondents confirm and approve the case summaries

External validity	Used replication logic - 3 cases for each service offering

Internal validity	i. patterns were matched
	   ii. explanation building
	   iii. rival explanations evaluated
	   iv. used logic frameworks

Reliability	i. used case study protocol ii. created a database

Table 3-7: Tactics for ensuring quality of research (Yin, 2009)

Quality is defined in terms of validity and reliability with the former having three levels; construct validity, internal validity and external validity. Verification of this research's findings is assured through these four tests criteria. The criteria and remedial tactics used in

this study to assure quality of the case study research design (Yin, 2009 pp.40 - 45) are provided next.

- Construct validity – concerned with translation and identification of real life operational variables that represent and capture theoretical constructs. It evaluates the extent to which the variables utilised in the study relate or match what was they were intended to represent. Construct validity subsumes and gives a basis to internal and external validity. For the current study, the test is realised by: (a) use of multiple sources of evidence including organised literature review during problem definition phase and observations, interviews, document reviews during data collection phase; (b) establishment of a chain of evidence through consistently presented case notes and records and continuous consultations with industry and academic experts; and (c) key respondents reviewed, confirmed and approved case reports.

- Internal validity – explains the extent to which a study supports an explanation of a relationship over another explanation. The higher the degree of confidence in the explanation, the better the study in making inferences and explaining causal relationships. This test is realised by several techniques: (a) pattern matching; (b) explanation building; (c) evaluating rival explanations; and (d) use of logic frameworks. In this study, a succinct iterative process was followed to evaluate extant theoretical premises during data analysis.

- External validity – explains the scope of generalizability of a study's findings to different contexts such as entities and times. For this study, the test is realised through use of theory in individual cases and replication logic in cross-case studies. In addition, the conceptual framework developed a *priori* allowed for replication of theories across cases before any conclusions could be drawn.

- Reliability – relates to consistency and repeatability of a research process. Similar research process should yield compatible or highly correlated findings. There are two tactics that support repeatability; (i) use of case study protocol, and (ii) creating a database of interview transcripts, case study notes and documents, drawings used during data analysis, for the each case study. Indeed, this study utilizes both tactics.

3.5 Summary of Chapter 3

Chapter three described the research methodology used in understanding the mechanism that designs and delivers IIS processes. The main conclusions are presented three fold. First, of the four interrelated philosophical positions; hermeneutic, dialogic and monologic and positivist, the formulation and the general approach of this study matches hermeneutic paradigm. Second, since hermeneutic position advocates for human sense-making to unravel the study context, embedded multiple case study research design is preferred. Third, tripartite data analysis technique that involves data condensation, data display and drawing and verification of conclusions (Miles and Huberman, 1994) is adopted.

Within Case Analysis

Since it is presumed from literature review that services in a particular category are likely to exhibit similar features in terms of service concept, customer inputs and the service delivery process, iterative explanation building approach (Yin, 2003) is deemed appropriate. This is prudent because each service offering requires three iterations. Qualitative data collected through semi-structured interviews is analysed through coding and pattern matching. The strategy suggested by Miles et al. (2014) advocating for creation of codes that relate constructs of the study to each other coherently is embraced.

Process Chain Network Diagrams

Clarifying the nature and form of the service delivery processes was deemed necessary to theory building. By zeroing in on processes that directly delivered specific rather than generic benefits (Sampson, 2012b), the 'operate' processes that deliver data, research, call centre and training service offerings were studied and summarised using the process chain networks [PCN] specified in Appendix C. The central logic of the service process frameworks is captured by disaggregating process activities that make up the unit of analysis because customer value resides in the chain of activities that together make up the delivery process (Sampson, 2012a). Disaggregation of activities helps the identification of critical process areas (Porter, 2008; Stabell and Fjeldstad, 1998), highlights problematic sections that require correction/improvement as well as opportunistic ones for exploitation. The diagram facilitates detailed examination of various aspects of the transformation process. For instance if an activity is within the surrogate interaction (SI) region of the customer, it means the customer interacts with possessions or information of the service provider and has control over the activity. Furthermore, level II data analysis will rely on the findings herein. For instance, evaluation of employee skill requirements will focus on those employees that deliver the identified *main* activity in each service delivery process.

Summary of steps followed to deliver services

In each of the three BPO firms, the service delivery processes for providing data processing, research work, call centre and training services were explored. The case results were summarised in two different ways. First, using guidelines in Appendix B and end-to-end process knowledgeable employees, PCN diagrams for each service delivery process were developed and are shown in Appendix C. Second, Appendix D presents a narration of the key activities summarised in the PCN diagrams. This section provides a summary of the steps followed on delivery of the four cases.

The key activities in delivering data services are:
- receiving scanned pre-filled forms or voice recorded files from clients
- sharing the files amongst the agents for processing.
- reading and assembling the files [seeking clarification]
- processing and converting the received files to softcopies in client friendly formats [main activity]
- checking final work for quality
- forwarding document to client

Processing and converting files to client required format is the main activity in this process because all the other activities are supplemental.

Activities in providing research work services are:
- receiving instructions/data and decoding client expectations
- design research methodologies
- where applicable[22] develop data collection instruments and collect data
- analyse data
- write report of findings
- handing over the final report to client

---

[22] There are cases where clients send data for analysis and report writing

Other than the last step of handing over the report to the client, all the other steps are considered core to this service delivery process.

Activities in call centre service delivery process are:

- call is received by Interactive Voice Response (IVR) system and simple customer queries resolved

- calls not resolved by IVR forwarded to Automatic Call Distributor (ACD) system and routed to agents

- agent resolves the problem or call is escalated to technical support

- if not resolved immediately, the customer is promised a call-back

Value is realised when the caller's query is adequately answered either via IVR or agent.

Activities in providing training services are:

- receive request from client

- assess and determine objectives

- develop training content and a delivery plan

- undertake training

- provide support

- validate training

The main activity is the undertake training.

4 CHAPTER FOUR – SERVICE CONCEPT

This chapter aims to explore the concept of service concept with view to unravelling the specific OM attributes relevant to particular IIS. The chapter explores the aspect of service concept with view to distinguishing between the four cases using genera related to objectives, adaptability and focus as extracted during literature review. The aim is to draw any significant patterns that explain each case's 'operate' process.

4.1 Concept of Service Concept

Table 2-5 listed major works that have addressed the concept of the service concept from an OM perspective. As stated in chapter three, Sasser et al. (1978) defined service concept as the sum of the relative utility inherent in each component of the service bundle offered to the consumer. Service bundle has three elements; service objectives, adaptability and focus. The codes used for data analysis in this chapter are presented in Table 4-1.

CATEGORY: SERVICE CONCEPT	CODE	EXPLANATION
SC: Operational Objective	SC-OBJ	Customer's motive for outsourcing
SC: Adaptability	SC-ADP	Level of accommodation of customer unique requests
SC: Focus	SC-FOC	Number options/choices in the 'menu' (available to the customer)

Table 4-1: Codes for service concept

4.1.1 CASE OF DATA SERVICES

EVEREST Company

Cost is established to be the protuberant order winning criteria for data processing services. Without cost reduction guarantees, clients would not offshore outsource this process. At

111

country level, cost advantages are determined by availability of unemployed people with the appropriate skills for the job. This supply determines the cost of labour in the destination country. Other determinants include minimum wages set by the government and cost of living in terms of cost of food, housing and transport. However, country level competitiveness is more relevant when competing for international clients. At firm level, the key cost driver is the terms of employment and in particular the form of compensation provided to employees. Data service workers are employed on a contract fixed to the project duration. The employees are not salaried but paid wages on piece rate system. This ensures that employees strive to do as much as possible to maximise earnings, avoid making mistakes that would necessitate rework whilst impressing the employer for future consideration after the current job elapses. Data processing work undertaken by individual employees is easy to quantify and fits well into that piece rate system of compensation which according to Lazear (1986) works best where; (i) it is easy to measure an employee's work without significant possibility of error, (ii) other compensation schemes would cost the firm more, and, (iii) the levels of skills and worker motivation are tremendously different. However, cost arbitrage benefits do not only accrue from the activities inherent to data 'operate' process, other aspects such as the nature of work sent by the client impact operational costs. Since data work is processed at the BO, quality aspects such as accuracy pose a challenge to **EVEREST** at the beginning of new projects. However, as the project processing progresses, employees experience learning curve benefits leading to drastically reduced execution errors.

- *"You realise that when a project runs for a few weeks then you might not even need the QAs – because the agents could be 98% accurate so that the QCs' work is to look for the 2% error to make sure that we deliver 100% quality. But now as this team also*

gets more experienced you realise may be is 100% and for that reason the QCs could

*become redundant – what we do is to reduce their numbers - **Operations Manager***

To ensure faster adjustment to client's quality standards, **EVEREST** has in place client-centric training system. Indeed, quality check is one of the major activities in the 'operate' process. Quality standards are adhered to during data processing so that the checking done before work is delivered to the client is precautionary.

Timely delivery of BPO work is assured via a couple of time zone facets; (i) proximity advantages of the service provider country**. EVEREST** enjoys the time zone proximity advantages of Kenya relative to Europe which works perfectly well for data processing services. (ii) Having branches in strategic countries, ensuring that whilst it is night time at client destinations it is day time in some branches for work continuity. This is enhanced by running 24 hour shifts everyday - 24/7 working system.

For the non-same day work, **EVEREST** has adopted the 24/7 system to deliver quick turnaround times:

- *"We for instance do deals with international clients whereby we receive work at night and deliver the completed files by beginning of the next working day[23]" - **Business Development Manager***

EVEREST is yet to optimise these zoning benefits because its international branches are for sales/marketing purposes and not operations. It is believed that having operations in these locations may be expensive.

---

[23] At client's destination

The 'operate' process for data processing services exhibits similarity in both process steps and procedures from client to client. However, the firm allows clients flexibility in determining pre-'operate' process activities such as hiring of agents, appropriate training for agents and data security systems:

- *"Some also have very, very specific requirements in terms of the type of agents they want, the type of training they want, the type of security they want for their data"* - *Business Development Manager*

The delivery process is highly standardised but client-specific demands are considered. Each client has specific key performance indicators (KPIs) stated in the service level agreement (SLA). The breadth of data processing services in this firm is very narrow as the scope entails receiving scanned documents or voice recorded files from clients and keying or transcribing them into softcopies as the request may be. Considering revelations by **EVEREST's** employees, it could be argued that data processing is 'idiot-proof' (Schlesinger and Heskett, 1991) i.e., "*… with fewer, less knowledgeable* ~~sales~~ *people on the floor, customers* ~~will~~ *get less and lower quality* ~~help~~." (ibid, 1991 pp.75)

GIGAS International Inc.

To the main reason why local and international clients prefer to work with **GIGAS** International Inc., is delivery of quality data work cost effectively. From literature, clients consider quality and data security priority concerns. Hence, consistent delivery of accurate pieces of work is the main performance priority for **GIGAS**. The firm approaches quality matters earnestly and is among few CMMI level 3 cum ISO 9000: 2008 certified firms in the African continent. Quality check is so important for the data 'operate' process that terms like

quality checker (QC), quality analyst (QA), and quality analyst form were frequently captured during data collection for this study.

- *"If it is data entry they want 100% accuracy"* – **Agent 4**

- *"We have what we call quality analyst forms that are used to gauge the quality. Once a QC has gone through his team's work, he has this form that he has to fill for each and every individual from the work that he has been seeing"* – **Associate Service Delivery Lead**

Although clients are willing to a premium for quality service, to avoid uncertainties and ensure competitiveness into the future, the firm is keen on prudent cost management. Accordingly, **GIGAS** adopted several strategies towards realising cost benefits,: (i) identify and employ talents with low levels of education such as certificate capable of understanding data work; (ii) employee retention strategy supported by clear career advancement path in the company; (iii) offering competitive pay to the agents, better than immediate competitors and comparable to entry level pay in other local industries.

The scope of data services offered entails a number of services, some work is done and continuously delivered online whereas other jobs received in form of hard copy files is processed offline and sent to the client online. The online work is tailored to the client's asking. The bulk of work is homogeneous from client to client and is done offline albeit with some degree of flexibility. The client determines the kind of people to be hired, sets the minimum pay, chooses the appropriate time of the day when work should be carried out and decides what delivery processes and procedures are to be followed. **GIGAS** has invested heavily and formed strong relationships with many technology partners ensuring client

requests are easily accommodated irrespective of bespoke technology requirements. These technology partners include IBM, Microsoft, CISCO, ORACLE, SAP, CISCO, CompTIA, redhat, and PEARSON VUE. Agent training is tailored to match client specific technology. Despite this client free hand, the data 'operate' process offers generic data processing services to a diverse clientele.

HUMONGOUS Inc.,

The firm provides assurance that data processing work always surpasses client's current as well as expected quality levels and at low operational overheads. **HUMONGOUS** has an existing quality management system called quality assurance framework that ensures data processing 'operate' process consistently delivers excellent quality work. This is supported by client-centric staff training model that supports regular staff refresher courses. **HUMONGOUS** takes advantage of the 2/3 hours and 7 hour time zone difference between Kenya and the UK and the USA, respectively, to deliver faster turnaround times. The 24/7 working shift system is utilised to provide flexibility and give clients choice about appropriate delivery time of the day. Scalability concern is tackled through investments made in facility with ample space and technologies and helped by availability of labour on short notice. For data security, clients with excellent technology systems have their work processed in their own systems. Most clients have a representative at the site of operation to oversee the agents during work which provides brilliant liaison between the provider and the client.

HUMONGOUS specialises in few variants of data processing services, some entailing receiving of physical or electronic files that are entered into computer in specified format required by the client. A good example is migrating client's manual documents to digital

database. Although the engagement with clients entails many interactions, particularly prior to and during delivery, the central 'operate' process for data services, is routine:

- *"This work is tiring if you do it for the same client for long and the work they send is the same, day in day out – I feel like collapsing!"* – **Agent 2**

Synthesis: DATA PROCESSING

A summary of the emerging issues related to operational objectives, service adaptability and service focus in delivery of data processing service concept are summarised in Table 4-2.

Service Concept – data processing services		
EVEREST		
Objectives	*Cost*	utilise *cheap* labour in the host country, piece rate form of compensation, and client sending work in bulk benefits from operating in one location
	Quality	achieved through client-centric training process quality checking
	Speed	realised through time zone advantages and working shifts of 24/7
Adaptability	*Client say*	high during the step-up stage but drastically reduces during operate level
	Process similarity from client to client	high standardised
Focus	*Scope*	narrow with only two options (two types of services)
GIGAS		
Objectives	*Cost*	lower level of education employee retention - career advancement path competitive pay
	Quality	CMMI level 3 ISO 9000: 2008 slightly higher pricing than competitors
Adaptability	*Client say*	has say on online work since its specific to them determine agents to be hired and their pay choice of delivery time
	Procedure similarity from client to client	offline work is homogeneous
	Process similarity from client to client	accommodates different client technologies

Focus	*Scope*	select group of services (online and offline)
HUMONGOUS		
Objectives	*Cost*	should provide significant savings
	Quality	quality assurance framework client-centric training with refresher courses
	Speed	time zone benefits 24/7 working shifts
	Scalability	invested in huge space standby technology partners
Adaptability	*Client say*	work could be processed in client system allowed to have representative at the site
	Procedure similarity from client to client	lots of interactions pre-contract
	Process similarity from client to client	process is repetitive
Focus	*Scope*	few variants of data work

Table 4-2: Summary of service concept for data processing services

There is consensus that *cost* is the order winner for data processing services. However, to qualify and be considered for project providers are expected to meet certain minimum requirements. The criterion requires the provider to surpass client's existing internal process excellence level measured by traditional performance operational performance dimensions: (a) quality, clear procedures of ensuring standards are met, (b) speed, realised due to time zone differences and through the 24/7 shift system, and (c) flexibility, referred to as scalability i.e., capability to handle volatile capacity demands. Although the client is allowed ample latitude during the win phase of the project, the run phase is more closed up and *routinized*. For instance, at the initial stages the client determines the kind of staff to do the job and the necessary training for them, chooses the appropriate delivery time, and the location of the operations. However after the process is operationalized, it is up to the provider to ensure that the process runs smoothly. In other words, service providers adopt the principles of mass customisation. Compared to their Indian counterparts, the Kenyan BPO firms offer *fewer* data processing services i.e., narrow scope of services. The firms seem

comfortable in offerings services for which they are confident of positive results. The explanation provided is that the available labour in the market is not well acquainted with the right skills to deliver diverse range of services. In summary, data processing service offerings exhibit similar features irrespective of the company environment in which they are offered.

4.1.2 CASE OF RESEARCH WORK

EVEREST Company

Research work entails web search, outbound customer surveys and market research. Market research examines current market trends in particular industry. This information helps clients to develop appropriate business level and operational strategies necessary for competing in volatile markets. Cost emerged as the main driver in research outsourcing. Clients expect the service provider to deliver credible research findings in a timely way. As observed by the CEO timeliness is critical. This is due to reality that untimely information is irrelevant information:

- *"Failure to meet research deadlines literally means you are dead. Deadline is a matter of life and death"* - **CEO**

Seamless exchange of information between the client and the provider is ensured throughout the project. To deliver credible research findings, **EVEREST** ensures that from the start of the project, the client's requirements are succinct and clear and understood in detail by the research team. The presentation of the research findings and report is done according to specifications of the clients, enabling synthesis of the report and value derivation from inherent information.

GIGAS International Inc.

GIGAS International Inc. considers cost arbitrage, ability to collect credible data and analyse as the most important client winning criteria.

- *"Other than cost, once the client trusts that you are capable of collecting sufficient and credible data related to their interest, you have the job"* - **ITES Manager**

Experienced and tried researchers are valuable to research clients. **GIGAS** has at least two senior researchers in every area of research. Due to wealth of knowledge accumulated over the years, researcher retention, although expensive - through incentives such as high salaries and other employment benefits, is undertaken. These additional costs are recouped by charging slightly higher fee than the market average for the high quality work. The firm has a deliberate strategy to minimise interactions particularly in the run and renew phases of the project, ensuring optimisation of transactional costs. This is achieved by building trust and strong bonds with clients by meeting or surpassing expectations. For confidence building, the firm provides potential clients with an opportunity to visit premises and interact with the team of researchers.

HUMONGOUS Inc.,

HUMONGOUS Inc. offers simple routine market and web research services across many industries[24] because these services are easier to secure compared to core and complex research services that international firms may be unwilling to offshore outsource in Kenya because BPO industry is not well established. The main competitive criterion for securing research jobs is cost. The firm recruits graduates and trains them, under supervision of experienced researchers, for specific research projects. Moreover, the firm strives to build trust with the

---

[24] This concept of offering services to many industries is referred to as horizontal BPO

client eliminating the need for continuous monitoring of process and output quality. The reduced number of quality checks translates to cost savings. Other than cost, quality of work concern is addressed by matching experience of the research team to the nature of the research project. Dependability and reliability are the other client concerns which the firm realizes by delivering services that meet agreed service level specifications i.e., meeting deadlines and not reneging on promises. This is facilitated by internal integration of functions such as operations and business development.

Synthesis: RESEARCH WORK

A summary of the emergent issues related to objectives, adaptability and focus in delivering outsourced research work process are summarised in Table 4-3.

Service concept – 'operate' process of research work		
EVEREST		
Objectives	*Cost*	Is the main driver
	Provider's employees	Experienced professionals
	Contract related issues	Credibility of process as stated in contract
	Timeliness	Only timely findings are valuable
Adaptability	*Client say*	Client needs considered initially Final report is tailored
	Process similarity from client to client	Process is homogeneous and routine to the researchers
Focus	*Scope*	Web search and market surveys
GIGAS		
Objectives	*Cost*	Arbitrage Minimise interactions/ meetings by building trust
	Provider's employees	Access to experienced and tried talent
	Operational process criteria	Level of enforcement of procedures and systems of work
Adaptability	*Client say*	Instructions followed
	Procedure similarity from client to client	Homogeneous
Focus	*Scope*	Many
HUMONGOUS		

Objectives	Cost	The main driver Young graduates under supervision Reduced quality check through strong relationships and building trust
	Operational process criteria	Kenya not mature for complex research work that is core to client
	Supplier's employees	Matching research team to work
	Reliability	Deliver at agreed service levels through internal integration
Adaptability	Client say	States research needs Tailored report
	Procedure similarity from client to client	Routine
Focus	Scope	Simple routine web and market research

Table 4-3: Summary of service concept for research work

With regard to operational objectives in provision of research work services several similarities are observed in the three companies. Cost saving is main reason behind offshore outsourcing of research work and does not suggest the other operational considerations are less important. It is probable though that the client could better realise them internally but at higher cost. Indeed, **GIGAS** considers delivery of contractual metrics and timeliness as important to the clients. **HUMONGOUS** defines similar aspects but refers to them as reliability. The three case companies observe that calibre of service employees and operational process systems are important to clients. Although there is evidence of procedure similarity in delivery of research work, clients still ensure specific requirements are incorporated in the design of the process. Research work services by these firms are few and specific but offered to different industries connoting broad service focus.

4.1.3 CASE OF CALL CENTRE

EVEREST Company

Although clients expect packages of service benefits from providers, cost is the main driver. Clients believe they can internally realise competitive priorities such as quality and flexibility albeit at higher cost. Since labour cost is the highest contributor to overheads in call centres, offshoring to low cost destinations such as Kenya leads to huge cost savings. This is explained by the high unemployment among employable graduates produced by Kenyan universities every year.   Business processes are optimised through a unique workforce management (WFM) software that helps to reduce operational costs. Second concern to the client is the kind of experience that customers have while interacting with the customer service representatives.

- *"Apart from cost, I say it is quality and customer satisfaction with the call. Was their (customers') concern taken care of fully? First we are saving you cost and second we provide required solutions"* **Administration Manager**

- *"I think our entire process is encapsulated in what we call customer experience. We need to ensure the customer experience level is called WOW. So when somebody calls they will say wow, maybe my issue is not solved, but the agent was fantastic, very courteous, he solved my problem to whatever is possible."* - **CEO**

The experience is the total sum of many dimensions including courtesy, language and accent, ear for listening, mind to understand and ability of the agent to provide appropriate answers. The information provided first time to callers should not only be timely but final i.e., first call resolution (FCR). Also related to quality is the aspect of consistency:

- *"Let me give you an example, productivity is key and you are measured by the market and your ability to deliver, to be productive and provide quality at the same time. And*

quality is delivered at each interaction, so am talking to 100 customers today, and quality of 100 customers has to be the same level from customer 1 at the beginning of the day to customer 100 at the end of the day ... consistency is the word" – **Director of IT Analytics and BPM**

Assurance about scalability is the third important concern to the client; it enables quick response to market changes such as fluctuations in number of incoming calls. **EVEREST** provides scalability through; (i) use of workforce management team that maintains proactive staff scheduling system, and (ii) a platform that supports space redundancies. Lastly, security of customers' information is a major concern and is addressed through an integrated access control system. The firm uses customised performance management system that reviews the performance of each agent allowing for corrective action to be taken on ad hoc basis. The 'operate' process for inbound calls is customised to each client's requirements but the scope of the client's customers' needs falls within predefined menu. However, inbound calls vary in customer demands.

- *"So if I am handling an electronic company I need to have IT background, so that I may be able to trouble shoot phones, TVs, computers and all that. So you need to have a good IT background, but if its basic customer service like telecom, you just need to know basic telecom, to know your way around the phone. So that in itself is a special skill."* - **Director of I.T Analytics and BPM**

GIGAS International Inc.

Competitive costs due to economies of reduced overheads and infrastructural costs make **GIGAS** International Inc. call centre services competitive. This is enabled by process optimization stemming from investments made in cutting-edge call centre technologies.

Clients seek service providers capable of maintaining quality standards and satisfying customer requirements at significant cost savings. This firm offers increased customer satisfaction through high quality interactive service that is assured through the use of highly trained and experienced agents. A 24/7 working shift mechanism provides flexibility in answering customer queries irrespective of the time the customer calls. Despite customers calling randomly, the first call resolution strategy ensures high customer satisfaction and high customer retention into the long term. Client's requirements vary, for instance, in terms of skill level requirements, call volumes and work complexity, depending on BPO vertical but in general inbound call 'operate' process is homogeneous. The scope for inbound calls entail 4 channels; voice, e-mail, chat, and short message services.

HUMONGOUS Inc.,

Besides the official cost leadership strategy captured in the SLAs, **HUMONGOUS** strives to deliver quality service to the client's customers. The firm provides specialised as well as simple inbound call centre services. For routine calls, the company employs non-graduates who cost less and have lower attrition rates than graduates. For the specialised/technical projects, degree holders are preferred because of comprehension of issues and adaptability to heterogeneous business models necessary for delivery of quality services. The team undertaking the project is tailored for the job. **HUMONGOUS** receives and answers inbound queries through three platforms; e-mails, voice and sms. Flexibility is guaranteed by the use of 24/7 shift system that allows clients to participate in agent hiring, training and determination of remuneration. The firm has redundant fiber links that provide scalability assurance.

Synthesis: CALL CENTRE

A summary of the emergent issues related to operational objectives, service adaptability and service focus in delivery of inbound calls service concept are summarised in Table 4-4.

Service concept – 'operate' process for call centre services		
EVEREST		
Objectives	Clients expect a package of benefits:	
	Cost	B2B *cheap* labour in the host country workforce management
	Service level	B2C AHT, FCR, abandonment rate, speed of answer etc. could be achieved through client-centric training Soft skills Neutral accent Realised f 24/7 Consistency in call handling
	Contract related issues	SLAs implemented
	Scalability	Proactive staff scheduling mechanism Platform and space redundancies
	Security	Integrated access control system
Adaptability	*Client say*	High B2B Low B2C Hiring and training
	Process similarity from client to client	High B2B Low B2C – predefined menu
Focus	*Scope*	Narrow
GIGAS		
Objectives	*Cost*	Reduced overheads and infrastructural costs Process optimization through on edge technologies
	Contract related issues	Issues in the SLA
	Quality	Highly trained and experienced agents
	Operational process criteria	Milestones Testimonials
Adaptability	*Client say*	24/7 shift
	Process similarity from client to client	B2C homogeneous B2B heterogeneous Call volumes are different Work complexity is different
Focus	*Scope*	Four channels but homogenous between clients - Narrow

HUMONGOUS		
Objectives	*Cost*	Cost leadership strategy for B2B Non-graduates for the simple routine services
	Quality	For B2C Employs degree holders for complex services
	Flexibility	24/7 working shift
	Scalability	Redundant fiber links
Adaptability	*Client say*	Could play a role in hiring, training of agents
	Process similarity from client to client	Complex services are tailored Simple ones are routine/standardized
Focus	*Scope*	Specialised as well as simple services Three platforms; e-mail, voice and sms – narrow

Table 4-4: Summary of service concept for call centre

With regard to service concept attributes for the provision of call centre services, huge similarities are observed. First in terms of operational objectives - there was consensus from the three case companies that offshoring decision is hinged on possibilities of cost arbitrage benefits. However, assurance about service levels, flexibility and quality are so important and are enforced through stringent service level agreements. Capacity scalability is considered important and is evaluated at the win phase as an order qualifier. Second, call centre entails co-production and shared design of the service delivery process. This is due to service provider reliance on client information in terms of probable caller queries and answers. Furthermore, there is observable similarity in process execution from caller to caller. Third, all the companies offer services to industry verticals, translating to a narrow operational focus.

4.1.4 CASE OF TRAINING WORK

EVEREST Company

Although **EVEREST** acknowledges that there are multiple reasons why clients offshore outsource training process, cost cutting is the order winner. By outsourcing training work, the nature of running costs changes from fixed re-current to variable which are incurred on ad hoc basis. Other reasons include: access to global management knowledge pool of individuals exposed to many decision scenarios in different firms operating in distinctive contexts; the global outlook of trainers helps widen the client firm's outreach and understanding of the market beyond the host country; avenue for innovation because employees are eager to learn from leading experts, sprouting new ideas that would otherwise not be available internally. **EVEREST** offers one line of training service; customer support services. This is explained by high inherent expertise emanating from continuous training conducted for every new call centre client coming on board. Since it is the same consultants who lead the training 'operate' process, cost as well as quality benefits are tremendous. Despite the niche training service, it is observed that each client's requirements are unique requiring customised curriculum and delivery model. For clients who choose, especially for short period training, the exercise is conducted within their premises. **EVEREST** has invested heavily in on edge training facilities that are availed irrespective of the training duration.

GIGAS International Inc.

The firm seeks to ensure that its successful training programs translate to better bottom-line for the outsourcing client. Outsourcers look for trainers that would understand the brand, vision and mission of the client firm and provide training services cost efficiently. Existing and potential clients seek to outsource training services because they lack internal expertise.

GIGAS is able to offer cost savings because of the economies of scale arising from the wide spectrum of jobs undertaken. The winning criterion entails creating long lasting partnerships with clients such that the training fully captures the work systems/processes of the client. Indeed, **GIGAS** specializes in two areas of training; (a) customer care training services, and (b) process excellence. Whilst the former is about "soft skills" in handling customer interactive activities, the latter relates to use of continuous process improvement programs to optimise organisational processes. These include process documentation, automation, choosing the best technology and so on. Given that the client firms operate in different contextual environments, all the training is client-specific such that no two 'operate' processes for the training case are similar. Each project is aligned to corporate, business and operational goals of the client. Clients continue to realise benefits into the long-term by working with **GIGAS** because of the continual growth in experience and knowledge enrichment trainers accumulate from global exposure. This leads to significant cost savings and adoption of contemporary management skills and knowledge.

HUMONGOUS Inc.,

The main reason why client outsource training is to avoid investing in expensive infrastructure. Service providers are able to invest in state of the art training infrastructure because of the economies that emanate from serving many different clients using the same facilities over the years. This enables **HUMONGOUS** to offer cost effective training services. The firm provides training in customer support where their main strength is innovation and flexible curriculum tailored to clients' needs. The service package offers innovation, leading to realisation of benefits to bottom-line of the client. At the end of the training program, the trainee is able to view work from a supply chain rather than organisational perspective.

Despite specialisation in one line of training services, **HUMONGOUS** is well acquainted with the fact that client requirements are heterogeneous in terms of training needs, calibre of staff to be trained, market in which the client is operating, and scope of client's operations, all of which must be factored into the design of the training curriculum.

Synthesis: CASE OF TRAINING

Summary of emergent issues related to operational objectives, service adaptability and service focus in the delivery of service concept for training service case are summarised in Table 4-5.

With regard to competitive priorities, there is consensus that, in making the outsourcing decision, innovation is as important as cost considerations. Client firms realise that value originates from the calibre of employees in the service provider firm. There is agreement that the service provider should have good understanding of the client's business, brand and the operational market environment. In terms of adaptability, the training case is influenced by the clients both in conceptualisation and delivery. The process is entirely tailored to the specifications of the clients. All the three case firms provide broad range of training services to diverse industries and markets.

Service concept – 'operate' process for the training case		
EVEREST		
Objectives	*Cost*	Is the order winner Economies of scale
	Innovation	New ideas
	Competitive environment	Image Understanding of client's business environment
	Provider's employees	Global talent pool Motivated
Adaptability	*Client say*	Training is based on needs analysis/ objectives
	Process similarity from client to client	Heterogeneous Customised curriculum Delivery model
Focus	*Scope*	Niche - Broad focus
GIGAS		
Objectives	*Cost*	Client's bottom-line Economies of scale
	Way of working	Create long-lasting relationships
	Innovation	Access contemporary management views
	Competitive environment	Understand client's needs: brand, vision, mission
	Provider's employees	Fill the internal gap Tried and exposed to global challenges
Adaptability	*Client say*	Huge in guiding the entire process
	Process similarity from client to client	Heterogeneous Depends on business environment Current processes/ employees
Focus	*Scope*	Flexible customer care support and process excellence – Broad
HUMONGOUS		
Objectives	*Cost*	Avoid infrastructure cost Economies of scale
	Quality	State of the art facilities
	Innovation	New ideas New management view
	Provider's employees	Quality and knowledgeable trainers
Adaptability	*Client say*	Client's TNA is a must
	Process similarity from client to client	Tailored curriculum Depend on client's staff and their market of operation
Focus	*Scope*	Heterogeneous customer support services – Broad

Table 4-5: Summary of service concept for the training work

4.1.5 Service Concept – Aggregate Amalgamation

Summary of all the four cases in terms of the three sub-constructs of the service is provided in table 4-6. The work summary forms an important block for the cross-case comparisons to be undertaken in chapter six.

	Data processing	Research work	Call centre	Training
SC-OBJ Order - Winner(s)	Cost	Cost	B2B: Cost B2C: Service level	Innovation and cost
Qualifier(s)	Quality and speed	Operational process criteria & provider's employees	Contract related issues, scalability and operational process criteria	Provider's employees and competitive environment
SC-ADP	Low	Medium[25]	B2B: High[26] B2C: Low	Very High
SC-FOC	Narrow	Broad	Narrow	Broad

Table 4-6: Summary of service concept attributes for all cases

4.2 Summary of Chapter 4

This chapter highlighted the attributes of *service concept*; operational objectives, service focus and adaptability and revealed similar patterns and characteristics within-case in the three companies and also between cases such as data and call centre, and research and training cases. Significant cross-case disparities, for instance between data and training cases and cases of research and call centre were observed and documented.

---

[25] The 'operate' process is homogeneous but the 'win' process and the final report are tailored
[26] This study is related to the 'operate' process that is specific to B2C relationships of case C. The B2B aspect though important is not considered for this particular interpretation.

5 CHAPTER FIVE – CUSTOMER INPUTS

This chapter aims to explore the concept of customer inputs with view to unravelling the specific OM attributes relevant to particular IIS. The concept of customer inputs is reviewed with a view to distinguishing between the four service offerings using features related to input type, cause of variability, and quantity of customer inputs as construed from literature review.

5.1 Concept of Customer Inputs

Table 5-1 presents codes for the customer inputs construct. The first two letters; CI, across codes represent the main category, customer inputs; the other letter(s) represent specific variable and or its sub-category.

CATEGORY: CUSTOMER INPUTS - CI	CODE	EXPLANATION
CI: Type		
Informational	CIT- INF	Three important aspects of information: equivocality, intensity and volume
Interaction	CIT-SLF	Direct or indirect interaction
Triadic	CIT-TRI	Are there two beneficiaries to the service provider's operate process?
CI: Variability		
Arrival	CIVAR-ARR	Timing of customer requests
Request	CIVAR-REQ	Diversity of customer requests
Capability	CIVAR-CPB	Diversity of customer co-production abilities
CI: Volume	CI-VOL	Time and effort expended by the customer

Table 5-1: Codes for customer inputs

Volume of information is measured by enumerating the number of process cycles[27] completed by the lead employee in a task over given time period. CIT-SLF measures customer contact by answering the question: ""How much does this job require the worker to be in contact with others (face-to-face, by telephone or otherwise) in order to perform it?"" (Liu et al., 2011 pp.565) and re-looking at the process activities in PCN diagrams. The triadic nature of relationship between service provider and client is expressed through 'dummy [like] variables'; YES or NO[28], establishing whether the 'operate' process simultaneously serves one or more beneficiaries. The three types of customer input variability are literally measured by way of the respective statements in table 5-2. Volume of customer inputs is measured relative to time and effort directly expended by client into 'operate' process.

5.1.1 CASE OF DATA SERVICES

Analysis of customer input data collected from the three case companies is undertaken in the sequence expressed in Table 5-1, evaluating the nature and volume of customer inputs and level of variability caused to the 'operate' process.

EVEREST Company

Type of customer inputs: CIT

Table 5-2 presents summary of statements collected from **EVEREST** related to the type of customer inputs as determined in data service processes. The findings suggest data service clients supply unambiguous operant customer inputs in form of instructions. The instructions form the major component of the service level agreement and are realised by well-trained

---

[27] Process cycle is defined by complete PCN diagram for a process
[28] YES means present and hence a triadic relationship and NO means dyadic relationship

customer service representatives. Once understood, instructions become part of day-to-day operations and are revisited during performance evaluation. On the other hand, operand customer inputs such as data files are continuously received for processing during the project life time. The intensity of operand customer inputs is high because data processing process is unsustainable unless client files are received. Accordingly, the number of data processing cycles is high. Data services are processed at the back office and mostly entail dyadic relationships. There are however few exceptions whereby third party firms collect work from companies out of the country and outsource to the case companies for processing.

CI: Type	Statement
CIT-INF i. Equivocality	• *"The expected performance levels are clearly stipulated in the SLA"* – **Agent 1** • *"Yes, they (agents) all know what is expected of them"* – **Operations Manager**
ii. Intensity	• *"Without the client sending the files, then our agents have no work that day. This is also the case with the call centre, unless customers make a call, the agents are free!"* - **CEO**
iii. Volume	*Many*
CIT-SLF **Core activity** Do work	Since the core activity is in the surrogate region, data processing has low level of customer contact even though clients are involved in the pre-operationalization stage: • *"Actually we do involve clients all the way from recruitment to training. For daily running of the process, we have a representative of the client company on the floor – more of a liaison officer for the client."* – **Team Leader 2**
CIT-TRI	Data processing is mainly dyadic (B2B) but there are instances where projects are secured through a third party making the relationship triadic (B2B2B): • *"We have such platforms like one called SH[29]. So the agent will log in as an agent, the QC as a QC and then the client team will also log-in as admins. So the agent works on his batch and then it will come to the QC but the agent cannot see where the work has gone to, he will just do his bit. The QC will be able to access the work done by the agents, go through it. Sometimes you may have a QA level here, the QA will come in and go through a sample of the work and then from the other side [client] the admin is able to access the final job"* - **Quality Analyst 1**

Table 5-2: Summary of customer inputs for data processing - **EVEREST**

---

[29] The platform, SH is owned and run by a client who secures jobs from US third party firms and outsources the work to **EVEREST** i.e., an example of B2B2B relationship

Customer input variability: CIVAR

The minimal arrival variability observed in this case is explained by the pre-determined start date and advance planning of project delivery. Clients have most of the data ready for processing way in advance of project commencement, such that data arrival is definite.

- *"As I mentioned we operate 24/7, this means the client can choose the right timing for delivery of their work. That is to say, work should be processed between 10.00a.m and 3.00pm or 8.00pm and 4.00am or whatever other time that suits them or it could be continuous until the project is completed"* – **Team Leader 2**

In terms of requests, data processing services are homogeneous with slight flexibility allowed in the pre-'operate' stages of the process.

- *"They bring in bunch after bunch of papers, make us understand how they want it done, it is all captured and put in the computer. There are others however who will have scanned - soft - documents that they send online. So that is also data service."* – **Administration Manager**

- *"We actually need to understand the clients' requirements at a very early stage, because some also have very, very specific requirements in terms of the type of agents they want, the type of training they want, the type of security they want for their data"* - **Business Development Manager**

Capability variability does not apply to data processing services because the client is not a co-producer.

GIGAS International Inc.,

Type of customer inputs: CIT

From the summary of the findings in Table 5-3, the role of the client is not only to provide data files for processing but also to conduct quality evaluations. Processing of the two activities follows clear procedures with no ambiguity. Processing is data intensive and entails 'manipulation of symbols' (Apte and Mason, 1995). This means that clients repeatedly send work for processing in many process cycles during the project duration. Data service processes are highly decoupled, meaning there is minimal client participation, to enable optimal flow between firms. This affords clients ample time to oversee the project as it unravels. All the experience that **GIGAS** has had with clients to date has been dyadic without third party involvement.

CI: Type	Statement
CIT-INF	
i. Equivocality	Minimal operant customer inputs. Customer plays two roles: - give clarification about operand inputs, and - quality audits, Hence, the process is highly unequivocal
ii. Intensity	• *"This is how I see it … we receive incomplete data, enter it to a database in the requested format with a lot of editing and verifications before eventually handing the completed data file to the client. That is data …"* – **Operations Manager** As per the PCN, data 'operate' process is all about data processing
iii. Volume	*Many*
CIT-SLF **Core activity** Do work	Although the core activity is in the surrogate region implying low level of customer contact for data services, interview data suggests some level of contact during the data 'operate' process: • *"We have to quickly understand the client's process and that is why we are in touch sometimes every half an hour with the appointed person on the client-side – who will explain and clarify the events"* – **Quality Manager** • *"We do have online platforms - clients put their work somewhere, we don't even have to download, we just work on it from there and so they are actually able to see how – for instance they even sometimes call and ask how comes there are supposed to be say four agents and we are seeing only one agent"* – **Director Business Development and Technology**
CIT-TRI	Dyadic – B2B

Table 5-3: Summary of customer inputs for data processing - **GIGAS**

Customer input variability: CIVAR

Client exposure to the 'operate' process acts as the base in estimation of the volume of work per time duration flowing to the service provider. Since these are estimates, **GIGAS** makes provision for variation in the amounts of work arriving. For instance, the QCs who undertake the work during the win phase act as cushion to capacity during the 'operate' phase.

- *"The information supplied to us is gathered by the client from their current or potential customers. As you may know, business environments – markets are volatile such that you wouldn't know the exact volumes to expect at a given time – you work with estimates" –* **Managing Director**

Although the general requirements for every new client are routine with clear guidelines and procedures, details differ from project to project. For instance, the client is free to suggest the appropriate number of workers and the requisite skills needed for the project. Requests are made at pre-determined times and follow agreed work schedules. However, volume of work could fluctuate in tandem with market variability.

- *"If the project goes through the client might say I will need forty people, now if the client is ready to commit in terms of volume we then get such a team and commence training" –* **HR & Training**

- *"Once these agents have passed what we call the off-hub or offline training they go on to the system. What they are going to process, even the client's team will be able to see. Sometimes the client is the one who will tell us these are the individuals who passed – they will say this is the team we want" –* **Operations Manager**

HUMONGOUS Inc.,

Type of customer inputs: CIT

Summary of customer inputs related data, table 5-4 shows that clients provide both operand and operant customer resources. However, the latter are in form of procedural guidance during transition prior to commencement of the operate phase. Since these instructions are simple, clear and easy to understand, data processing is unequivocal. **HUMONGOUS'** 'operate' process for data services entails symbolic manipulation of data - operand inputs - for which the client desires efficient handling. The data is received frequently in the life of data service project. The 'operate' process is undertaken at the back office although there are peripheral interactions that do not qualify for the label of co-production.

CI: Type	Statement
CIT-INF i. Equivocality	• *"Some of the jobs are long-term, others short term and the client will always tell us everything including specifics e.g., about the duration be it 1 year project, 2 months project or even work for a weekend where we just get a huge team, they come and clear the batch and then they leave"* – **Program Manager**
ii. Intensity	• *"The reason is that they have these very immense data that they cannot properly handle"*- **Quality Leader**
iii. Volume	*Many*
CIT-SLF **Core activity** Do work	The core activity entails surrogate interaction but there are instances of direct interaction: • *"For international customers it may be hard, but there are always interactions online maybe via skype, always online. But for local accounts we do have representatives who always sit here get to see how the account is running, may be clarify something, new products. They are the point of contact between us and client in terms of the daily running of the account."*- **Associate Service Delivery Lead** • *"I know international clients for data; I know it is daily via Skype or email. But for local clients, apart from daily reporting, there are weekly meetings. In terms of quality they do it every week, get see where the quality is whether they can improve it, so it is an on-going process"* - **Quality Leader**
CIT-TRI	Dyadic – B2B

Table 5-4: Summary of customer inputs for data processing – **HUMONGOUS**

Customer input variability: CIVAR

Client caused variability is negligible since there are clear and strong working relationships between the parties. Indeed, most clients allow **HUMONGOUS** free hand to access data end-to-end from the original source.

- *"For most clients, we are enabled to access data from the source – we have seamless link to the channels used by the client's customers"* – **Director of Operations and HR**

Requests put forward vary from client to client, such that they are unique to each project but once understood and become clear; they are no longer challenging to manage.

- *"***HUMONGOUS*** offers diverse back office data services such as database management, data cleansing and validation, data entry and so on. Each of them requiring specific agent qualifications and capabilities, specific technologies and specific work hours"* – **Managing Director**

5.1.2 CASE OF RESEARCH WORK

EVEREST Company

Type of customer inputs: CIT

Table 5-5 suggests that client provided information is equivocal regardless of the efforts made by the client to provide clear instructions. The 'operate' process does not directly utilise the information intensive guidelines from the client but rather the data collected from relevant sources. This relates to basic level of outsourced research work carried out by **EVEREST** at the time of the study.

CI: Type	Statement
CIT-INF	
i. Equivocality	• *"Just like any other research study, the instructions [from the client] could be clear but the process is never smooth. Researchers have to think on their feet. For instance, if the anticipated data source is not forth coming they quickly must find and seek alternatives"* – **Director Quality and Training**
ii. Intensity	• *"Once our research team understands the client's [research] needs, the role of the client ends there not unless clarification is needed"* – **Reporting, Analytics, Pricing and Workforce Manager**
iii. Volume	Few
CIT-SLF **Core activity** Understand expectations Design study Develop data collection tools Search for information Analyse data Write report	Since five of the six core activities appear in the surrogate interaction region of the PCN, research work is a low contact service.
CIT-TRI	Research work is B2B

Table 5-5: Summary of customer inputs for research work - **EVEREST**

Volume of customer provided inputs is low because ordinarily there is one process cycle per research work project. In terms of contact, there is limited participation of the client allowing the service provider to carry out the 'operate' process at the back office. Indeed, client participation is limited and takes place in the first activity of the process, bringing the provider to quick understanding of the project at hand. For **EVEREST**, research work entails provider-client relationship with no third parties.

Customer input variability: CIVAR

Clients specify research needs well in advance before commencement of the core activities. Therefore at the point of receiving or processing research work, client caused arrival variability does not exist. However, clients operate in volatile environments and may change the research objectives from time to time.

- *"In case several bids go through at the same time, we would have no problem because the current team is not yet fully utilised"* - **Operations Manager**

Different research projects have different objectives, urgency, criticality, and size.

- *"Every project will be different from the next project but work in a project is the same"* – **Operations Manager**

Due to limited client involvement in this case, capability variability is not applicable.

GIGAS International Inc.,

Type of customer inputs: CIT

Table 5-6 presents a summary of customer inputs evidence gathered from data services.

CI: Type	Statement
CIT-INF i. Equivocality	• *"For simple web searches and data mining where the client gives clear guidelines, one could anticipate the findings. However, for complex research, no one can ever guess where the research journey will take them"* – **Agent 3** • *"I am pretty sure; you (reference to the author) don't know what the findings of your PhD research will be. Do you?"* – **Associate Delivery Lead**
ii. Intensity	For **GIGAS**, three[30] variants of research work were observed: - Client gives instructions and the provider undertakes the rest of the activities - PCN - Client sends data for analysis by the provider, and - Client gives instructions to help the provider gather particular data. These data is then handed over to client without analysis
iii. Volume	Few
CIT-SLF **Core activity** Plan and collect data Analyse data Write report	Since all three core activities appear in the surrogate interaction region of the PCN, research work is low in direct contact.
CIT-TRI	Research work is B2B

Table 5-6: Summary of customer inputs for research work - **GIGAS**

---

[30] All the three variants entail data manipulation

Instructions given to the service provider are relatively equivocal due to the reality that it is not possible to predetermine the research processes let alone the outcome. Research work is information intense and entails data collection and analysis with minimal number of process cycles. Indeed, other than the client giving instructions, the other activities are undertaken by the service provider. In relation to interaction, the 'operate' process is highly decoupled and commoditized. Research work entails dyadic relationship between the client and provider businesses.

Customer input variability: CIVAR

It is observed that research work is secured randomly during the win phase of the project. But in the operate phase, clients are put on a schedule that considers urgency and criticality of the project and are accordingly delivered within agreed timelines. Research work is fixed and follows laid down schedules such that the 'operate' process is not affected by arrival variability.

- *"Face-to-face meetings or teleconferences are used to fix key timelines and resource plans"* – **ITES Manager**

Although the main steps of the 'operate' process for research are identifiable from the PCN diagram, there are no two client processes that follow exactly the same steps and sequence. Furthermore, the nitty-gritties of the activities are dissimilar.

- *"The difference between projects is in the small details"* – **Director of Operations and HR**

Clients do not define the research problems in standard way. Whilst those that previously conducted in-house research may fully understand what it takes, first timers may not.

- *"Clarity or lack of it, I would say, of the problem being investigated defines the other steps"* – **Operations Manager**

HUMONGOUS Inc.,

Type of customer inputs: CIT

As may be seen from Table 5-7, client provided information is equivocal due to the volatile nature of environments from which data are collected. In addition to being processed in B2B relationship, the case is information intensive and encompasses the client providing **HUMONGOUS** with operant instructions to be followed in collection of appropriate data. Unless the market dynamics change, there is one 'operate' process cycle per research work project. However if there are changes in market that necessitate project variation, an extra cycle may be required.

CI: Type	Statement
CIT-INF i. Equivocality	• *"Despite our efforts in ensuring that clients provide clear and specific instructions to avoid nuances, market research is complex and not a straightforward"* – **Recruitment and Training** • *"Researchers come across many situations and options requiring choice – a subjective undertaking. Let me give you a simple example – given two data sources that look similar, why prefer one to the other?"* **- COO**
ii. Intensity	• *"Customers provide instructions which we follow in collecting and analysing data"* – **Business Development Leader**
iii. Volume	Very few
CIT-SLF **Core activity** Develop research plan Collect data Analyse data Write report	Since all four core activities appear in the surrogate interaction region of the PCN, research work is low in direct contact. • *"For research it is rare to have direct contact with the client – unless it is a real time project"* – **Director Business Development Africa**
CIT-TRI	Research work is B2B

Table 5-7: Summary of customer inputs for research work - **HUMONGOUS**

Customer input variability: CIVAR

Since research work services in **HUMONGOUS** are still at infancy stage, client caused variability has minimal effect to the operate process.

- *"We are far from crisis or overwhelming level. For now, the faster the rate at which we contract new projects, the better. We have capacity that we feel can do more than is the case today"* – **Project Manager**

Research is a high request variability service due to diversity of clientele. Despite the unique client requests, the process sequence is standardized for all.

- *"I am yet to come across two projects that are alike. I mean same data, same objectives"* – **Quality Analyst 2**

- *"To make the point clear, consider our clients; AAA is a manufacturing firm, BBB is an insurance company, CCC is a bakery, DDD is a bank. This explains the dynamism of our clients and the markets in which they operate - and so is the research work undertaken for each of them"* – **CEO**

Since research work entails minimal interaction with the client, the construct of capability variability is not significant. The alluded minimal interaction occurs in case questions are posed [reference is made] to client's liaison person.

- *"The liaison person from the client-side understands the research process and that way there cannot be confusion "* – **Service Delivery Lead**

5.1.3 CASE OF CALL CENTRE

EVEREST Company

Type of customer inputs: CIT

The 'operate' process for call centre depends on two types of customer inputs; (i) inputs from the generic beneficiary, the client firm, and (ii) inputs from the specific beneficiaries, customers of the client. This connotes a triadic process and will be considered herein.

Whereas client provided information is unequivocal, caller provided information has ambiguity albeit minimal (Table 5-8). In terms of information intensity, the 'operate' process for call centre is multi-dimensional, both informational and interactive. The process involves FO interaction between employees of the service provider and callers. Because of the high number of callers and consequent number of process cycles, call centre has high information volume. Despite there being two solution provision points; the IVR and the agent, most calls are resolved by the agent and as such call centre service is considered high contact service.

CI: Type	Statement
CIT-INF i. Equivocality	• *"The expected performance levels are clearly stipulated in the SLA. Yes, for both – data and voice"* – **Agent 1** • *"For inbound call centre, agents respond to caller's queries. We already have an idea [from the historical pattern] the likely questions to expect and thus agents have answers at their fingertips"* – **Agent 3**
ii. Intensity	• *"Without the client sending the files, then our agents have no work that day. This is also the case with the call centre, unless customers make a call, the agents are free!"* - **CEO**
iii. Volume	Many
CIT-SLF **Core activity** IVR receives call Agent receives call	Since most calls are resolved by the agent, call centre case is a high contact service.
CIT-TRI	Call centre is triadic: • *"What we say is that we are virtual captive. Virtual captive means you are like a captive, you are part of the organisation but you end up working for* **EVEREST** *but you are part of client Y. So for example any customer communication client Y sends out, we send it out through these agents as well to ensure that they feel empowered and as part of that organisation."* - **CEO**

Table 5-8: Summary of customer inputs for call centre – **EVEREST**

Customer input variability: CIVAR

The 'operate' process for call centre services entails high degree of arrival variability since customers call randomly at any time of the day.

• *"Customers are free to make enquiries at any time of the day….. Absolutely, we are on 24/7 365 days"* – **Team Leader 1**

Request variability is low because the needs of callers fall within an encoded menu of options. However, this being triadic service there is small element of customisation in the pre-'operate phase, before the specific beneficiaries come into play.

- *"We use a list of FAQs to make the agent's work easy. So, he or she can anticipate what the caller is likely to ask. If the question is outside the list of routine enquiries, then the agent escalates it to the technical team at the back office"* – **Team Leader 2**

- *"Clients are involved in all the steps for example recruitment, training up to the actual engagement, so we actually try to make sure there is very smooth or minimal disruption to the daily running of our clients business."* – **Business Development Manager**

- *"The agents are trained by our trainers and also by the client"* – **Director Sales**

Capability variability is high because the specific beneficiaries are highly diverse in terms of background, education and other demographics.

- *"The callers are totally different, whilst some will know what they want, others have no clear understanding. Just to give you an example, there are calls that AVR can adequately resolve but they still come all the way to us*" - **Agent 3**

GIGAS International Inc.,

Type of customer inputs: CIT

Data in table 5-9 suggests that client provided information is unequivocal and that all centre processes entail building trust and collaboration with the client.

CI: Type	Statement
CIT-INF i. Equivocality	• *"As long as there is trust between clients and a service provider, there are no uncertainties because of full disclosure and updates. We are always in the know for any new developments. There is no way you can deliver SLA without trust"* – **Operations Manager** • *"Measures such as AHT, escalations, abandonment rates, occupancy are in the SLA"* – **Agent 1**
ii. Intensity	• *"Whilst the demands of the client are stated in the SLA, the customer makes his/hers through the phone"* – **Associate Service Delivery Lead**
iii. Volume	Many
CIT-SLF **Core activity** IVR Speak to agent	Since both activities in surrogate regions, call centre is a high contact service
CIT-TRI	Call centre is triadic because: • *"Whilst the demands of the client are stated in the SLA, the customer makes his/hers through the phone"* - **Associate Service Delivery Lead**

Table 5-9: Summary of customer inputs for call centre case – **GIGAS**

Since the case is triadic, from the client's perspective, the 'operate' process is not only information intense but interactive. The cycle of information flow into the process occurs severally within given time durations.

Customer input variability: CIVAR

Although at client level projects are won through definite processes, the 'operate' process experiences random arrival of calls. Arrival variability is so high that one of the major challenges in managing call centres is scheduling of agents and finding the right capacity balance.

- *"Modern customers cannot wait for support to arrive tomorrow, not with competitors who are all about customer satisfaction. This is what has forced clients to operate throughout the day every day."* – **ITES Manager**

- *"Call centre projects are hard to come-by. HUMONGOUS is lucky to secure two in a year. That is why … renew phase is crucial, we cannot let go of a current client"* – **ITES Manager**

148

Whereas requests from clients are well stipulated, those from the callers at times deviate from the menu of options. However in general, request variability is not a major concern in delivering call services.

- *"Clients' needs are easy to tell because they are clearly stated but for the callers it is subjective"* – **Agent 4**

- *"There is a thin thread between correct anticipation of a call request and a misdiagnosis. Agents have to be in charge, focused and open to anything"* – **Program Manager**

- *"Once you understand your client's market, then you have solved the problem of uncertainty and hence many logistical concerns"* – **Operations Manager**

Capability variability is high among the callers but much lower between the clients.

- *"Think about it – there is no better definition of diversity, call centre customers are diverse. There is a category that requires minimum advice and the rest they DIY, then the 'normal' category – the average callers, reasonable as would be expected, and then the group of those who make a call as a first resort – given a chance, this group would walk to the centre"* – **ITES Manager**

HUMONGOUS Inc.,

Type of customer inputs: CIT

Table 5-10 provides summary data in regard to customer input variables. From training perspective, customer inputs from the clients are unambiguous. Otherwise, it is impossible to undertaken structured or sometimes client-centric training process. Customer inputs are informational although with significant FO interactions between callers and agents. As defined by the number of calls received per day, the volume of information is high.

CI: Type	Statement
CIT-INF i. Equivocality	• *"The kind of training that we provide clarifies what is expected of each CSR. This clarity of performance standards makes it easy for managers, quality leads and quality analysts"* – **Director Recruitment and Training** • *"Our clients will tell you that our contracts have no hidden details or costs or exploitable loopholes. We don't intend to exploit anybody for that is not who we are. That would not be the way forward."* – **Director Recruitment and Training**
ii. Intensity	• *"The caller-agent interactive part is challenging because you never know what is up a caller's sleeve"* – **Agent 2**
iii. Volume	Many
CIT-SLF **Core activity** IVR Agent greets and identifies need Address issue Escalate to back office	Since 3 of the 4 critical call centre activities are in the direct interaction region, the process is classified as a high contact service.
CIT-TRI	Call centre is triadic: • *"A call process has two parts; relationship between clients and us, and our relationship with the callers"* – **Operations Manager** • *"Care must be taken in drafting SLA to avoid conflicts in delivery of divergent client vis-à-vis customer needs"* – **Director I.T**

Table 5-10: Summary of customer inputs for call centre case – **HUMONGOUS**

Customer input variability: CIVAR

Arrival variability is high such that it warrants 24/7 'operate' process for call centre services.

• *"Two of our first clients; one a cable TV company and the other a college engaged us, despite our advice against, for 10 hours and 8 hours call centre work respectively, only for the cable TV to reconsider after experiencing many customer complaints. Today, we operate the call centre 24/7 365 days a year"* – **Director I.T**

Irrespective of client type, most customer queries are pre-known i.e., low request variation.

• *"For some companies, 90% of the queries can be predicted but for others the percentage is lower. But on average, I would say, irrespective of the client, more than half of the callers' concerns are predictable"* – **Director I.T**

- *"We offer many types; some are mobile phone companies call centres, utility providers, banks, cable tv provider, restaurant among others"* – **Associate Delivery Lead 2**

- *"There is bias in how the callers are treated. For example for the bank, business or the so called 'corporate' clients are given preferential treatment, they are provided designated agents despite the low volume of calls that they make"* – **Agent 2**[31]

Callers are diverse and cut across many demographic characteristics

- *"Notwithstanding their status in society or demographic differences, their [callers'] needs and desires are universal"* – **Quality Analyst 1**

5.1.4 CASE OF TRAINING WORK

EVEREST Company

Type of customer inputs: CIT

This case is dyadic with highly equivocal customer inputs because clients are not entirely clear about specifics such as research methodologies, Table 5-11. The 'operate' process is vastly interactive although it entails information exchange. Since there are few process cycles, the volume of customer information is low. Training case entails high contact service since all the core activities entail direct interaction.

---

[31] This services are paid for – are not provided for free

CI: Type	Statement
CIT-INF i. Equivocality	• *"The challenge is that clients do not know exactly what they want, they rely on us, believe as experts we should be able to provide answers even where they don't state the questions"* – **Director Quality and Training**
ii. Intensity	Trainers handle non client information in most steps but the critical train activity entails a lot of contact with the client i.e., low to medium information intensity
iii. Volume	Few
CIT-SLF **Core activity** Determine objectives Develop content and delivery plan Train	Since these activities involve direct interaction with the client, training is a high contact service.
CIT-TRI	Training is dyadic

Table 5-11: Summary of customer inputs for training– **EVEREST**[32]

Customer input variability: CIVAR

Although training entails high client-involvement moments, arrival variability is not a distraction to the process because activities schedules are pre-set. Despite the liaison between **EVEREST** and clients at the operate process level, request variability depends on the passiveness or otherwise of the trainees during the actual training session.

• *"For the training to commence, each member of the trainers team, including secretaries, has to understand the client's motivation for outsourcing"* – **Director Sales**

• *"We liaise with the client in setting up the objectives for the entire training process"* – **Director Quality and Training**

Capability variability is low because trainees are people likely on the same organisational level.

• *"Most trainees grasp the issues quite well and more importantly, very quickly. But, I have actually observed this for so long, seriousness! They don't have… no no … they take it*

---

[32]Most clients that outsource training from **EVEREST** are local

easy. But that is why we are here, to make them become serious" – **Administration Manager**

GIGAS International Inc.,

Type of customer inputs: CIT

The process consumes equivocal customer information as shown in Table 5-12. In terms of intensity, the highest proportion of process time is spent during the interaction rather than in processing information. Training case is low in customer information volume due to singular process cycle per project. The core activities in the 'operate' process entail direct interaction and are dyadic, without third parties involvement.

CI: Type	Statement
CIT-INF i. Equivocality	• *"For any training, reaction of the trainees is a major performance measure. Are they called first impressions? However, real benefits such as employee productivity, behaviour change - time keeping, courtesy to customers and so on are realise later at the place of work – they are long-term to the client"* – **PR officer** • *"Success metrics for a training program are diverse and that is why assessment and identification of training objectives have to be done before we commence the training"* – **Operations Manager**
ii. Intensity	From the PCN, this is a highly interactive information exchange process i.e., interactive but informational
iii. Volume	Very few
CIT-SLF **Core activity** Assess and identify objectives Develop content Learn/train	Since two of the three core activities involve direct interaction with the client, training is a high contact service.
CIT-TRI	Training is dyadic • *"Identification of objectives and the corresponding performance measurement metrics means the client defining success from their customers' point of view. It is important, as trainers, we understand the client's market"* – **Program Manager**

Table 5-12: Summary of customer inputs for training– **GIGAS**

Customer input variability: CIVAR

There are rare occasions in which **GIGAS** secures and delivers more than one training project at the same time. The client determines the appropriate training time considering the service provider has to deliver work in agreed time schedules. The service provider requires ample time to pool together the necessary resources required for the project. Evidence suggests that inputs arriving from the client do not vary delivery of 'operate' process.

- *"The best case is when the timetable/schedule is adhered to strictly, but again unavoidable emergent situations have to be attended to. We make provisions for such upshots"* – **ITES Manager**

Training work is high in request variability as each client seeks training that matches or addresses the needs of their customers. Since **GIGAS** offers training in customer care and process excellence, the clients served come from different industries and sectors. As such, their requests are bespoke. This low level training gives rise to unique challenges.

- *"Mediation is the other role; we mediate between the trainee employees and the client. We enable them to see the bigger picture from their employer's perspective"* – **Director Operations and HR**

- *"Composition of the group could affect the training sequence of events. Think of training an individual, this is different from training a group of say 5 individuals which is in turn different from a larger group with more people"* – **HR and Training**

Although the trainees are diverse, capability variability is not a concern to trainers. The only obstacle is related to effort variability.

- *"The structure of the curriculum is such that each individual has to participate, learn and improve at personal level, it has to benefit each person."* – **Director Business Development and Technology**

- *"Yes, the calibre of people in the client organisation influence the training program"* - **HR and Training**

HUMONGOUS Inc.,

Type of customer inputs: CIT

Information emanating from clients is equivocal to the extent that clients depend and trust the expertise of the service provider, Table 5-13. This could be due to what Lewis and Brown (2012) refer to as inter-parties information asymmetry. The 'operate' process is designed to involve many information exchanges albeit in one direction - from trainers to trainees.

CI: Type	Statement
CIT-INF i. Equivocality	• *"It depends on the willingness of the client to divulge all the necessary information"* – **Project Manager** • *"There are instances where clients are unclear in stating their need for training. But through continuous interactions through meetings and probing by asking relevant questions we are able to understand their concern "* – **Director Recruitment and Training**
ii. Intensity	• *"Follow-up meetings are necessary for the client to clarify – fill in gaps on any incomplete information. However, there is a requirement that we have few meetings as possible because they are costly in terms of time for both parties "* – **Project Manager**
iii. Volume	Very few
CIT-SLF **Core activity** Client summarizes needs and objectives Determine the relevant best practices Design curriculum Deliver training and examine	High contact service
CIT-TRI	Training is dyadic

Table 5-13: Summary of customer inputs for training– **HUMONGOUS**

In general however, the process is more interactive with few process cycles, meaning there is low volume of customer information. Since the core activities of training process entail interaction between the two parties, training is a high contact dyadic service.

Customer input variability: CIVAR

Arrival of work schedule is pre-determined and in case the group to be trained is large; training is done in batches for quality assurance purposes. As such arrival of work is predictable.

- *"The CSRs to be trained will come in batches of 15, 20 to a maximum of 25 persons at a time"* – **Director Recruitment and Training**

At organisational level, clients are bespoke and have mixt requests. Similarly at personal level, trainees have different expectations.

- *"Training groups is challenging because members have differ in preferences and world view."* – **Service Delivery Lead**

- *"Composition of the group could affect the training sequence of events. Think of training an individual, this is different from training a group of say 5 individuals which is in turn different from a larger group with more people"* – **HR and Training**

Where trainees fail to understand and own the process, they are distracted; a case of effort rather than capability variability.

- *"Motivation levels are not equal, some people are self-driven and positive to training, others see it as a waste of time"* – **Associate Delivery Lead 1**

5.1.5 Customer Inputs – Aggregate Amalgamation

In preparation for cross case analysis in chapter 7, the findings from individual case analysis are summarised into Tables 5-14 and 5-15 and immediately followed by analysis of volume of customer inputs in Table 5-16.

Table 5-14 provides summary of the characteristics of customer inputs provided into each 'operate' process. The findings show that for: data processing services, customer inputs are unambiguous, information intense and voluminous, processed at the back office in B2B relationship; research work, the customer provided inputs are ambiguous, informational and small in quantity, processed at the back office in B2B relationship; call centre case, receives customer inputs that are unambiguous, information intense but provided interactively, processed at the front office in triadic B2B2C relationship; training case, receives ambiguous client instructions, is non-information intense and processed in the front office in dyadic B2C relationship.

CASE	Company	CIT - INF			CIT - SLF	CIT - TRI
		Equivocal	Intense	Volume	Interaction	Triadic
Data	**EVEREST**	**No**	**Yes**	**Many**	**BO**	**No**
	GIGAS	**No**	**Yes**	**Many**	**BO**	**No**
	HUMONGOUS	**No**	**Yes**	**Many**	**BO**	**No**
Research	**EVEREST**	Yes	Yes	Few	BO	No
	GIGAS	Yes / No	Yes	Few	BO	No
	HUMONGOUS	Yes	Yes	Few	BO	No
Call centre	**EVEREST**	No	Low	Many	FO	Yes
	GIGAS	No	Low	Many	FO	Yes
	HUMONGOUS	No	-	Many	FO	Yes
Training	**EVEREST**	Yes	Low	Few	FO	No
	GIGAS	Yes	Low	Few	FO	No
	HUMONGOUS	Yes	No	Few	FO	No

Table 5-14: Summary of types of customer inputs for all cases

Findings in table 5-15 suggest; (i) processing of data work is not affected by customer inputs variability, (ii) processing of research work is influenced by client request variability and some element of capability variability, (iii) processing of call centre work is the highest affected by customer input variability because both arrival and capability variability are observed, and (iv) processing of training encounters high customer request variability due to the unique nature of the case.

CASE	Company	CIVAR - ARR	CIVAR - REQ	CIVAR - CAP
Data	**EVEREST**	**Low**	**-**	**-**
	GIGAS	**-**	**Low**	**-**
	HUMONGOUS	**Low**	**-**	**-**
Research	**EVEREST**	-	High	-
	GIGAS	Low	High	Low
	HUMONGOUS	Low	High	Low
Call centre	**EVEREST**	High	Low	High
	GIGAS	High	Low	High (low B2B)
	HUMONGOUS	High	Low	High
Training	**EVEREST**	-	High	Low
	GIGAS	Low	High	-
	HUMONGOUS	-	High	-

Table 5-15: Summary of customer inputs variability for all cases

Volume of customer inputs: CI-Volume

The volume of customer inputs expended in each of the four service offerings in the three case firms are consistently the same as shown in Table 5-16.

CASE	Data	Research	Call centre	Training
Time and effort	-	Low	Medium	High

Table 5-16: Summary of types of volume of customer inputs for all cases

Since the 'operate' process of data work is decoupled from the client, the time and effort expended by the client during service production is not applicable. For research work, there is little involvement of the client and very low amount of customer effort and time during the 'operate' process. Of the two customers served by the call centre case; the client and callers, only the latter are symbolically present during the delivery process. Since the time taken with them is minimal, it is suggested that effort and time spent is relatively medium. Client firm and the trainees expend high durations of time and effort to the actual training 'operate' process. Training experiences relatively higher levels of customer inputs compared to the other case services.

5.2   Summary of Chapter 5

This chapter provided an overview of the findings - bringing together the attributes of *customer inputs*; customer contact and customer influence, and revealed similar patterns and characteristics within-case in the three companies and also between cases such as data and call centre, and research and training cases. Also significant cross-case disparities, for instance between data and training cases and cases of research and call centre were highlighted.

6 CHAPTER SIX – SERVICE DELIVERY PROCESS

This chapter aims to explore the concept of service delivery process with view to unravelling the specific OM attributes relevant to particular IIS. The notion of service delivery process is explored with a view to distinguishing between the four service offerings using the ex-ante features; people skills, discretion in decision making, technology, infrastructure and human resource issues.

6.1 Concept of Service Process

Table 6-1 shows codes used in analysing service process construct.

CATEGORY: SERVICE PROCESS-SP	CODE	EXPLANATION
SP: Skills	SP-SKI	Employee skills needed
SP: Discretion	SP-DIS	Empowerment of employees executing the process to make decisions
SP: Infrastructure Technology Facilities	SPI-TEC SPI-FAC	Extent/type of technology utilised Physical facilities and security measures
SP: Hiring & Training	SP-HI&TR	What, how and when of hiring and training

Table 6-1: Codes for service process

Employee skills are measured by; (i) the type and level, for instance basic to high technical, diagnostic, or interpersonal skills, and; (ii) education qualifications - degree, diploma, certificate and high school levels. Employee discretion is evaluated in terms of decision making authority and responsibility allowed to process executioners, meaning the extent to which they use own judgement during the process. Technology is measured in terms of process automation; labour vis-à-vis equipment whereas interest in facilities relates to location, layout and space for the operations. Hiring is the process by which the calibre of

potential employees, basis on which they are considered for employment and corresponding training [minimal, modest, high, formal, external or on-the-job] are evaluated.

Espousing the suggestion that *"... if the intent with a taxonomy is to analyse and evaluate organisational design issues, the analyst is more interested in relative than absolute comparisons. Categorisation of processes can then be done based more on judgement than an objective measurement"* (Wemmerlöv, 1990 pp.28) and adhering to Sousa and Voss (2001)'s logic rules, the following rule is used to measure service process dimensions across the cases.

Rule: As per the relative comparison of respondents' feedback [to part B of Appendix B] in Appendix I, the author "observed and deduced clear differences" across cases and formulated a conservative ordinal scale of measurement, ranking the four cases in terms of service the service process constructs. Each construct is rated 1, 2, 3 or 4; 1 is ascribed to relatively low presence of an attribute and 4 is ascribed to relatively high presence of the attribute.

6.1.1 CASE OF DATA SERVICES

EVEREST Company

Employee skills and Discretion

The most important skills for data service workers include; (i) basic technical skills, measured by constructs such as typing speed, words per minute (wpm), in MS office, and (ii) how conversant agents are with the internet. In **EVEREST**, diploma holders that meet this criterion are hired.

- *"There is a lot of data entry, data scanning work which we do, so I think typing speed is very important"* **– CEO**

- *"For data, you just need to know your key board, be focused and do the right thing accurately and consistently"* – **Operations Manager**

The relative rank of 1 for both technical skills and diagnostic skills suggest this case utilises low level of skills.

Data entry clerks working on projects abide by pre-determined sequence of activities and have limited discretion if any. Occurrences beyond the scope of the script are escalated to immediate supervisors for advice. Objective metrics for employee performance evaluation such as time taken vis-à-vis number of errors in accomplishing tasks have been set-up. The metrics include.

- *"For data entry, the threshold of defining quality has many dimensions. It is the number of records you enter; it is the accuracy of those records."* – **Operations Manager**

These findings together with the relative rank of 1 suggest that data employees are allowed low discretion.

Infrastructure; Technology and Facilities

Use of optical and intelligent character recognition processing technologies[33] to convert data from one form to another is common. These technologies facilitate agents work for efficient delivery of tasks. Though the kind of data processing undertaken by **EVEREST** is largely labour intensive and basic, it relies on technology. This means the 'operate' process of data work is hybrid consisting of manual and automated activities in line with respondents ranking of 3 for automation and routineness. Since data security is major concern in designing

---

[33] OCR & ICR

physical facilities, **EVEREST** has stringent measures prohibiting unauthorised access to client records. Measures are physical but facilitated by technology. This was hand experienced by the author during the study because it is enforced through a requirement that all visitors be physically searched before being provided with place specific swipe pass cards, restricting entry and access to unauthorised places. Employees access work stations related to own on-going projects but no other. Agents use passwords to login to work, are not permitted to carry USB flash drives, external hard drives or other data storage device and heavily rely on on edge anti-virus software.

Training and hiring

To qualify for hiring, standard nature of data entry projects requires agents equipped with simple technical computer skills. In **EVEREST**, these skills are realised either through; (i) formal client specific training carried out by human resources department with direct support from the clients, or (ii) on-the-job training that leads to realisation of learning curve benefits. Hiring priority is given to employees who previously have worked on internal projects. Since such agents are tried and have known capabilities, the firm is able to optimise process costs. With client-centric training, new agents begin working within a short period of time.

- *"If an employee's contract has expired and there still are jobs like the data we are saying, we have received more projects and your contract expires, I just train you"* – **HR Officer**

In case there are no potential recruits internally, adverts are posted in press and **EVEREST**'s website. Other important observations include:

- there is recruitment for each client coming on board
- agents are employed for the duration of the data project

- employee remuneration depends on the type of project

- clients play a role in determining the pay of agents

- *"There are some projects where people are paid on a daily basis and others monthly depending on the work which is being sent because there is some work which is sent real-time. Depending of the amount of work you do that's how you are paid, depending on the amount of work sent by the client that's how it is"* – **Administration Manager**

GIGAS International Inc.,

Employee skills and Discretion

Since data processing is low calibre skill job, **GIGAS** prefers diploma holders with basic computer skills such as MS Office and minimum typing speed of 50 wpm. Individuals should be good in written and oral communication skills, spellings, and punctuations and meticulous.

- *"I believe for data you also require some skill, but not that much – typing speed, be meticulous and be focused paying attention to details "* – **Quality Manager**

Since the relationship is dyadic, to outsource data processing work, the client puts trust on the service provider with important organisational data that employees handle confidentially. For some projects, agents possess basic computational skills necessary for undertaking simple data analysis and interpretation. The low skill requirements are mirrored by rank score of 1 for both technical and diagnostic skills.

The design of data processing work allows the client, through the SLA, to define and set rules and procedures for task execution, limiting employee discretion. Since timely delivery of the project matters to the client, **GIGAS** has in place mechanisms that enforce attainment of this

goal. These mechanisms include high process automation and routinisation of tasks, meaning employees are allowed little room for manoeuvre and may not make decision based on independent judgement. Case rank with respect to both automation and corresponding routineness is 3 and is captured by the following statements:

- *"We sarcastically refer to this job as 'robo' aka robot competition. We are the robots – the management are the spectators watching to see which robot has more fuel to go on and on with dedication without question their authority"* – **Agent 1**

- *"What automation does is that it supports standardization which means we are able to deliver quality service consistently- and that is what wins us business"* – **Operations Manager**

- *"I put in place work schedules and procedures to be followed once the project goes live. Failure to get this right could mean losing the client."* – **Program Manager**

The rank score of 1 for this variable implies low discretion is provided to data workers in **GIGAS**.

Infrastructure; Technology and Facilities

GIGAS boasts of experience and ability to convert data files from any format to any digital format that the client may request. Indeed, having begun as a software application provider, the firm is rich in data management technologies. The firm has never lost a job due to technological inadequacy. Technologies used range from ordinary MS office, scanners, and printers to complex digitization and imaging technologies such as XML, XHTML, OCR, typesetting and ebooks. However, the use of technology for the 'operate' process goes hand in hand with human abilities. Execution of data service tasks requires agents to identify and find

remedies to incomplete data files. Observational evidence suggests the case is labour intensive but highly automated.

At the time of data collection, **GIGAS** offered data processing services in two locations; Kenya and Uganda with expansion plans to other African countries, where the company has well established IT services, under way. The physical location of the operations centre is important due to micro-level factors such as power supply reliability, physical security of the site, access to developed internet and telephony technologies and so on.

- *"With access to reliable internet technology, operations can be located anywhere in the world"* – **Operations Manager**

- *"You know some accounts run for 24 hours and if you are going to leave work at midnight, your client would want to know whether your people get home. So it is a determining factor"*- **HR and Training**

In addition to other extra security measures such as UPS systems, reliable bandwidth for data links, data back-up in remote locations and staff badges to access to the buildings, the company has secure servers for data and information exchange with the clients.

Training and hiring

Other than returnees from previous projects, newly recruited agents have necessary educational and professional qualifications but nought work experience. This means efficient and effective job delivery is only possible through training. The service provider has a structured formal training program that is conducted internally. The statements below were made in regard to this variable:

- *"Even if it requires special skill, with data you can undergo training in maybe 2-3 weeks"* – **Agent 2**

- *"From the very first group training - we are able to come up with agents, quality checkers (QCs) and quality analysts (QAs)"* – **Associate Service Delivery Lead**

- *"Training could be done in phases depending on the nature of the project. We have a training plan that could take 3 weeks or even a day."* – **HR and Training**

- *"Clients that we deal with could also have their own training tasks or tests on the platform."* – **Associate Service Delivery Lead**

These statements suggest data processing entails simple to learn grasp tasks.

HUMONGOUS Inc.,

Employee skills and Discretion

Stand out skills possessed by employees include basic computer literacy, internet skills, ability to deliver deadlines paying attention to details with minimal error rates if any. Fluent communication and good analytical skills are important. For the thumb keyboard, agents are expected to deliver at least 10,000 keystrokes-per-hour (KPH).

- *"Aptitude test captures analytical skills as well as language proficiency. For work speed, we give KPH test"* – **Quality Analyst 3**

However, this slightly varies depending on the status/nature of the data files to be keyed-in. The relative rank score of 1 for both technical and diagnostic skills suggests low employee skill requirements.

Data processing projects are sufficiently defined through service level agreements, clearly stipulating levels of efficiency required to maximise productivity.

- *."As a company **HUMONGOUS** has a mantra of three words for BO workers – volume, speed and accuracy'. I mean every time a worker reports to work and sits on that desk, s/he should be thinking – what are my targets in this sheet, I must deliver today and this will be error free"* – **Quality Analyst 2**

Due to stringent goals and highly specific tasks, employees have to follow prescribed scripts. The average ranking score of 1means that data work is low in employee discretion requirements.

Infrastructure; Technology and Facilities

Since **HUMONGOUS**'s specialises in keyboard data entry services, basic technologies such work station with computers and software accessories, telephony systems, and scanners were used. Importantly though, for online data entry, reliable internet source is must have. For escalations and end-to-end intra- and inter-organisation work flow, the company has cutting edge BPM/BPO management technology platforms. Indeed, the rank score 3 implies high level of automation.

All operations are run from the Nairobi office. Facilities in the same office floor are shared among employees working on different projects such as data, research and call centre cases. Huge investments have been made in state of the art facilities that include generators and UPS systems, ensuring uninterrupted power supply. Furthermore, security systems in place are both physical and digital. Specific to data processing work, **HUMONGOUS** has data protocol that stipulates access restrictions, controls and definitions.

Training and hiring

Recruitment policy ensures that only candidates with the right qualifications from accredited institutions are considered for data processing jobs. A thorough background check is done on each potential employee before signing employment contract. In terms of training, **HUMONGOUS** undertakes four levels of training:

- *"Training is sub-divided into four levels: (1) generic, (2) product, (3) quality, and (4) on-the-floor."* – **Director Recruitment and Training**

The generic is done on all agents (both data work and call centre) to ensure that the requisite general knowledge and skills for the 'operate' process are acquired. Product and quality trainings are undertaken jointly with the client team while the on-the-floor involves trainees interacting with the real work environment. On average agents training takes 1-2 months before full potential and efficiency is realised. Given the simplicity of tasks, agents are recruited without job experience and learn through internal formal training processes.

6.1.2 CASE OF RESEARCH WORK

EVEREST Company

Employee skills and Discretion

Four skills are valuable in delivery of quality research work; analytical skills, critical thinking, conscientiousness and communication skills. Although this appears as a generic set of skills, scrutinised closely, with the exception of communication which is usually categorised under interpersonal skills, it largely encompasses diagnostic skills. However, research workers possess computer skills necessary for summarize work into MS office, databases and variety of spread sheets and internet skills. Each employee possesses an academic degree from a

relevant discipline and experience from work environment involving research. Data analytical techniques are weighted heavily into the consideration:

- *"To qualify for this position, you must have at least 2 years, preferably BPO, experience from leading organisations"* - **Team Leader 1**

Execution of this process requires high technical and diagnostic skills (both ranked 3).

Evidence suggests that the calibre of research work undertaken in **EVEREST** allows restricted employee discretion. Although literature shows that high knowledge intensive research work entails high discretion, the nature of research work undertaken by **EVEREST** is largely defined through client specified parameters. A relative ranking of 3 indeed suggests high employee discretional requirements.

Infrastructure; Technology and Facilities[34]

The main technology utilised during the search for information activity and in delivery of research work results is the internet. The process is labour intensive but use technology albeit to a small extent. This matches quantitative score of 2 for both automation and task routineness.

---

[34] The following quote is from one of the fliers collected from the firm:
"EVEREST is East and Central Africa's first state-of-the-art and fully on demand International Contact Center and Business Process Outsourcing (BPO) Facility. EVEREST has a world-class facility within Nairobi, Kenya fully enabled to service the global market by deploying the best of breed technology to run its operations 24 hours a day, 7 days a week. The facility has over 40,000 sq ft and the scalability to house over 1,200 agents, making us the largest Outsourcing Contact Center in the entire region. We have over 5,000 sq/ft dedicated to our training and recruitment departments. This enables us to process large intakes of staff and accommodate them in a modern and well equipped environment ensuring continuous skills development for our best in class workforce"

Research work process is not interactive and relies on clicks rather than bricks. This renders the traditional facility aspects of location and layout inapt because 'there is no worth in collocating service production with the service consumption (Miles, 2005)' (Riedl et al., 2009 pp.2). However, locational issues such as culture, institutional quality and process technology impact service delivery.

Training and hiring

For supervisory and management positions, only researchers with prior experience are hired. The firm recruits fresh graduates and trains them through formal processes that are supplemented by on-the-job quantum learning by working with experienced teams of researchers. The internally trained employees are considered first for any available higher positions:

- *"We have got a clear career path for them [read researchers] such that all vacancies are filled internally unless there are no people qualified or interested"* – **Director Sales**

Lack of qualified people with the necessary skills to conduct quality research was noticeable. Indeed, turnover is high because employees are expensive and difficult to appease and retain. Where training requires huge investment, **EVEREST** has a policy that bonds employees for at least 3 years post-training.

GIGAS International Inc.,

Employee skills and Discretion

Ability to conduct statistical analysis via statistical software such as MS Excel, SPSS and SAS is considered the most important factor in delivery of research work. Bachelor of Science

statistics and degree holders in related disciplines are preferred. Knowledge and experience in client specific technical industry environments, such as software research and industrial market research are better conducted by employees with engineering backgrounds.

- *"We consider individuals' qualifications in terms of their level of education, the experience comes in – has this person worked before in such an environment"* – **Managing Director**

For qualitative research work that involves conducting interviews during data collection, degrees in anthropology or sociology are deemed appropriate. Soft skills such as excellent command of appropriate language; written and spoken, personal attributes like confidence and generic people-skills are useful in collect data and write report activitie. The 3 rank score suggests high technical and diagnostic skill requirements.

Although there are laid down procedures for undertaking aspects of research; from designing the study, collecting to analysing data and writing the final report, researchers are allowed liberties in processing of activities.

- *"Responsibility goes hand in hand with authority and accountability, whoever is in charge of the project is responsible for its deadlines, quality and has authority over project budget,"*- **Director Business Development and Technology**

Researcher discretion is more conspicuous in the data collection phase of research work.

- *"It is our responsibility to create interest for the task, many would be respondents are not interested. You must be creative"* – **ITES Manager**

- *"Observation is a good example. If data are collected through this method, the experienced researchers are expected to use judgement in a way that leads to objective interpretations"* – **Director of Operations and HR**

The quantitative average ranking of 3 implies high extent of employee discretion.

Infrastructure; Technology and Facilities

Due to extensive use of mobile telephones and penetration of internet to remote and rural areas, in virtually all countries – developed and developing, conducting marketing research is much easier. The two technologies support e-mail and social media interactions such as LinkedIn, Twitter and Facebook, which helps identification of potential respondents. CRM technology provides further avenue for customer information and contact. Outbound call centre services keep records of original providers of data enabling data verification by way of contact. Technologies related to data processing work are used for specific research work services.

- *"Because there is a thin line between data work and research work, technologies such as OCR, OMR are shared"* – **ITES Manager**

This work is relatively labour than technology intensive as per automation's rank score 2.

GIGAS has invested heavily in comfortable and spacious conference rooms and boardrooms for hosting individual as well as focus groups. The rooms have Wi-Fi access and are air conditioned. Other facilities include audio, video recorders and the traditional computer equipment workstation. The facility is easily accessible to would be interviewees because it is located between Nairobi city centre and the major airport in the country[35]. It is also served by Mombasa Road, one of the major highways in the country.

---

[35]Only 12.5KM to the centre of the capital city of Kenya, Nairobi and 7.2KM to Jomo Kenyatta International Airport

Training and hiring

Since research projects are few and far between, recruitment in **GIGAS** is done on ad hoc basis. The firm has accumulated pool of permanent researchers over the years. Although recruitment of experienced researchers is preferred, the reality is that demand outweighs supply in the Kenyan labour market. Specialised research work projects for which the firm does not possess necessary skills are outsourced to third party entities.

- *"Over the years we have been able to build a pool of researchers whom we rely on in initiating the young fresh from university graduates"*- **Managing Director**

- *"Qualified and experienced market researchers are just not available"*- **Managing Director**

- *"Our education system - in particular universities need to do much more to ensure they churn not just numbers but quality graduates with good analytical skills"*- **Managing Director**

The firm recruits fresh graduates and has put together systematic internal training mechanism for them. The mechanism relies on experienced researchers to provide 'person-to-person' on the job training.

- *"I think people-to-people is where the actual learning takes place"*- **Director of Operations and HR**

- *"All team members undergo extensive training on research concepts, types, models and methodologies before working on a project"* – **HR and Training**

HUMONGOUS Inc.,

Employee skills and Discretion

A degree in any field is the minimum qualification with prior research work experience considered added advantage. The specific skills required fall into three categories: generic computer and information technology literacy; analytical skills such as numerical knowledge, statistical data analysis using various software and spreadsheets; and communication skills such as oral communication necessary during meetings and when giving briefs to clients or moderating group discussion, and report writing skills. The two constructs are ranked 3, suggesting high technical and high diagnostic employee skill requirements.

The researcher has to decide on the best approach for executing each particular project. The rank relative score of 3 implies high level of employee discretion. Work is undertaken in teams with team leaders exercising more autonomy than individual members.

- *"Research needs depend on the client, the environment and the data"* – **Operations Manager**
- *"Research process is sequential and clear to all members of the research team"* – **Director Business Development and Technology**
- *"Clients are assigned to teams of experienced and novice researchers"* – **Operations Manager**

Infrastructure; Technology and Facilities

Internet connectivity is essential because it supports access to secondary data and facilitates faster e-mail, Facebook and WhatsApp communication to the convenience of the client. The organization has two dedicated internet lines for; (a) on-going daily operations and, (b)

accessing and downloading files sent by the clients. Since **HUMONGOUS** has identified data mining and analysis to be potential areas for business growth, SPSS software package and technologies such as MS Excel and SAS[36] are used for collection and analysis of data. Other valuable technologies include digital sound recorders used in collecting primary data and CAQDAS[37] such as NVivo used for analysing qualitative data. The relative low usage of technology is highlighted by rank score of 1 for both automation and routineness.

Employees are provided with ample office space equipped with modern facilities such as computers – dual monitors and chairs appropriate for desktop research work. Individual interviews and focus group meetings are held in board rooms. The firm has four interviewing stations strategically located in city of Nairobi to the convenience of potential interviewees since the head office is 12 km away. However, these stations are laid out for one-on-one person interviews, meaning all focus group interviews are conducted at the head office. There is UPS system for power back-up, shredders for disposal of unnecessary confidential documents, laminators for putting together reports and 24/7 smart card access facilities for visitors.

Training and hiring

HUMONGOUS employs analysts with vast research experience, requiring minimal work training. However, new research work recruits undergo organisational training to fit in. Training is designated as either: on-the-job, where new employees learn informally from

---

[36] SAS is a business analytics software
[37] CAQDAS (Computer Assisted Qualitative Data Analysis)

experienced colleagues by buddying-up or; through formal training scheme. The formal training is undertaken in classroom setting and entails:

- A course labelled "introduction to **HOMUNGOUS**" whereby new employees are initiated to the firm's way of work, vision, mission and values.

- Project specific skills training

The organization has clear development plan accompanied by monitoring scheme for evaluating performance and overall progress of each trainee.

- *"We have clear career development scheme. It all depends ones performance"* – **Quality Analyst 3**

6.1.3 CASE OF CALL CENTRE

EVEREST Company

Employee skills and Discretion

Employees possess interpersonal skill; ability to create rapport with the caller, neutral accent, courtesy, attentiveness, focused listening and constructive facets of the big five personality traits[38] (McCrae and Costa Jr, 1999).

- *"Important ones include soft skills, customer service experience, and then the product training where we normally involve a representative from the client. By soft skill I mean if it's a voice account rapport building, how to handle re-battles and difficult clients. How to speak on the phone"* – **HR Officer**

---

[38] The Five-Factor Model (FFM) by McCrae and Costa Jr (1999) identifies five human factor traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism. Neuroticism is not related to the requirements of case A.

Besides, technical skills such as typing speed of 30 wpm, ability to multitask and work in teams are necessary prerequisites. Call centres agents require good understanding of the mechanics of different client products because of differences in features and complexity with some requiring high/ low levels of technical knowledge in responding to customer calls.

- *"For voice accounts we take strictly diploma and degrees. However there are clients that say they require graduates"* – **HR Officer**

The relative ranking for both technical and diagnostic skills is 2, connoting basic skill requirements. Correspondingly, the minimum qualification for data processing work is a diploma although many agents hold degrees. For technical projects, graduates with specialised knowledge in relevant areas are preferred.

The average ranking of 2 implies low employee discretion and is buttressed by the following remarks:

- *"To bring out the human aspect of the agent and probably make them enjoy their work, we do not prescribe one approach of interacting with a customer. We only ensure that they do not deviate from the core concerns"* – **Operations Manager**

- *"It would be ideal to allow them more time with the 'not in a hurry callers' but this rapport has to be balanced with economic realities. For example if an agent takes more time with a caller, that could mean more waiting time for the callers in the queue. To avoid this then we ought to hire more agents, which means extra cost to us"*
  – **Director of IT Analytics and BPM**

Limited discretion is allowed for customer experience purposes but still the agents have to strike the right balance because performance is based on measures such as average handling time (AHT).

Infrastructure; Technology[39] and Facilities

For the call centre case, **EVEREST** has invested in an end-to-end technology platform from Avaya Inc., an all-encompassing platform that provides technologies such as: (i) interactive voice response (IVR), caller-machine interactive process where pre-recorded speech of instructions guides the customer through process of answering queries by themselves; (ii) automatic call distributor (ACD), technology that facilitates quick assignment of calls to the next available agent based on the call's category; (iii) CRM, enables documentation of customer queries so that recurring questions can be addressed in consistent way; (iv) CTI[40], facilitates 'screen pop' on the agent's desktop providing him/her with the caller's history. Other prominent technologies include; (a) **EVEREST** Performance Manager Platform, technology that through the dashboard, shows employee performance metrics facilitating corrective measures to be taken, (b) NICE IEX Workforce Management, for supporting complex workforce scheduling in the call centre. Together the evidence suggests that the 'operate' process for inbound call centres is highly automated, agreeing with rank score of 3 in regard to both automation and task repeatability.

The main facility entails a work station consisting of computer, keyboard and telephony system all linked together by the CTI technology. **EVEREST** has in huge production floor

---

[39] Technologies such as desktop computer, telephony system, internet protocol are considered part of the facilities
[40] CTI stands for Computer Telephony Integration

capable of hosting 1,200 agents with each having ample space conducive to free employee movement. As suggested in the firm's website not only provides employees with right ambience conducive for serious work but relaxing and cool environment. If need be, the service is executed at the premises of clients provided they have appropriate call centre infrastructure although they choose to outsource operations to **EVEREST**.

- *"XXXX[41] client is a very different concept where we manage in their premises, it is their facility and their technology but our people."* - **CEO**

The converse is also true; some clients outsource **EVEREST**'s facilities and technology but not workers.

Training and hiring

- *"What makes **EVEREST** tick is the team that is here, I believe the training done here is excellent. All the training they get in customer care, they can use anywhere, not just in a call centre"* – **Administration Manager**

Most trainees are new to call centre operations without prior experience. Two main areas of training are (i) soft skills and time keeping, and (ii) understanding product of the client. Whilst the former are taught in the traditional lecture-listen and by watching customer service videos, the latter is delivered through kinaesthetic learning. Other training techniques include group discussions, role plays, and pep talk from veteran agents. Towards the end of the training, trainees are buddied up with experienced agents to observe and listen to live calls and general call centre operations. Correspondingly, the trainees are exposed to actual products, ensuring they understand the point of view of the caller. Extensive reference to the

---

[41]Revealing the name of XXXX client could lead to identification of **EVEREST**

website of the client, brochures and any other materials that are necessary for enhancing product knowledge is made.

- *"In a call centre foremost you require basic training in soft skills - that is very basic. Any agent who comes here will have to undergo that"* – **Director Sales**

- *"Well, if a new client comes and maybe have other special requirements then you can undergo that. So there may be some degree of routine or maybe a common ground, but after that you go to that upper level where we customize and train you depending on the client's requirements"* – **Director Quality and Training**

GIGAS International Inc.,

Employee skills and Discretion

Call centres require employees with good: (i) communication skills, oral communication, clear diction free of accent and writing skills that bear right grammar, spelling and punctuation; (ii) computer skills, including typing speed and various software applications, and; (iii) soft skills such as sense of judgement, ability to multi-task, listen, patience and compassion.

- *"Customers love to hear compassion and sympathy in agent's voice"* – **Agent 1**

- *"Basically what we look for in voice work is the neutral accent"* – **Managing Director**

- *"Kenyans have very neutral accent as opposed for someone from India. So someone will clearly tell this call is from India. So that is where Kenya wins, neutral accents and education."* **- Managing Director**

Employees do not have an independent voice since they adhere to strict procedures and follow template scripts.

- *"Are they following the script or are diverting? Are they capturing the exact data that is needed?"* **- Director of Operations and HR**

- *"They /management/ do not allow us to use judgement but they expect us to serve the callers and provide exceptional service, how do we do it? – nobody is ready to answer this question"*- **Agent 2**

- *"We also have a general analysis – this may be what the QC saw from the agent that day. For instance, the agent might have come in late – so he could put it as the feedback – so we have attendance sheets and also under targets we have what we call a production document. For every single day – every work that is done we always fill the number of the tasks that have been done. And then we have an attendance track – so it is not the responsibility of the manager to come and see who is there or who is not there."* – **Quality Leader 1**

High agent discretion is not tenable because it could mean provision of more training and pay because of the extra responsibility and risk arising out of wrong decisions. However, because of high attrition rates in the industry, **GIGAS** is not ready to invest in people without the surety that they will be retained into the long-term. The construct is ranked 2, highlighting low employee discretion.

Infrastructure; Technology and Facilities

Technologies used to deliver research work entail software of CRM phone system that consists of IVR, WFM [used to forecast call volume and facilitate capacity planning], ACD, CTI and QM systems.

The main facility consists of cubicles, furnished with adjustable chairs, workstation with computer and telephony system, essential pre-requisites for call centre service delivery. Whereas the work area is designed to ensure optimal lux, windows, walls, ceiling and carpet are designed to be sound proof. Other important facilities include coaching, training and meeting rooms, data centre platform that supports data storage and security systems. Access to the workstations is limited to customer service representatives and management teams only.

Training and hiring

Each position in **GIGAS** has a job flexible description that accommodates varying client requests. The right people are identified on the basis of specified skill levels. To this end, training and consequent tests undertaken are based on this principle. Recruitment process identifies candidates that not only qualify but are fit for the job and likely to remain in the organization into the long run.

- *"The guiding principle in our recruitment is to balance qualifications with capability to fit in the job. A mismatch means we end up with high employee turnover or run-of-the-mill performance."*- **HR and Training**

The training process entails instilling fundamental call centre service delivery knowledge as well as product knowledge. Whereas new trainees sit for mock call and written exams and verbal tests, experienced agents undergo refresher courses from time to time.

HUMONGOUS Inc.,

Employee skills and Discretion

Communication skills, voice quality, fluency in the language of interest and accent neutrality are ranked first for call centre work. These are followed by soft skills such as listening skills, attentiveness, diplomacy, and compassion.

- *"Callers should 'feel' your smile as you speak to them"* – **Operations Manager**

- *"Kenyan accents are very, very neutral and good. I think Indian accents can be a little bit different. I think international clients figure out that am talking to an Indian and he is putting an accent which may be irritating for the customer"* – *COO*

- *"They include excellent verbal communication skills"*- **CEO**

- *"Typing speed of thirty words per minute"*- **Service Delivery Lead**

Potential candidates possess good computers skills, meaning they should be able to multitask and key-in given number of words per minute and. Attention to detail, resolving complaints first time, following up customers' queries and tolerating stress are necessary additional traits.

Call centre tasks are highly standardised, scripted and routinized and as such employees have little discretion. This is in line with the comparable rank score 2.

- *"This is not the kind of job you look forward to when you wake up in the morning. It is repetitive, I feel like I wasted many years in school - only to end up with a mechanical job. I consider it a stepping stone to a better job."*- **Agent 1**

The job entails high degree of agent monitoring technologies such as WFM software and others [highlighted in the next section] that support record keeping about work reporting time, performance and conversation quality. Put together, monitoring makes the agents uncomfortable, feel controlled, demotivated and dislike the job. Employees believe

management overemphasises cost savings at the expense of other important performance objectives particularly those that call for human judgement.

- *"Performance metrics like KPIs and SLAs are all about cost"* – **Project Manager**

Infrastructure; Technology and Facilities

HUMONGOUS has state of the art call centre technologies ranging from the basic ACD to software such as CTI, IVR and call centre monitoring. However, the automation simplifies rather than complicates call centre service 'operate' process.

- *"It's not that we use very, very fancy and complicated technology and the agent will have a challenge using that, NO."* – **Director I.T**

For instance, the firm has a workforce optimization application that pools together the entire call centre's 'win' and 'operate' processes linking functions such as quality assurance, workforce management, agent training, performance management, customer feedback gathering and so on.

The location decision is based on availability of qualified labour in Nairobi because the cost of living; food and transport, are comparable to Indian cities if not lower. In terms of floor arrangement, engineering aspects such as noise levels, lighting and ergonomics are prioritised in the workstation layout. The floor configuration is based on optimal space utilisation and facility considerations such as data security. For instance the IT cables or cords are laid out in a way that does not hinder movement, cause harm or damage and people are restricted from accessing areas beyond their work stations.

- *"We need to ensure for example if we are working in the same industry, the agents will not move from one account to the other. We also need to ensure internally that the*

back office for example support staff doesn't share the information. So the confidentiality is very high. There is a water tight compartment, IT security is obviously there. One agent cannot access information of another client. It is not possible." – **Project Manager**

Training and hiring

Many call centre agents in **HUMONGOUS** are non-graduates, in line with a recruitment policy that gives preference to certificate holders. Past experience shows that certificate holders outlast diploma and degree holders in the company. Since the eventual objective is to pool a mass of agents, the process is continuously on-going. To accommodate the low educational levels employees, training process is wide in scope. Training emphasises general skills for call centre operations, handling of calls, communication and product specific skills. Similar to the case of recruitment, **HUMONGOUS** provides continuous training albeit informal. Workshops are held where top performing agents, success 'story' employees and long-serving agents give talks to trainees. Potential and new employees are made to know that the job is energy sapping if not stressful.

- *"I remember on my very first day, somebody mentioning that what we will be providing is 'emotional labour'. I don't know for sure the meaning of that but I can tell you, it's a stressful job"-* **Agent 2**

6.1.4 CASE OF TRAINING WORK

EVEREST Company

Employee skills and Discretion

Employees in this process require domain knowledge. To optimise customer care training, employees require prior expertise, relevant experience, and knowledge on client centric market verticals. At personal level, employees should have excellent interpersonal skills such as presentation, communication, facilitation, grooming, motivational, time management and team bonding skills. The minimum education qualification is first degree.

- *"Trainers should be people with many years of experience, excellent English communicators and above all their finesse and etiquette should be peerless. They must portray the wow image of EVEREST "* – **Director Quality and Training**

- "*We seek presentational/public speaking skills and curriculum development and design experience and probably an HR related degree"* – **Business Development Manager**

- *"Bachelor degree, understand outcome based learning, knowledge in training needs evaluation, presentation and coaching skills"* – **Online Job Advert**

Training work entails sailing in uncharted waters where service operations are dependent on expert trainers for delivery. Although the process is summarised sequentially with a content and delivery plan, the success of the core – train -activity depends on the diligence of the lead trainers and their teams. Employees rely on own independent judgement, throughout the entire 'operate' process to deliver each training project.

- *"There are regular sessions at higher levels with the consultants [and trainees] to ensure that this is how you are doing, this is how it impacts the clients strategy"* – **CEO**

- *"The dynamics of training projects are such that the person leading the process has free hand to exercise personal judgement and creativity. Our opinion is that one-size-fits-all does not apply to this service"* – **Director Quality and Training**

The 4 rank score shows that employee discretion is high in the training case.

Infrastructure; Technology and Facilities

Training service case entails direct contact between trainers and trainees with minimal reliance on technology. The 'operate' process is manual but buttressed by generic computer technologies such as Microsoft Office. Since training in this firm is limited to customer care and support, the process utilises resources that are used in training internal call centre employees. One of the two multimedia training rooms simulates call centre production floor.

- *"The 3rd floor is dedicated to training. So it is very intense, very thorough. You come out of there you are completely different. It is international standard training. Because these trainers have trained all over the world. So they come on board with a wealth of experience. So you get to learn quite a lot"* - **CEO**

Other facilities include typical classrooms; with computers, LCD projectors, chairs and tables in comfortable work environment. In terms of location, local clients are afforded flexibility to choose in whose premises; **EVEREST** or client, training is to be done. In case it is done at the work place of the client, trainer consultants have to familiarise beforehand with the requisite facilities and technology.

Training and hiring

The human resources policy of the company brings together externally sourced experienced trainers in specific market verticals with in-house developed talents. The requisite experience

encompasses designing and documenting training assessment tools, curriculum development, training methods, and understanding of outcome based learning.

- *"An all-round BPO trainer – s/he can deliver CSRs training and consultancy work. That is why we keenly check the background and experience of this person before hiring"* – **CEO**

GIGAS International Inc.,

Employee skills and Discretion

Creative and enterprising mind-set that handles challenges in fast changing BPO environment is considered the minimal requirement for lead trainers. Other skills include ability to work for long durations, simultaneously undertake many tasks, personal initiative and effective communication abilities.

- *"Willingness to work long hours and ability to use judgement in making sound decisions are key qualities"* – **Operations Manager**

Qualifications such as academic degree are considered important although secondary to experience.

- *"Experience is valued more than education because of the business environment that is extremely volatile"*- **Managing Director**

Trainers are highly competent in use of functional technologies such as BPM platforms, enterprise resource planning (ERP), and the general MS office package.

- *"How can they guide clients if they weren't proficient and comfortable working with these technologies?"* – **Director Business Development and Technology**

The nature of the 'operate' process elucidates high degree of employee independence as reflected in the following statements and as supported by the rank score of 4.

- *"Two skills that I consider a must have for any facilitator - confidence and flexibility in handling divergent client concerns."*- **Operations Manger**

- *"Unless you have good judgement, you cannot succeed in this job because most decisions are made independently. This is more so because the work does not make available an opportunity for consultation"* – **Quality Leader 1**

Infrastructure; Technology and Facilities

To ensure business process excellence, clients are introduced to functional platforms and software such as BPM helping them experience work in real time. BPM is considered the major functional technology for delivery of training. For customer care training projects, the firm utilizes the call centre technologies. The firm has modern training rooms equipped with training delivery tools such as whiteboards, flipcharts, LCD projectors and computers, all connected to the internet. To enable practice oriented training, **GIGAS** ensures that the facilities such as hardware and software match or are at least similar to those used by the clients.

Training and hiring

GIGAS places advertisements for trainer positions in local print and mass media as well as online through websites. Successful candidates are required to attend face-to-face interviews. After new entrants are hired, irrespective of background and experience, each goes through a formal professional training and development program. For the experienced trainers, the program aims at acclimatization to **GIGAS**. However, for novice trainers the program entails attending seminars, working with other trainers on projects and learning on-the-job.

HUMONGOUS Inc.,

Employee skills and Discretion

A bachelor's degree in business, human resources or other related disciplines is required for the training case. Trainers are required to possess a package of skills from prior work experience. Trainers in **HUMONGOUS** are referred to as "facilitators" due to the firm's training model that emphasises client participation than traditional student-teacher model. For customer service training, the facilitator should possess excellent oral communication skills, good presentation and style of engaging the learners.

- *"We are able to impart expert-based knowledge that cannot be found in text books"*- **Business Development Leader**

Facilitators in the 'operate' process are responsible for planning of training sessions according to predetermined schedule of activities and measuring the results of the project at the end. Other skills that are highly valued in **HUMONGOUS** are ethics and moral issues such as honesty and sincerity.

- *"Facilitators should be capable of listing the objectives of the training session, infrastructure requirements – ideally they should have the entire training toolkit." –* **Service Delivery Lead**

- *"Should be genuine and honest in all collaborations or dealings with clients." –* **Quality Analyst 1**

Although at macro perspective the vision of the service provider and goals of the particular project guide execution, at the operational level, training relies on the judgement of the lead facilitator and the team. Delivery system for 'operate' process is highly reliant on judgement of the facilitator as influenced by previous interactions with similar situations.

- *"The general direction is guided by the objectives of the assignment. However, the operational aspects are left to the facilitator"* – **Associate Delivery Lead 2**

- *"S/he exercises independent judgement depending on the scenario under consideration."* – **Quality Analyst 2**

- *"Our focus is not roles, processes or even procedures but people aspects since these are at the heart of training projects."*- **Business Development Leader**

The rank score of 4 for the training case suggests high employee discretion.

Infrastructure; Technology and Facilities

There is high reliance on MS Office particularly PowerPoint during classroom presentations and use of e-mail technology to pass training materials to the learners. Training with regard to projects requiring process excellence utilizes technologies such as BPM and SaaS to make demonstrations that help client customisation choices. Modern training rooms with comfortable seats, permanently fixed LCD projectors and computer monitors are available to trainers. For hands-on training, each trainee is provided a computer during the training session. The rooms are equipped with modern LED technology for 'mood lighting'.

- *"Training environment plays unbelievable role in relaxing the trainees."* – **Project Manager**

All training projects are processed at the head office with intermittent cases undertaken at the client's premises.

Training and hiring

The firm only hires degree holders with over 2 years of experience in similar positions. Despite the experience, all newly recruited trainers go through formal training program that

exposes them to the tools and templates that are relevant to the day-to-day operations of the training 'operate' process. The training entails identification of strengths and weaknesses of the trainers during the process and suggestion of strategies for improvement.

- *"The training provides them with practical tools and templates that help them easily integrate within the work environment."* - **Project Manager**

The company has mechanisms that support learning on-the-job by working closely with senior and experienced facilitators.

- *"We have ensured that there is no conflict between the young and the older trainers. Indeed, the young ones learn by working with their seniors. We deliberately encourage it."* – **COO**

6.1.5 Service Delivery Process – Aggregate Amalgamation

To expedite cross-case analysis process in chapter 7, the findings from the three cases with regard to the attributes of service delivery process are summarised into tables 6-2, 6-3, 6-4 and 6-5.

CASE	Company	Skills[42]	Education[43]
Data	**EVEREST**	Typing speed,	Diploma
	GIGAS	Basic computer skills, written and oral communication, computational skills	Diploma
	HUMONGOUS	Internet skills	Degree
Research	**EVEREST**	Analytical, critical, conscientiousness and communication skills	Degree
	GIGAS	Statistical analysis, understanding of client's environment	Degree
	HUMONGOUS	Computer/IT skills	Degree
Call centre	**EVEREST**	Neutral accent, courtesy, attention to detail, big five personality traits, typing speed, multitasking and understanding of client's products	Degree / Diploma
	GIGAS	Diction, writing skills, compassionate	Diploma
	HUMONGOUS	Voice quality, fluency in language, computer skills, FCR, mental strength (high stress absorption capability)	Degree
Training	**EVEREST**	Domain knowledge, interpersonal skills, presentational skills and experience	Degree
	GIGAS	Creativity, ability to work long hours, personal initiative, communication skills	Degree + work experience
	HUMONGOUS	Exposure, oral communication, planning skills, ability to measure performance	Degree

Table 6-2: Summary of employee skills: **SP-SKI**

---

[42] Once a skill that applies to a case is captured in a company, it is not repeated in the subsequent company for the same case.

[43] Refer to Appendix I for an analysis of this construct

CASE	Company	Arguments[44]	Score
Data	**EVEREST**	Follow script, fixed objective metrics	1
	GIGAS	Client formulates SLA, cost and speed are major aims, routinized / automated processes	1
	HUMONGOUS	Tasks are highly specific	1
Research	**EVEREST**	Restricted independence, work defined by client	3
	GIGAS	Laid down procedures, researcher dependent data collection	3
	HUMONGOUS	Researcher determines best approach for each project, the research process is sequential but activities require expertise	3
Call centre	**EVEREST**	Follow script, economic realities are important	2
	GIGAS	Adhere to strict procedures, high discretion comes at extra cost which providers are not ready to incur	2
	HUMONGOUS	Standardized tasks, scripted and routinized, agent monitored	2
Training	**EVEREST**	Dependent on the trainer, trainer's diligence ensure success, projects are unique	4
	GIGAS	Trainers should be flexible, have good judgement	4
	HUMONGOUS	Person dependent operations, prior experience is key	4

Table 6-3: Summary of employee discretion: **SP-DIS**

CASE	Company	SPI-TEC	SPI-FAC
Data	**EVEREST**	Both manual and automated	Confidentiality, prohibits unauthorised access
	GIGAS	Largely automated, technology influences choice of location	Secure servers
	HUMONGOUS	Basic technology (computer + telephony)	Uninterrupted power supply, physical + digital security systems
Research	**EVEREST**	Internet, manual labour	Culture, institutional quality and technology are important determinants
	GIGAS	Use of mobile phones, e-mail, social media, CRM technology	Conference rooms, air conditioning, access by respondents
	HUMONGOUS	Statistical software (+CAQDAS)	Board rooms, interviewee convenience, power back-up
Call centre	**EVEREST**	IVR, ACD, CRM, CTI, automated	Huge production floor, scalable, clients' premises
	GIGAS	Quality management systems	Chairs, lux, sound proof
	HUMONGOUS	-	Noise, lighting, ergonomics
Training	**EVEREST**	General computer use	Shared facilities, comfort, client's premises
	GIGAS	Functional platforms and software	-
	HUMONGOUS	MS PowerPoint, e-mail	LED technology, modern rooms

Table 6-4: Summary of infrastructure: **SPI–TEC and SPI-FAC**

---

[44] Arguments made in one company regarding a particular case are not repeated in the subsequent company for the said case.

CASE	Company	Hiring	Training
Data	**EVEREST**	Inexperienced fresh from college, internal from elapsed projects, done for each client, employed for project duration, remuneration is project dependent	Formal, on-the-job, client centric
	GIGAS	Educational + professional qualifications, need not be experienced, quick to learn	Formal, client could participate
	HUMONGOUS	Accredited institutions, background check	Generic, product, quality and on-the-floor
Research	**EVEREST**	Fresh graduates for lower positions, experienced recruits for managerial/ higher positions, scarcity of people with necessary skills	Formal, learn from experienced researchers, bonded after training
	GIGAS	Research work projects are few hence relies on permanent pool of employees i.e. minimal recruitments	Person-to-person
	HUMONGOUS	Experienced + fresh recruits	On-the-job, classroom setting, fit-in, project specific
Call centre	**EVEREST**	Non-graduates – they outlast graduates leading to low attrition rates	
	GIGAS	Qualifications, potential longevity on the job	Call centre case's process, product knowledge, refresher courses
	HUMONGOUS	No prior experience	Kinesthetic, , buddying-up, pep-talks, group discussions
Training	**EVEREST**	External sourcing, in-house talent development	Project specific learning
	GIGAS	Advertisement in print media and online	Formal professional development program, acclimatization, on-the-job
	HUMONGOUS	Degree holders in relevant fields with prior experience	Tools and templates of work, TNA

Table 6-5: Summary of training and hiring: **SP-HI&TR**

6.2   Summary of Chapter 6

This chapter provided an overview of the findings - bringing together the attributes of *service delivery process*; employee discretion, skills, process automation, task routineness, and work volume, using the quantitative data (Appendix I). It highlighted similar patterns and characteristics within-case in the three companies and also between cases such as data and call centre, and research and training cases. However, there are also significant cross-case disparities, for instance between data and training cases and cases of research and call centre.

SYNTHESIS OF CHAPTERS FOUR, FIVE AND SIX

DATA CASE

CI&P Framework	Major Considerations
Service Concept	
Objective	Cost considerations persuade clients to offshore outsource
Adaptability	Processes are easily summarised into a set of activities and rules and procedures are followed routinely during the contract duration
Focus	The data offerings entail few similar processes to few industry verticals
Customer Inputs	
Type	Are unequivocal, information intense, high in information volume and do not involve customer contact – processed at the BO
Variability	Contractual agreement signed during transition eliminates customer input variability
Time & Effort	Client expends minimal effort and time at the initial stages – but negligible after full transition of process to the provider
Service Process	
Employee skills	Basic technical, diagnostic and interpersonal skills are required
Employee Discretion	Employees follow scripts without liberty to vary execution process
Automation	Data processes rely on humans and are highly automated
Hiring & Training	In-house acquisition from projects that have elapsed and hiring of new graduates that learn on the job

RESEARCH CASE

CI&P Framework	Major Considerations
Service Concept	
Objective	Outsourcing is predicated on cost benefits
Adaptability	Instructions differ from client-to-client but the core aspects of delivery process are cross-cutting
Focus	Conducted in wide spectrum of verticals – such as business, legal, financial, and technological
Customer Inputs	
Type	Ambiguous, instructional, low in information volume and involves minimal customer contact – processed at the BO
Variability	High customer capability and request variability – diverse clientele with commissioned requirements
Time & Effort	Client expends some effort throughout the phases of the 'operate' process
Service Process	
Employee skills	Intricate technical and diagnostic skills but low interpersonal skills
Employee Discretion	Independently solve – problems as defined by the client
Automation	Tasks are undertaken manually - with minimal technology support
Hiring & Training	Internal development helped by external hiring of experts. Training is defined by the entry level

CALL CENTRE CASE

CI&P Framework	Major Considerations
Service Concept	
Objective	Offshored for cost savings and customer service objectives
Adaptability	At process level of analysis, call centre is rigid and routine offering the same service to callers
Focus	Scope of operation entails few call centre services offered to few selected industry verticals
Customer Inputs	
Type	Unambiguous, information intense, very high in information volume and involves virtual customer contact
Variability	Very high arrival variability – random arrival rate that affects scheduling of staff
Time & Effort	Effort and time spent by clients is material – clients continuously update provider on new developments lest they are misrepresented
Service Process	
Employee skills	Interpersonal skills are critical – language fluency and accent
Employee Discretion	Employees follow scripts- else escalate to technical support section
Automation	Processes are highly automated
Hiring & Training	Fresh non-experienced graduates trained internally - on the job

TRAINING CASE

CI&P Framework	Major Considerations
Service Concept	
Objective	Driven by service considerations such as innovation – plus cost
Adaptability	'Operate' processes not specified *ex ante* and tailored to client specific needs allowing high flexibility
Focus	Adopts and takes new challenges – including unexplored domains
Customer Inputs	
Type	Equivocal, non-informational, low information volume involving interactive/influential customer encounters at FO
Variability	High request variability explained by the high customization and trainee heterogeneity
Time & Effort	Huge amount of time and effort invested by trainees throughout the project duration
Service Process	
Employee skills	Unspecifiable tacit knowledge and high communication skills
Employee Discretion	The process is trainer dependent – free hand
Automation	Highly manual
Hiring & Training	Experienced multi-domain knowledgeable experts headhunted – few exceptional talents developed internally

7   CHAPTER SEVEN – CROSS-CASE ANALYSIS

Through the iterative process of explanation building undertaken in chapters 4, 5 and 6, the underlying mechanism for each of the four cases; data, research, call centre and training was generated. This chapter unravels key observations through cross-case synthesis of findings. To ensure literal replication, cases that theoretically would be expected to yield similar results are compared (Yin, 2009). For instance transactional service cases; data service is compared to call centre, and knowledge service cases; research work is compared to training case. Contrasting cases such as data and research, data and training, research and call centre, and call centre and training are compared to ensure theoretical replication (Benbasat et al., 1987; Yin, 2009). Analyses are done in context of formal research CI&P constructs suggested in the general research model. This approach allows identification and matching of common as well as contrary patterns for purposes of distinguishing between the four cases and drawing verifiable conclusions.

An assessment of the use of qualitative case studies in OM (Barrat et al., 2011) found that outcomes of inductive case studies were presented by means of frameworks, propositions or confirmations/falsifications of hypotheses. Research outcomes in this thesis are presented in form of propositions. To this end, we apply the variable-oriented strategy to compare the four cases and generate important observations [expressed as OB_i] in relation to the study constructs.   The resultant observations are discussed further in chapter 8 in relation to extant literature.

7.1 Linkages between Elements of the CI&P Framework

This section relates findings from chapter 4, 5 and 6 [summarised in Figure 7-1] to the outsourced service typology developed in subsection 3.2.2 which highlighted the need for evaluating service processes through aspects of provider actions vis-à-vis recipient perspective. The table provides a synthesis of the micro level features of CI&P framework for data, research, call centre and training cases, showing the areas of convergence and divergence between/among the case firms, in a way that simplifies and advances cross-case analysis.

The approach adopted entails comparing attributes of the CI&P constructs and drawing observations (OB_i) at three levels of Figure 7-1; (i) diagonal comparison between services that differ in all attributes, (ii) vertical comparison between services in the same category, and (iii) horizontal comparison between services in different categories but with comparable levels of customer contact.

Customer Processing Operations
(CPO)

Order winner – cost & service [**C**]

High interpersonal skills [**P**]

High amount of time and effort [**I**]
High customer contact [**I**]

Transactional cases –
consumed as INFORMATION

Concept [C]
Narrow focus
Low adaptability
Order qualifier – contract related
issues

Inputs [I]
Unequivocal inputs
Low request variability
High arrival variability

Process [P]
Basic technical/diagnostic skills
Low employee discretion
Automated
Layout for efficiency
In-house sourcing
On-the-job training

| Call centre | Training |
| Data work | Research work |

Knowledge cases – consumed
through the MIND

Concept [C]
Broad focus

High adaptability[1]
Order qualifier – calibre of
service provider employees

Inputs [I]
Equivocal inputs
High request variability
Low arrival variability

Process [P]
High technical/diagnostic skills
High employee discretion
Manual
Layout - customer/efficiency
External sourcing
Formal training

Information Processing Operations
(IPO)

Order winner – cost [**C**]

Low interpersonal skills [**P**]

Low amount of time and effort [**I**]
Low customer contact [**I**]

Figure 7-1: Comparison of cases[45] by CI&P attributes

7.1.1 The Concept–Inputs (CI) Relationship

Customer inputs brought into processes that are consumed through the mind portray; high

level of knowledge embedded in the process, information inputs equivocality, high request

but low arrival variability, and contrasting levels of customer contact and volume of customer

---

[45] Note; (i) for call centre case, level of adaptability is high B2B and low B2C but recall the unit of analysis is the B2C 'operate' process, (ii) In a scale of 1 to 4 (1 meaning low adaptability and 4 high adaptability), the four cases; data, call centre, research and training are ranked 1, 2, 3 and 4 respectively

inputs (as surrogated by customer expended time and effort). On the other hand, service processes consumed as information depict, low knowledge embedded in the service process, unequivocal information inputs, low request and high arrival variability, and contrasting levels of customer contact and volume of customer inputs.

In terms of the *service concept*, service processes that are consumed through the mind portray; high adaptability, broad focus, and order qualification based on calibre of service provider employees but differ in order winning criteria. For instance, the research case [Info-MIND] is focused on cost savings whereas training case [Inte-MIND] has considerations beyond cost. On the other hand, service concepts consumed as information portray; low adaptability, narrow focus, and order qualification based on contract related issues but differ in order winning criteria. For example, the data case [Info-INFO] is concerned with cost savings whereas call centre case [Inte-INFO] has considerations beyond cost.

Cross-case comparison of the cases (Figure 7-1) gives rise to important suggestions that paint an *ab initio* picture of relationship between sub-constructs of service concept and customer inputs. This comparison is based on observations, in SOM literature, that standardised service concepts are associated with efficient operations (Sasser et al., 1978) for couple of reasons; (i) serving few markets and offering narrow range of services (*narrow focus*) leads to specialisation and repeatable processes, and (ii) low degree of customer influence or minimal customer induced *variability* permits control of work process by the service provider (Thompson, 1998).

Comparison along the primary diagonal shows that orders for services [research case] with high adaptability and broad focus are won on strength of cost competitiveness provided the service provider has the right calibre of employees. These service processes receive equivocal inputs from customers, exhibit high request and capability variability, low arrival variability, high amounts of knowledge embedded in the processes, utilise low amounts of customer time and effort and are undertaken at the back office. The call centre case is diametrically opposite to research in all attributes of CI. This is interpreted to mean:

OB_1: Information intense service processes consumed through the MIND deliver standardized service concept – one with high adaptability, broad focus and that is outsourced for cost considerations.

OB_2: Interactive service processes that are consumed as INFORMATION deliver standardized service concept – one with low adaptability, narrow focus and whose orders are won on cost plus other considerations.

Comparison along the secondary diagonal shows that orders for services [data case] with low adaptability and narrow focus are won on strength of cost arbitrage provided contract related issues are addressed. These service processes receive unambiguous instructions from customers, exhibit low levels of request and capability variability, high arrival variability, low amounts of knowledge embedded in processes, utilise low amounts of customer time and effort and are undertaken at the back office. This is consistent with suggestions in extant literature that level of efficiency realised by standardised operate processes that are low in customer interaction and insignificantly influenced by variation of customer inputs is high (Chase and Tansik, 1983). The training case is diametrically opposite to data case in all attributes of CI. This is interpreted to mean:

OB₃: Highly interactive service processes consumed through the MIND deliver bespoke service concept – one with high adaptability, broad focus and that is outsourced for factors beyond cost considerations.

OB₄: Information intense service processes consumed as INFORMATION deliver standardized service concept – one with low adaptability, narrow focus and whose orders are won on cost considerations.

The four observations suggest that for bespoke service concepts, customers provide their minds and participate directly during process execution. In other words, the type of action taken by the service provider in processing the service activities is not, in isolation, a sufficient condition for explaining the nature of service concept. This is supplemented by 'self' vs 'non-self' customer input attributes. For bespoke services, service provider and recipient actions are informed by respective perceptions about the service concept. The findings suggest that the decision to standardize a service concept is based on the level of information inherent to a process (provider action) or the nature of customer inputs. This is remarkably consistent with extant literature that suggests customization decision is influenced by customer participation (Buzacott, 2000).

Vertical comparison shows that other than order winners, data processing and call centre cases are similar in all aspects of service concept. Given this scenario, the two are compared to find similarities and differences in customer inputs. It is observed that both receive unambiguous customer inputs, exhibit low request and high arrival variability but differ in levels of customer time and effort and customer contact. This means:

OB$_5$: Irrespective of the level of information intensity or customer interaction, 'operate' processes consumed as INFORMATION deliver standardized service concept – one with low adaptability, narrow focus and that is outsourced for cost considerations.

Similarly, research and training cases, except for the order wining criterion, are similar in all service concept perspectives and exhibit high levels of adaptability, broad focus and similar order qualifying criterion. In terms of similarities and differences in customer inputs, both entail ambiguous inputs, exhibit high request and low arrival variability but differ in level of customer time and effort and degree of customer contact. This means that:

OB$_6$: The kind of service concept delivered by 'operate' processes that are consumed through the MIND depends on nature of provider action i.e., whether it is information intense or interactive.

OB$_5$ and OB$_6$ suggest that the nature of processing action undertaken by the service provider does not explain the type of the service concept where the service recipient's action is informational. However, there is a relationship in situations where service consumption goes through the mind. Comparison of knowledge cases; research and training, reveals that knowledge services are service concept heterogeneous, contradicting service classifications such as Schmenner (1986). SOM literature recognizes that transactional services are diverse, justifying the many service categorisations such as mass services and service factories (Maister and Lovelock, 1982). However, there is no explicit explanation of the differences. This study suggests that the nature of customer inputs explains the differences.

Horizontal comparison suggests that other than similarities in amount of time and effort expended by the consumer and back office nature of processing, data case and research case are antipodal in customer inputs. Whilst data processing involves unambiguous customer inputs, exhibits low level of request variability with low amounts of knowledge embedded in 'operate' process, research case exhibits opposing characteristics. Given this scenario, the two are compared for service concept similarities and differences. Both have orders won on the basis of cost but differ in service focus. However, whilst data service case serves a narrow market and emphasises contract related aspects, research case provides diverse offerings and emphasises calibre of the provider employees. This means:

OB$_7$: Irrespective of whether they are consumed as information or through the mind, service processes that entail informational provider action deliver a standardized service concept.

Similarly, call centre and training are antipodal from customer inputs perspective because other than similarities in amount of time and effort expended and front office execution, the degree of customer input ambiguity, request and arrival variability and amounts of knowledge embedded in 'operate' processes are contrasting. Compared in terms of the service concepts, similarities end at order winning criterion and degree of adaptability. They differ in variety of services offered and order qualifying criterion. This means:

OB$_8$: The kind of service concept delivered by service processes that are interactive depends on 'self' vs 'non-self' nature of customer inputs.

Together OB$_5$, OB$_6$, OB$_7$ and OB$_8$ suggest that customer inputs [consumption action of the service consumer] is a better explanatory construct, than service provider processing action, of service concept.

7.1.2 The Inputs-Process (IP) Relationship

Input uncertainty sprouts from the continuous contact and exposure of the internal 'technical core' of a service (Chase, 1978) to the external environment (Larsson and Bowen, 1989a), through customers introducing themselves or their objects (Bullinger et al., 2003), in a way that impacts the design of service operations systems (Argote, 1982). The service contingency framework developed by Larsson and Bowen (1989a) showed linkage between customer input variability and service process design. The current study seeks to establish whether this linkage is generic or specific to some service processes.

Since the features of customer inputs for each of the four service offerings have been discussed in previous section [in relation to the service concept], this section comparatively gauges the attributes of the service delivery process; employee skills, employee discretion, facility layout, process automation, hiring and training across the cases.

Figure 7-1 shows that service process attributes of processes consumed through the mind portray: high technical and diagnostic skills; high employee discretion; low automation; facility layout based on customer needs; hiring through external sourcing and employees formally trained. Conversely, the 'operate' processes that are consumed as information portray: low technical and diagnostic skills; low employee discretion; high automation; facility layout based on efficiency of operations; hiring through in-house recruitment and employees learning on-the-job. The process characteristics are compared to the attributes of customer inputs; diagonally, vertically and horizontally, following the approach adopted in section 7.1.1.

Diagonal comparison suggests that data and training cases are antipodal in the sense that whilst data processing services are low in technical, diagnostic and interpersonal skills, training is high in all these skills. Employees undertaking data processing are accorded minimal discretion since most activities in the 'operate' process are automated. The facilities used for data processing work are laid out for efficiency of operations and recruitment of employees done in-house and recruits trained on-the-job. Delivery of training services requires employees with significant discretion and facility layout centred on customer requirements. Training service workers are sourced externally and go through formal training. Given that the two service cases are diametrically opposite in terms of attributes of customer inputs:

OB$_9$: Delivery of highly interactive 'operate' processes consumed through the MIND requires high skills, high level of employee discretion and low automation. These processes are laid out to meet customer requirements; employees are sourced externally and require formal training.

OB$_{10}$: Delivery of information intense 'operate' processes consumed as INFORMATION requires low skills, low level of employee discretion and are high automation. The process facilities are laid out to achieve operational efficiency, employees emanate internally and are trained on-the-job.

Similarly, research and call centre cases are out-and-out different in terms of customer inputs attributes but with few exceptions. In terms of the service process attributes, research case requires higher technical, diagnostic and interpersonal skills, more employee discretion and less automation than call centre case. Although facilities for both research and call centre cases are laid out for efficiency of operations, hiring in research work is done externally and

employees require formal training whilst call centre employee recruitment is internal and training on-the-job. This means:

OB$_{11}$: Delivery of information intense 'operate' processes consumed through the MIND requires high technical and diagnostic skills, low interpersonal skills, high employee discretion and low automation. These processes are laid out to achieve operational efficiency; executing employees are sourced externally and require formal training.

OB$_{12}$: Delivery of interactive 'operate' processes consumed as INFORMATION requires low technical and diagnostic skills, high interpersonal skills, low employee discretion and high automation. The process facilities are laid out to achieve operational efficiency, employees emanate internally and are trained on-the-job.

The findings suggest that processes whose customer inputs are 'self – MIND' require high employee skills, high employee discretion and minimal automation. The converse is true for services with 'non-self - INFORMATION' customer inputs. Furthermore, the evidence suggests that the layout of the service delivery facilities is explained by consumption action.

Vertical comparison reveals similarities between data and call centre cases and between research and training cases in all service process attributes except interpersonal skills. Correspondingly, there are similarities in all attributes of customer inputs except for level of customer contact and amount of time and effort expended by the customer, meaning:

OB$_{13}$: With exception of interpersonal skills, processes consumed as INFORMATION have similar service concept attributes irrespective of action of the service provider.

OB$_{14}$: With exception of interpersonal skills, processes consumed through the MIND have similar service concept attributes irrespective of action of the service provider.

The findings suggest there is a correlation between the level of customer contact and interpersonal skills, agreeing with BO/FO configuration framework (Metters and Vargas, 2000; Safizadeh et al., 2003).

Horizontal comparison shows that other than similarities in employee interpersonal skills and the aim of delivering services efficiently, data and research cases are antipodal in service process attributes. Whilst people working in data processing require basic technical skills, diagnostic skills, no discretion and automated processes, the converse is true to research work. Further, whilst data employees are hired in-house and trained on the job, research service workers are sourced externally and trained formally. Similarly, other than for interpersonal skills and layout efficiency objective, call centre and training cases are utterly opposite of each other.

OB$_{15}$: Provided service provider actions are similar, attributes of service processes consumed through the MIND are contrast those consumed as INFORMATION.

OB$_{16}$: Service provider actions do not DEFINE attributes of the service process other than interpersonal skills.

Evidence suggests that process design attributes could be dependent on the form of customer inputs. Specifically, service process feature differences across verticals are due to variations in customer contact and horizontally due to customer inputs. The diagonal differences are attributed to all customer inputs.

7.1.3 The Process-Concept (PC) Relationship

Although attributes of service process and service concept, have independently been discussed in relation to the customer inputs in each case [sub-section 7.1.1 and 7.1.2], this

sub-section compares them. This is achieved through diagonally, vertically and horizontally case comparison. Literature suggests competitive design of services requires matching of service delivery processes to service packages (Apte and Vepsäläinen, 1993; Kellogg and Nie, 1995; Schmenner, 1986). This study sought to establish the link between; (i) the 'how' of achieving service outcomes, meaning the service delivery process or functional quality (Grönroos, 1984), and (ii) the 'what' of service outcomes, meaning the actual service product or technical quality (Bullinger et al., 2003; Grönroos, 1984). In operations management literature, this link has two perspectives; the market-led and operations-led views (Lillis and Lane, 2007). Competitive advantage of outsourcing companies is built around availability of capabilities and resources that deliver specific market required services from home country of service provider. Hence, the PC relationship is established within this logic i.e., given internal capabilities and resources such as people, technology, facilities, space and time (service process), how do organizations determine what services to offer (service concept)?

Diagonal comparison shows that data and training cases just like research and call centre are antipodal in entire scope of service process and service concept attributes, meaning:

OB_{17}: Compared to processes that deliver bespoke service concepts, processes that deliver homogeneous mass services require low skills (technical, diagnostic and interpersonal), low employee discretion and are more automated.

OB_{18}: Compared to mass customized service concepts that are outsourced for cost considerations, standardized service concepts outsourced for cost plus other considerations require low technical and diagnostic skills, low employee discretion but more automation and higher interpersonal skills.

213

The findings suggest that additional customer value beyond cost considerations in IIS is realised through proper application of interpersonal skills.

Vertical comparison shows that data and call centre cases differ in order winning aspect of service concept and interpersonal skills characteristic of service process. This means the cases are significantly similar in CP attributes. Arguments made for data and call centre cases hold true for research and call centre cases, respectively, leading to the following inferences:

OB$_{19}$: 'Operate' processes with low employee technical and diagnostic skills, low employee discretion and high automation deliver standardized service concepts.

OB$_{20}$: The type of service concept delivered by process with high employee technical and diagnostic skills, high level of employee discretion and low automation is contingent on the nature of the provider's action.

This evidence suggests that although interpersonal skills provide logical hint regarding the extent of service customization, the information is incomplete and requires reference to the nature of customer inputs.

Horizontal comparison shows that data and research cases are diametrically opposite in all the attributes of the service concept (with the exception of the order winners) and in all the attributes of the service process (with the exception of interpersonal skills); realities which also hold true for call centre and training work, meaning:

OB$_{21}$: Service concepts that are outsourced for cost considerations are standardized or at least mass customized.

OB$_{22}$: Service concepts that are outsourced for cost plus other considerations are defined by service process attributes.

7.2 Service Operations Principles

7.2.1 Standardization cum routinisation

Literature has it that performance evaluation and pricing of data projects involves routine use of metrics such as turnaround times, running throughout the project duration. Similar indicators such as AHT (average handling time), ASA (average speed of answer), abandonment rate, rework rate, FCR (first call resolution rate) are observed in the call centre case. This is due to the nature of main operational goals of call centre that include: (i) providing timely solutions and answers to customer queries, as measured by ASA; (ii) quality, as gauged through abandonment rate, rework rate, and FCR; and (iii) efficiency, as measured by AHT. The use of metrics presages degree of routinisation and standardisation of the process (Misra, 2004). Research work entails repeatable process steps from client to client However, specific tasks within each process activity are heterogeneous from one research project to the next. At micro level therefore, research work is modified to client requirements. For training the variations in process activities between projects is huge such that standardisation is inconceivable. Developing metrics for such cases would be herculean and were it to happen, varying them during the project would be resource and time expensive (Sen and Shiel, 2006). Evidence suggests that whereas data and call centre cases are highly standardised, research case is standardised at a macro level with micro specifications remaining varied. Training is bespoke and is delivered according to the interpretation given to the problem at hand by both client and service provider.

7.2.2 Technologies

By extrapolating previous discussions in section 6.1 and literature review, we evaluate the nature of technologies used in the cases. Firstly, it seems mass manufacturing methods are applied in transformation processes of data services. For instance, although service providers aim to deliver data work to the satisfaction of each client, there is no direct contact during service delivery in this B2B relationship. In terms of service classification dimensions, data processing work not only entails low contact time, discretion, customization, 'back-office' orientation and product focus but embraces the definition of mass services (Silvestro et al., 1992). Since the most important objectives relate to productivity and cost efficient operations, the data case resonates with these views. Further, the facility layout is designed to attain maximum efficiency informed by the cost-driven client demands; performance based on volume of outputs; and highly automated processes. The high automation of processes enables replication (standardisation) of processes from client-to-client. Secondly, data processing case exhibits nebulous connection between customer inputs and service process, suggesting the low levels of customer input attributes explicitly imply that service process is not necessarily contingent on external variability and disruptions. This is explained by the 'back office' formation of data work arising due to absence of customer contact and as a result no uncertainties and variation introduced to the service 'operate' process (Chase and Tansik, 1983; Johnston and Clark, 2008). From the analysis in section 6.1, it is clear, there is a *sequential interdependency* (Thompson, 1967) between data processing activities. The activities follow each other in the sequence depicted in Figure 7-2 according to the order of execution of task operations. The figure is developed from cross-case scrutiny of three data PCN diagrams in Appendix C. It is clear that data service work exhibits characteristics of an assembly line in the nature of *product layout* that is associable to traditional manufacturing

mass production (Russell and Taylor, 2003) or service operations' mass services (Schmenner, 1986).

Communicate
error(s) to client

| In → | Client Sends File | → | Provider Receives File | → | Assemble, Share, **Do** Work | → | Check Quality | → | Send File to Client | → | Client Receives File | → Out |

Client Audits
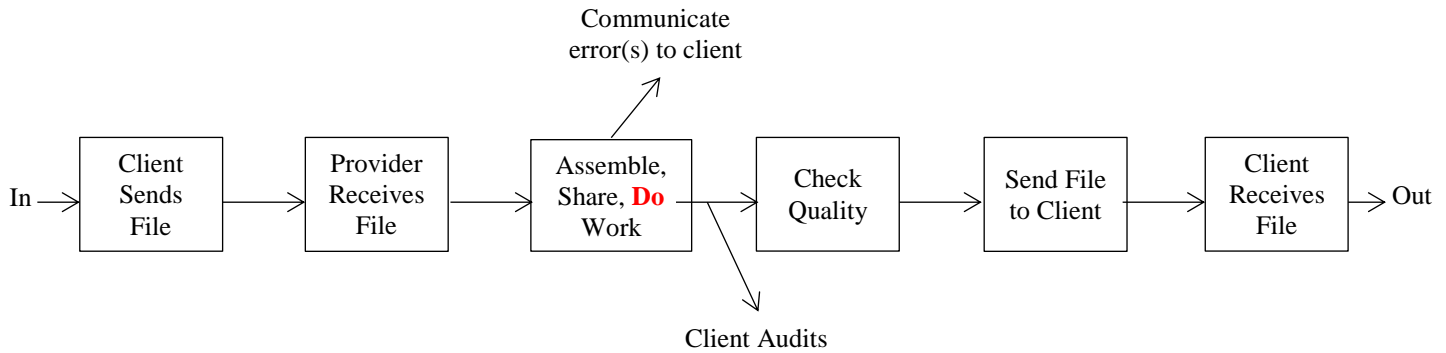
Figure 7-2: Process Technology-like Layout for call centre case

From an operations management point of view, mass production processes support efficiency, speed and low cost competitive strategy (Russell and Taylor, 2003; Trinh and Kachitvichyanukul, 2013). According to the value chain configuration (Porter, 2008), cost leadership strategy is subject to scale of operations and the extent to which capacity is utilised (Stabell and Fjeldstad, 1998). This also resonates with data case findings where agents work long shifts, ensuring projects are delivered reliably and the larger the amount of work contracted the lower the operational costs. Other than economies of scale, cost leadership strategy for data projects is driven by automation, locational benefits[46] and timing (from regional time differentials). This is akin to long-linked technology (Stabell and Fjeldstad, 1998).

Training case reveals remarkably contrasting characteristics from data work case. In terms of service classification dimensions, training not only entails high; contact time, employee

---

[46] Kenya is a relatively cheaper destination compared to developing economies i.e., clients' home countries

discretion and customization but also front-office orientation and process focus that resonates with professional services (Silvestro et al., 1992). Facility layout is designed to meet trainee considerations such as comfort, satisfaction, meeting the deadlines, learning and the general quality of the process. Since these measures are subjective, the 'operate' process of the training case is highly customised. Process execution entails many uncertainties and variations brought about by physical presence of the customer. The evidence suggests that training entails both *sequential and reciprocal interdependencies* (Thompson, 1967) between activities geared towards solving the problem at hand and moving the customer from current to desired state (Stabell and Fjeldstad, 1998). High levels of customization for training case are associated with informational asymmetry that exists in professional services between the service providing professionals and the client customer (Freidson, 1960; Lewis and Brown, 2012). Inexperienced new employees are mentored by the experienced colleagues before eventually they can undertake training independently. This is akin to intensive technology (Stabell and Fjeldstad, 1998).

Data and training cases use principles of mass and professional services respectively (Kellogg and Nie, 1995; Maister and Lovelock, 1982; Schmenner, 1986; Silvestro et al., 1992). This is because the cases are designed for the extreme end points ('low' or 'high') of the constructs studied. However as observed by Schmenner (1986 pp.24) "not all service businesses fit cleanly into these extremes: there are many shades of gray". Indeed this arose in elucidating research and call centre cases. The two cases do not necessarily exhibit medium level construct characteristics analogous to Silvestro et al. (1992)'s service shop. For instance, the call centre case is similar to data services case in terms of customization and required level of employee judgement, and to the training case in terms of 'front-office' orientation and

customer contact time, analogous to quadrant I of Larsson and Bowen (1989a) service typology. Research work is also extreme in variables such as contact time but high in customization and employee discretion akin to quadrant III (ibid, 1989a).

Tompkins et al. (1996) presented a framework showing features of traditional mass manufacturing that included; management that focuses on hierarchy which is removed from the individual employee, provides low levels of employee training, has rigid production processes and emphasises optimal utilisation of human as well as capital resources. Making references to these features, Smith et al. (2010) argued that call centre services exhibit characteristics of mass manufacturing that support service industrialisation (Levitt, 1976). Our findings allude that call centre exhibits features of mass services as well as aspects of mediating technology or value network (Stabell and Fjeldstad, 1998; Thompson, 1967).

Similarly, research case exhibits some features of both mass services and expert services. The question then begs: is it logical to conclude that research work and call centre cases utilise similar hybrid technologies? The answer is explicitly no - although both utilise amalgam of technologies, the technologies are different. This means it could be imprudent to treat services whose attributes do not fit into either of the two extremes in the same way. Consideration should be given to nature of the blend of the varied attributes such that each has a package of technologies that is unique. This is akin to hybrid technology (Stabell and Fjeldstad, 1998).

7.3   Summary of Chapter 7

This chapter addressed dyadic relationships among the three formal study constructs; CI&P and showed the specific attributes that explain these linkages. The main highlights of the chapter include:

- A clear link exists between service concept and customer inputs in the training case [bespoke services] but not in the other cases

- The IP and PC links exist for all categories of services

- IP link suggests that level of information intensity in 'operate' process explains the process design characteristics

- PC link suggests that level of interpersonal skills is related to non-cost outsourcing objectives.

- OB_{23} and OB_{24} below pool aggregate the relationships among the CI&P constructs

- Total of 24 observations were made

OB_{23}: 'Operate' processes with low level of customer interaction deliver standardized service concepts irrespective of the levels of employee skills, employee discretion and automation. This means that the type of service concept delivered by 'operate' processes that have high proportion of provider time spent on information actions is not contingent upon attributes of the service process.

OB_{24}: The type of service concept delivered by 'operate' processes that have high proportion of provider time spent on customer contact involving actions is contingent upon attributes of the service process.

8   CHAPTER EIGHT – DISCUSSION & CONCLUSIONS

This PhD research study set out to investigate implication of relationships among CI&P constructs to SOM. Four operational level objectives identified in chapter one are recapped. First aim was to identify process design characteristics of outsourced IIS. Second objective was to explore interrelationships among concepts of customer inputs, service delivery process and service outcomes for the different service offerings. Building from findings of the first two, the third objective sought to provide explanation regarding the role of information intensity vis-à-vis customer contact in design of services. The fourth objective related to implications of the study to practice and wider IIS operations management. Data analysis in chapters four, five and six provided insights about each service case culminating into cross-case analysis in chapter 7 that produced 24 observations[47].

Concerns from theoretical question will be addressed through emergent propositions explicitly summarised within this chapter. This chapter draws conclusions that are geared towards filling research gaps, presenting research contributions at two levels; implications to SOM theory of service design and contribution to practice. This phase of study answers the 'so what' question, concerned with the effect of research to theory and practice (Whetten, 1989) in operations management. The chapter closes with a presentation of limitations of the study and suggestions for future research.

---

[47] A list of the 24 observations made in chapter 7 is attached in APPENDIX H

8.1   Key findings and discussion

8.1.1 Process design features of outsourced IIS

This section summarizes the attributes of service delivery process, discusses manipulations in outsourced IIS and how they differ from other contexts in SOM literature.

Employee Skills

Evidence shows that highly information intense outsourced services require employees to possess basic technical, diagnostic and interpersonal skills. This is consistent with conclusions derived earlier, that info-INFO service offerings such as data case are highly commoditized and 'industrialized' (Levitt, 1976). In contrast, non-information intense outsourced services such as training case require employees to possess high technical, diagnostic and interpersonal skills, meaning personalised services are polar opposite of commoditizable services in all aspects of employee skill requirements. Extant OM literature (Johansson and Olhager, 2004; Kellogg and Nie, 1995) explains these differences through customer contact (interaction) lenses. However, our findings show that the impact of information intensity is different from that of customer contact. According to the emergent novel definition of IIS (page 241), non-extreme cases [research and call centre] are considered information intensive. These cases exhibit significant employee skill differential as explained by the observation that research work is informational in aspects of provider action and call centre is informational in consumption actions. 'Operate' processes that entail informational consumption and interactive processing are delivered by employees possessing high levels of interpersonal skills but basic technical and diagnostic skills. On the other hand, service processes that are informational in provider actions but consumed through the mind are processed by employees with high technical and diagnostic skills but low interpersonal skills. This suggests that

customer interaction sufficiently highlights the level of interpersonal skills but not the other service process attributes. It is reasoned herein that; (a) interaction (customer contact) provides partial explanation of employee skill requirements, and (b) that remaining part is explained by knowledge embedded in the process [alternatively consumption action]. This was true to the four cases.

Employee Discretion

The findings suggest that outsourced IIS consumed through the mind are delivered by employees with higher discretion than those consumed as information. This suggests that traditional OM understanding of interaction, in terms of only processing actions, does not explicate employee discretion requirements. The main contribution to knowledge of this study in relation to employee skills and discretion is presented through proposition 1, P_1, in section 8.1.3.

Infrastructure – Technology and Facilities

Technology is understood in terms of automation and degree of service routinization. Automation entails execution of tasks by use of machine technology in place of persons (Parasuraman and Riley, 1997). Execution involves active processing of data into information and taking control of the entire task (Lee and See, 2004), enhancing efficiency of operations and boosting realization of advantage over competitors (Adam and Swamidass, 1989; Meredith, 1987). However, different services require different levels of automation; some are designed to realise efficiency and productivity whilst others consider quality, speed and effectiveness as pertinent performance objectives. Findings show that the core activities of standardised service concepts are automatable although not in terms of machines replacing

humans but rather mediating , facilitating or assisting service delivery (Froehle and Roth, 2004). For instance, delivery of data case relies on mediated and facilitated technological archetypes (ibid, 2004) to receive (deliver) data files from (to) clients and in some instances to process data. Call centre case goes beyond that because simple customer inquiries are fully resolved through the IVR technology system, in the absence of human interface, affording the customer sales representative ample time to resolve more demanding customer interactions. Other than the use of routine operational technologies, customised service concepts are delivered free of technology. Along similar lines, SOM literature (Bowen et al., 1989; Hickson et al., 1969; Perrow, 1967; Selladurai, 2004) suggests that automation enhances standardization. Nevertheless, the kind of automation found in outsourced services does not support system flexibility that would allow provision of broad scope of services (Chase and Erikson, 1988). This is explained by the vertical specialization approach used by BPO providers.

Service **facilities** have two dimensions, (i) *location* decision, and (ii) *layout* decision. According to traditional customer contact model:

• facility location decision is made along the following thinking:

> "In high-contact systems, the service facility must be located near the
>
> customer. In low-contact systems, the service facility may be located near
>
> the resources" (Chase and Tansik, 1983 pp.1043)

Extant findings reveal that for contact (call centre) and non-contact (data and research) outsourced IIS, the service facility may be located anywhere in the world although the service system should be in the home country of the service provider, near the resources. However, high-contact processes involving interruptive client

interaction such as training case are challenging to globally spread because of physical customer participation in the process. These findings are consistent with the assertion that highly information intense activities are easier to globally disaggregate and locate anywhere in the world than high contact and high physical material processing service activities (Apte and Mason, 1995).

- layout decision is made on the following basis:

> "In high-contact systems, the service facility must be laid out to accommodate the customer's physical and psychological needs and expectations. In low-contact systems, the facility should be designed to maximize production" (Chase and Tansik, 1983 pp.1043)

Whereas findings from highly interactive processes (training case) are consistent with the customer contact model, facilities that deliver low contact service processes are laid out to achieve efficiency (case of data) or meet customer requirements (case of research) (Metters and Vargas, 2000). This means that consumption action illuminates facility layout, challenging the belief that facility layout is dependent on customer contact and or interaction.

Hiring and Training

Findings suggest that employees do not require specific knowledge or academic qualifications to deliver standardized outsourced IIS concepts and that prior experience from equivalent jobs is not considered necessary. For example, the recruitment process for data and call centre cases values thoroughness (Lee and See, 2004), ability to quickly learn and follow rules and procedures and potential for longevity in the job more than past job experience. Since training of employees working on these cases is generic, it is undertaken on-the-job. In contrast,

effective delivery of customized concepts requires employees with education from relevant fields supplemented by prior experience in similar or equivalent jobs. Whilst it is mandatory that novice employees undertake formal professional development programs, experienced employees acclimatize to new projects by learning project specifics in relation to client needs. Vacancies in customised training case are filled through external sourcing, headhunting or in-house talent development. Due to complexity, research case delivers middle-ground kind of service concept and requires package-like mix of hiring and training characteristics. Whereas employees undertaking routine tasks are hired without rigid education qualifications or prior experience, managerial positions must meet these requirements. Correspondingly, the former group requires generic on-the-job training whilst the latter only requires project familiarization.

The findings suggest that outsourced IIS require low skilled employees hired in-house to undergo basic technical training while non-IIS processes require external recruitment of employees with vast experience and interdisciplinary knowledge. This could be interpreted to mean that IIS consumed as information correspond to service factory processes, non-IIS to expert services and research work resembles service shop (Kellogg and Nie, 1995). This is consistent with the high degree of automation observed in outsourced IIS and low routinisation in non-IIS.

8.1.2 Emergent service typology

On the basis of the clarity of differences that emerged, from data analysis, between the various classes of service process based on the service *provider actions* and customer

consumption actions, an empirical typology that in addition to IPOs and CPOs, considers

MPOs, Table 8-1, is suggested.

		Service recipient			
		Customer 'self'		Customer 'non-self'	
Provider Actions		Body	Mind	Possessions	Information
	Physical (material)	A	■	B	■
	Informational	■	C	■	D
	Interactive (people)	E	F	■	G

Table 8-1: Generic Service Typology

Cell A service processes entail physical manipulation of materials such vegetables, wheat and cooking oil in preparing food that is consumed directly by customer's body. Service processes in cell B are high in physical manipulations and the customer derived benefits are received through customer's possessions such as motor vehicles, buildings, and equipment. Hill (1977) referred to them as services affecting goods, examples of which include maintenance, repair, security, and cleaning services. Category E service processes involve high element of customer involvement and contact because customer utility is delivered through physiological transformation such as provision of healthcare services or locational movement such as transporting employees to and from work. Services in cells C and D are informational meaning that most of the provider's operational time is spent processing information. Because of their nature, category C services are received by the consumer through the mind in form of knowledge, requiring engagement of the thinking brain (Currie et al., 2008; Davenport and Prusak, 1998). They include provision of distance learning and research and development services. Category D services include data entry and transcription services and are received by customers as ready to use sets of information. Indeed Drennan (1989) cites legal and education services as examples of informational industries. Whereas categories F and G services are consumed in the same way as C and D respectively, both entail high degree of

contact between the client and the provider. Examples include human resources training for category F and call centre service for category G. The typology suggests that service classification should be based on totality of both service providers' and customers' actions.

8.1.3 The links between CI&P for different service offerings

Literature (Bullinger et al., 2003; Sampson, 2012a; Sampson and Froehle, 2006) suggests that customer caused variability is coped with by (i) altering the service delivery system, or (ii) adapting strategies that reduce the variability (Frei, 2006). Although most of the literature is theoretical than empirical, there are exceptions such as Ponsignon et al. (2011) that suggested service design process is contingent upon customer inputs. The authors are not explicit about customer inputs despite capturing some aspects such as back and front office structure and customer contact and relation to service delivery system. Empirical findings herein attempt to make explicit this linkage. The relationship is highlighted by OB_9 - OB_{12}. 'Operate' processes that entail customers providing 'self' inputs[48] during consumption are delivered by employees with high skills and discretion than those that require 'non-self' customer inputs. Indeed, according to OB_{13}–OB_{16}, the extent of service process characteristics is contingent upon the nature of the consumption action rather than the nature of the provider's processing action. These findings are in tandem with the assertion, in service classification literature, that high customer contact (time) professional services such as management consultancy require employees with higher decision making discretion and are more customised than mass services (Silvestro et al., 1992). The findings suggest linkage between customer inputs and service process in the four cases.

---

[48] In Figure 8-1, the dimension of consumption through the mind is analogous to 'self' customer inputs

Current literature suggests linkage between service concept and service delivery process but largely from an outside-in view (Lillis and Lane, 2007). This study included the inside-out perspective, whereby organisational resources (Barney, 1991; Prahalad and Hamel, 1990; Wernerfelt, 1984) and dynamic capabilities (Teece and Pisano, 1994) available to an organisation guide the design of the service delivery system, filling the research gap whose aim is to unearth the linkage between service process and service concept. OB_{17}–OB_{20} suggest that service processes requiring high skills (technical, diagnostic and interpersonal), high employee discretion and low automation are suited to deliver bespoke service concepts.

From foregoing, only the training case is bespoke. Other mishmash of service process attributes deliver somewhat standardized or homogeneous service concept. Research and call centre cases provide new insights, adding to current SOM literature. As observed in chapter 6, research work is similar to training (whereas data processing work is similar to call centre case) in all aspects of service process except interpersonal skills and all dimensions of service concept except operational objectives. From Figure 8-1, the service concept of research case process is slightly less customised than training case[49] process:

> ***P₁**: Compared to standardised service concepts outsourced for cost and non-cost considerations, customised service concepts outsourced for cost considerations are delivered by employees with high diagnostic and technical skills, high discretion and low interpersonal skills.*

---

[49] Similarly, call centre's service concept is slightly less standardised than data case.
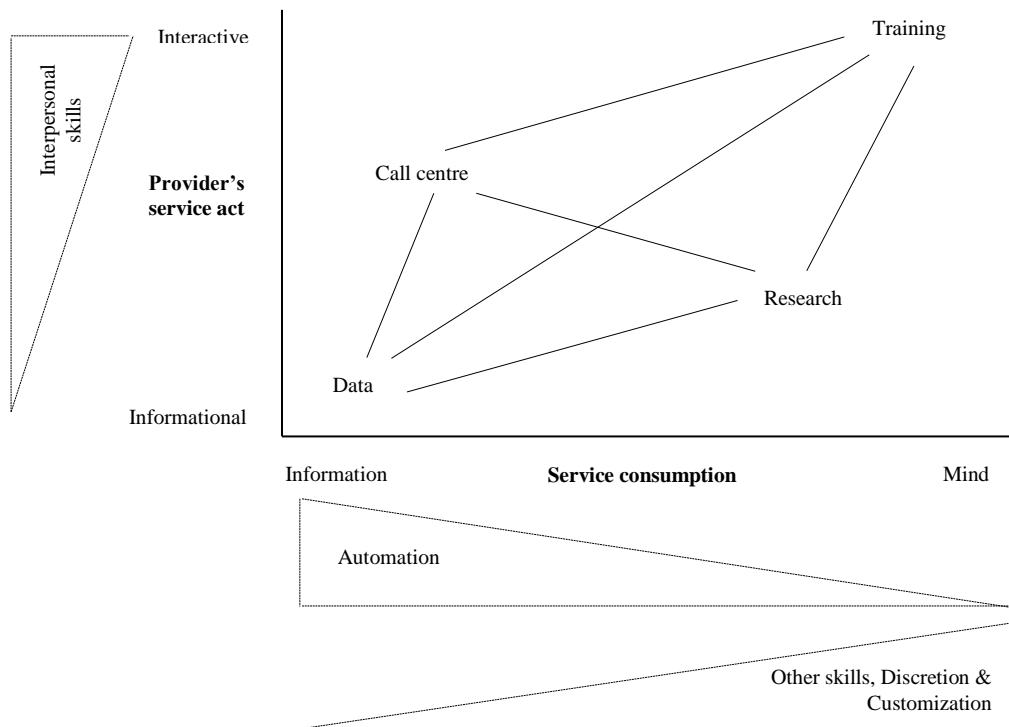
Figure 8-1: Summary of Findings

The findings suggest that service concepts delivered by employees possessing low technical and diagnostic skills, low employee discretion and high automation are standardised. However service process attributes by themselves do not explain existence [or otherwise] of link between service process and service concept. Service concepts are standardised irrespective of service process attributes, leading to a blurry link that is explained by informational considerations. However, service process attributes explain this link in interactive [non-informational] services. Whilst service process characteristics explain link between service process and service concept for interactive service processes, this does not apply to informational services:

P$_2$: Information intensity is better and richer than service process attributes as [an]explanatory construct of the link between service process and service concept.

The findings suggest there is a link between service processes and service concepts for interactive processes, in line with seminal OM suggestion that matches between service delivery process and service concept should be created (Heskett, 1987; Silvestro and Silvestro, 2003). However, this link should be understood from the level of information intensity present in a service process.

The last link considered was between service concept and customer inputs. Sampson (2000) contends that previous SOM studies have not explicitly covered this dual provider-client relational concept. Edvardsson and Olsson (1996) observe that customer acts as *"... the recipient and judge of the service in terms of added value and quality ... as co-producer of the service in his partially unique manner ..." (Edvardsson and Olsson, 1996 pp.146).* The current study sought to explore and fill research gap as to whether customer perception of service concept influences customer inputs brought into a service providing organisation. Harris and MacKay (2009) evaluated the applicability of value chain, as originally modelled by Michael Porter, to modern manufacturing and concluded that it is no longer 'fit for purpose'. For the best in class manufacturing firms today, the value model is and circular (Ibid, 2009), global and networked[50] (Zhang and Gregory, 2011). The linear chain, Harris and MacKay (2009) assert, ignores the role of customer relations in innovation because with the customer at the centre, the value model is circular. Indeed Silvestro and Silvestro (2003) found that organizations (in particular NHS Direct[51]) faced challenges in translating the service concept into explicit service process. The current study suggests that failure by operations managers to consider and address customer inputs widens the gap between service

---

[50] The following articles; Zhang et al. (2007) and Zhang and Gregory (2011) discuss global engineering networks in detail

[51] National Health Service (NHS) Direct is a call centre in UK that links patients to health experts for advice.

concept and service delivery process. The initial hint of linkage between service concept and customer inputs was established through $OB_1 - OB_8$, meaning consumer interactions enhanced customization of the service concept. This is true to bespoke non-information intense service but not to information intense services, meaning the circular value manufacturing model (Harris and MacKay, 2009) is extraneous to outsourced IIS but germane to delivery of non-information intense customer contact services at 'operate' process level.

P3: The link between the service concept and customer inputs is non-existent for IIS, challenging the notion that all service processes are bidirectional

Findings suggest existence of linkage between level of information intensity in an 'operate' process and the type of service concept, meaning that overall relationship among the three study variables shows that design of 'pure' information intensive service 'operate' processes is *unidirectional* and should benefit from manufacturing assembly-line principles of mass production as well as mass customization. Non-information intensive services, on the contrary, are delivered through bidirectional 'operate' process that entails seamless coordination of various attributes of the CI&P service design constructs.

Furthermore, despite being an outsourced IIS, findings from research case provide extra imperative insights in two perspectives; (i) the suggestion that, compared to service concepts consumed through the mind, service concepts consumed as information are contingent upon lower technical and diagnostic skills and lower employee discretion, and (ii) 'operate' process of the research case refutes the observation that "… the higher the information intensity of a service activity, the easier it is to use information technology for performing that activity … " (Apte and Karmarkar, 2007 pp.69) and provides empirical support to the verbatim observation

that: "As the informational component of production increases and information assumes the status of a productive output in its own right, work becomes more complex and at the same time is subject to great decentralization" (Russell, 2009 pp.273).

8.1.4 Service customization and definition of customer interaction

According to the definition of customer contact as percentage of total service creation time in which the customer is in direct contact with the service facility (Chase, 1981), data, research, and call centre cases are back-office since they are not characterised by customer physical presence. Training case is pure front-office service process carried out in the presence of the customer. However, under the revised definition of contact that considers indirect communication as part of customer contact (Froehle and Roth, 2004; Johnston and Clark, 2005a), inbound call centre case is a front-office process[52]. The front-office and back-office configurations have traditionally been referred to in making the facility layout and design decision. The back-office model is appropriate for delivery of productivity and efficiency considerations because the service providing organisation is in total control of work processes (Thompson, 1998). For front-office processes, however, the degree of operating freedom of the service provider in undertaking work tasks is low due to customer caused variability. Such FO processes are designed to maximise effectiveness related goals (Chase and Tansik, 1983). Rival suggestions and theories have been offered by SOM researchers such as Metters and Vargas (2000). Intrinsically, clear understanding of words customer contact and customer interaction is overdue.

---

[52] This study adopted the revised definition.

Related to conceptual typology in chapter 2 and construct of customization widely referred to in definition of service concept (Kellogg and Nie, 1995; Ponsignon et al., 2011), our findings suggest that the decision regarding the optimal extent to which a service concept is customized is not based on customer contact or information intensity but rather the two together. For instance OB_6 implies; with the proviso that customer inputs are 'self' mind, degree of customization of service concept is contingent upon provider's action. OB_8 is interpreted to mean that; as long as the provider action is interactive then the degree of customization of service concept is contingent upon customer inputs. To that extent, actions of the two parties together provide better basis for designing 'operate' processes, particularly, to deliver non-extreme services (research work and call centre).

> P_4: *Service customization decision is a product of consumption action of the consumer and service processing action of the provider.*

Schmenner (1986) defines interaction as influence that the consumer has on the service process, suggesting that customer contact [visibility or participation without the consumer actively intervening in the service delivery process] is not equivalent to consumer interaction. However, due to its implicit premise that all services are consumed as information, implying interaction means customer contact, the PCN concept misses this point. Chase and later other authors including Schmenner (1986) attempted to rectify this misnomer. Current findings add to SOM knowledge by suggesting that customer inputs primarily explain interaction.

> P_5: *Nature of customer inputs [consumption act] defines interaction.*

Theoretical replication logic (chapter seven) provided empirical evidence suggesting that due to inherent differences in characteristics and goals, not all FO processes nor BO processes are

designed in the same way. For instance, whereas call centre and training are FO processes, the former offers standardised service and is designed to deliver operational efficiency unlike the latter that is bespoke. Similarly BO process (data and research) exhibit variations. This is remarkably consistent with observation by Metters and Vargas (2000) that some service situations call for design of FO processes that deliver cost objectives and BO processes that deliver non-cost goals. These unusually inconsistent findings are explained by level of information intensity in service processes as well as by micro-aspects of customer contact construct such as whether the customer 'self' inputs entail customer's body or mind and whether non-'self' customer inputs refer to customer's property or information (Sampson and Froehle, 2006). Outsourced IIS that entail high level of customer contact delivered to the mind and those that entail low customer contact delivered as information, respectively, strive to realise effectiveness and productivity goals stated in traditional customer contact framework. This study adds to extant customer contact theory by providing evidence suggesting that high-contact outsourced IIS processes consumed as information (call centre) are designed to deliver standard goals and achieve high productivity whilst low-contact processes that are delivered to the customer's mind are designed to achieve unique requests specific to the customer. This study suggests that customer contact should be succinctly specified. For instance, whether it entails value consumption via physical body or mind and where contact is surrogate whether it entails physical material or informational. This specification is possible through understanding of service process information intensiveness.

8.1.5 Diversity of IIS

Literature reveals two attempts to classify ITES; one by Niranjan et al. (2007) and second by Youngdahl and Ramaswamy (2008). Whereas the former uses complexity and criticality

dimensions of the service offering to classify BPO vendor organizations, the latter takes an

operations outlook that classifies outsourced processes in terms of level of customer contact

and knowledge inherent to the service process. Although the two classifications address

'offshorable' services, they are not exhaustive and do not capture whole range of services

offered by BPO industry. A typology that captures the totality of outsourced services will

better practitioners' understanding of the offshoring phenomenon. This thesis provides the

first theory development research attempt in the outsourced phenomenon. OM thinking in

outsourced IIS can be fostered by understanding relationships between or among service

products, relevant technologies utilised in production and corresponding service delivery

processes. The four cells of two-by-two dimensional traditional classification of services

(Schmenner, 1986) are not collectively exhaustive because they consider only extreme cases

for each dimension. A typology containing several important dimensions of the two service

beneficiaries – *action of the service provider* (generic beneficiary) and the *nature of action of*

the direct recipient (specific beneficiary) that encompasses all outsourced services, and

captures the levels that lie between the extremes for each dimensions is suggested. Action of

the service provider is characterised as either physical, informational or interpersonal (Apte

and Mason, 1995) whereas service recipients consume the service directly as a person or

indirectly through his/her possessions (Lovelock, 1983; Sampson and Froehle, 2006).

Incorporation of customer actions and service provider actions makes this classification

powerful. This is because the typology categorises services in a way that encompasses all the

traditional dimensions of service classification such as: intangibility, heterogeneity,

inseparability and perishability (IHIP) (Sasser et al., 1978); contact (Chase, 1978); degree of

customer influence (Kellogg and Nie, 1995); degree of labour intensity, interaction and

customisation (Maister and Lovelock, 1982; Schmenner, 1986); number of clients processed

per process per day and six other dimensions (Silvestro et al., 1992); dimensions of unified service theory (Sampson and Froehle, 2006) and many others. Through cross-case analysis of the four empirical cases it emerged that outsourced services differ due to (i) service provider's action and (ii) customer's consumption act. Indeed clear relationship appears between the various aspects of these two variables.

Evidence in section 7.1 shows how the four cases, as discussed in accordance to theoretical classification typology, differ. Some of these findings are recapped herein to provide justification for the proposed methodological classification of services. Figure 8-1 presented summary of the findings from both within and cross-case analyses done and suggested that for extreme[53] cases (data and training), the nature of the service concept (read customization) is related to the degree of information intensity[54] of customer inputs brought into the service 'operate' process. The less informational the inputs into the service process are, the higher the extent of customization. This is in tandem with extant SOM literature that suggests customization increases as the level of customer contact increases (e.g., Chase, 1981; Sampson, 2012a)[55]. Importantly, the implied suggestion by Apte and Mason (1995) that if higher proportion of total time spent processing tasks is informational, low contact time is noted. The stated findings are reflected and justified by $OB_1 - OB_8$ in chapter 6.

However, service processes that exhibit mixed aspects of provider and consumer action, such as those processed interactively but consumed as information and those processed independently but consumed through the mind, offer new insights. For instance, service

---

[53] Extreme in the sense of traditional service classifications that only consider the high-low continuum of a service dimension – see section 7.3 for elaboration.

[54] Information intensity should be viewed from both the provider's and the consumer's actions. A service process is highly *information intense* if it evidences information processing actions and information consumption actions.

[55] This provides a partial explanation of the link between service concept and customer inputs.

concept is standardized to some extent irrespective of the nature of the provider action (including cases where action is interactive) provided consumption action is informational. As well, service concepts consumed through the mind are customized to some extent irrespective of action of the provider (including situations where the action is informational). The findings support proposition that:

> ***P₆***: *A service classification that considers actions of the service provider and the customer is all encompassing or [and] collectively exhaustive.*

8.1.6 Summary of Research Propositions

Adopting the approach of (Narasimhan and Jayaram, 1998), key constructs of the study; service concept, customer inputs and service delivery process are mapped together with emergent propositions (Figure 8-2) relative to research objectives. The first five propositions show how empirical findings link variables of theoretical framework. Next is a brief overview of each of the six propositions developed.

P₁ - challenges the widely held notion that interactive[56] service processes deliver more customised service concepts and are less efficient than less interactive processes. It also supposes that employee interpersonal skills do not necessarily correspond directly to employee discretion. In SOM literature, service categories that require employees with high interpersonal skills suggest need for more employee discretion (Bowen and Lawler III, 1995; Kellogg and Nie, 1995; Melhem, 2004; Parasuraman and Riley, 1997).

---

[56] The concept of interpersonal skills is extrapolated to include concept of interaction

P₂ - by highlighting that the nature of the link between service delivery process and service concept is revealed by the level of information intensity in a service process, this proposition challenges SOM literature and contradicts the perception that service process attributes solely provide the yardstick for exploring the service concept.

P₃ - brings out the importance of understanding the level of information intensity in the 'operate' process of service and suggests that customer inputs mediate the relationship between service delivery process and service concept for non-IIS.

P₄ - supports conceptual suggestion by Schmenner (1986) that customer contact is not equivalent to customer interaction. Findings show that for interactive processes consumed as information, interaction is equivalent to customer contact but for service processes consumed through the mind, interaction is understood in terms of level of customer contact and customization.

P₅ - provides clarification on the meaning of consumer 'interaction' and challenges unclear statements, such as "… if financial services are relatively more interactive than research and development, they are less likely to be outsourced" (Liu et al., 2011 pp.562), that Schmenner (1986) unsuccessfully attempted to lay to rest.

1

P₁

Standardised services outsourced for service benefits	**Customised services outsourced for cost benefits**

P₄

Consumption act and provider processing act

Levels of employee skills and discretion

P₂

Information Intensity

	Mass	Expert
D	**R**	**T**
	C	
	Network	

Case	D	R	C	T
Person skills	Low	Low	High	High
Other skills	Low	High	Low	High
Discretion	None	High	Low	High
Automation	High	Low	High	Low

Service Process

Service Concept

Customer Inputs

Case	Service Concept	Action
D	Standardised - mass	Info
R	Largely customised- hybrid	Info
C	Standardised - 'multibrid'	Inte
T	Customised - expert	Inte

P₃

Information intensity in a service process

Case	D	R	C	T
Information intensity	Pure IIS	IIS	IIS	Non-IIS
Customer contact	Very Low	Low	High	Very High
Client time & effort	-	Low	Medium	High
Consumer Action	INFO	MIND	INFO	MIND

Interaction

P₅

Figure 8-2: Mapping of Propositions to Conceptual Framework

240

P₆ - suggests that outsourced IIS are defined as *services that are high in information intensity either in processing act of the provider of service or in consumption act of the consumer or in both*. Services that are high in information in both actions are hereby referred to as 'pure' information intense services. Per se, data processing is pure IIS, research and call centre are IIS whilst training does not meet the criteria is non-IIS. This methodological approach develops a typology for outsourced IIS, helping fill gaps in SOM literature. First, the emergent typology extends SOM literature on contemporary service classification logics (Sampson et al., 2010a) by encompassing services that ordinarily are excluded from classifications. Secondly, the typology provides explicit definition necessary condition to understanding of service design decisions. This makes clear the distinction between various types of services. Thirdly, the typology attempts to put closure to persistent confusion in SOM between the concepts of customer contact and interaction (Schmenner, 1986), suggesting that the two have same meaning in some service contexts but not in others.

This aforegoing discussion examined relationships between [among] 3 important service design aspects; CI&P leading to 6 important propositions. The findings from comparison of service concept to attributes of the delivery process suggest that customization of client's service requests does not necessarily preclude efficiency considerations because through innovative manipulation of attributes of the delivery process, a service can be tailored to meet specific client requests at competitive cost considerations. Similarly, standardized or homogeneous service concepts are designed to deliver non-cost operations dimensions while at the same time ensuring service efficiency.

8.2 Contribution to Knowledge

The research extends the existing SOM theory in several ways. A new theory on role of customer inputs; particularly information intensity, present in a service process emerges, suggesting that aspects of customer inputs such as *how a service is consumed* [not necessarily the level of customer contact] define customer interaction at process level. It is established that although customer contact is an important service classification dimension, it only provides partial explanation of the similarities and differences among service categories. To unravel and demystify complex service processes within the aim of identifying strategic and operational options that enable service business managers to realize organizational goals requires service designers to make considerations that go beyond level of customer contact. After determining, for instance, that a service process falls within CPO domain, the next level is to establish how the CPO is consumed; is it consumed as information or as knowledge? The answer to which then highlights the inherent managerial challenges in delivering such a service process. In short, the findings contradict the widely held notion that service customization is related to customer contact.

While agreeing with UST's provision that services should be understood at process level, this study suggests that each service process has a core activity [hereby referred to as *the-activity-within-the-process [TAWTP]*] that is the back-bone that holds the process together and that all the other activities are secondary and supplementary to it. This suggests that understanding how TAWTP is consumed forms the best basis for service classification. The study provides an IIS OM conceptual typology showing how contingencies governing service delivery create explicit conditions necessary for definition and understanding of service process design dimensions and decisions.

Table 8-2 provides summary of conclusions. The research question; *what are the implications of synchrony among customer inputs, service delivery system characteristics and service concepts on operations and operational actions in information intensive services?* is answered by addressing subsidiary objectives as advocated by Blaikie (2009).

Process design features		Service concept	Customer inputs		Designation
			Level of customer contact (interaction)	Level of information intensity	
Low technical/ diagnostic skills Low discretion High automation Layout for efficiency In-house sourcing On-the-job training		Standardized	(i) Low (low)	High	Transactional services ['pure' IIS]
			(ii) High (low)	High	Transactional services [IIS]
High technical/ diagnostic skills High discretion Low automation External sourcing Formal training	Layout for efficiency	Mass customized	Low (low)	High	Knowledge services [IIS]
	Layout for customer service	Customized	High (high)	Low	Knowledge services [non-IIS]

Table 8-2: Design constructs for outsourced services

Subsidiary Objective 1*: To identify process design features of IIS*

The emerging conclusion is that different services have different process design features. Evaluation of features such as employee skills, employee discretion, automation, facilities and staff hiring and training shows no one service delivery framework fits all IIS offerings. Indeed, knowledge services are fluid compared to the rigid transactional services (Wemmerlöv, 1990). Outsourced and or offshorable services are diverse requiring different service design considerations. This study extends extant SOM knowledge since there are no other equivalent studies identifying service design attributes for IIS.

Subsidiary Objective 2: *To understand the links between customer inputs, service delivery process and service outcomes for different IIS offerings*

We conclude that at process ['operate'] level, service design requirements for IIS are different from the traditional customer interactive service processes. For instance, the service concept-customer inputs [C-I] link is not established in IIS. This is explained by the 'win' phase of outsourcing process that defines service concepts and determines requisite customer inputs prior to transitioning the 'operate' phase. However for non-IIS, the link is well established due to the strong influence the interactive customer has on the service provider. This extends extant SOM literature by providing new insights into the applicability of Taylorism and other manufacturing methods such as production-line approach (Levitt, 1972) to IIS.

Subsidiary Objective 3: *To explore role of information intensity in design of services*

The study provides empirical evidence that:

- validates assertion by Apte and Mason (1995) that as compared to the level of customer contact, the level of information intensity in service processes is equally important to the understanding of service design.

- supports suggestion by Sampson and Froehle (2006) that the nature of customer inputs defines interaction in service operations.

The level of information intensity in service process is succinct to explaining the nature of the service concept. From table 8-2, service processes that entail high information intensity have more standardised service concepts than those with low levels. This suggestion provides SOM researchers with avenue for further theory testing research.

8.3   Suggestions to Practice

Kenyan BPO/ITES environment relative to country specific characteristics elucidated in chapter three (Liu et al., 2011; Metters and Verma, 2008) presented an economy lagging behind competitors due to; (i) lack of government support to BPO/ITES industry – such that each company builds own capacity fully in isolation (Wausi et al., 2013), (ii) lack of not only working legal framework (Waema et al., 2009) – a key requirement to any ITES/BPO industry - but an industry association[57] (similar to NASSCOM[58]) – key ingredients for establishing strong ITES industry and building pool of key resources and capabilities, and (iii) overemphasizing marketing of Kenya as BPO/ITES destination to international players with little attention to operations aspects has led to failure to win clients (Wanjiku, 2012). Despite these challenges, Kenyan ITES firms (including the three case companies) have striven ahead and are competitively adding value to a global clientele albeit with challenges.

The emergent findings provide several valuable insights to Kenyan ITES and outsourcing managers; (i) the observed use of one service delivery framework in all outsourced service offerings is not feasible into the long run because different services have varying capability, resource and strategic requirements, (ii) the findings provide avenue that can be used by service providers, particularly new entrants to the industry, to design and select services in which to specialise, for which requisite expertise, capabilities and competences are internally available, and (iii) understanding service 'operate' process for each type of outsourced process enhances realization of objectives of *win* and *renew* phases of outsourcing [i.e., ensuring more international businesses outsource to Kenya and that existing clients renew and

---

[57] Observed by the author during preliminary phase of study – in an attempt to establish industry contacts
[58] National Association of Software and Services Companies - India

extend contractual relationships]. Indeed the three phases of outsourcing provider's end-to-end process; win, run and renew (Perunović et al., 2012) should be addressed collectively. This however is not the case because providers overemphasize the 'win' phase at the expense of the 'run[operate]' phase: *"There are very few experienced BPO vendors in the world, […] and sometimes sales prowess may outstrip delivery capability"(Newing, 2002).* Understanding of relationship among CI&P unravels this fundamental problem of BPO industry which involves outsourcing decision based on marketing function without due consideration to operations function. Success in operations [run] phase of outsourcing inevitably trickles down to the win and renew phases.

Mismatch between customer expectations [service concept] and service delivery capability (Hill, 2000) for bespoke services can sufficiently be addressed through review of customer perception about service concept and consequential inputs brought into the service process by the same customers. Indeed, outsourced IIS providers and managers should evaluate current operations in light of the suggested service design characteristics. For instance, ITES firms should carefully identify target markets for delivery of complex research work-like services. The observed generic and industry wide market targeting requires customization and efficiency trading-off. Specific targeting identifies groups with related service requirements and customer input DNAs which eases design of service delivery process (Trinh and Kachitvichyanukul, 2013). This process will be aided by emergent outsourced IIS OM typology that is based on dual actions of customers and service providers.

Finally, although previous studies on service design and operations transformational context have been confined to developed and BRICS countries, this study is conducted in a less

developed country and has shown that studies in sub Saharan Africa countries such as Kenya could contribute to knowledge.

8.4   Looking back and forward – A Critical Review

Propositions developed from exploration of four ITES cases and review of extant literature fill gaps in SOM service design domain and provide understanding of relationships between the CI&P constructs. However, looking back, just like in any other study, the precincts of geography/location, context and the research process – design and methods – provided challenges and hence limitations. Acknowledgment of these limitations forms basis for recommendations, further research and way forward.

Exploratory nature of this study entailed inductive use of qualitative case study design - Central to this research design was the use of semi-structured interviews that supported adjustments, and back-to-forth redirection, of attention from specific relationships between CI&P constructs to expansive exploration of emergent facets, leading to development of propositions in chapter 7. For instance, information intensity aspect of customer inputs emerged vital than had been anticipated, culminating to significant insights and propositions. This would not have been possible had the author kept distance and not worked with and within the case companies. The composition of case firms in terms of diverse strengths in delivery of the four service offerings provided rich operations management information that possibly would not have provided by cross sectional survey. However, although sufficient for theory generalisation, many commentators challenge case study research design in the aspect of external validity (representativeness and generalizability) of the findings as compared to quantitative methodologies. Through the use of multiple cases and cross-case analysis, the

extant research process offers valuable insights and contributions that are generalizable to ITES providers, particularly in the Kenyan context, but debatable across the global ITES sector and other information service markets. We recommend further empirical research studies testing the applicability of the emergent propositions, either by means of large quantitative survey approach or quantitative/longitudinal case studies, across wider breadth of information intensive contexts be conducted. To illustrate, an empirical survey of different classes of the emergent service processes in the context of OM management challenges highlighted by Schmenner (1986) could provide insights to management of service operations.

The Kenyan and IIS outlook – the case companies were selected from Kenya – a relatively nascent ITES context. However, as the BPO/ITES outsourcing entails a global clientele, it is judicious to envisage replicability of the findings to other contexts. Future comparison and probable convergence of findings from a less developed economy context (Kenya) to developed economies - UK and USA and developing economies - India and China, will increase SOM experts' confidence in the findings. Moreover, such studies should consider other types of services [see other cells of the generic service typology, table 8-1] and redefine services from a SOM perspective.

Drudgery of validating "customer inputs" construct - Construct validity is an important yardstick in the measurement of quality in a piece of research work. Given the recentness in reference to customer inputs in defining services from a SOM perspective, there was little literature that could be used to generate the dimensions and measure customer inputs. As such, aspects of this construct were woven from a bricolage of dimensions - such as type and

248

volume of customer inputs - and objective premises based on diverse literature. Furthermore, there is a very thin line separating the CI&P constructs. As observed, some parts of a production process have customer inputs while others do not, meaning that customer expertise may be more necessary to some production processes than in others. Where required, the customer inputs and expertise supplement service provider employee skills. For instance the dimension volume of customer inputs, which was defined in terms of extent of customer participation in service production, was relied upon to measure this particular construct.

Imbalance between parsimony and comprehensiveness in deriving aspects of technology within the service delivery process – According to Whetten (1989), finding the right balance between comprehensiveness and parsimony provides assurance regarding how good a theory is. So as not to jeopardize the depth of the study, a relatively fewer number of dimensions for the *process* construct were studied. Specifically, the complex aspect of technology was simplified. Ideally, technological has several facets, such as: (i) long-linked, intensive mediated and package (Johansson and Jonsson, 2012; Thompson, 1967), or (ii) people based versus equipment based (Thomas, 1978), or (iii) value chain, value shop and network (Stabell and Fjeldstad, 1998), or (iv) mediating versus facilitating technology (Froehle and Roth, 2004), or (v) computational service versus tech-enhanced P2P (Glushko, 2010) and so on. Indeed, future study laying together different types of IIS with the various levels of technology – in product-process like matrix (Hayes and Wheelwright, 1979) could enrich the process construct in the CI&P framework and as such enhance the study propositions. This could for instance reveal what kind of technology is pertinent to which type of IIS. It could provide knowledge as to whether hypothesis, such as the following, regarding the aforesaid technology levels are sensible; (i) purely information intense services utilise long-linked

technology, (ii) non-information intense services utilise intensive technology, and (iii) there is no one package technology that fits all IIS.

The OM lenses - Operations management focus of extant study meant that was paid to '*operate*' phase of outsourced IIS delivery process. Although the effects of the 'win' and 'renew' phases were considered in developing study protocol particularly the interview guide, the transformational process was central. It is probable that this influenced the research methodology, findings, propositions and conclusions. To address this limitation, future studies about the *win* phase could provide valuable insights for most IIS because unlike other services, the phase is negotiated *a priori*. Indeed an inquiry about the relationship amongst the three phases of the entire IIS provision processes and linkages to each other, coordinated in terms of the CI&P constructs would be valuable.

Researcher influence and bias - Vividness and information-processing biases of researcher may colour the findings and conclusions of a research study. Indeed, data analysis involved researcher interpretation of interviewee responses, possibly biasing the findings. To circumvent the challenge of having to interpret responses, the alternative would have been to use a fully structured questionnaire. This however, would have significantly imperilled emergent viewpoints. According to Eisenhardt (1989) this challenge should be addressed by engaging multiple investigators in the research process and thus provide diversity of opinion and perspectives. Two strategies were applied to resolve this; (i) the data analysis process undertaken (chapters 4, 5 and 6) was deliberately made systematic, allowing replicability, (ii) data was verified by selected experts from the case companies and independent peer researchers albeit on small-scale due to availability and time constraints.

List of References

Abe, T. (2005) "What is service science". **FRI Research Report No. 246, Fujitsu Research Institute**. Citeseer.

Adam, E.E. and Swamidass, P.M. (1989) Assessing operations management from a strategic perspective. **Journal of management**, 15: (2): 181-203.

Aksin, Z. and Masini, A. (2008) Effective strategies for internal outsourcing and offshoring of business services: An empirical investigation. **Journal of Operations Management**, 26: (2): 239-256.

Amoako-Gyampah, K. and Acquaah, M. (2008) Manufacturing strategy, competitive strategy and firm performance: An empirical study in a developing economy environment. **International Journal of Production Economics**, 111: (2): 575-592.

Amundson, S.D. (1998) Relationships between theory-driven empirical research in operations management and other disciplines. **Journal of Operations Management**, 16: (4): 341-359.

Anil, K.S. and Suresh, N. (2009) **Operations Management**. New Age International.

Apte, U. and Karmarkar, U. (2007) **Managing in the information economy: current research issues**. Springer.

Apte, U.M. and Mason, R.O. (1995) Global Disaggregation of Information-Intensive Services. **Management Science**, 41: (7): 1250-1262.

Apte, U.M. and Nath, H.K. (2007) "Size, structure and growth of the US information economy". **Managing in the Information Economy**. Springer 1-28.

Apte, U.M. and Vepsäläinen, A.P.J. (1993) High tech or high touch? Efficient channel strategies for delivering financial services. **The Journal of Strategic Information Systems**, 2: (1): 39-54.

Argote, L. (1982) Input uncertainty and organizational coordination in hospital emergency units. **Administrative Science Quarterly**, 420-434.

Armistead, C., Harrison, A. and Rowlands, P. (1995) Business process re-engineering: lessons from operations management. **International Journal of Operations & Production Management**, 15: (12): 46-58.

Armistead, C. and Machin, S. (1997) Implications of business process management for operations management. **International Journal of Operations and Production Management**, 17: (9): 886-898.

Badri, M.A., Davis, D. and Davis, D. (2000) Operations strategy, environmental uncertainty and performance: a path analytic model of industries in developing countries. **Omega**, 28: (2): 155-173.

Bagozzi, R.P., Yi, Y. and Phillips, L.W. (1991) Assessing construct validity in organizational research. **Administrative science quarterly**, 421-458.

Barney, J.B. (1991) Firm Resources and Sustained Competitive Advantage. **Journal of Management**, 17: (1): 99-120.

Barrat, M., Choi, T. and Li, M. (2011) Qualitative case studies in operations management: Trends, research outcomes, and future research implications. **Journal of Operations Management**, 29: (4): 329-342.

Bateson, J. (1977) "Do We Need Service Marketing?". In Pierre Eiglier, E.L., Christopher H. Lovelock, John E.G. Bateson, and Robert F. Young (Ed.) **Marketing Consumer Services: New Insights**. Cambridge Mass, Marketing Science Institute 77-115.

Beer, S. (1984) The viable system model: its provenance, development, methodology and pathology. **Journal of the operational research society**, 7-25.

Benbasat, I., Goldstein, D.K. and Mead, M. (1987) The case research strategy in studies of information systems. **MIS quarterly**, 369-386.

Berman, E.M. (1998) **Productivity in public and non profit organizations: strategies and techniques**. Sage.

Bhasin, P. (2011) Genpact's CEO on Building an Industry In India from Scratch. **Harvard business review**, 89: (6): 45-48.

Bhat, J., Fernandez, J., Kumar, M., et al. (2010) "BPO through the BPM Lens: A Case Study.". In vom Brocke, J. & Roseman, M. (Eds.) **Handbook on Business Process Management**. Heidelberg, Springer.

Bitner, M.J., Faranda, W.T., Hubbert, A.R., et al. (1997) Customer contributions and roles in service delivery. **International Journal of Service Industry Management**, 8: (3): 193-205.

Blades, D.W., Johnston, D.D. and Marczewski, W. (1974) **Service activities in developing countries: an analysis based on national accounts**. OECD.

Blaikie, N. (2007) **Approaches to social enquiry: Advancing knowledge**. Polity.

Blaikie, N. (2009) **Designing social research**. Malden, USA: Polity Press.

Borman, M. (2006) Applying multiple perspectives to the BPO decision: A case study of call centres in Australia. **Journal of Information Technology**, 21: (2): 99-115.

Bowen, D. and Lawler III, E. (1995) EMPOWERING SERVICE EMPLOYEES. **Sloan Management Review**, 36: (4): 73-84.

Bowen, D.E., Siehl, C. and Schneider, B. (1989) A framework for analyzing customer service orientations in manufacturing. **Academy of Management Review**, 14: (1): 75-95.

Bowen, J. (1990) Development of a taxonomy of services to gain strategic marketing insights. **Journal of the Academy of Marketing Science**, 18: (1): 43-49.

Bowen, J. and Bowers, M.R. (1986) A marketing contingency approach to service organizational structure. **Creativity in Services Marketing: What's New, What Works, What's Developing. Chicago: American Marketing Association**.

Boyer, K.K., Bozarth, C. and McDermott, C. (2000) Configurations in operations: an emerging area of study. **Journal of Operations Management**, 18: (6): 601-604.

Boyer, K.K. and Swink, M.L. (2008) Empirical elephants—why multiple methods are essential to quality research in operations and supply chain management. **Journal of Operations Management**, 26: (3): 338-344.

Bozarth, C. and McDermott, C. (1998) Configurations in manufacturing strategy: a review and directions for future research. **Journal of Operations Management**, 16: (4): 427-439.

Brown, S. (2012) An interview with Terry Hill, Emeritus Fellow at the University of Oxford, UK. **International Journal of Operations & Production Management**, 32: (3): 375 - 384.

Bullinger, H.-J., Fähnrich, K.-P. and Meiren, T. (2003) Service engineering—methodical development of new service products. **International Journal of Production Economics**, 85: (3): 275-287.

Buzacott, J.A. (2000) Service system structure. **International Journal of Production Economics**, 68: (1): 15-27.

Chase, R.B. (1978) Where does the customer fit in a service operation? **Harvard Business Review**, 56: (6): 137-142.

Chase, R.B. (1981) The customer contact approach to services: Theoretical bases and practical extensions. **Operations Research** 29: (4): 698-706.

Chase, R.B. and Apte, U.M. (2007) A history of research in service operations: What's the big idea? **Journal of Operations Management**, 25: (2): 375-386.

Chase, R.B., Aquilano, N.J. and Jacobs, R. (1998) **Operations Management for Competitive Advantage**. Boston, MA: McGraw-Hill Irwin.

Chase, R.B. and Erikson, W.J. (1988) The service factory. **The Academy of Management Executive**, 2: (3): 191-196.

Chase, R.B. and Prentis, E.L. (1987) Operations management: a field rediscovered. **Journal of Management**, 13: (2): 351-366.

Chase, R.B. and Tansik, D.A. (1983) The customer contact model for organization design. **Management Science**, 29: (9): 1037-1050.

(2013) **Australian Symposium on Service Research and Innovation** Springer.

Childe, S.J., Maull, R.S. and Bennett, J. (1994) Frameworks for understanding business process re-engineering. **International Journal of Operation and Production Management**, 14: (12): 23-34.

Choi, T.Y. and Wu, Z. (2009) Taking the leap from dyads to triads: Buyer–supplier relationships in supply networks. **Journal of Purchasing and Supply Management**, 15: (4): 263-266.

CIM-OSA, C.-O.S.C. (1989) CIM-OSA reference architecture. **AMICE ESPRIT**.

Clark, G., Johnston, R. and Shulver, M. (2000) Exploiting the service concept for service design and development. **New Service Design. Sage, Thousand Oaks, CA**, 71-91.

Clark Jr, T.D., Zmud, R.W. and McCray, G.E. (1995) The outsourcing of information services: transforming the nature of business in the information industry. **Journal of Information Technology (Routledge, Ltd.)**, 10: (4): 221.

Collier, D.A. and Meyer, S.M. (1998) A service positioning matrix. **International Journal of Operations & Production Management**, 18: (12): 1223-1244.

Collier, D.A. and Meyer, S.M. (2000) An empirical comparison of service matrices. **International Journal of Operations & Production Management**, 20: (6): 705-729.

Colquitt, J.A. and Zapata-Phelan, C.P. (2007) Trends in theory building and theory testing: a five-decade study of the 'Academy of Management Journal'. **Academy of Management Journal**, 50: (6): 1281-1303.

Constantin, J.A. and Robert, L.F. (1994) **Understanding resource management: How to deploy your people, products, and processes for maximum productivity**. Oxford, OH: The Planning Forum.

Cook, D.P., Goh, C.H. and Chung, C.H. (1999) Service typologies: a state of the art survey. **Production and Operations Management**, 8: (3): 318-338.

Crabtree, B.F. (1999) **Doing qualitative research**. Sage Publications.

Creswell, J.W. (2013) **Research design: Qualitative, quantitative, and mixed methods approaches**. Sage Publications, Incorporated.

Currie, W.L., Michell, V. and Abanishe, O. (2008) Knowledge process outsourcing in financial services:: The vendor perspective. **European Management Journal**, 26: (2): 94-104.

da Graça Moura, M. and Martins, N. (2008) On some criticisms of critical realism in economics. **Cambridge journal of economics**, 32: (2): 203-218.

Daft, R.L. and Lengel, R.H. (1986) Organizational information requirements, media richness and structural design. **Management science**, 32: (5): 554-571.

Davenport, T.H. (2005) The Coming Commoditization of Processes. **Harvard Business Review**, 83: (6): 100-108.

Davenport, T.H. and Prusak, L. (1998) **Working Knowledge: How organization manage what they know**. Boston, MA.

De Ruyter, K. and Wetzels, M. (2000) Customer equity considerations in service recovery: a cross-industry perspective. **International Journal of Service Industry Management**, 11: (1): 91-108.

De Vaus, D. (2001) **Research design in social research**. Sage.

Deetz, S. (1996) Crossroads—Describing Differences in Approaches to Organization Science: Rethinking Burrell and Morgan and Their Legacy. **Organization science**, 7: (2): 191-207.

Denzin, N.K. (1978) **The Research Act: A Theoretical Introduction to Sociological Methods**. New York: McGraw-Hill.

Denzin, N.K. and Lincoln, Y.S. (2000) **Handbook of Qualitative Research**. Thousand Oaks: Sage Publications Inc.

Dibbern, J., Goles, T., Hirschheim, R., et al. (2004) Information systems outsourcing: a survey and analysis of the literature. **ACM SIGMIS Database**, 35: (4): 6-102.

Dillon, J. and Wals, A.E. (2006) On the danger of blurring methods, methodologies and ideologies in environmental education research. **Environmental Education Research**, 12: (3-4): 549-558.

Dörner, N., Gassmann, O. and Gebauer, H. (2011) Service innovation: why is it so difficult to accomplish? **Journal of Business Strategy**, 32: (3): 37-46.

Doty, D.H. and Glick, W.H. (1994) Typologies as a unique form of theory building: toward improved understanding and modeling. **Academy of Management Review**, 19: (2): 230-251.

Drennan, M. (1989) Information intensive industries in metropolitan areas of the United States of America. **Environment and Planning A**, 21: (12): 1603-1618.

Dubé, L. and Paré, G. (2003) Rigor in information systems positivist case research: current practices, trends, and recommendations. **MIS quarterly**, 597-636.

Dubois, A. and Araujo, L. (2007) Case research in purchasing and supply management: opportunities and challenges. **Journal of Purchasing and Supply Management**, 13: (3): 170-181.

Dubois, A. and Fredriksson, P. (2008) Cooperating and competing in supply networks: Making sense of a triadic sourcing strategy. **Journal of Purchasing and Supply Management**, 14: (3): 170-179.

Easterby-Smith, M., Thorpe, R. and Lowe, A. (2002) **Management research: An Introduction**. London: Sage Publications.

Edgett, S. and Parkinson, S. (1993) Marketing for Service Industries - A Review. **Service Industries Journal**, 13: (3): 19-39.

Edvardsson, B. and Olsson, J. (1996) Key concepts for New Service Development. **Service Industries Journal**, 16: (2): 140-164.

Eisenhardt, K.M. (1989) Building Theories from Case Study Research. **The Academy of Management Review**, 14: (4): 532-550.

Eisenhardt, K.M. and Graebner, M.E. (2007) Theory building from cases: opportunities and challenges. **Academy of Management Journal**, 50: (1): 25-32.

Fähnrich, K.P., Meiren, T., Barth, T., et al. (1999) **Service Engineering: Ergebnisse einer empirischen Studie zum Stand der Dienstleistungsentwicklung in Deutschland**. Stuttgart: IRB.

Filippini, R. (1997) Operations management research: some reflections on evolution, models and empirical studies in OM. **International Journal of Operations & Production Management**, 17: (7): 655-670.

Fitzgerald, L., Brignall, S., Silvestro, R., et al. (1991) **Performance measurement in service businesses**. Chartered Institute of Management Accountants London.

Fitzsimmons, J. and Fitzsimmons, M. (2013) **Service management: Operations, strategy, information technology**. McGraw-Hill Higher Education.

Fitzsimmons, J.A. and Sullivan, R.S. (1982) **Service operations management**. McGraw-Hill New York.

Fleury, A. (1999) The changing pattern of operations management in developing countries: the case of Brazil. **International Journal of Operations & Production Management**, 19: (5/6): 552-564.

Flick, U. (2014) **An introduction to qualitative research**. Sage.

Flynn, B.B., Sakakibara, S., Schroeder, R.G., et al. (1990) Empirical research methods in operations management. **Journal of Operations Management**, 9: (2): 250-284.

Ford, D., Gadde, L.E., Håkansson, H., et al. (2003) **Managing business relationships**. Chichester: John Wiley.

Forza, C. (2002) Survey research in operations management: a process-based perspective. **International Journal of Operations & Production Management**, 22: (2): 152-194.

Frei, F.X. (2006) Breaking the trade-off between efficiency and service. **Harvard Business Review**, 84: (11): 92.

Freidson, E. (1960) Client control and medical practice. **American journal of sociology**, 374-382.

Froehle, C.M. and Roth, A.V. (2004) New measurement scales for evaluating perceptions of the technology-mediated customer service experience. **Journal of Operations Management**, 22: (1): 1-21.

Gerring, J. (2004) What is a case study and what is it good for? **American political science review**, 98: (02): 341-354.

Gibb, F., Buchanan, S. and Shah, S. (2006) An integrated approach to process and service management. **International Journal of Information Management**, 26: (1): 44-58.

Gilmore, A. and Carson, D. (1993) Enhancing service quality: the case of Sealink Stena. **Irish Marketing Review**, 6: (1): 64-69.

Gilmore, A. and Moreland, L. (2000) Call centres: how can service quality be managed? **Irish Marketing Review**, 13: 3-11.

Glaser, B.G. and Strauss, A.L. (1967) "The discovery of grounded theory: Strategies for qualitative research". Chicago: Aldine.

Glaser, B.G. and Strauss, A.L. (2009) **The discovery of grounded theory: Strategies for qualitative research**. Transaction Books.

Glushko, R.J. (2010) "Seven contexts for service system design". **Handbook of service science**. Springer 219-249.

Godin, B. (2008) The information economy: The history of a concept through its measurement, 1949–2005. **History and technology**, 24: (3): 255-287.

Goldstein, S.M., Johnston, R., Duffy, J., et al. (2002) The service concept: the missing link in service design research? **Journal of Operations Management**, 20: (2): 121-134.

Graham, M. and Mann, L. (2013) Imagining a Silicon Savannah? Technological and Conceptual Connectivity in Kenya's BPO and Software Development Sectors. **The Electronic Journal of Information Systems in Developing Countries**, 56.

Grönroos, C. (1984) A service quality model and its marketing implications. **European Journal of Marketing**, 18: (4): 36-44.

Grönroos, C. (1994) From scientific management to service management: a management perspective for the age of service competition. **International Journal of Service Industry Management**, 5: (1): 5-20.

Grütter, A.W., Field, J.M. and Faull, N.H. (2002) Work team performance over time: three case studies of South African manufacturers. **Journal of Operations Management**, 20: (5): 641-657.

Guba, E.G. (1990) **The paradigm dialog**. Sage Publications.

Guba, E.G. and Lincoln, Y.S. (1994) Competing paradigms in qualitative research. **Handbook of qualitative research**, 2: 163-194.

Guion, L.A., Diehl, D.C. and McDonald, D. (2011) Triangulation: Establishing the validity of qualitative studies.

Haksever, C. (2013) **Service Management: An Integrated Approach to Supply Chain Management and Operations**. FT Press.

Hambrick, D.C. (1984) Taxonomic approaches to studying strategy: some conceptual and methodological issues. **Journal of Management**, 10: (1): 27-41.

Hammer, M. (2007) The Process Audit. **Harvard Business Review**, 85: (4): 111-123.

Hammer, M. and Champy, J. (1993) Reengineering the Corporation. 1993. **HaperCollins, New York**.

Harris, S. and MacKay, B. (2009) "The Global Networked Value Circle: A new model for best-in-class manufacturing". <u>In</u> Edinburgh, C.C.U.o. (Ed.).

Hart, C. (1998) **Doing a literature review: Releasing the social science research imagination**. Sage.

Harvey, J. (1998) Service quality: a tutorial. **Journal of Operations Management**, 16: (5): 583-597.

Hayes, R.H. and Wheelwright, S.C. (1979) Link manufacturing process and product life cycles. **Harvard Business Review**, 57: (1): 133-140.

Haywood-Farmer (1988) A Conceptual Model of Service Quality. **International Journal of Operations & Production Management**, 8: (6): 19-29.

Healy, M. and Perry, C. (2000) Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm. **Qualitative market research: An international journal**, 3: (3): 118-126.

Herriott, R.E. and Firestone, W.A. (1983) Multisite qualitative policy research: Optimizing description and generalizability. **Educational researcher**, 12: (2): 14-19.

Heskett, J.L. (1986) **Managing in the service economy**. Harvard Business Press.

Heskett, J.L. (1987) Lessons in the service sector. **Harvard Business Review**, 65: (2): 118-126.

Heskett, J.L., Jones, T.O., Loveman, G.W., et al. (1994) Putting the service profit chain to work. **Harvard Business Review**, 72: (2): 164-174.

Heskett, J.L., Sasser, W.E. and Hart, C.W.L. (1990) **Service breakthroughs: changing the rules of the game**. New York: Free Press.

Heskett, J.L., Sasser, W.E. and Schlesinger, L.A. (1997) "The service profit chain". New York, Free Press.

Hickson, D.J., Pugh, D.S. and Pheysey, D.C. (1969) Operations technology and organization structure: An empirical reappraisal. **Administrative science quarterly**, 378-397.

Hill, A. and Hill, T. (2012) **Operations management**. Palgrave Macmillan.

Hill, T. (2000) **Manufacturing strategy - Text and cases**. Basingstoke: Palgrave.

Hill, T. (2005) **Operations Management, Second Edition**. Houndmills, Basingstoke, Hampshire: Palgrave Macmillan.

Hill, T.J. and Menda, R. (1998) Using Product Profiling to Illustrate Manufacturing-Marketing Misalignment. **Interfaces**, 28: (4): 47.

Hill, T.P. (1977) On goods and services. **Review of income and wealth**, 23: (4): 315-338.

Holstein, W.J. (2010) The Case for Backshoring: Which manufacturing operations should return to the United States? **Operations & Manufacturing, January**, 25.

Huete, L.M. and Roth, A.V. (1988) The Industrialisation and Span of Retail Banks' Delivery Systems. **International Journal of Operations & Production Management**, 8: (3): 46-66.

Husserl, E.G. (1970) **The crisis of European sciences and transcendental phenomenology: An introduction to phenomenological philosophy**. Northwestern Univ Press.

Ikiara, G., Muriira, M. and Nyangena, W. (1999) Kenya's Trade in Services: A 'State of Play' Paper.

Isenberg, D. (2009) **KenCall: Can Nik Nesbitt's Venture Succeed in Kenya?**

Jacobs, F.R., Chase, R.B. and Aquilano, N.J. (2009) **Operations and Supply Management**. New York: McGraw Hill.

Johansson, M. and Jonsson, A. (2012) The package logic: A study on value creation and knowledge flows. **European Management Journal**, 30: (6): 535-551.

Johansson, P. and Olhager, J. (2004) Industrial service profiling: Matching service offerings and processes. **International Journal of Production Economics**, 89: (3): 309-320.

Johnson, P. and Duberley, J. (2000) **Understanding management research: An introduction to epistemology**. Sage.

Johnson, R. and Clark, G. (2001) Service operations management. **Financial Times, Prentice Hall**.

Johnson, S.P., Menor, L.J., Roth, A.V., et al. (2000) "A critical evaluation of the new service development process: integrating service innovation and service design". In Fitzsimmons, J.A. & Fitzsimmons, M.J. (Eds.) **New Service Development: Creating Memorable Experiences**. Thousand Oaks, CA, Sage Publications 1-32.

Johnston, R. (1996) Achieving focus in service organisations. **Service Industries Journal**, 16: (1): 10-20.

Johnston, R. and Clark, G. (2005a) **Service Operations Management.** 2nd ed. Harlow: Prentice Hall.

Johnston, R. and Clark, G. (2005b) **Service operations management: improving service delivery**. Second Edition. Harlow, UK: Pearson Education.

Johnston, R. and Clark, G. (2008) **Service operations management: improving service delivery**. Harlow: Prentice Hall.

Judd, R.C. (1964) The case for redefining services. **Journal of Marketing**, 28: (1): 58-59.

Karlsson, C. (2008) **Researching operations management**. Routledge.

Karmarkar, U.S. (1996) Integrative research in marketing and operations management. **Journal of Marketing Research**, 33: (2): 125-133.

Karmarkar, U.S. and Apte, U.M. (2007) Operations management in the information economy: Information products, processes, and chains. **Journal of Operations Management**, 25: (2): 438-453.

Karmarkar, U.S. and Pitbladdo, R. (1995) Service markets and competition. **Journal of Operations Management**, 12: (3): 397-411.

Karwan, K.R. and Markland, R.E. (2006) Integrating service design principles and information technology to improve delivery and productivity in public sector operations: The case of the South Carolina DMV. **Journal of Operations Management**, 24: (4): 347-362.

Kelley, S.W. (1993) Discretion and the service employee. **Journal of Retailing**, 69: (1): 104-126.

Kellogg, D.L. and Nie, W. (1995) A framework for strategic service management. **Journal of Operations Management**, 13: (4): 323-337.

Khan, S. and VanWynsberghe, R. (2008) "Cultivating the under-mined: Cross-case analysis as knowledge mobilization". **Forum Qualitative Sozialforschung/Forum: Qualitative Social Research**.

Kingman-Brundage, J. (1991) Technology, design and service quality. **International Journal of Service Industry Management**, 2: (3): 47-59.

Kingman-Brundage, J., George, W.R. and Bowen, D.E. (1995) "Service logic": achieving service system integration. **International Journal of Service Industry Management**, 6: (4): 20-39.

Kotler, P. (1982) **Marketing for nonprofit organizations**. Prentice-Hall.

Krajewski, L., Wei, J.C. and Tang, L.-L. (2005) Responding to schedule changes in build-to-order supply chains. **Journal of Operations Management**, 23: (5): 452-469.

Lahiri, S. and Kedia, B.L. (2009) The effects of internal resources and partnership quality on firm performance: An examination of Indian BPO providers. **Journal of International Management**, 15: (2): 209-224.

Laine, T., Paranko, J. and Suomala, P. (2006) "The Nature of Services in the Business-To-Business Context". In Mendibil, K. & Shamsuddin, A. (Eds.) **Moving up the Value Chain**. Glasgow, Scotland, University of Strathclyde 887-896.

Lally, A.M. and Fynes, B. (2006) Articulating service concept to enhance tourism experience design.

Larsson, R. and Bowen, D.E. (1989a) Organization and customer: managing design and coordination of services. **Academy of Manage Review**, 14: (2): 213- 233.

Larsson, R. and Bowen, D.E. (1989b) Organization and customer: managing design and coordination of services. **Academy of Management Review**, 14: (2): 213-233.

Lazear, E.P. (1986) Salaries and piece rates. **Journal of Business**, 405-431.

Lee, J.D. and See, K.A. (2004) Trust in automation: Designing for appropriate reliance. **Human Factors: The Journal of the Human Factors and Ergonomics Society**, 46: (1): 50-80.

Letourneau, N. and Allen, M. (1999) Post-positivistic critical multiplism: a beginning dialogue. **Journal of advanced nursing**, 30: (3): 623-630.

Levina, N. and Ross, J. (2003) From the Vendor's Perspective: Exploring the Value Proposition in IT Outsourcing. **MIS Quarterly Executive**, 27: (3): 331-364.

Levitt, T. (1972) Production-line approach to service. **Harvard Business Review**, 50: (5): 41-52.

Levitt, T. (1976) **The industrialization of service**. Graduate School of Business Administration, Harvard University.

Lewin, A.Y. and Peeters, C. (2006) Offshoring work: business hype or the onset of fundamental transformation? **Long Range Planning**, 39: (3): 221-239.

Lewis, M.A. and Brown, A.D. (2012) How different is professional service operations management? **Journal of Operations Management**, 30: (1–2): 1-11.

Lewis, M.W. (1998) Iterative triangulation: a theory development process using existing case studies. **Journal of Operations Management**, 16: (4): 455-469.

Li, M.E.I. and Choi, T.Y. (2009) Triads in Services Outsourcing: Bridge, Bridge Decay and Bridge Transfer*. **Journal of Supply Chain Management**, 45: (3): 27-39.

Lillis, B. and Lane, R. (2007) Auditing the strategic role of operations. **International Journal of Management Reviews**, 9: (3): 191-210.

Lillis, B. and Szwejczewski, M. (2012) An exploratory study of strategic operations audit methods in services. **International Journal of Operations & Production Management**, 32: (11): 1306-1336.

Lincoln, Y.S. and Guba, E.G. (1985) **Naturalistic inquiry**. Sage.

Liu, R., Feils, D.J. and Scholnick, B. (2011) Why are different services outsourced to different countries&quest. **Journal of International Business Studies**, 42: (4): 558-571.

Loh, L. and Venkatraman, N. (1992) Diffusion of information technology outsourcing: influence sources and the Kodak effect. **Information Systems Research**, 3: (4): 334-358.

Lovelock, C. and Gummesson, E. (2004) Whither services marketing? In search of a new paradigm and fresh perspectives. **Journal of Service Research**, 7: (1): 20-41.

Lovelock, C.H. (1983) Classifying Services to Gain Strategic Marketing Insights. **Journal of marketing**, 47: (3): 9-20.

Lovelock, C.H. and Young, R.F. (1979) Look to consumers to increase productivity. **Harvard business review**, 57: (3): 168-178.

Machlup, F. (1962a) **The Production and Distribution of Knowledge in the United States**. Princeton, NJ: Princeton University Press.

Machlup, F. (1962b) **The production and distribution of knowledge in the United States**. Princeton university press.

Maister, D.H. and Lovelock, C.H. (1982) Managing Facilitator Services. **Sloan Management Review**, 23: (4): 19-19.

March, J.G. and Simon, H.A. (1958) **Organizations**. New York, NY: John Wiley & Sons, Inc.,.

Markus, M.L. (1989) Case selection in a disconfirmatory case study. **The information systems research challenge: qualitative research methods**, 1: 20-26.

Marshall, M.N. (1996) Sampling for qualitative research. **Family practice**, 13: (6): 522-526.

McCrae, R.R. and Costa Jr, P.T. (1999) A five-factor theory of personality. **Handbook of personality: Theory and research**, 2: 139-153.

Media, C. (2007) A proactive approach to process outsourcing efficiency and business agility. **CIO**, 20: (8).

Melhem, Y. (2004) The antecedents of customer-contact employees' empowerment. **Employee Relations**, 26: (1): 72-93.

Menor, L.J. and Johnson, P.F. (2012) "Service operations management and service supply network triadic arrangements". **POMS**.

Meredith, J. (1998) Building operations management theory through case and field research. **Journal of Operations Management**, 16: (4): 441-454.

Meredith, J.R. (1987) Implementing the automated factory. **Journal of Manufacturing Systems**, 6: (1): 1-13.

Mersha, T. (1990) Enhancing the customer contact model. **Journal of Operations Management**, 9: (3): 391-405.

Metters, R. (2008) A typology of offshoring and outsourcing in electronically transmitted services. **Journal of Operations Management**, 26: (2): 198-211.

Metters, R. and Vargas, V. (2000) A typology of de-coupling strategies in mixed services. **Journal of Operations Management**, 18: (6): 663-682.

Metters, R. and Verma, R. (2008) History of offshoring knowledge services. **Journal of Operations Management**, 26: (2): 141-147.

Metters, R.D., King-Metters, K.H., Pullman, M., et al. (2009) **Service operations management**. New Delhi: Cengage Learning.

Meyer, A.D., Tsui, A.S. and Hinings, C.R. (1993) Configurational Approaches to Organizational Analysis. **The Academy of Management Journal**, 36: (6): 1175-1195.

Miles, I. (2005) "Innovation in Services". In Fagerberg, J.;Nelson, R. & Mowery, D. (Eds.) **The Oxford Handbook of Innovation**. New York, NY, USA,, Oxford University Press 433-458.

Miles, I., Kastrinos, N., Flanagan, K., et al. (1995) Knowledge-intensive business services. **EIMS publication**, (15).

Miles, M.B. and Huberman, A.M. (1994) **Qualitative data analysis: An expanded sourcebook**. Sage Publications, Incorporated.

Miles, M.B., Huberman, A.M. and Saldana, J. (2014) **Qualitative data analysis: A methods sourcebook**. 3.California: Sage.

Miller, D. (1996) Configurations revisited. **Strategic Management Journal**, 17: (7): 505-512.

Miller, D. and Mintzberg, H. (1981) **The case for configuration**.

Mills, J., Platts, K., Bourne, M., et al. (2002) Competing through competences.

Mills, P.K. and Margulies, N. (1980) Toward a Core Typology of Service Organizations. **The Academy of Management Review**, 5: (2): 255-265.

Misra, R.B. (2004) Global IT outsourcing: metrics for success of all parties. **Journal of Information Technology Cases and Applications**, 6: (3): 21-34.

Morris, B. and Johnston, R. (1987) Dealing with Inherent Variability: The Differences Between Manufacturing and Service? **International Journal of Operations & Production Management**, 7: (4): 13-13.

Namasivayam, S. (2004) Profiting from Business Process Outsourcing. **IT Professional**, 6: (1): 12-18.

Narasimhan, R. and Jayaram, J. (1998) Reengineering service operations: a longitudinal case study. **Journal of Operations Management**, 17: (1): 7-22.

Narayanan, S., Jayaraman, V., Luo, Y., et al. (2011) The antecedents of process integration in business process outsourcing and its effect on firm performance. **Journal of Operations Management**, 29: (1-2): 3-16.

Neely, A., McFarlane, D. and Visnjic, I. (2011) "Complex service systems–identifying drivers characteristics and success factors". **Proceedings of the 18th European Operations Management Association Conference, Cambridge, July**. John Benjamins.

Newing, R. (2002) "Service vendors in rush to target a hot market area: BUSINESS PROCESS OUTSOURCING". **Financial Times**. London UK.

Nie, W. and Kellogg, D.L. (1999) How professors of operations management view service operations? **Production and Operations Management**, 8: (3): 339-355.

Niranjan, T.T. and Metri, B.A. (2008) Client-vendor-end user triad: A service quality model for IS/ITES outsourcing. **Journal of Services Research**, 8: (1): 123-138.

Niranjan, T.T., Saxena, K.B.C. and Bharadawaj, S. (2007) Process-oriented taxonomy of BPOs: an exploratory study. **Business Process Management Journal** 13: (4): 588-606.

Ojasalo, J. (2002) Key account management in information-intensive services. **Journal of retailing and consumer services**, 9: (5): 269-276.

Ostrom, A.L., Bitner, M.J., Brown, S.W., et al. (2010) Moving forward and making a difference: research priorities for the science of service. **Journal of Service Research**, 13: (1): 4-36.

Pannirselvam, G.P., Ferguson, L.A., Ash, R.C., et al. (1999) Operations management research: an update for the 1990s. **Journal of Operations Management**, 18: (1): 95-112.

Parasuraman, R. and Riley, V. (1997) Humans and automation: Use, misuse, disuse, abuse. **Human Factors: The Journal of the Human Factors and Ergonomics Society**, 39: (2): 230-253.

Patinkin, D. (1973) In Search of the" Wheel of Wealth": On the Origins of Frank Knight's Circular-Flow Diagram. **The American Economic Review**, 63: (5): 1037-1046.

Perrow, C. (1967) A Framework for the Comparative Analysis of Organizations. **American Sociological Review**, 32: (2): 194-208.

Perrow, C. (1970) **Organizational Analysis: A Sociological View**. Belmont, CA: Wadsworth.

Perunovic, Z. (2008) **Utilisation of Information and Communication Technology across the Outsourcing Process - The Vendor's Perspective**. PhD Thesis, TECHNICAL UNIVERSITY OF DENMARK.

Perunović, Z., Christoffersen, M. and Mefford, R.N. (2012) Deployment of vendor capabilities and competences throughout the outsourcing process. **International Journal of Operations & Production Management**, 32: (3): 351-374.

Platts, K.W. and Gregory, M.J. (1990) Manufacturing audit in the process of strategy formulation. **International Journal of Operations & Production Management**, 10: (9): 5-26.

Ponsignon, F., Smart, A. and Maull, R.S. (2007) Service delivery systems: the transformational context. **Discussion Papers in Management (07/17), University of Exeter, UK**.

Ponsignon, F., Smart, P. and Maull, R. (2012) Process design principles in service firms: Universal or context dependent? A literature review and new research directions. **Total Quality Management & Business Excellence**, 23: (11-12): 1273-1296.

Ponsignon, F., Smart, P.A. and Maull, R.S. (2011) Service delivery system design: characteristics and contingencies. **International Journal of Operations & Production Management**, 31: (3): 324-349.

Porat, M. and Rubin, M. (1977) "The Information Economy". In Commerce, U.S.D.o. (Ed.) Washington, DC, Government Printing Office.

Porter, M.E. (1980) **Competitive strategy: Techniques for analyzing industries and competitors**. New York, NY: The Free Press.

Porter, M.E. (1991) TOWARDS A DYNAMIC THEORY OF STRATEGY. **Strategic Management Journal**, 12: 95-117.

Porter, M.E. (2008) **Competitive advantage: Creating and sustaining superior performance**. SimonandSchuster. com.

Prahalad, C. and Hamel, G. (1990) The core competence of the corporation. **Boston (MA)**, 235-256.

Quinn, J.B. (1992) The intelligent enterprise a new paradigm. **The Academy of Management Executive**, 6: (4): 48-63.

Ragin, C. (1993) "Introduction to qualitative comparative analysis". In Thomas, J. & Alexander, H. (Eds.) **The comparative political economy of the welfare state**. New York, Cambridge University Press 299-319.

Reimann, B.C. (1980) Organization structure and technology in manufacturing: System versus work flow level perspectives. **Academy of Management Journal**, 23: (1): 61-77.

Riedl, C., Leimeister, J.M. and Krcmar, H. (2009) "New service development for electronic services–A literature review". **Proceedings of the Fifteenth Americas Conference on Information Systems (AMCIS'09)**. Citeseer.

Riege, A.M. (2003) Validity and reliability tests in case study research: a literature review with "hands-on" applications for each research phase. **Qualitative market research: An international journal**, 6: (2): 75-86.

Rolfe, H. (1990) In the name of progress? Skill and attitudes towards technological change. **New Technology, Work and Employment**, 5: (2): 107-121.

Roth, A.V. (2007) Applications of empirical science in manufacturing and service operations. **Manufacturing & Service Operations Management**, 9: (4): 353-367.

Roth, A.V. and Menor, L.J. (2003) Insights into service operations management: A research agenda. **Production and Operations Management**, 12: (2): 145-164.

Russell, B. (2009) **Smiling down the line: Info-service work in the global economy**. University of Toronto Press.

Russell, R.S. and Taylor, B.W. (2003) **Operations management**. Prentice Hall, Inc. New Jersey.

Safizadeh, M.H., Field, J.M. and Ritzman, L.P. (2003) An empirical analysis of financial services processes with a front-office or back-office orientation. **Journal of Operations Management**, 21: (5): 557-576.

Saldaña, J. (2012) **The coding manual for qualitative researchers**. Sage.

Sampson, E.S. (2012a) **Essentials of Service Design: Developing high-value service businesses with PCN Analysis**. Marston Gate UK: Amazon.co.uk.

Sampson, S., Bone, S. and Menor, L. (2010a) "Service Innovation from a New Service Process Logic". **The 11th International Research Seminar in Service Management**. La Londe les Maures, France.

Sampson, S.E. (2000) Customer-supplier duality and bidirectional supply chains in service organizations. **International Journal of Service Industry Management,** 11: (4): 348 - 364.

Sampson, S.E. (2012b) Visualizing Service Operations. **Journal of Service Research**, 15: (2): 182-198.

Sampson, S.E. and Froehle, C.M. (2006) Foundations and Implications of a Proposed Unified Services Theory. **Production & Operations Management**, 15: (2): 329-343.

Sampson, S.E., Menor, L.J. and Bone, S.A. (2010b) Why we need a service logic: A comparative review. **Journal of Applied Management and Entrepreneurship**, 15: (3): 18-33.

Sanderson, J. (2013) "Revealing gaps in the project management literature: an application of multi-paradigm review to explanations of megaproject governance". **Birmingham Business School Discussion Paper Series**. Birmingham, University of Birmingham.

Sasser, E.W., Olsen, P.R. and Wyckoff, D.D. (1978) **Management of Service Operations: Text, Cases, and Readings**. Boston, MA: Allyn & Bacon.

Saunders, M., Lewis, P. and Thornhill, A. (2012) **Research Methods For Business Students, 6/e**. Harlow, England: Pearson Education.

Saxena, K.B.C. and Bharadwaj, S.S. (2009) Managing business processes through outsourcing: A strategic partnering perspective. **Business Process Management Journal**, 15: (5): 687-715.

Say, J.B. (1803) **A Treatise on Political Economy; or the Production, Distribution, and Consumption of Wealth**. Ontario, Canada.

Scheuing, E.E. and Johnson, E.M. (1989) A proposed model for new service development. **Journal of Services marketing**, 3: (2): 25-34.

Schlesinger, L.A. and Heskett, J.L. (1991) The service-driven service company. **Harvard business review**, 69: (5): 71-81.

Schmenner, R.W. (1986) How Can Service Businesses Survive and Prosper? **Sloan Management Review**, 27: (3): 21-32.

Schonberger, R. "World class manufacturing: the lessons of simplicity applied, 1986". Free Press: New York, NY.

Scudder, G.D. and Hill, C.A. (1998) A review and classification of empirical research in operations management. **Journal of Operations Management**, 16: (1): 91-101.

Searle, J.R. (1995) **The construction of social reality**. London: Penguin.

Selladurai, R.S. (2004) Mass customization in operations management: oxymoron or reality? **Omega**, 32: (4): 295-300.

Sen, F. and Shiel, M. (2006) From business process outsourcing (BPO) to knowledge process outsourcing (KPO): Some issues. **Human Systems Management**, 25: (2): 145-155.

Seppänen, K., Huiskonen, J. and Karppinen, H. (2015) Customer input management in service processes: needs and tools. **International Journal of Business Innovation and Research**, 9: (1): 100-114.

Shafti, F., Van Der Meer, R. and Williams, T. (2007) An empirical approach to service classification for productivity management studies. **The Service Industries Journal**, 27: (6): 709-730.

Shostack, G. (1987) Service Positioning Through Structural Change. **Journal of Marketing**, 51: (1): 34-34.

Shostack, G.L. (1977) Breaking free from product marketing. **The Journal of Marketing**, 73-80.

Shostack, G.L. (1984) Designing Services that Deliver. **Harvard Business Review**, 62: 133-139.

Silvestro, R., Fitzgerald, L., Johnston, R., et al. (1992) Towards a Classification of Service Processes. **Journal of Service Management**, 3: (3): 62 - 75.

Silvestro, R. and Silvestro, C. (2003) New service design in the NHS: an evaluation of the strategic alignment of NHS Direct. **International Journal of Operations & Production Management**, 23: (4): 401-417.

Skaggs, B.C. and Huffman, T.R. (2003) A customer interaction approach to strategy and production complexity alignment in service firms. **Academy of Management Journal**, 46: (6): 775-786.

Skinner, W. (1974) **The focused factory**. Harvard Business Review.

Slack, N. (1989) Focus on flexibility. **International Handbook of Production and Operations Management, Cassell, London**, 50-73.

Slack, N., Brandon-Jones, A., Johnston, R., et al. (2012) **Operations and process management: principles and practice for strategic impact**. 3rd.Essex: Pearson Education Limited.

Slack, N., Chambers, S. and Johnston, R. (2010) **Operations management**. Prentice Hall.

Slack, N., Chambers, S., Johnston, R., et al. (2009) **Operations and process management: principles and practice for strategic impact**. 2.Essex: Pearson Education.

Slack, N., Lewis, M. and Bates, H. (2004) The two worlds of operations managemet research and practice: Can they meet, should they meet? **International Journal of Operations & Production Management**, 24: (3/4): 372-387.

Smart, P., Maull, R. and Childe, S. (1999) A reference model of'operate'processes for process-based change. **International Journal of Computer Integrated Manufacturing**, 12: (6): 471-482.

Smith, A. (1776) **An Inquiry into the Nature and Causes of the Wealth of Nations, E. Cannan, ed.** London: Methuen, 1904.

Smith, M.K., Ball, P.D., Bititci, U.S., et al. (2010) Transforming mass production contact centres using approaches from manufacturing. **Journal of Manufacturing Technology Management**, 21: (4): 433-448.

Sousa, R. and Voss, C.A. (2001) Quality management: universal or context dependent? **Production and Operations Management**, 10: (4): 383-404.

Spekman, R.E., Kamauff Jr, J.W. and Myhr, N. (1998) An empirical investigation into supply chain management: a perspective on partnerships. **Supply Chain Management: An International Journal**, 3: (2): 53-67.

Spohrer, J. and Maglio, P.P. (2008) The Emergence of Service Science: Toward Systematic Service Innovations to Accelerate Co-Creation of Value. **Production and Operations Management**, 17: (3): 238-246.

Spring, M. and Araujo, L. (2009) Service, services and products: rethinking operations strategy. **International Journal of Operations & Production Management**, 29: (5): 444-467.

Spring, M. and Schoenherr, T. (2012) Call for Papers for a Special Issue:"Service Triads". **Journal of Operations Management**.

Stabell, C.B. and Fjeldstad, Ø.D. (1998) Configuring value for competitive advantage: on chains, shops, and networks. **Strategic Management Journal**, 19: (5): 413-437.

Stake, R.E. (1995) **The art of case study research**. Thousand Oaks, CA: Sage.

Staughton, R. and Johnston, R. (2005) Operational Performance gaps in business relationships. **International Journal of Operations & Production Management**, 25: (4): 320-332.

Stauss, B. and Jedrassczyk, M. (2008) Business Process Outsourcing (BPO): Value creation through external service providers. **Journal of Applied Management and Entrepreneurship**, 13: (3): 20-34.

Stock, G.N. and Tatikonda, M.V. (2000) A typology of project-level technology transfer processes. **Journal of Operations Management**, 18: (6): 719-737.

Stratman, J.K. (2008) Facilitating offshoring with enterprise technologies: Reducing operational friction in the governance and production of services. **Journal of Operations Management**, 26: (2): 275-287.

Strauss, A.L. and Corbin, J. (1990) Basics of qualitative research: grounded theory procedures and research. **New-bury Park (CA): Sage**.

Stuart, I., McCutcheon, D., Handfield, R., et al. (2002) Effective case research in operations management: a process perspective. **Journal of Operations Management**, 20: (5): 419-433.

Tatikonda, M.V. and Montoya-Weiss, M.M. (2001) Integrating operations and marketing perspectives of product innovation: The influence of organizational process factors and capabilities on development performance. **Management Science**, 47: (1): 151-172.

Tax, S.S. and Stuart, I. (1997) Designing and implementing new services: The challenges of integrating service systems. **Journal of Retailing**, 73: (1): 105-134.

Teece, D. and Pisano, G. (1994) The dynamic capabilities of firms: an introduction. **Industrial and corporate change**, 3: (3): 537-556.

Thomas, D.R.E. (1978) Strategy is different in service businesses. **Harvard Business Review**, 56: (4): 158-165.

Thompson, G.M. (1998) Labor Scheduling, Part 1 Forecasting Demand. **Cornell Hotel and Restaurant Administration Quarterly**, 39: (5): 22-31.

Thompson, J.D. (1967) **Organizations in Action**. New York: McGraw-Hill.

Tinnilä, M. and Vepsäläinen, A.P.J. (1995) A model for strategic repositioning of service processes. **International Journal of Service Industry Management**, 6: (4): 57-80.

Todaro, M.P. (1994) **Economic development in the Third World**. Harlow: Longman.

Tompkins, J.A., White, J.A., Bozer, Y.A., et al. (1996) **Facilities planning**. New York: Wiley.

Trinh, T.H. and Kachitvichyanukul, V. (2013) A unified framework for the design of service systems. **International Journal of Services and Operations Management**, 15: (3): 374-388.

Tronvoll, B., Brown, S.W., Gremler, D.D., et al. (2011) Paradigms in service research. **Journal of Service Management**, 22: (5): 560-585.

UNDP (1993) "Human development report 1993". New York, Oxford University Press.

van de Valk, W. and van Weele, A. (2011) "Business service triads: a new area for service research". **IPSERA 2011 Conference Proceedings**.

van der Valk, W. and van Iwaarden, J. (2011) Monitoring in service triads consisting of buyers, subcontractors and end customers. **Journal of Purchasing and Supply Management**, 17: (3): 198-206.

Van Maanen, J. (1979) The fact of fiction in organizational ethnography. **Administrative Science Quarterly**, 24: (4): 539-550.

Vargo, S.L. and Lusch, R.F. (2004a) Evolving to a new dominant logic for marketing. **Journal of marketing**, 1-17.

Vargo, S.L. and Lusch, R.F. (2004b) The four service marketing myths remnants of a goods-based, manufacturing model. **Journal of Service Research**, 6: (4): 324-335.

Vargo, S.L., Maglio, P.P. and Akaka, M.A. (2008) On value and value co-creation: A service systems and service logic perspective. **European Management Journal**, 26: (3): 145-152.

Verma, R. (2000) An empirical analysis of management challenges in service factories, service shops, mass services and professional services. **International Journal of Service Industry Management**, 11: (1): 8-25.

Voss, C., Tsikriktsis, N. and Frohlich, M. (2002) Case research in operations management. **International Journal of Operations & Production Management**, 22: (2): 195-219.

Voss, C.A. (2003) Rethinking paradigms of service: Service in a virtual environment. **International Journal of Operations & Production Management**, 23: (1): 88-104.

Waema, T.M., Odera, G., Adeya-Weya, C.N., et al. (2009) Development of a business process outsourcing industry in Kenya: Critical success factors. **Policy brief submitted to the International Development Research Centre, Ottawa IDRC Grant**, (104488-001).

Wanjiku, R. (2012) "Kenya changes BPO strategy, striving for efficiency". **PC Advisor Online Magazine**.

Ward, P.T., Bickford, D.J. and Leong, G.K. (1996) Configurations of manufacturing strategy, business strategy, environment and structure. **Journal of Management**, 22: (4): 597-626.

Wausi, A., Mgendi, R. and Ngwenyi, R. (2013) "Labour Market Analysis and Business Process Outsourcing in Kenya: Poverty Reduction through Information and Digital Employment Initiative". Kenya, School of Computing and Informatics, University of Nairobi.

Weick, K.E. (1995) What Theory Is Not, Theorizing Is. **Administrative Science Quarterly**, 40: (3): 385-390.

Wemmerloev, U. (1990) A taxonomy for service processes and its implications for system design. **International Journal of Service Industry Management**, 1: (3): 20-40.

Wemmerlöv, U. (1990) A taxonomy for service processes and its implications for system design. **International Journal of Service Industry Management**, 1: (3): 20-40.

Wernerfelt, B. (1984) A resource-based view of the firm. **Strategic Management Journal**, 5: (2): 171-180.

Westbrook, R. (1995) Action research: a new paradigm for research in production and operations management. **International Journal of Operations & Production Management**, 15: (12): 6-20.

Whetten, D.A. (1989) What Constitutes a Theoretical Contribution? **Academy of Management Review**, 14: (4): 490-495.

Whitaker, J., Krishnan, M. and Fornell, C. (2008) Does offshoring impact customer satisfaction? **Available at SSRN 1010457**.

Wilhelm, M.M. (2011) Managing coopetition through horizontal supply chain relations: Linking dyadic and network levels of analysis. **Journal of Operations Management**, 29: (7): 663-676.

Williamson, O.E. (1979) Transaction-cost economics: The governance of contractual relations. **Journal of Law and Economics**, 22: (2): 233-261.

Williamson, O.E. (2008) Outsourcing: Transaction Cost Economics and Supply Chain Management*. **Journal of Supply Chain Management**, 44: (2): 5-16.

Winch, G. (2014) Strategic business and network positioning for internationalisation. **Service Industries Journal**, 34: (8): 715-728.

Wullenweber, K., Beimborn, D., Weitzel, T., et al. (2008) The impact of process standardization on business process outsourcing success. **Information Systems Frontiers**, 10: (2): 211-224.

Yin, R. (2003) "Case study research: Design and methods". **Thousand Oaks: Sage**.

Yin, R.K. (2009) **Case Study Research: Design and Methods (Applied Social Research Methods)**. London: Sage Publications.

Youngdahl, W. and Ramaswamy, K. (2008) Offshoring knowledge and service work: A conceptual model and research agenda. **Journal of Operations Management**, 26: (2): 212-221.

Zeithaml, V.A., Parasuraman, A. and Berry, L.L. (1985) Problems and strategies in services marketing. **The Journal of Marketing**, 33-46.

Zhang, Y. and Gregory, M. (2011) Managing global network operations along the engineering value chain. **International Journal of Operations & Production Management**, 31: (7): 736-764.

Zhang, Y., Gregory, M. and Shi, Y. (2008) Global engineering networks (GEN): Drivers, evolution, configuration, performance and key patterns. **Journal of Manufacturing Technology Management**, 19: (3): 299-314.

Zomerdijk, L.G. and Vries, J.d. (2007) Structuring front office and back office work in service delivery systems. **International Journal of Operations & Production Management**, 27: (1): 108-131.

APPENDICES

9   APPENDIX A: CONSENT AND INTRODUCTORY LETTER

UNIVERSITY OF BIRMINGHAM

Interview Consent Form

Information Intensive Service Operations: Links between service Concept, customer Inputs and service Process design

This research aims to examine the delivery process design features, the nature of customer inputs and service outcomes for different outsourced information intensive service offerings and how BPO firms should adopt process end-to-end approach to deliver value to customers. The research is conducted in partial fulfilment of the requirements for PhD degree in University of Birmingham, UK.

Before commencement of the interview, your (interviewee) voluntary consent is sought:

- Participating in this research is voluntary

- I agree to be interviewed for the purposes outlined for this research

- I understand my right to opt out at any point in time during the research process

- All personal information will be treated with strict confidentiality

- Data provided in this interview will be collated with other interviewees' data and the results used to answer the research question

- This research is conducted in partial fulfilment of the requirements for a PhD degree

- This research does not intend to inflate harm to any participant

I, the researcher, assure that the data collected will be strictly confidential following the data protection Act (1998)

Name: ....

Signature: ....

Date: ....

I, the participant (interviewee), agree to take part in this research process

Name: ....

Signature: ....

Date: ....

268

UNIVERSITY OF BIRMINGHAM

Michael Wainaina Githii
Bcom, MBA, CPA(K)

Birmingham Business School
Department of Management
Procurement & Operations Management

Date – 00/00/2011[12]

Company Name
Title, name, position
Address

Title: **Information Intensive Service Operations: Links between service Concept, customer Inputs and service Process design**

Dear Sir / Madam,

Business process outsourcing provider firms need to address several issues of importance to their growth and survival. This is particularly important in less developed countries where the outsourcing phenomenon is still evolving. Literature suggests that a significant number of outsourcing relationships have not been successful due to poor service delivery processes, quality concerns and challenges in managing interdependencies between the vendors and clients. This necessitates empirical research in real world context.

In order to address these issues, I plan to examine the delivery process design features, the nature of customer inputs and service outcomes for different outsourced information intensive service offerings in best performing Kenyan BPO provider firms. The target is to interview several individuals (top management, middle level managers and operational level experts) each expected to take between 60 – 90 minutes.

In return, you will be able get managerial implications and insights on different BPO classes relevant to Kenya, understand linkages between process management initiatives and customer satisfaction and also compare your firm's practices against 'best practices' appearing in outsourcing literature which could be tremendously valuable.

All company information will be taken as strictly confidential and not published specific to your organization or any individual employee interviewed. I would be grateful to hear from you soon.

Thank you very much for your co-operation.

Yours sincerely,

Michael Wainaina Githii

Supported by Dr. Yufeng Zhang
Lead supervisor

Participant Information Sheet

This document provides important information to assist you understand and decide to (or not) take part in the research. Please read it carefully and in case you do not understand any part; I will be happy to clarify.

1. **Title: Information Intensive Service Operations: Links between service Concept, customer Inputs and service Process design**

This research aims to explore the service process features of outsourced information intensive services and examine how the operational constructs of customer inputs and service concept relate. The study is conducted in partial fulfilment of the requirements for PhD degree in Operations Management for Michael Wainaina Githii at the University of Birmingham, UK.

2. **Why Kenya?**

As a player in the industry you are aware of the huge investments the Kenya Government is making in the BPO/ITES industry as part of realising one of six objectives stipulated in the economic pillar of Kenya vision 2030. However setting up world class infrastructure and proper policy regulations is just but one aspect of the industry. At a micro-economic (firm) level, a lot has to be done for local firms to be able to compete or surpass their peers in the well-established economies such as India and China. It is these operational aspects that this study seeks to address. The particular objectives and aims are addressed in the next sections.

3. **Aims of the research**

- To identify process design features of outsourced IIS
- To understand the links between customer inputs, service delivery process and service outcomes for different outsourced IIS offerings
- To explore the role of information intensity in service design
- To draw managerial implications and insights relevant to BPO providers in Kenya
- To understand the taxonomy of BPO services

4. **Expected outcomes of the research**

- Establish the nature of relationship among the constructs of service package, customer inputs and the service delivery process
- An understanding of the concept of service customization vis-à-vis customer contact.
- Understand role of customer inputs and information intensity in process design and delivery of BPOs
- Develop a framework for BPO services, establishing service process features such as employee skills, employee discretion, automation, facilities and staff hiring and training
- A PhD thesis and academic papers

5. **Target Participants**

Participants are broadly divided into THREE tiers, I, II and III where tier I includes people in senior managerial positions whereas tiers II and III consist middle level managers and operational level employees respectively.

6. **What is my role if I opt to participate?**

- You will be required to sign a copy of the consent form
- You will be interviewed for a period lasting between 1-1½ hours in relation to the stated topic of research.
- If you agree, the conversation will be audio-recorded. Otherwise notes will be taken.
- Later on a copy of the interview transcript will be provided for you to verify its accuracy

Please note:
   a) You can withdraw from the interview process at any point in time without having to give reasons.
   b) There will be no consequences on your part for withdrawing from the research.
   c) In the case of withdrawal, all the information you will have provided will be excluded from the research.

7. Risks for participating
This being a practical and academic piece of research conducted professionally; there are absolutely no expected risks to you.

8. Benefits for participating
The benefits may not be direct to you as an individual but could be enormous to your organization and the country's BPO industry. For instance, the research will offer managerial insights on different BPO service types and an understanding of the linkages between service delivery and customer/client satisfaction.

9. Levels of confidentiality and anonymity
All the information you provide will be treated with the strictest levels of confidentiality as required in professional research. No personal details relating to you will be passed to any third party without your written consent.

10. Data Protection
All data files both in soft and hard copies will be stored in such a way that they are either password protected or under lock by the researcher. Upon full completion of the study, all data will be properly destroyed.

11. The researcher, University of Birmingham and University of Nairobi.
The researcher, Michael Wainaina Githii, is a lecturer at School of Business at University of Nairobi currently on study leave for three years. He is undertaking doctoral study at the University of Birmingham Business School. This research has been cleared by the ethics Committee of the Business School and the University of Birmingham.

Lead Supervisor : Dr. Yufeng Zhang
Co-Supervisor: Dr. Paul Forrester

Michael Wainaina Githii
Bcom, MBA, CPA(K)

10   APPENDIX B: FIRST LEVEL INTERVIEW GUIDE

The interview will last at most 1 hour and will have the following TWO sections:

A.   DEVELOPMENT OF PCN (PROCESS CHAIN NETWORK) DIAGRAMS

The objective is to understand the generic service **winning** & **delivery** processes for four service offerings (data, research, inbound calls and training). The PCN diagram helps to capture the key steps (activities) clearly showing the points of interaction with the customer/ client or otherwise (**see the attached templates**).

To illustrate, an illustrative theoretical PCN for inbound calls is provided for your approval [or rejection]. The rest are yet to be filled. I will be seeking respondents help to do the same.

B.   CHARACTERISTICS OF THE SERVICE OFFERINGS

Use the numbers 1, 2, 3 and 4 to rank the four service offerings [1=Lowest and 4=Highest] in the table.

SERVICE CHARACTERISTICS	OUTSOURCED SERVICE OFFERINGS			
	Inbound calls	Data	Research	Training
Employee discretion				
Labour Intensity				
Customer contact				
Level of skills: Technical (doing)				
Diagnostic (knowledge)				
Repeatability/routineness of task				
Level of technology				
Customer influence on outcome				
Availability of necessary skills				
Volume of work				
Training needed				

11   APPENDIX C: PROCESS NETWORK DIAGRAM FOR EACH CASE

FOR THE DATA CASE

'Operate' process for data work - **EVEREST**

'Operate' process for data work - **GIGAS**

Provider			Customer	
Provider's Process Domain			**Customer's Process Domain**	
Independent Processing	Surrogate Interaction	Direct Interaction	Surrogate Interaction	Independent Processing

Degree of process control   Degree of process control

- Analyst receives file ← Customer sends file
- Analyse and check completeness
- Pass to agent
- **Work on file** ↔ Resolve issues with client
- Quality check
- Send file → Receive file

'Operate' process for data work - **HUMONGOUS**

FOR THE RESEARCH CASE

'Operate' process for research work -**EVEREST**

Degree of process control   Degree of process control

Provider

Provider's Process Domain

Customer

Customer's Process Domain

| Independent Processing | Surrogate Interaction | Direct Interaction | Surrogate Interaction | Independent Processing |

Receive instructions/ data

Plan & collect data

Verify / send data

Analyse data

Write report

Handover report

Send instructions/ data

Receive data

'Operate' process for research work - **GIGAS**

277

Provider

Provider's Process Domain

Customer

Customer's Process Domain

Degree of process control

Degree of process control

Independent Processing	Surrogate Interaction	Direct Interaction	Surrogate Interaction	Independent Processing

Develop research plan ← Set objectives ← Analyse problem ← Find need for research

Develop research plan → **Collect data** → **Analyse data** → **Write report** → Present findings

Present findings → Handover report → Use the findings

'Operate' process for research work - **HUMONGOUS**

FOR THE CALL CENTRE CASE

'Operate' process for call centre -**EVEREST**

Provider

Provider's Process Domain

Customer

Customer's Process Domain

Independent Processing	Surrogate Interaction	Direct Interaction	Surrogate Interaction	Independent Processing

Calls routed - ACD

IVR/Call tracking

Make a call

Speak to Agent

Technical support

Call back

Provide solution

Provide solution

Satisfied customer

'Operate' process for call centre - **GIGAS**

Provider			Customer	
Provider's Process Domain			**Customer's Process Domain**	
Independent Processing	Surrogate Interaction	Direct Interaction	Surrogate Interaction	Independent Processing

Degree of process control   *Degree of process control*

- Call routing - ACD
- Call back the customer
- Agent greets and identifies need
- Enter details - CRM
- Escalate to back office
- Address issue
- Resolve issue
- IVR
- Customer calls
- Resolve issue

Operate' process for call centre- **HUMONGOUS**

FOR THE TRAINING CASE

Degree of process control

Degree of process control

Provider

Provider's Process Domain

Customer

Customer's Process Domain

Independent Processing	Surrogate Interaction	Direct Interaction	Surrogate Interaction	Independent Processing

Develop content ← **Determine objectives** ← Pre-assess needs ← Identify need e.g., through a TNA

Develop a delivery plan → **Training session** ← Go for training

Provide support ←

Validate training ← → Go back to work

'Operate' process for training - **EVEREST**

282

Degree of process control

Degree of process control

Provider

Customer

Provider's Process Domain

Customer's Process Domain

Independent Processing	Surrogate Interaction	Direct Interaction	Surrogate Interaction	Independent Processing

Develop content

Assess and identify objectives

Need for training

Learn /train

Go for training

Prepare for training

Reinforce

Supplemental support

Validate training

'Operate' process for training - **GIGAS**

283

Degree of process control

Degree of process control

| Provider | | Customer | |
| **Provider's Process Domain** | | **Customer's Process Domain** | |

| Independent Processing | Surrogate Interaction | Direct Interaction | Surrogate Interaction | Independent Processing |

Determine relevant best practices

Design curriculum

Set-up infrastructure

Deliver training and examine

Prepare outcome report

Send Report

Receive report

Receive the needs and objectives summary

Client summarizes needs and objectives

'Operate' process for training - **HUMONGOUS**

284

12   APPENDIX D: PROCESS NARRATIVE

Data processing CASE

In **EVEREST**, data processing services are basic and entail receiving scanned copies of pre-filled forms/questionnaires or voice recorded files from clients and then typing/transcribing or converting them to softcopies in client friendly formats. The process entails creating a drop point for the client, receiving the files from the access point and sharing the files amongst the agents for processing. Subsequently, the agents read the files and in case of need for clarification or other unforeseen challenges, the files are passed to team leaders (TL) for action. If the files are in the expected form, they are processed. Work is checked for quality before forwarding to the client. All service process activities are housed in the surrogate region of the service provider. The need for surrogate interaction is that clients are not necessarily located in the same geographical area with service provider. There is only one activity in the direct interaction (DI) region. This activity involves the team leader consulting the client's contact person mostly through phone or e-mail to seek clarification on unclear issue in the file being processed. The other observation relates to presence of minimal independent processing activities. Importantly though, it is noted that the whole process is triggered by the client's independent activity of sending a file.

For **GIGAS**, data processing services commence with receipt of hard or soft copies of documents from the client. These are scanned documents saved in forms such as MS Word, MS Excel, PDF, TIFF, XML, BMP and GIT. In most cases, the documents are received online and are processed virtually without printing. Some small batches of work are received in hard copies through a process of direct interaction. However, the main interaction is

between employees of the service provider and the client's documents giving rise to positioning the receive file activity in surrogate interaction region of service provider. The assemble data activity involves assessing the data to find whether it is legible and ready for processing. In case of errors, clarification is sought from representative of the client. The way forward could entail replacing the entire data file or withdrawing the faulty section. Assign work comprises sharing the received work among the team of agents assigned to the project. The *do work* activity is the heart of this 'operate' process since performance is measured on its basis. Indeed agents are fore trained on delivery of this activity. One event that happens in this activity is the conversion of the files to client's requested format. Upon completion of work, the agents' files are made accessible to quality analysts (QA) and clients for quality auditing purposes. This is done randomly and in low frequency. If approved by the QAs and is acceptable to the client, the file is sent to the client in the stipulated format accompanied by a status report. It is observed that all the fundamental activities fall into the provider's surrogate interaction region. Except for the random audits and referrals regarding errors, the process entails absolutely no direct interaction with the client. This means, at optimal performance level, agents carry out the work at the provider's back office (BO).

The 'operates' process for **HUMONGOUS** is triggered when the client sends a file to the service provider for processing. An analyst receives the file, reads, verifies for errors and completeness and appropriateness for processing. If there are concerns that require client's attention, the resolve issues activity in the DI Region is activated. Otherwise, the analyst forwards the file to the agents who do the actual work that entails transcription or converting the file from one form such as scanned soft copy to another form say XML. As the agents process the work, there could be emergent issues requiring resolutions from the client. These

are resolved through resolution mechanism in the DI region. Upon completion, the agent's works is checked by quality analysts (QA). If satisfactory, the file is dispatched to the client. Apart from the resolve issues activity that is in the direct interaction region, all the other activities of this process are undertaken in the surrogate interaction region of the provider.

Research work CASE

For **EVEREST**, research work involves web data extraction with tads of market research. Clients do background need identification prior to making decision to outsource research work. Apart from understanding of client expectations, other activities are processed in the provider's surrogate interaction region. Using the information collected from the client, providers design research methodologies, develop data collection instruments, collect and analyse data and write comprehensive reports of findings for the clients.

Although **GIGAS** International Inc. provides different types of research work options, the most predominant at the time of this study were web research, market research and data analytics. The service 'operate' process for this service begins with the client sending instructions to the service provider specifying what information ought to be collected, from what sources, within what period and the requisite form for presenting the information and findings. The collect data activity involves developing clear plan with guidelines on how data collection and field work are undertaken. For web research, the collected data is first verified for quality purposes. If the data does not meet set standards, additional data is collected. Otherwise, if the data is adequate and up to standard, it is sent to the client. For market research, the data collected is moved to the analysis phase. Data received from the client goes directly to the analysis stage. The analyse data activity involves using the appropriate

techniques depending on whether the data is qualitative or quantitative to provide answers to the client's questions. The write report activity involves summarising the findings from the analysis activity to client specified layout. **GIGAS** conducts the last activity, *handover report* in an interactive ceremony. The direct interaction is necessary so that the experts can explain the research findings and clarify the not so explicit sections of the report to the client. The deliberate physical meeting strategy provides avenue for **GIGAS** to get feedback, show appreciation to the client for working with **GIGAS** and importantly seek more work from the client.

Research work in **HUMONGOUS** Inc., is basic and entails market research. On finding the need for research, the client contacts the provider. In the initial contact, the client explains in detail the questions that need to be researched on to the provider's understanding. This leads to shared development of research objectives that guide the provider in the actual research process. The develop research plan activity consists of assembling team of researchers and research assistants to conduct the research, explaining to them the research work at hand and agreeing on important dates, tasks and other operational level events. The outcome of this activity are clear working instruments such as questionnaire, interview guide, timetable of work and people/sources to be utilised. Collect data activity involves going to the field seeking appropriate primary or secondary data as the case may require. Data analysis activity means deducing meaning from the collected data. It involves data reorganization, use of charts, graphs, tables, codes and matrices and simple descriptive statistics to bring out meaning from the data. The report writing activity involves putting in writing the findings from the data analysis. The report is the final output of the entire process. Upon full compilation of the report, formal meeting is arranged where the provider's research lead

presents verbatim findings albeit in summarised form. This is immediately followed by handover of the detailed report. Although the eight key activities of this process are distributed equally between the provider's surrogate interaction region and the direct interaction region, the actual research activities are those in the surrogate interaction region of the service provider.

Call centre CASE

Voice call centre services for **EVEREST** Company entail inbound as well as outbound services with each delivering many standardised services that require different employee capabilities and have different competitive priorities. For instance, the inbound calls range from answering basic telecom calls to providing technical solutions that requiring high skills depending on the client's context:

- *"You see voice is about passing information. If you have a telephone and you can communicate. That's it, simple."* – **Operations Manager**
- *"For the telecalls you will need soft skills and may be a bit of sales prowess. But take for example our client Ramtons that sells TV, phones all that. So you get to see an agent in that account needs to have more skills than a basic customer service agent who maybe handles telephone calls or a basic hotline. So if I am handling an electronic company I need to have IT background, so that I may be able to trouble shoot phones, TVs, computers and all that. So you need to have a good IT background, but if its basic customer service like telecom, you just need to know basic telecom, to know your way around the phone. So that in itself is a special skill."* - **Director of I.T Analytics and BPM**

The process activities are equally shared between the direct interaction region, the surrogate interaction region of the customer and that of the provider with each region hosting two important process steps. The process is initiated when the caller independently choses to put a call to the service provider. The call is received by Interactive Voice Response (IVR) system rather than an agent, connoting surrogate interaction. By following the IVR instructions,

simple customer queries are resolved and customer terminates the call. Calls not resolved by IVR are forwarded to Automatic Call Distributor (ACD) system for routing to the appropriate agent queue. The agent speaks to the customer and resolves the problem or puts the customer on hold while escalating the call to technical support. If the technical support team is in position of providing the answer immediately that is done and the customer exits. Otherwise, the customer is promised a call-back. It is important to note that value is realised when the caller's query is answered adequately and this occurs in the caller's surrogate area via the IVR or in the region of direct interaction via the agent.

For **GIGAS,** the first stop for the call is IVR machine/technology/computer where the customer interacts with pre-set voice instructions and by following carefully, simple questions, particularly those that require YES/NO answer, are answered on the spot. The unresolved calls are moved to the ACD activity for routing to the appropriate person in a time conscious manner. The ACD activity gathers and generates: (i) internal records that show to whom the call was directed, the number of calls at a particular time of the day and so on; (ii) external information records with particulars of the customer such as account or phone number or email address. Speak to agent is the core activity because most of the caller's concerns are handled and resolved here. The agent listens, shows interest and asks relevant questions to the caller before figuring out the best solution to give. If the agent manages to resolve the customer query then it is mandatory that s/he finds out whether all needs have been satisfactorily met before the call is terminated. Unresolved calls are transferred to technical support staff for immediate action where possible or a 'call-back' promise is made to the customer. This process has two solution points; first at the customer's surrogate interaction region and second in the region of direct interaction. The inbound call centre's 'operate'

process has four keys activities: (i) IVR in the caller's surrogate interaction region, (ii) ACD in the provider's surrogate interaction region, (iii) speak to agent activity in the direct interaction region, and (iv) technical support action at the service provider's back office.

The 'operate' process for call centre service in **HUMONGOUS** Inc., is triggered by customer calls. The calls are initially received and responded to with automated information housed in the IVR. The IVR provides wide menu of options for the callers to choose from depending on their informational needs. Upon receiving satisfactory answers the call terminates. The rest are recorded and re-routed by the ACD to the available agents. The identify needs activity entails the agent greeting and showing appreciation to the customer for finding time to call and enquiring about customer concern. Immediately after, the agent takes and records the caller's identification and other details so that the caller can be accessed from, or if new entered to, CRM database. The CRM provides the agent with probable solutions to different customer queries. If the agent cannot resolve the issue, the agent escalates it to the BO. Later on the customer is called back and the issue dealt with conclusively. Most of the critical activities for this process happen in the DI region although the provider's SI region hosts two important activities. The customer's SI region also hosts the IVR activity.

Training CASE

EVEREST's training services are bespoke and tailored to the client's human resource needs. Most activities are undertaken in direct interaction region albeit with significant chunk of work going on in the provider's surrogate area. However, no activities take place in the client's SI region. Training needs assessment is done independently by the client prior to sourcing for training supplier. Upon engaging the provider, there is initial direct interaction

specifically to reassess the training needs as well as set the objectives for the training. With this information, the provider carries out research and develops the requisite training content and delivery plan. Since the actual training entails face-to-face contact between employees of the client and trainers from the service providing entity, it is hosted in the direct interaction region. After the training, the client and the provider have to evaluate the entire process and see the extent to which the objectives were realised.

There are three core activities in training service process of **GIGAS**, commencing with an activity refered to as identification of *need for training*, which is undertaken by the client independent of the service provider. This activity succeded by a face-to-face meeting where the client's needs for training are assessed and appropriate objectives for training agreed upon by both parties. The next activity takes place in the provider's surrogate interaction region and entails preparation of training content that matches the identified objectives. This activity is succeeded by *learn/train* activity that involves the trainers meeting and interacting with the to be trained employees of the client. In this activity, the learners listen, take notes, ask questions and perform tasks as may be required. This activity is the most important because the client's value for money is realised or lost at this point. Concurrently, the service provider's team provides extra supportive materials that the learners later use to supplement their learning and understanding. Upon covering the full content, the two parties meet directly to evaluate the training and find out the extent to which the objectives have been realised. The service provider takes the client feedback seriously as it enhances and improves delivery of similar future projects. Other than the surrogate interaction activities of content development and the reinforce activity, all the other key activities are processed in the direct interaction region.

The 'operate' process of the training case, begins when the client identifies needs for training of employees. For **HUMONGOUS** Inc., it is a matter of procedure that the clients first summarise and present written statement of training needs and objectives in advance. This statement is studied by the service provider and benchmarked against best practices available facilitating set-up of strategic direction for the project. The design curriculum is an important activity that entails face-to-face meeting between the client and the service provider. It involves discussion of the needs and objectives as initially presented in comparison to the established best practice. If agreed on, revised set of objectives is developed and used in generating the training content. Next, the provider undertakes to assemble requisite resources and infrastructure i.e., setting-up venue, timetable, planning who is to do the training, and other logistical issues. The deliver training and examine activity involves actual engagement between trainers and learners. Significant part of training is done in class room format but with practical examples highlighted. This is supported by online access to reading materials and exercises. The last step entails putting together an outcome report which is delivered to the client. The two activities at the heart of this process are found in the DI region but supported by several activities in the provider's SI region.

13 Appendix E: CASE STUDY PROTOCAL AND INTERVIEW GUIDE

**Information Intensive Service Operations: Links between service Concept,
customer Inputs and service Process design**

Case Study Protocol

December 2012

Overview
The objective of this study is to investigate how BPO organizations *deliver value through service processes in outsourced information intensive service environments*. Specifically:

- To identify process design features of information intensive services

- To understand links between customer inputs, service delivery process and service outcomes for different information intensive service offerings

- To explore role of information intensity as a component of customer inputs

- To draw managerial/operational implications and insights relevant to information intensive service providers

This will be achieved by evaluating data, to be collected, from outsourcing companies offering BPO services, based in Nairobi Kenya. A series of interviews with case study companies will be conducted to collect the required data. This Case Study Protocol is designed to increase *reliability* of the study and ensure that the data collection and analysis can be repeated by different researchers with minimal variation. The Figure next provides a summary of five st*ag*es of data collection that will be followed.

Stage 1a
Preparation

Stage 1b
Piloting

Stage 2
Access

Stage 3
Site visit

Stage 4
Conduct interviews

Stage 5
Data analysis
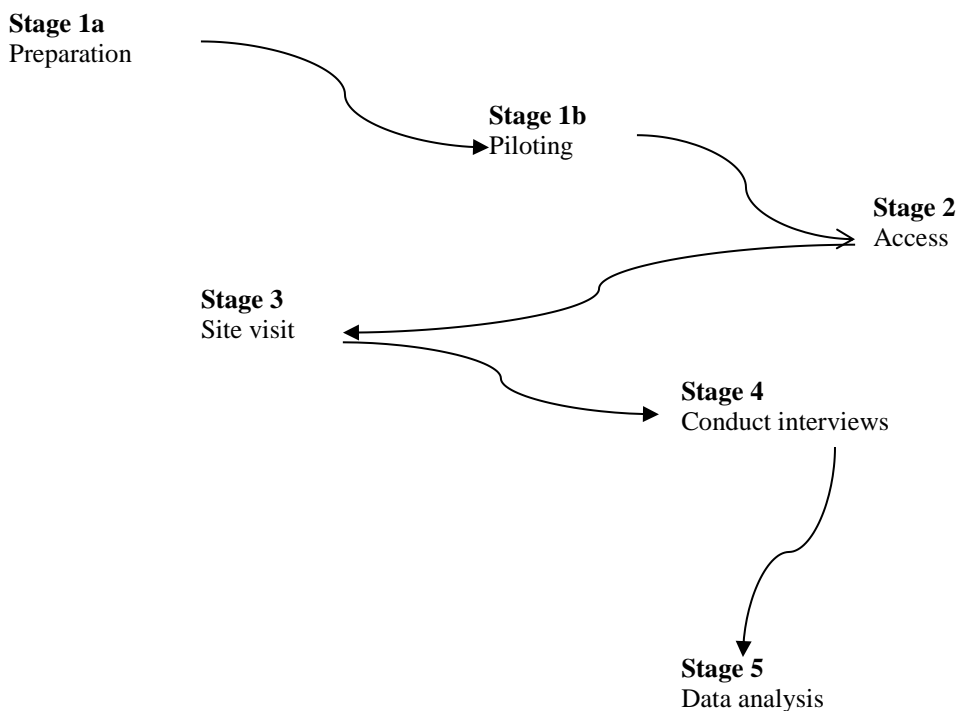
Unit of Analysis
Although business process outsourcing providers offer services that widely fall into three categories: ITO services and BPO services, the focus of this study is specific BPO projects/contracts that have existed for at least three years.
Consequently, the research will involve firms:
- established in Kenya and have a majority local shareholding,
- providing back office administrative and/or front office services either to local or international clients, and
- are conscious to their own process management practices
The unit of analysis for this study is the process ['operate'] level of each of the services under consideration.

Stage 1a – Preparation
Before commencing the fieldtrip, as much information as possible available in public domain will be collected through desk research. The information includes but not limited to financial reports, web/internet searches and press reports on what the company does, its origins and service offerings. At this initial preparation stage we will

formulate an interview strategy, seek to establish prime contacts for all the targeted case firms and apply for ethical review approval from the University of Birmingham.

Stage 1b – Pilot Study
A brief exploratory study of two business process outsourcing providers will be undertaken. Several industry practitioners and academics will be contacted to review the interview guide after which requisite corrective measures taken.

Stage 2 – Access
- Key contact people requested to arrange a meeting between the researchers and a potential case company sponsors
- Important rules for the study set. The sponsor provided with the attached introductory letter together with participant information sheets and consent forms
- Sponsor evaluates and gives brief opinion about availability of necessary data in the organization.

Stage 3 – Site Visit
Visit the site to see first-hand what the case company does, how operations are organised and observe the general work environment. In addition, specific people to be interviewed particularly in middle management and operational level identified and interview arrangements made.

Stage 4 – Conducting Interviews
This is an important stage that entails the actual interviewing and data collection. The aim is to extract relevant information from the interviewee to enhance researcher's understanding of the service delivery process for each of the four units of analysis. The following will be the key areas of focus:
- Field data collection - face-to-face interview
- Note taking, electronic/tape recording
- Document analysis
- Observation
- Findings confirmed with interviewees
- Follow-ups where necessary
- Summarise data/information

Stage 5 – Analyses
Tightly interwoven with stage 4, data analysis entails making interpretations of data collected.

<p style="text-align:center">THE CASE STUDY PROTOCOL</p>

Introduction

This research protocol contains the instrument, procedures and rules to be followed in collecting data from leading outsourcing companies, offering BPO services, based in Nairobi Kenya. The objective of this study is to empirically investigate the service concept, service delivery process and their linkages to customer inputs in outsourced information intensive services. The research questions to be answered by the study are:

- What are the service delivery design features in outsourced electronically transmittable services?
- How do these service delivery design features influence linkages between service concepts and customer inputs?

So as to capture necessary and relevant data, wider areas of focus including company's background information, services offered, the market, the service delivery process features will be considered.

a) Background

Constructs	Elements of the constructs
Business Context	Environment - History - Scope of your operations (Sector/industry, market share in Kenya – evidence)
Types of services offered	Market targeted - Organization's existing and potential clients/customers (industry-wise) - Offerings or services offered (local/international, sites) - Does the firm specialise in particular services? - Are there plans to offer distinct services in the future?
Competition	Industry rivalry - How does the domestic market compare to the international market? (*rivalry, proportion of clients, competitive strategies*) - In your opinion how have the following changed over time? (*business growth (decline) over the years, level of competition, entry and exit barriers to the industry*) - Initiatives undertaken in response to changes in competition (recent occurrences - expansion/developments) - Expectations/what lies ahead? - How do Kenyan BPOs, like your organization, differ from captive centres and BPOs in other countries such as India, China?
Capabilities	Winning formula - What would you say are core capabilities of the organization? - How are these capabilities measured? (*an outlay of their evolution*)
Business process	How is it defined?

b) Market segments, service process and customer interaction

Constructs	Elements of the constructs
Segmentation	- Basis on which customers are segmented (characteristics, size, skills, contact etc.)
	Criticality of process to the client - Any services offered that are critical to the client – high in criticality (failure on your part would render the client inoperable) - Services that are low on criticality
	Service complexity - What people skill levels are needed in executing this process? - Ease of knowledge transfer - Tasks are easily routinized/standardized - To what extent are tasks machine/technology dependent? - So, which services are low in complexity and which are complex?
	Service concept - How would you describe the service concept/package? – for each of the services offered
Extent of customer	Describe the interactions between your organization and the:

contact	▪ *client*
	▪ *client's customer*
	  - For each of these interactions - describe the modes of contact
	  - Duration of the relationship with the client (short/long-term)
	  - Who in your organisation deals directly with the client?
	  - Average number of encounters with the client during a relationship? With the client's customers
	  - Is culture important in these interactions?
	  - Is language important in these interactions?

Professional/mass services	Customization Which services do you categorize as: ▪ *professional?* ▪ *mass/transactional?* Why? [characteristics for each]

c)   Outsourcing process and service design features

Constructs	Elements of the constructs

Main processes	Processes involved in **winning, running** and **renewing** the outsourcing relationship:
	- Processes involved in **winning** clients
	  ▪ Main activities
	  ▪ What initiates the process?
	  ▪ How does the customer come in?
	  ▪ Who (people, departments) is responsible for these processes?
	  ▪ Challenges
	  ▪ Technology or facilities or resources used (significant?)
	  ▪ Outcome of the process
	- Processes involved in **running** the won clients' processes
	Main activities
	  ▪ Where to begin
	  ▪ Transition
	  ▪ Role of the customer
	  ▪ Who (people, departments) is responsible for these processes?
	  ▪ Drivers
	  ▪ Challenges
	  ▪ Technology or facilities or resources used (significant?)
	  ▪ Outcome of the process
	- Processes involved in renewing or retaining clients
	  ▪ Main activities
	  ▪ What drives the process?
	  ▪ Client's role – What information do clients provide? How complex? What amount?
	  ▪ Who (people, departments) is responsible for these processes?
	  ▪ Challenges
	  ▪ Outcome of the process
	- Brief history of the end-to-end process workflow in the organization (design, technology, changes)
	- more detailed information about the transition of processes from the client to your organization

Degree of routiness	How true: - task / process is repeatable from client to client - how heterogeneous are the tasks in the process? - is consistent technology / methods / tools used continuously - task repeatability happens most of the time
Degree of automation	- most activities are machine/technology dependent - most activities are manual/people dependent - level of mix (technology – people) - what technologies

	- drivers of process automation - inhibitors of process automation
Level of skills	- type of employees performing the work (qualifications) - technical skills - interpersonal skills
Level of discretion	- employees can vary the attributes of the service being offered - employees can vary the service delivery structure - service delivery process is fixed - work rules and guidelines exist

FO-BO configurations	- Customer facing activities (front-office)
	   ▪ Who is responsible for these FO activities?
	   ▪ Do these employees change frequently?
	- Any back-office activities
	   ▪ Who is responsible for these activities
	- Are FO employees and BO employees the same?
	- Do FO and BO employees share the same space?

Location	- Physical address (HQ) - Are there satellite locations – local/abroad? Why the location? - benefits
Layout [efficiency]	- Service cost compared to rivals - Employees in each process - How is efficiency captured in process design - Is there room for improvement
Hiring and training	- Qualifications – academic, experience - Nature of training

d) The 'operate' process

Constructs	Elements of the constructs
Coordination	- What mechanisms has your organization put in place to support coordination among processes/activities? - On what basis are tasks assigned?
Periodic interdepartmental meetings	- What is the nature of process teams? - Would say there are cross departmental efforts (such as meetings, real time information flow)?
Interaction between activities	- How is cooperation/support realised among departments when undertaking activities?
Resources	- How are operant (knowledge and skills) resources integrated into processes? - How are operand (material) resources integrated into processes?
Data/information integration & Information technology	- Describe the nature of cooperation in terms of information exchange internally - In what technologies (e.g. ERP) has the organization invested? - What role does technology play in enhancing internal information and data integration? - What role does IT play in enhancing internal tasks / activities or process integration?
Data and information integration	- How is process integration with the client achieved? - Information sharing between the organization and the client - Does the client supply/receive process information unreservedly? - How are unresolved issues concerning security, access and ownership of information dealt with?
End customer orientation	- To what extent do you understand client's vendor selection process? - Customer expectations? SLAs? - Customer inputs – info, instructions, ambiguity/clarity - How are they captured?
Workflow	- From client to the organization - From the organization to the client

Information technology	- Is information flow computerized / seamless? - What technologies are used?
Drivers	- Why does your firm have to integrate externally? - To what extent are the following considered drivers of external integration - *Response speed, Service delivery, Reliability, Cost and Client pressure*
Decoupled resources	- How are company resources: operant (skills and knowledge); operant (materials) exchanged / shared with the client? - Does the client share resources: operant (skills and knowledge); operant (materials) with you? Explain

e) Operational performance measures

Constructs	Elements of the constructs
Customer needs	- Why do international clients outsource in Kenya? - Would you say cost arbitrage is the main reason why clients prefer your firm? Other reasons? - How are customer needs determined? - How are they prioritised? - How are these customer needs translated into actionable plans? - Is there a structure to communicate customer needs throughout the organization (across functions)? - Measure of success (documentary evidence)
Reliability	How important to the clients: - Timeliness - Accurateness - Documentation of historical events
Tangibles	How important to the clients: - Physical facilities - Employees image - Equipment and technology used - Scalability (capacity flexibility) - Interoperability - Other customers
Conformance	How important to the clients: - Process design - Consistent service - Efficiency - Effectiveness
Responsiveness	How important to the clients: - Speed of response to customer request - Speed of response to enquiries - Speed of service delivery (TATs) - Competent employees
Flexibility	How important to the clients: - Upgrade - Innovation - Transition - Re-scalability
Security	How important to the clients: - Confidentiality/Customer information -priority and rules of protection - Physical premises - Financial security
Assurance	Outside-in approach: - Common approach to problem solving - Match organization work processes to those of the client - Quality assurance - Availability of expertise

14   APPENDIX F: CODING

I. CODING FOR EVEREST
SERVICE CONCEPT

A. Operational Objective: SC-OBJ

DATA
"If I was to list them, I would say cost, speed and scalability" – **Agent 3**
"Every day we have metrics in terms of saying these are the KPIs and this is our performance. We send that to the client and we review on weekly basis with the client" - **CEO**
"You realise that when a project runs for a few weeks then you might not even need the QAs – because the agents could be 98% accurate so that the QCs' work is to look for the 2% error to make sure that we deliver 100% quality. But now as this team also gets more experienced you realise may be is 100% and for that reason the QCs could become redundant – what we do is to reduce their numbers." – **Operations Manager**
"We for instance do deals with international clients whereby we receive work at night and deliver the completed files by beginning of the next working day" - **Business Development Manager**
RESEARCH
"Failure to meet deadline for research work literally means you are dead. Deadlines are matters of death" **- CEO**
CALL CENTRE
"Let me give you an example, productivity is key and you are measured by the market and your ability to deliver, to be productive and provide quality at the same time. And quality is delivered at each interaction, so am talking to 100 customers today, and quality of 100 customers has to be the same level from customer 1 at the beginning of the day to customer 100 at the end of the day … consistency is the word" – **Director of IT Analytics and BPM**
"We want to ensure the client sees value in terms of value addition, thereby, for example the kind work we are doing for a telecom company, we tell them or rather we guarantee to them that we will optimize your service experience level from level A to level B, and level B is definitely hard than level A" – **CEO**
"For every group of 15 agents there is a quality analyst who is assigned and we monitor quality very, very religiously." **– CEO**
"So if I am handling an electronic company I need to have IT background, so that I may be able to trouble shoot phones, TVs, computers and all that. So you need to have a good IT background, but if its basic customer service like telecom, you just need to know basic telecom, to know your way around the phone. So that in itself is a special skill." - **Director of I.T Analytics and BPM**
"I think our entire process is encapsulated in what we call customer experience. We need to ensure the customer experience level is called WOW. So when somebody calls they will say wow, maybe my issue is not solved, but the agent was fantastic, very courteous, he solved my problem to whatever is possible." - **CEO**
"Every day we have metrics in terms of saying these are the KPIs and this is our performance. We send that to the client and we review on weekly basis with the client." – **CEO**
"Apart from cost, I say it is quality and customer satisfaction with the call. Was their concern taken care of fully? First we are saving you cost and second we provide required solutions" **Administration Manager**
"The agents work even at night so that it is daytime there" **– Agent 2**
"They of course they will follow up by what we call calibration sessions. They will come here and we would pick random calls and we discuss" - **Quality Analyst 1**"
TRAINING
"Our training focuses on quality aspects like KPIs, SLAs and other metrics" – **Director Quality and Training**
"For us it is our flexibility - being able to think fast, come up with solutions, specifically tailored for a specific client." – **Business Development**

B. Adaptability: SC-ADP

DATA
"Client requirements are different – in terms of technology and people" – **Operations Manager**
"My main duties involve shortlisting, creating a profile that matches the criteria the client wants for the agents" – **HR Officer**
"Most of the time a client comes on board they always have different profiles they want from an agent" **– HR Officer**
"I recruit, then I train and then they go to the floor. But before they go to the floor, we take them through

induction. And that is where we invite someone from QA because quality is different to each client" – **HR Officer**
"What I know is that they are different data projects, there are some that involve image tagging, and there are those that necessitate basic data entry." – **HR Officer**
"Some also have very, very specific requirements in terms of the type of agents they want, the type of training they want, the type of security they want for their data" - **Business Development**
"Client might bring a bunch of handwritten papers that they need to be put in the computer as data. So we either scan or capture in a certain way they want and then it is stored. – **Administration Manager** We do it in their absence. They just bring in the papers, make us understand how they want it done; it is all captured and put in the computer. There are others who have already scanned, they want it captured and verified. So that is also data processing." – **Administration Manager**
RESEARCH
"Research projects entail different perspectives because the unique problems faced by different clients call for equally unique solutions" – **Director of IT Analytics and BPM**
CALL CENTRE
"My main duties involve shortlisting, creating a profile that matches the criteria the client wants for the agents" – **HR Officer**
"For every new client we have to recruit" – **HR Officer**
"We manage in their premises, it is their facility and their technology but our people" - **CEO**
"We also do telephone services where clients only use our telephony. They bring their own agents but the telephony is ours" – **Administration Manager**
"We get to know what kind of staff are needed, the level of education, if its experience, etc. That's when guys are called in for training, specific for this client" – **Administration Manager**
TRAINING
"What I realized is that these clients, they do mind about the cost, but when they see the output they won't mind the cost. What they would care is about quality" – **Business Development**
"Training is client-centric, I mean you have to handle every client differently" – **Director Sales**

C. Focus: SC-FOC

DATA
"Client requirements are different – in terms of technology and people"- **Operations Manager**
RESEARCH
"For us, flexibility is key, the strategy is the huge people investment we have made, enabling us to provide quick solutions many market needs" – **Director of IT Analytics and BPM**
CALL CENTRE
"To be honest with you, this job is boring – because you answer the same questions every time every day" – **Agent 1**
"We have a process of procedure that is out to make it easy …" – **Director of IT Analytics and BPM**
"What agents do is what they are trained about the client products e.g., for XYXY - the phones, the tariffs, when you cannot load your modem, etc. so those are the questions agents answer" – **Administration Manager**
TRAINING
"Very diverse ranging from training of newly employed workers, skills development, customer relations to product knowledge. Indeed, each client presents unique demands " – **Business Development Manager**

CUSTOMER INPUTS

A. Type: CIT
   i.   **Informational: CIT-INF**

DATA
"The expected performance levels are clearly stipulated in the SLA. Yes, for both – data and voice" – **Agent 1**
"Without the client sending the files, then our agents have no work that day. This is also the case with the call centre, unless customers make a call, the agents are free!" - **CEO**
"Yes, they (agents) all know what is expected of them" – **Operations Manager**
RESEARCH
"Just like any other research study, the instructions – from the client – could be clear, that doesn't mean process will be smooth. Researchers have to think on their feet. For instance, if the anticipated data source is not forth

coming we quickly must find and seek alternatives" – **Director Quality and Training**
"Once our research team understands the client's (research) needs, the role of the client ends there not unless clarification is needed" – **Reporting, Analytics, Pricing and Workforce Manager**
CALL CENTRE
"The client will give us their specifications and we also come up with our own internal specifications just to ensure that we are going over and beyond what is expected" - **Quality Analyst 1**
"The expected performance levels are clearly stipulated in the SLA. Yes, for both – data and voice" – **Agent 1**
"For inbound call centre, agents respond to caller's queries. We already have an idea (from the historical pattern) the likely questions to expect and thus agents have answers at their fingertips" – **Agent 3**
"Without the client sending the files, then our agents have no work that day. This is also the case with the call centre, unless customers make a call, the agents are free!" - **CEO**
TRAINING
"The challenge is that clients do not know exactly what they want, they rely on us, believe as experts we should be able to provide answers even where they don't state the questions" - **Director Quality and Training**

ii.   **Person: CIT-SLF**

DATA
"Actually we do involve clients all the way from recruitment to training to the daily running of the process; we have a representative of the company on the floor." – **Team Leader 2**
"We have such platforms like one called SH[59]. So the agent will log in as an agent, the QC as a QC and then the client team will also log-in as admins. So the agent works on his batch and then it will come to the QC but the agent cannot see where the work has gone to, he will just do his bit. The QC will be able to access the work done by the agents, go through it. Sometimes you may have a QA level here, the QA will come in and go through a sample of the work and then from the other side (client) the admin is able to access the final job" - **Quality Analyst 1**
"We have lots of video interaction, lots of audios for interaction" – **Team Leader 1**
RESEARCH
"we do a lot of interaction through I.Ms (instant messaging), I have told you of Skype, then there is another one called join.me" – **Quality Analyst 2**
CALL CENTRE
"Actually we do involve clients all the way from recruitment to training. For daily running of the process, we have a representative of the client company on the floor – more of a liaison officer for the client." – **Team Leader 2**
"We ensure that that quality is maintained through continuous coaching, floor walking, giving feedback directly to the agent, ensuring that our doors are open so if those guys can come in if they have any complaints and address them and have a dialogue, also using the systems we use they are able to see what quality departments expects of them, and through that same forum they are also able to give us feedback" – **Quality Analyst 3**
TRAINING
"Trainees are physically present during the process" – **Team Leader 1**

iii.   **Triadic: CIT-TRI**

DATA
"There are instances where clients are secured through third parties" - **Operations Manager**
RESEARCH
"The relationship is direct between us and the clients" - **Operations Manager**
CALL CENTRE
"What we say is that we are virtual captive. Virtual captive means you are like a captive, you are part of the organisation but you end up working for EVEREST but you are part of client Y. So for example any customer communication client Y sends out, we send it out through these agents as well to ensure that they feel empowered and as part of that organisation." - **CEO**
"They of course they will follow up by what we call calibration sessions. They will come here and we would pick random calls and we discuss" - **Quality Analyst 1**
TRAINING

---

[59] SH is a disguise for prominent client

"training relationship is between two parties, **EVEREST** and the client or client's employees" - **Operations Manager**

B. **Variability: CIVAR**

   i.   **Arrival: CIVAR-ARR**

DATA
"As I mentioned we operate 24/7, this means the client can choose the right timing for delivery of their work. That is to say, work should be processed between 10.00a.m and 3.00pm or 8.00pm and 4.00am or whatever other time that suits them or it could be continuous until the project is completed" - **Team Leader 2**

RESEARCH
"In case several bids go through at the same time, we would have no problem because the current team is not yet fully utilised" - **Operations Manager**

CALL CENTRE
"We know the days of the week and time of the day when traffic is heavy, but you cannot be sure" – **Agent 2**
"Customers are free to make enquiries at any time of the day….. Absolutely, we are on 24/7 365 days" – **Team Leader 1**

TRAINING
"For the training to commence, each member of the trainers team, including secretaries, has to understand the client's motivation for outsourcing" - **Director Sales**
"We liaise with the client in setting up the objectives for the entire training process" - **Director Quality and Training**
"For the training to commence, each member of the trainers team, including secretaries, has to understand the client's motivation for outsourcing" – **Director Sales**
"We liaise with the client in setting up the objectives for the entire training process" – **Director Quality and Training**

   ii.   **Request: CIVAR-REQ**

DATA
"We actually need to understand the clients' requirements at a very early stage, because some also have very, very specific requirements in terms of the type of agents they want, the type of training they want, the type of security they want for their data" - **Business Development Manager**
"They bring in bunch after bunch of papers, make us understand how they want it done, it is all captured and put in the computer. There are others however who will have scanned - soft - documents that they send online. So that is also data processing." – **Administration Manager**

RESEARCH
"Every project will be different from the next project but work in a project is the same" – **Operations Manager**

CALL CENTRE
"Clients are involved in all the steps for example recruitment, training up to the actual engagement, so we actually try to make sure there is very smooth or minimal disruption to the daily running of our clients business." – **Business Development Manager**
"The agents are trained by our trainers and also by the client" – **Director Sales**
"We use a list of FAQs to make the agent's work easy. So, he or she can anticipate what the caller is likely to ask. If the question is outside the list of routine enquiries, then the agent escalates it to the technical team at the back office" – **Team Leader 2**

TRAINING
"Clients demands are as diverse as the clients. Also, during the training you could argue the trainer faces varied challenges" **– Quality Analyst 1**

   iii.   **Capability: CIVAR-CPB**

DATA
"I would say all clients understand what they outsource pretty well" **– Team Leader 2**

RESEARCH
"Only firms with not well established research culture pose challenges to us" **– Director Sales**

CALL CENTRE
"The callers are totally different, whilst some will know what they want, others have no clear understanding. Just to give you an example, there are calls that AVR can adequately resolve but they still come all the way to

us" - **Agent 3**
TRAINING
"Most trainees grasp the issues quite well and more importantly, very quickly. But, I have actually observed this for so long, seriousness! They don't have… no no … they take it easy. But that is why we are here, to make them become serious" – **Administration Manager**

SERVICE PROCESS

A. Skills: SP-SKI

DATA
"There is a lot of data entry, data scanning work which we do, so I thing typing speed is very important" - **CEO**
"For data, you just need to know your key board, be focused and do the right thing accurately and consistently" – **Operations Manager**
RESEARCH
"To qualify for this position, you must have at least 2 years, preferably BPO, experience from leading organisations" - **Team Leader 1**
CALL CENTRE
"Although the work could be done by form four leavers, we take people with minimum of a degree because they are available. More so cheaply" – **CEO**
"English is Kenya's official language – accent is not an issue for our agents – gain we take care of accent at the recruitment level" -**CEO**
"Important ones include soft skills, customer service experience, and then the product training where we normally involve a representative from the client. By soft skill I mean if it's a voice account rapport building, how to handle re-battles and difficult clients. How to speak on the phone" – **HR Officer**
"For voice accounts we take strictly diploma and degrees. However there are clients that say they require graduates" – **HR Officer**
TRAINING
"We seek presentational and public speaking skills and curriculum development and design experience and probably an HR related degree" – **Business Development Manager**
"Bachelor degree, understand outcome based learning, knowledge in training needs evaluation, presentation and coaching skills" – **Online Job Advert**
"Of course good communication skills, good command of language – for our case English" - **CEO**
"Trainers should be people with many years of experience, excellent English communicators and above all their grooming, finesse, etiquette should be peerless. They must portray the wow image of **EVEREST** " – **Director Quality and Training**
"A relevant degree is required – in most cases this will be business related" – **HR officer**

B. Discretion: SP-DIS

DATA
"For data entry, the threshold of defining quality has many dimensions. It is the number of records you enter; it is the accuracy of those records." **– Operations Manager**
RESEARCH
"There are regular sessions at higher levels with the consultants to ensure that this is how you are doing, this is how it impacts the clients strategy" - **CEO**
CALL CENTRE
"No no no… you have to follow the script, if it is not in the script, then you escalate it" – **Agent 3**
"Agents have to adhere to the laid down procedures" – **Quality Leader 1**
"To bring out the human aspect of the agent and probably make them enjoy their work, we do not prescribe one approach of interacting with a customer. We only ensure that they do not deviate from the core concerns" – **Operations Manager**
"Quality analysts ensure that the agents follow the process as trained" - **CEO**
"It would be ideal to allow them more time with the 'not in a hurry callers' but this rapport has to be balanced with economic realities. For example if an agent takes more time with a caller, that could mean more waiting time for the callers in the queue. To avoid this then we ought to hire more agents, which means extra cost to us" – **Director of IT Analytics and BPM**

TRAINING
"There are regular sessions at higher levels with the consultants to ensure that this is how you are doing, this is how it impacts the clients strategy" - **CEO**
"The dynamics of training projects are such that the person leading the process has free hand to exercise personal judgement and creativity. Our opinion is that one-size-fits-all does not apply to this service" – **Director Quality and Training**

C. Infrastructure: SPI
   i. **Technology: SPI-TEC**

DATA
"I think it's a peoples' business, but I think people cannot handle without technology, so people and technology" - **CEO**
"It comes down to technology quality, and if maybe one link is down there is redundant links, so internet is never down. If its power backup, if there is any blackout, no one will ever know" – **Business Development**
"Technology depends with the agreement with the service provider. You know you can get a dedicated link, with dedicated speeds, so it does not fluctuate" – **Director Quality and Training**

RESEARCH
"The most obvious is the internet" - **Business Development Manager**

CALL CENTRE
"If it is telecommunication you have multiple providers, different types of technologies. Then technology that accept those interactions within the contact centres, we also have multiple vendors, multiple types of technologies, how you then integrate those technologies to allow the agent to effectively and efficiently deliver those interaction to the client, allow the team leader to be able to monitor real time what's going on, allow the quality analyst to enable them to measure the quality of all interactions that are happening within the contact centre and allows to have regulatory or statutory obligations that allow us to capture and store this data while at the same time providing the interface to the support staff to ensure consistency across the entire organisation." **- Director of IT Analytics and BPM**
"IT is both support service, a competitive advantage service and it also an opportunity for the business to save on cost of diversify into new product areas" **- Director of IT Analytics and BPM**
"IT security as you know or data privacy and information security is a big thing. So to get certified by their head office in New York we are good. It also says something about the investment we have made and the advantage that IT and specifically IT security has been implemented as **EVEREST**" - **Director of IT Analytics and BPM**
"In terms of reporting, we get to prove the reports maybe for quality, for calls. There are different technologies we use within the company to get to see where we are." – **Business Development**
"Technologies that we are using are very basic, so the kind of user interface than an agent has in terms of taking or getting call logging into the CRM is very basic. The backing may be very complicated that is why we have a fully-fledged IT department. But for a user interface for an agent is very comprehensible. " **- CEO**

TRAINING
"Training is trainer as opposed to technology reliant" **- CEO**

   ii. **Facilities: SPI-FAC**

DATA
"Real-time internet access allows clients to monitor work as it happens" – **Operations Manager**

RESEARCH
"Each researcher is provided with state of the art laptop, unlimited internet access. For some, internet connectivity in their homes because once in a while they work from home" – **Team Leader 1**

CALL CENTRE
"When we set up the contact centre was to say, this should be a contact centre in terms of physical facility, IT infrastructure and people and processes. There should be no difference between **EVEREST** and any contact centre you find in any first class country. So you can take **EVEREST** put in Paris, London, New York we will still compete." - **Director of IT Analytics and BPM**
"XXXX[60] client is a very different concept where we manage in their premises, it is their facility and their technology but our people." - **CEO**

---

[60]The use of client's real name would unmask **EVEREST**

"No customer will want to outsource before they have seen the facility, they have validated that everything; the technology and the facility is to expectation" - **CEO**
"The location where you are, how close is it to where the people live? Does the potential employee find this a safe place to work in? Is it risky is it not risky? Security as well. Both physical security and IT security etc." - **CEO**
TRAINING
"The 3rd floor is dedicated to training. So it is very intense, very thorough. You come out of there you are completely different. It is international standard training. Because these trainers have trained allovertheworld.so they come on board with a wealth of experience. So you get to learn quite a lot" - **CEO**

D. Training: SP-TRAI

DATA
"If an employee's contract has expired and there still are jobs like the data we are saying, we have received more projects and your contract expires, I just train you" – **HR Officer**
"The business heads we have are able to help, they are able to advise you on how to improve your customer service" – **Agent 4**
"There are some projects where people are paid on a daily basis and others monthly depending on the work which is being sent because there is some work which is sent real-time. Depending of the amount of work you do that's how you are paid, depending on the amount of work sent by the client that's how it is" – **Administration Manager**
RESEARCH
"We have got a clear career path for them [read researchers] such that all vacancies are filled internally unless there are no people qualified or interested" – **Director Sales**
CALL CENTRE
"In a call centre foremost you just require basic training in soft skills that is very basic. Any agent who comes here will have to undergo that" – **Director Sales**
"Well, if a new client comes and maybe have other special requirements then you can undergo that. So there may be some degree of routine or maybe a common ground, but after that you go to that upper level where we customize and train you depending on the client's requirements" – **Director Quality and Training**
"What makes **EVEREST** tick is the team that is here, I believe the training done here is excellent. All the training they get in customer care, they can use anywhere, not just in a call centre." – **Administration Manager**
TRAINING
"We have a lot of experience in training – yes internal training. That is why we also offer it as a service. So if a company feels their staff need training, they can also outsource it to us. Companies come we train their staff on what they need to be trained on and they leave better people." - **Business Development**
"Actually it is something we do - with one of our clients we actually dealt with the processes part - how everything flows from when a customer calls about their product, we had to go in and reengineer their processes because they were not working. So they outsourced these processes to us. We had to go to the company, stay there for like 2 months to see what the processes are and then get to streamline these processes and train their people. Training is a product we are offering. It is business process outsourcing" - **Business Development**
"You train according to the clients requirements" – **Director Sales**
"An all-round BPO trainer – s/he can deliver CSRs training and consultancy work. That is why we keenly check the background and experience of this person before hiring" - **CEO**
"Very minimal if any. However, all employees must be inducted" – **Director Quality and Training**

E. Hiring: SP-HIRI

DATA
"For every new client we have to recruit" – **HR Officer**
"Employment contracts never elapse unless the job in question ends" – **HR Officer**
"It depends on the kind of project that is available. Because you might take someone with their level of education, maybe you cannot pay them well. There are some projects where people are paid on a daily basis and others monthly depending on the work which is being sent because there is some work which is sent real-time. Depending of the amount of work you do that's how you are paid, depending on the amount of work sent by the client that's how it is" – **Administration Manager**
"As long as the client business stands, the agent's contract stands." – **HR Officer**
RESEARCH

"We have got a clear career path for them /read researchers/ such that all vacancies are filled internally unless there are no people qualified /interested" – **Director Sales**
CALL CENTRE
"For every new client we have to recruit" **– HR Officer**
"When a phone rings, you need to have an agent available to pick up the phone. That means there is a lot of importance on scheduling. Scheduling is to ensure that when the call comes in you have people available to answer that call" - **CEO**
"There is huge people turnover and yes is a problem" – **Administration Manager**
"Attrition or turnover is huge in India. It has about 30% - 40% even as high as more than 50% for certain companies. Now given that this is a new industry in Kenya, it is very manageable, which is a great thing. I think it will take a lot of time Michael; it will take a lot of time for the industry to mature enough to the fact that attrition becomes a disease in the industry. But right now it is not. It is very manageable. You are looking at least 4 or 5 maybe 6 years." – **CEO**
TRAINING
"Experience counts" – **Director Sales**
"Trainers are expensive to retain because of scarcity and the enormous skills that they possess, enabling them deal with sensitive projects" – **Director Quality and Training**

II. CODING FOR GIGAS

SERVICE CONCEPT

A. Operational Objective: SC-OBJ

DATA
"If it is data entry they want 100% accuracy" – **Agent 4**
"We have what we call <u>quality analyst forms</u> that are used to gauge the quality. Once a QC has gone through his team's work, he has this form that he has to fill for each and every individual from the work that he has been seeing" – **Associate Service Delivery Lead**
RESEARCH
"Other than cost, once the client trusts that you are capable of collecting sufficient and credible data related to their interest, you have the job"   - **ITES Manager**
CALL CENTRE
"Like I said, the daily metrics are sent internally and to the customer as well. So the customer gets to know his KPIs and this is the performance that X had yesterday. I mean the client. Not the end customer." – **Managing Director**
"If its customer service they want exemplary customer service" – **Agent 2**
"Quality boils down to the details such as training, if its calls, time accuracy, if is maybe its customer service and the client has specific script, they need to know that that script was followed." – **Operations Manager 1**
TRAINING
"we offer better deals because of the economies of scale that we enjoy" - **- ITES Manager**
"Our history and client profile are important to potential clients" **- Director Business Development and Technology**

B. Adaptability: SC-ADP

DATA
"We have a full dedicated quality team - so whereby we get to tailor the quality metrics in regards to the client's needs" **– Director of Operations and HR**
"Sometimes the client might be specific; they need their work to be done from this time to this time – so we get a team for that." – **Quality Manager**
RESEARCH
"Depending on the nature of work the client wants to give us, the client will choose what they want and what they don't want." – **Quality Manager**
CALL CENTRE
"The people are ours, but clients will want to know how are these guys going home?" – **Operations Manager**
"There are companies whose call centres are run by our agents" – **PR Officer**
"When a customer says that there is a problem you don't say fine I've heard you and I will get back to you. You try and resolve that issue there and there which is called FCR" **– Agent 3**
TRAINING
"Training is different, training is very flexible – one day I will do training on call centre the other day I will do training on customer service and the next time on completely different thing" **– HR and Training**
"Some of these trainings can go on for six months but all the same the element of repeatability is low" – **Associate Service Delivery Lead**

C. Focus: SC-FOC

DATA
"Other could be real time - for instance sites where people ask questions – you've seen yahoo answers - yeah? They are platforms like those – we call them content writing because content writing could be huge as academic document writing or small as questions whereby you have to give answers." – **Program Manager**
RESEARCH
"We undertake any research; analytics, market research, economic trend analysis and interpretation, name it" – **Director Business Development and Technology**
CALL CENTRE
"The work is similar within the platforms " **– Agent 3**
TRAINING

"Our training services are limited to call centre or customer relations and BPM process excellence" – **Managing Director**

CUSTOMER INPUTS

A. Type: CIT
  i. **Informational: CIT-INF**

DATA
"All the tests during training are related to the clients work – so from our experience from the bidding, we just grab some of these tasks and put them as tests." – **Associate Service Delivery Lead**
"This is how I see it … we receive incomplete data, enter it to a database in the requested format with a lot of editing and verifications before eventually handing the completed data file to the client. That is data …" – **Operations Manager**

RESEARCH
"For simple web searches and data mining where the client gives clear guidelines, one could anticipate the findings. However, for complex research, no one can ever guess where the research journey will take them" – **Agent 3**
"I am pretty sure; you (reference to the author) don't know what the findings of your PhD research will be. Do you?" – **Associate Service Delivery Lead**

CALL CENTRE
"As long as there is trust between clients and a service provider, there are no uncertainties because of full disclosure and updates. We are always in the know for any new developments. There is no way you can deliver SLA without trust" – **Operations Manager**
"Measures such as AHT, escalations, abandonment rates, occupancy are in the SLA" – **Agent 1**
"Whilst the demands of the client are stated in the SLA, the customer makes his/hers through the phone" – **Associate Service Delivery Lead**

TRAINING
"For any training, reaction of the trainees is a major performance measure. Are they called first impressions? However, real benefits such as employee productivity, behaviour change - time keeping, courtesy to customers and so on are realise later at the place of work – they are long-term to the client" – **PR officer**
"Success metrics for a training program are diverse and that is why assessment and identification of training objectives have to be done before we commence the training" – **Operations Manager**

  ii. **Person: CIT-SLF**

DATA
"We have to quickly understand the client's process and that is why we are in touch sometimes every half an hour with the appointed person on the client-side – who will explain and clarify the events" – **Quality Manager**
"In all these there is a bit of direct interactions with the client because the client will normally recommend – get 100 employees, get 10 QCs … so with the capacity that we have on the floor we decide on exactly how many numbers we can commit because again it ties all the way to the cost of the project - yes the client will always give direction. They will say we have this volume of work which we need in say two weeks; then it is up to us from the biding to agree on the target that an individual can achieve and basically decide on how many we need to hire" – **Associate Service Delivery Lead**
"We do have online platforms - clients put their work somewhere, we don't even have to download, we just work on it from there and so they are actually able to see how – for instance they even sometimes call and ask how comes there are supposed to be say four agents and we are seeing only one agent" – **Director Business Development and Technology**

RESEARCH
"Clear definition of the problem and guiding instructions is all we need" – **Operations Manager**

CALL CENTRE
"Some clients have their own person doing management or supervision or intermediary between us and them" – **HR Officer**

TRAINING
"Classroom as well as web-based training platforms are available" – **Director Business Development and Technology**

iii. **Triadic: CIT-TRI**

DATA
"I would say, its between two parties" – **Program Manager**
RESEARCH
"The relationship is between GIGAS and client" – **ITES Manager**
CALL CENTRE
"Whilst the demands of the client are stated in the SLA, the customer makes his/hers through the phone" - **Associate Service Delivery Lead**
TRAINING
"Identification of objectives and the corresponding performance measurement metrics means the client defining success from their customers' point of view. It is important, as trainers, we understand the client's market" – **Program Manager**

B. **Variability: CIVAR**
  i. Arrival: CIVAR-ARR

DATA
"The information supplied to us is gathered by the client from their current or potential customers. As you may know, business environments – markets are volatile such that you wouldn't know the exact volumes to expect at a given time – you work with estimates" – **Managing Director**
RESEARCH
"Face-to-face meetings or teleconferences are used to fix key timelines and resource plans" – **ITES Manager**
CALL CENTRE
"Modern customers cannot wait for support to arrive tomorrow, not with competitors who are all about customer satisfaction. This is what has forced clients to operate throughout the day every day." – **ITES Manager**
"Call centre projects are hard to come-by. **HUMONGOUS** is lucky to secure two in a year. That is why … renew phase is crucial, we cannot let go of a current client" – **ITES Manager**
TRAINING
"The best case is when the timetable/schedule is adhered to strictly, but again unavoidable emergent situations have to be attended to. We make provisions for such upshots" – **ITES Manager**

  ii. **Request: CIVAR-REQ**

DATA
"If the project goes through the client might say I will need forty people, now if the client is ready to commit in terms of volume we then get such a team and commence training" – **HR & Training**
"Once these agents have passed what we call the off-hub or offline training they go on to the system. What they are going to process, even the client's team will be able to see. Sometimes the client is the one who will tell us these are the individuals who passed – they will say this is the team we want" – **Operations Manager**
RESEARCH
"The difference between projects is in the small details" – **Director of Operations and HR**
CALL CENTRE
"Clients' needs are easy to tell because they are clearly stated but for the callers it is subjective" – **Agent 4**
"There is a thin thread between correct anticipation of a call request and a misdiagnosis. Agents have to be in charge, focused and open to anything" – **Program Manager**
"Once you understand your client's market, then you have solved the problem of uncertainty and hence many logistical concerns" – **Operations Manager**
TRAINING
"Mediation is the other role; we mediate between the trainee employees and the client. We enable them to see the bigger picture from their employer's perspective" – **Director Operations and HR**
"Composition of the group could affect the training sequence of events. Think of training an individual, this is different from training a group of say 5 individuals which is in turn different from a larger group with more people" – **HR and Training** CIVAR-CAP

  iii. **Capability: CIVAR-CPB**

DATA
"Clients fully understand the project and set the TORs on that basis" – **Director of Operations and HR**

RESEARCH
"Clarity or lack of it, I would say, of the problem being investigated defines the other steps" - – **Operations Manager**

CALL CENTRE
"Think about it – there is no better definition of diversity, call centre customers are diverse. There is a category that requires minimum advice and the rest they DIY, then the 'normal' category – the average callers, reasonable as would be expected, and then the group of those who make a call as a first resort – given a chance, this group would walk to the centre" – **ITES Manager**

TRAINING
"The structure of the curriculum is such that each individual has to participate, learn and improve at personal level, it has to benefit each person." – **Director Business Development and Technology**
"Yes, the calibre of people in the client organisation influence the training program" - **HR and Training**

SERVICE PROCESS

A. Skills: SP-SKI

DATA
"I believe for data you also require some skill, but not that much – typing speed, being meticulous and detailed" – **Quality Manager**

RESEARCH
"We consider individuals' qualifications in terms of their level of education, the experience comes in – has this person worked before in such an environment" – **Managing Director**
"We consider individuals' qualifications in terms of their level of education, the experience comes in – has this person worked before in such an environment" – **Managing Director**
"We have research projects whereby all you need is somebody who can use the internet" – **HR and Training Manager**

CALL CENTRE
"Basically what we look for in voice work is the neutral accent" – **Managing Director**
"Kenyans have very neutral accent as opposed for someone from India. So someone will clearly tell this call is from India. So that is where Kenya wins, neutral accents and education." - **Managing Director**
"Customers love to hear compassion and sympathy in agent's voice" – **Agent 1**

TRAINING
"Willingness to work long hours and ability to use judgement in making sound decisions are key qualities" – **Operations Manager**
"How can they guide clients if they weren't proficient and comfortable working with these technologies?" – **Director Business Development and Technology**
"It is a sieve process whereby you look for specific qualifications" - **HR and Training**
"Experience is valued more than education because of the business environment that is extremely volatile"- **Managing Director**
"We have trainings that are done from our premises, others at the client's place or even outside the country" - **Director of Operations and HR**

B. Discretion: SP-DIS

DATA
"The project is broken down into specific deliverables" – **Quality Leader 1**
"We have also pre and post shift meetings. Pre basically reminds the agents about the deliverables and what is expected of them. Post enables you to get feedback from the agents as you also brief them on your day's observations." – **ITES Manager**
"We sarcastically refer to this job as 'robo' aka robot competition. We are the robots – the management are the spectators watching to see which robot has more fuel to go on and on with dedication without question their authority" – **Agent 1**
"What automation does is that it supports standardization which means we are able to deliver quality service consistently- and that is what wins us business" – **Operations Manager**
"I put in place work schedules and procedures to be followed once the project goes live. Failure to get this right could mean losing the client." – **Program Manager**
RESEARCH

"Responsibility goes hand in hand with authority and accountability, whoever is in charge of the project is responsible for its deadlines, quality and has authority over project budget," - **Director Business Development and Technology**
"It is our responsibility to create interest for the task, many would be respondents are not interested. You must be creative" – **ITES Manager**
"Observation is a good example. If data are collected through this method, the experienced researchers are expected to use judgement in a way that leads to objective interpretations" – **Director of Operations and HR**
CALL CENTRE
"They [management] do not allow us to use judgement but they expect us to serve the callers and provide exceptional service, how do we do it? – nobody is ready to answer this question"- **Agent 2**
"We also have a general analysis – this may be what the QC saw from the agent that day. For instance, the agent might have come in late – so he could put it as the feedback – so we have *attendance sheets* and also under targets we have what we call a production document. For every single day – every work that is done we always fill the number of the tasks that have been done. And then we have an *attendance track* – so it is not the responsibility of the manager to come and see who is there or who is not there." – **Quality Leader 1**
"Are they following the script or are diverting? Are they capturing the exact data that is needed?" **- Director of Operations and HR**
"Unfortunately, CSRs are not allowed to address issues that are beyond the ordinary" – **Agent 3**
TRAINING
"Two skills that I consider a must have for any facilitator - confidence and flexibility in handling divergent client concerns."- **Operations Manger**
"Unless you have good judgement, you cannot succeed in this job because most decisions are made independently. This is more so because the work does not make available an opportunity for consultation" – **Quality Leader 1**

C. Infrastructure: SPI
  i. **Technology: SPI-TEC**

DATA
"We have an edge because the internet is very fast and affordable – because of the fibre cables" – **Managing Director**
RESEARCH
"Because there is a thin line between data work and research work, technologies such as OCR, OMR are shared" – **ITES Manager**
CALL CENTRE
"So there are a lot of efficiencies that allow operations to deliver brought by technology that allow operations." – **Quality Leader 1**
"So the same, same tools the client is using to service their customers is also what we have to access. So we end up integrating because again that type of integration increases the efficiencies of that agent during that interaction, instead of putting you on hold to try and figure out who you are, I can use your phone to automatically query the data base and know who am speaking to, it makes customer's experiences 10 times better." – **Director Business Development and Technology**
TRAINING
"Training is about people, technology is supplemental – not unless we are talking about training hosted online" – **PR Officer**

  ii. **Facilities: SPI-FAC**

DATA
"You know some accounts run for 24 hours and if you are going to leave work at midnight, your client would want to know whether your people get home. So it is a determining factor." - **HR and Training**
"With access to reliable internet technology, operations can be located anywhere in the world" – **Operations Manager**
"You know some accounts run for 24 hours and if you are going to leave work at midnight, your client would want to know whether your people get home. So it is a determining factor"- **HR and Training**
RESEARCH
"Over the years we have been able to build a pool of researchers whom we rely on in initiating the young fresh from university graduates"- **Managing Director**

"Our education system - in particular universities need to do much more to ensure they churn not just numbers but quality graduates with good analytical skills"- **Managing Director**
"Qualified and experienced market researchers are just not available"- **Managing Director**
"I think people-to-people is where the actual learning takes place"- **Director of Operations and HR**
"All team members undergo extensive training on research concepts, types, models and methodologies before working on a project" – **HR and Training**
CALL CENTRE
"As a call centre, we get contracts say for doing customer service training" – **Director Business Development and Technology**
TRAINING
"Neat rooms with comfortable rooms and enough space" – **Associate Service Delivery Lead**

D. Training: SP-TRAI

DATA
"Even if it requires special skill, with data you can undergo training in maybe 2-3 weeks" – **Agent 2**
"From the very first group training - we are able to come up with agents, quality checkers (QCs) and quality analysts (QAs)" – **Associate Service Delivery Lead**
"Quality checkers (QCs) normally are experienced individuals who have been in the company for long, they have worked on a number of projects, they learn and quickly understand what the deliverables for the new project are and what needs to be captured." – **Operations Manager**
"Training could be done in phases depending on the nature of the project. We have a training plan that could take 3 weeks or even a day." – **HR and Training**
"I will do the training, give all the tests, give feedback, and give more and more tests sometimes up to a round of three or four tests" – **Associate Service Delivery Lead**
"Clients that we deal with could also have their own training tasks or tests on the platform" – **Associate Service Delivery Lead**
RESEARCH
"We consider individuals' qualifications in terms of their level of education, the experience comes in – has this person worked before in such an environment" – **Managing Director**
CALL CENTRE
"I believe it all comes first of all to recruitment and training. We have excellent training, I have undergone it myself " – **Associate Service Delivery Lead**
"We train on soft skills, we train on product knowledge" - **Operations Manager**
There is a document – Generic Training for the trainer. I know we have it on a folder in our department – **Program Manager**
TRAINING
"We call it hands-on training. Classroom and also hands on. We to go there premises, streamline their processes, come here and retraining their people on their processes. So it is very, very intense." – **Managing Director**

E. Hiring: SP-HIRI

DATA
"So normally the new people who are recruited for a project come in as agents and not these other levels (QCs and QCs). So during the bidding phase the QA will deal with the eventual QCs. …. the QCs act as agents and QAs goes through their work and then submit to the client. So at that point the interaction with the client is on about hourly basis using platforms like Skype. … the client would be correcting the QAs and the QAs would be passing the information downwards. Once everything is at the level that is required by the client and the large volumes now come in, these two teams (QCs and QA) are ready. Then the agents would be recruited and trained and start work under supervision of the QCs" – **Associate Service Delivery Lead**
RESEARCH
"We consider individuals' qualifications in terms of their level of education, the experience comes in – has this person worked before in such an environment" – **Managing Director**
CALL CENTRE
"The guiding principle in our recruitment is to balance qualifications with capability to fit in the job. A mismatch means we end up with high employee turnover or run-of-the-mill performance."- **HR and Training**
TRAINING
"Very few learn on-the-job, most are well versed before recruitment" – **Operations Manager**

III. CODING FOR HUMONGOUS

SERVICE CONCEPT

A. Operational Objective: SC-OBJ

DATA
"Something that sticks out is cost saving. Cost and quality. That's something these clients usually look for out. So if get to show them we can do this cost effectively and this is the kind of output we are going to give you, they are comfortable with it." – **Director I.T**
"Customer wants quality training for staff" – **Director Business Development Africa**
"This work is tiring if you do it for the same client for long and the work they send is the same, day in day out – I feel like collapsing!" – **Agent 2**
RESEARCH
"The common factors are; education, Kenyans are very well educated, and labour cost, it is cheap labour" - **COO**
CALL CENTRE
"Call volume, FCR and optimise the average talk time" – **Project Manager**
"Number 3 is what we call Average handling time. For example it is very important to have a very good average handling time, you don't bore the customer, you are crisp, you are to the point, and you try and hear the customer empathize with the customer and try and give a solution" – **Quality Analyst 3**
"It comes down to cost and quality and also the people" - **CEO**
"Flexibility and quality in everything from training to internet – May be recently you have heard about the fiber cuts, the net is completely cut and so sometimes we have to relocate to clients premises and operate from there" – **Associate Delivery Lead 1**
TRAINING
"Clients outsource training to avoid costly investments" - **COO**

B. Adaptability: SC-ADP

DATA
"I can say it (necessary skills) varies by the kind of campaign that we are doing, it varies by the kind of client" – **Quality Analyst 1**
"The nature of many projects is whereby the clients will say they need a certain number of people" – **Service Delivery Lead**
RESEARCH
"Some of these projects are complex – not in delivery but in terms of the way may be we look at them as Kenyans – they look weird but are actually big out there" – **Director I.T**
CALL CENTRE
"OK for instance, we have … insurance company … outsourcing call centers. We won't just start to recruit graduates who have done medicine, technical, engineering. No. .. get agents who have done insurance, finance and business related, .. relate to the client's area of business." – **Director Recruitment and Training**
"Training varies by the client" – **Project Manager**
TRAINING
"Include customer support, customer relations and sales representatives training and many more" – **Project Manager**

C. Focus: SC-FOC

DATA
"Our company is world class in the few variants of data work provided" – **Quality Analyst 3**
RESEARCH
"The company specialises in web-research and market research" – **Service Delivery Lead**
"I would say our expertise in research work is sub-optimal, we need more qualified people" - **COO**
CALL CENTRE
"Expertise is in three platforms; sms, voice and e-mail" – **Quality Analyst 2**
TRAINING
"Due to our talent pool … possesses global experience and exposure, the scope of our training services is big" – **Director of Operations and HR**

CUSTOMER INPUTS

A. Type: CIT

  i. **Informational: CIT-INF**

DATA
"Some of the jobs are long-term, others short term and the client will always tell us everything including specifics e.g., about the duration be it 1 year project, 2 months project or even work for a weekend where we just get a huge team, they come and clear the batch and then they leave" - **Program Manager**
"The reason is that they have these very immense data that they cannot properly handle" – **Quality Leader**
"We know our targets, we know what we are supposed to do, we know when our deadlines are, we know our KPIs" **– Business Development Leader**
RESEARCH
"Despite our efforts in ensuring that clients provide clear and specific instructions to avoid nuances, market research is complex and not a straightforward" – **Recruitment and Training**
"Researchers come across many situations and options requiring choice – a subjective undertaking. Let me give you a simple example – given two data sources that look similar, why prefer one to the other?" - **COO**
"Customers provide instructions which we follow in collecting and analysing data" – **Business Development Leader**
CALL CENTRE
"The kind of training that we provide clarifies what is expected of each CSR. This clarity of performance standards makes it easy for managers, quality leads and quality analysts" – **Director Recruitment and Training**
"Our clients will tell you that our contracts have no hidden details or costs or exploitable loopholes. We don't intend to exploit anybody for that is not who we are. That would not be the way forward." – **Director Recruitment and Training**
"The caller-agent interactive part is challenging because you never know what is up a caller's sleeve" – **Agent 2**
TRAINING
"It depends on the willingness of the client to divulge all the necessary information" – **Project Manager**
"There are instances where clients are unclear in stating their need for training. But through continuous interactions through meetings and probing by asking relevant questions we are able to understand their concern " **– Director Recruitment and Training**
"Follow-up meetings are necessary for the client to clarify – fill in gaps on any incomplete information. However, there is a requirement that we have few meetings as possible because they are costly in terms of time for both parties " **– Project Manager**

  ii. **Person: CIT-SLF**

DATA
"For international customers it may be hard, but there are always interactions online maybe via skype, always online. But for local accounts we do have representatives who always sit here get to see how the account is running, may be clarify something, new products. They are the point of contact between us and client in terms of the daily running of the account." - **Associate Delivery Lead 1**
"Some of the report is such that sometimes we even don't know the clients" – **Agent 2**
"We have a project for example called ask.com you can even find it online. In ask.com people ask all kinds of questions – when they ask, those questions automatically come here. Somebody will see the questions and answer within 20 minutes – the person asking will see the answers on his side – he won't know who answered his questions. Then we are paid by ask – ask is the client" **– Associate Delivery Lead 2**
"I know international clients for data; I know it is daily via Skype or email. But for local clients, apart from daily reporting, there are weekly meetings. In terms of quality they do it every week, get see where the quality is whether they can improve it, so it is an on-going process" – **Quality Leader**
RESEARCH
"For research it is rare to have direct contact with the client – unless it is a real time project" – **Director Business Development Africa**
CALL CENTRE
"For international customers it may be hard, but there are always interactions online maybe via skype, always online. But for local accounts we do have representatives who always sit here get to see how the account is running, may be clarify something, new products. They are the point of contact between us and client in terms

of the daily running of the account." **- Associate Delivery Lead 1**
"A call process has two parts; relationship between clients and us, and our relationship with the callers" – **Operations Manager**
"Care must be taken in drafting SLA to avoid conflicts in delivery of divergent client vis-à-vis customer needs" – **Director I.T**
TRAINING
"Interactive training is superior to online or web platforms" – **Project Manager**

iii. **Triadic: CIT-TRI**

DATA
"We have a lot of research projects where you are given random key words – and you are required to Google information that relates to the key words. For ask.com, for instance somebody may ask – where can I buy Olympus recorder? Our agent will have to Google to find an answer and come up with three sentences – you can get the recorder at online store A and then mention other stores B, C, D and then may be say something about the product" **– Associate Delivery Lead 2**
RESEARCH
"Research work is not call centre – here we give direct service to the clients" – **Project Manager**
CALL CENTRE
"Clients provide timely information that enable effective service provision to the callers" **– Agent 1**
"The direct recipient of the service is not the business client" **– Service Delivery Lead**
TRAINING
"Training is not tripartite" **– Director Business Development Africa**

B. **Variability: CIVAR**
i. **Arrival: CIVAR-ARR**

DATA
"The management always knows how to tinker with the teams that are already there. For instance they may know that a certain project by a certain date its volumes will go down and so they will know this number of people will be available and may be these people are not enough the rest will be hired or may be borrowed from another project to fill in."
"For most clients, we are enabled to access data from the source – we have seamless link to the channels used by the client's customers" **– Director of Operations and HR**
RESEARCH
"We are far from crisis or overwhelming level. For now, the faster the rate at which we contract new projects, the better. We have capacity that we feel can do more than is the case today" – **Project Manager**
CALL CENTRE
"Two of our first clients; one a cable TV company and the other a college engaged us, despite our advice against, for 10 hours and 8 hours call centre work respectively, only for the cable TV to reconsider after experiencing many customer complaints. Today, we operate the call centre 24/7 365 days a year" **– Director I.T**
TRAINING
"We can plan everything because the management is always aware months before"
"The CSRs to be trained will come in batches of 15, 20 to a maximum of 25 persons at a time" **– Director Recruitment and Training**

ii. **Request: CIVAR-REQ**

DATA
"Sometimes you have clients who say I want my work to start at say 11.00a.m and end may be at 5.00p.m" **– Quality Analyst 3**
"Clients are involved in all the steps for example recruitment, training up to the actual engagement, so we actually try to make sure there is very smooth or minimal disruption to the daily running of our clients business." – **Business Development Manager**
"**HUMONGOUS** offers diverse back office data services such as database management, data cleansing and validation, data entry and so on. Each of them requiring specific agent qualifications and capabilities, specific technologies and specific work hours" – **Managing Director**
RESEARCH

"I am yet to come across two projects that are alike. I mean same data, same objectives" – **Quality Analyst 2**
"To make the point clear, consider our clients; AAA is a manufacturing firm, BBB is an insurance company, CCC is a bakery, DDD is a bank. This explains the dynamism of our clients and the markets in which they operate - and so is the research work undertaken for each of them" **– CEO**
CALL CENTRE
"For some companies, 90% of the queries can be predicted but for others the percentage is lower. But on average, I would say, irrespective of the client, more than half of the callers' concerns are predictable" – **Director I.T**
"We offer many types; some are mobile phone companies call centres, utility providers, banks, cable tv provider, restaurant among others" – **Associate Delivery Lead 2**
"There is bias in how the callers are treated. For example for the bank, business or the so called 'corporate' clients are given preferential treatment, they are provided designated agents despite the low volume of calls that they make" – **Agent 2**
TRAINING
"Training groups is challenging because members have differ in preferences and world view." **– Service Delivery Lead**
"Composition of the group could affect the training sequence of events. Think of training an individual, this is different from training a group of say 5 individuals which is in turn different from a larger group with more people" **– HR and Training**

iii. **Capability: CIVAR-CPB**

DATA
"Client support and facilitation are vital at initial phase, prior to process transition" **– Quality Analyst 3**
RESEARCH
"The liaison person from the client-side understands the research process and that way there cannot be confusion " – **Service Delivery Lead**
CALL CENTRE
"Notwithstanding their status in society or demographic differences, their /callers/needs and desires are universal" – **Quality Analyst 1**
TRAINING
"Motivation levels are not equal, some people are self-driven and positive to training, others see it as a waste of time" **– Associate Delivery Lead 1**

SERVICE PROCESS

A. Skills: SP-SKI

DATA
"Aptitude test captures analytical skills as well as language proficiency. For work speed, we give KPH test" – **Quality Analyst 3**
"We do not hire high school, you must have at least one level of tertiary so you have gone to college or computer college, but most of the times we higher diplomas. Data doesn't necessitate a graduate. But if we get graduates we take them." – **Quality Analyst 2**
"We normally look at 60 words per minute and above. And then now when we recruit them we test them on aptitude, and we test them on grammar, maths and basic computer literacy" – **Service Delivery Lead**
RESEARCH
"Recently there is a project that is going on and they are taking people as long as you know your keyboard even form 4 leavers that have an idea" – **Agent 2**
"Skills required again will depend on type of research – for instance outbound research for a mobile phone company will need specific people who don't have an accent, if they speak Swahili it has to be Swahili – not ''sheng''. So the people have to be trained internally to reach that required level, have to come with specific qualifications." **– Business Development Leader**
"For most research work, clients request degree qualifications" – **Project Manager**
CALL CENTRE
"They include excellent verbal communication skills" - **CEO**
"Agents should be capable of effective multi-tasking" - **Quality Analyst 1**
"**HUMONGOUS** takes degree and diploma holders provided they have neutral and clear accent" - **COO**

"Kenyan accents are very, very neutral and good. I think Indian accents can be a little bit different. I think the international clients figured out that am talking to an Indian and he is putting an accent which may be irritating for the customer" - **COO**
"For call centre you need to have a clear neutral accent no mother tongue influence." - **CEO**
"Callers should 'feel' your smile as you speak to them" – **Operations Manager**
"Typing speed of thirty words per minute" - **Service Delivery Lead**
TRAINING
"Facilitators should be capable of listing the objectives of the training session, infrastructure requirements – ideally they should have the entire training toolkit." – **Service Delivery Lead**
"Should be genuine and honest in all collaborations or dealings with clients**." – Quality Analyst 1**
"We are able to impart expert-based knowledge that cannot be found in text books"- **Business Development Leader**

B. Discretion: SP-DIS

DATA
"As a company **HUMONGOUS** has a mantra of three words for BO workers – volume, speed and accuracy'. I mean every time a worker reports to work and sits on that desk, s/he should be thinking – what are my targets in this sheet, I must deliver today and this will be error free" – **Quality Analyst 2**
RESEARCH
"Research needs depend on the client, the environment and the data" – **Operations Manager**
"Clients are assigned to teams of experienced and novice researchers" – **Operations Manager**
"Research process is sequential and clear to all members of the research team" – **Director Business Development and Technology**
CALL CENTRE
"This is not the kind of job you look forward to when you wake up in the morning. It is repetitive, I feel like I wasted many years in school - only to end up with a mechanical job. I consider it a stepping stone to a better job."- **Agent 1**
"Performance metrics like KPIs and SLAs are all about cost" – **Project Manager**
TRAINING
"Our focus is not roles, processes or even procedures but people aspects since these are at the heart of training projects."- **Business Development Leader**
"The general direction is guided by the objectives of the assignment. However, the operational aspects are left to the facilitator" – **Associate Delivery Lead 2**
"S/he exercises independent judgement depending on the scenario under consideration." – **Quality Analyst 2**

C. Infrastructure: SPI
   i. **Technology: SPI-TEC**

DATA
"Fiber cable made connection and transferring data very fast" - **COO**
RESEARCH
"Internet technology is used to receive instructions, data gathering and to send final reports" – **Project Manager**
CALL CENTRE
"It's not that we use very, very fancy and complicated technology and the agent will have a challenge using that, NO." - **Director I.T**
TRAINING
"Would you consider MS PPT, EXCEL as technologies?" – **Associate Delivery Lead 1**

   ii. **Facilities: SPI-FAC**

DATA
"When you walk in here, you can't get in without the biometric and the badges, we have guards all over, and we have the bank downstairs. When you get into the office you have to be frisked, when you leave the office you have to be frisked" – **Agent 4**
"Every person has password to log into the system. No one else has that password, and should be changed every month. So unless it is given to someone then it is very hard for someone else to login using that password. Plus the reports generated show who was logged in when, so if there is any complains, you will be answerable" - **Agent 4**

RESEARCH
"Each research agent is given a comfortable office and the supporting facilities such as computers and technologies such as data analysis software" **- COO**
CALL CENTRE
"We need to ensure for example if we are working in the same industry, the agents will not move from one account to the other. We also need to ensure internally that the back office for example support staff doesn't share the information. So the confidentiality is very high. There is a water tight compartment, IT security is obviously there. One agent cannot access information of another client. It is not possible." – **Project Manager**
TRAINING
"Training environment plays unbelievable role in relaxing the trainees**." – Project Manager**

D. Training: SP-TRAI

DATA
"Training is sub-divided into four levels: (1) generic, (2) product, (3) quality, and (4) on-the-floor." – **Director Recruitment and Training**
"There is what we call secondment here. So we want people who are multi skilled, like if I am taken from quality I can be taken to maybe IT" – A**ssociate Delivery Lead 1**
RESEARCH
"We have clear career development scheme. It all depends ones performance" – **Quality Analyst 3**
CALL CENTRE
"I think training is a combination of what I call soft skills training which is essentially how is it to work in a call centre, what are the customer etiquette, etc. that takes about a week, and I thing even if I got somebody working in another company, I think it is very important for the individual to get the grooming that this is how we work - **CEO**
"I remember on my very first day, somebody mentioning that what we will be providing is 'emotional labour'. I don't know for sure the meaning of that but I can tell you, it's a stressful job"- **Agent 2**
"And after the training which varies by the client, the agent need to know what he is servicing or what he is selling, so obviously that training cannot be done be away with." – **Project Manager**
TRAINING
"The training provides them with practical tools and templates that help them easily integrate within the work environment." - **Project Manager**
"We have ensured that there is no conflict between the young and the older trainers. Indeed, the young ones learn by working with their seniors. We deliberately encourage it." **- COO**

E. Hiring: SP-HIRI

DATA
"You are taken to a certain department for a period of time to learn the skill, then you are taken back to your department, but if you are interested in that department you are considered" – A**ssociate Delivery Lead 1**
RESEARCH
"It is possible to learn on the job, we have a number of employees doing basic market research" – **Business Development Leader**
CALL CENTRE
"As quality analysts we get involved from training aspect. Once the employees have been engaged, we come in to train on the product as well as get the metrics on what quality they desire" - **Quality Analyst 1**
TRAINING
"Most have immense expertise – some are reputable academics in local universities, hired for specific projects temporarily" **- CEO**
"Trainers are the face of our company to the client and were are careful to have people who understand the job at hand " **- CEO**

15   APPENDIX G: CODES

CATEGORY: SERVICE CONCEPT-SC	CODE	EXPLANATION
SC: Operational Objective	SC-OBJ	Customer's motive for outsourcing
SC: Adaptability	SC-ADP	Level of accommodation of customer unique requests
SC: Focus	SC-FOC	Number options/choices in the 'menu' (available to the customer)

Codes for service concept

CATEGORY: CUSTOMER INPUTS-CI	CODE	EXPLANATION
CI: Type		
Informational	CIT- INF	Three important aspects of information: equivocality, intensity and volume
Interaction	CIT-SLF	Direct or indirect interaction
Triadic	CIT-TRI	Are there two beneficiaries to the service provider's operate process?
CI: Variability		
Arrival	CIVAR-ARR	Timing of customer requests
Request	CIVAR-REQ	Diversity of customer requests
Capability	CIVAR-CPB	Diversity of customer co-production abilities
CI: Volume	CI-VOL	Time and effort expended by the customer

Codes for customer inputs

CATEGORY: SERVICE PROCESS-SP	CODE	EXPLANATION
SP: Skills	SP-SKI	Employee skills needed
SP: Divergence	SP-DIV	Employee empowerment in decision making
SP: Infrastructure		
Technology	SPI-TEC	Extent/type of technology utilised
Facilities	SPI-FAC	Physical facilities and security measures
SP: Training	SP-TRAI	What, how and when of training
SP: Hiring	SP-HIRI	What, how and when of hiring

Codes for Process attributes

16 APPENDIX H: LIST OF OBSERVATIONS

Observation	Case[s]	CI&P linkage
OB_1: Information intense service processes consumed through the MIND deliver standardized service concept – one with medium adaptability, broad focus and that is outsourced for cost considerations.	Research	CI
OB_2: Interactive service processes that are consumed as INFORMATION deliver standardized service concept – one with low adaptability, narrow focus and whose orders are won on cost plus other considerations.	Call centre	CI
OB_3: Highly interactive service processes consumed through the MIND deliver bespoke service concept – one with high adaptability, broad focus and that is outsourced for factors beyond cost considerations.	Training	CI
OB_4: Information intense service processes consumed as INFORMATION deliver standardized service concept – one with low adaptability, narrow focus and whose orders are won on cost considerations.	Data	CI
OB_5: Irrespective of whether they are information intense or interactive, 'operate' processes consumed as INFORMATION deliver a standardized service concept – one with low adaptability, narrow focus and that is outsourced for cost considerations.	Data and Call centre	CI
OB_6: The kind of service concept delivered by 'operate' processes that are consumed through the MIND depend on nature of provider action i.e., whether it is information intense or interactive.	Research and Training	CI
OB_7: Irrespective of whether they are consumed as information or through the mind, service processes that entail informational provider action deliver a standardized service concept – one with low adaptability, narrow focus and that is outsourced for cost considerations.	Data and Research	CI
OB_8: The kind of service concept delivered by service processes that are interactive depend on nature of customer inputs i.e., whether the inputs are 'self' or 'non-self'.	Call centre and Training	CI
OB_9: Delivery of highly interactive 'operate' processes consumed through the MIND requires high skills, high level of employee discretion and low automation. These processes are laid out to meet customer requirements, executing employees are sourced externally and require formal training.	Training	IP
OB_{10}: Delivery of information intense 'operate' processes consumed as INFORMATION requires low skills, low level of employee discretion and are high automation. The process facilities are laid out to achieve operational efficiency, executing employees emanate internally and are trained on-the-job.	Data	IP
OB_{11}: Delivery of information intense 'operate' processes consumed through the MIND requires high technical and diagnostic skills, low interpersonal skills, high employee discretion and low automation. These processes are laid out to achieve operational efficiency; executing employees are sourced externally and require formal training.	Research	IP
OB_{12}: Delivery of interactive 'operate' processes consumed as INFORMATION requires low technical and diagnostic skills, high interpersonal skills, low employee discretion and high automation. The process facilities are laid out to achieve operational efficiency, executing employees emanate internally and are trained on-the-job.	Call centre	IP
OB_{13}: With the exception of interpersonal skills, 'operate' processes consumed as INFORMATION are similar irrespective of the nature of	Data and Call centre	IP

action of the service provider.		
OB₁₄: With the exception of interpersonal skills, 'operate' processes consumed through the MIND are similar irrespective of the nature of action of the service provider.	Research vs Training	IP
OB₁₅: Provided the action of the provider is similar, service process attributes for 'operate' processes consumed through the MIND are directly opposite of processes consumed as INFORMATION.	Data and Research vs Call centre Training	IP
OB₁₆: With the exception of interpersonal skills, the nature of provider action does not influence the service process attributes.	Data, Research, Call centre and Training	IP
OB₁₇: Compared to 'operate' processes that deliver bespoke service concepts, processes that deliver homogeneous mass services require low skills (technical, diagnostic and interpersonal), low employee discretion and are more automated.	Data vs Training	PC
OB₁₈: Compared to mass customized service concepts that are outsourced for cost considerations, standardized service concepts outsourced for cost plus other considerations require low technical and diagnostic skills, low employee discretion but more automation and higher interpersonal skills.	Call centre vs Research	PC
OB₁₉: 'Operate' processes with low employee technical and diagnostic skills, low employee discretion and high automation deliver standardized service concepts.	Data and Call centre	PC
OB₂₀: The type of service concept delivered by an 'operate' process with high employee technical and diagnostic skills, high level of employee discretion and low automation is contingent on the nature of the provider's action.	Research and Training	PC
OB₂₁: Service concepts that are outsourced for cost considerations are standardized or at least mass customized.	Data and Research	PC
OB₂₂: Service concepts that are outsourced for cost plus other considerations are defined by service process attributes.	Call centre and Training	PC
OB₂₃: 'Operate' processes with low level of customer interaction deliver standardized service concepts irrespective of the levels of employee skills, employee discretion and automation. This means that the type of service concept delivered by 'operate' processes that have high proportion of provider time spent on information actions is not contingent upon attributes of the service process.	Data and Research	CI&P
OB₂₄: The type of service concept delivered by 'operate' processes that have high proportion of provider time spent on customer contact involving actions is contingent upon attributes of the service process.	Call centre and Training	CI&P

17 APPENDIX I – COMPARISON OF CASES - KEY SERVICE CHARACTERISTICS

	EMPLOYEE DISCRETION				
	EVEREST	GIGAS	HUMONGOUS	AGGREGATE	RANK
Data	1.3125	1.266666667	1.307692308	1.295454545	1
Research	3	3.066666667	2.846153846	2.977272727	3
Call	1.875	2.066666667	2.076923077	2	2
Training	3.8125	3.6	3.769230769	3.727272727	4
	TECHNICAL SKILLS				
	EVEREST	GIGAS	HUMONGOUS	AGGREGATE	RANK
Data	1.5	1.333333333	1.461538462	1.431623932	1
Research	3.0625	2.866666667	3.076923077	3.002029915	3
Call	1.6875	2.066666667	1.846153846	1.866773504	2
Training	3.75	3.733333333	3.615384615	3.69957265	4
	DIAGNOSTIC SKILLS				
	EVEREST	GIGAS	HUMONGOUS	AGGREGATE	RANK
Data	1.25	1.4	1.230769231	1.293589744	1
Research	3.25	2.933333333	2.692307692	2.958547009	3
Call	1.875	2	2.538461538	2.137820513	2
Training	3.625	3.666666667	3.538461538	3.610042735	4
	CUSTOMER INFLUENCE				
	EVEREST	GIGAS	HUMONGOUS	AGGREGATE	RANK
Data	1.3125	1.2	1.307692308	1.273397436	1
Research	1.6875	2.333333333	1.769230769	1.930021368	2
Call	3.25	2.866666667	3.076923077	3.064529915	3
Training	3.75	3.6	3.846153846	3.732051282	4
	CUSTOMER CONTACT				
	EVEREST	GIGAS	HUMONGOUS	AGGREGATE	RANK
Data	1.625	1.4	1.384615385	1.469871795	1
Research	1.5625	1.666666667	1.769230769	1.666132479	2
Call	3	3.133333333	3.076923077	3.07008547	3
Training	3.8125	3.8	3.769230769	3.793910256	4
	AUTOMATION				
	EVEREST	GIGAS	HUMONGOUS	AGGREGATE	RANK
Data	3.25	3.266666667	3	3.172222222	3
Research	2	1.866666667	1.769230769	1.878632479	2
Call	3.625	3.733333333	3.923076923	3.760470085	4
Training	1.125	1.133333333	1.307692308	1.188675214	1
	TASK REPEATABILITY				
	EVEREST	GIGAS	HUMONGOUS	AGGREGATE	RANK
Data	3.5625	3.333333333	3.307692308	3.401175214	3
Research	2	1.933333333	1.769230769	1.900854701	2
Call	3.25	3.533333333	3.615384615	3.466239316	4
Training	1.1875	1.2	1.307692308	1.231730769	1
	WORK VOLUME				
	EVEREST	GIGAS	HUMONGOUS	AGGREGATE	RANK
Data	2.6875	3.733333333	2.538461538	2.986431624	3
Research	2.3125	1.733333333	1.923076923	1.989636752	2
Call	4	3.266666667	3.153846154	3.473504274	4
Training	1	1.266666667	2.384615385	1.55042735	1

Certificate of Recognition

This Certificate is hereby
awarded to

_____

in acknowledging your achievement for ranking

among the top 100 organisations in the

CIO 100 Annual Awards Competition

signature

Year:

CIO100

PREMIER ANNUAL AWARDS

19 APPENDIX K: LIST OF COUNTRIES WITH LOW HUMAN DEVELOPMENT INDEX[61]

Rank			HDI		Rank			HDI	
2015 estimates for 2014 [2]	Change in rank from previous year[2]	Country	2015 estimates for 2014 [2]	Change from previous year [2]	2015 estimates for 2014 [2]	Change in rank from previous year[2]	Country	2015 estimates for 2014 [2]	Change from previous year [2]
145	—	Kenya	0.548	▲ 0.004	167	▼ (2)	Sudan	0.479	▲ 0.002
145	▲ (1)	Nepal	0.548	▲ 0.005	168	—	Djibouti	0.470	▲ 0.002
147	—	Pakistan	0.538	▲ 0.002	169	▲ (2)	South Sudan	0.467	▲ 0.006
148	—	Myanmar	0.536	▲ 0.005	170	—	Senegal	0.466	▲ 0.003
149	—	Angola	0.532	▲ 0.002	171	▼ (2)	Afghanistan	0.465	▲ 0.001
150	▼ (1)	Swaziland	0.531	▲ 0.001	172	—	Ivory Coast	0.462	▲ 0.004
151	—	Tanzania	0.521	▲ 0.005	173	▲ (1)	Malawi	0.445	▲ 0.006
152	—	Nigeria	0.514	▲ 0.004	174	▲ (1)	Ethiopia	0.442	▲ 0.006
153	▲ (1)	Cameroon	0.512	▲ 0.005	175	▼ (2)	Gambia	0.441	▼ 0.001
154	▼ (1)	Madagascar	0.510	▲ 0.002	176	—	Congo, Democratic Republic of the	0.433	▲ 0.003
155	▲ (3)	Zimbabwe	0.509	▲ 0.008	177	—	Liberia	0.430	▲ 0.006
156	—	Mauritania	0.506	▲ 0.002	178	—	Guinea Bissau	0.420	▲ 0.002
156	▼ (1)	Solomon Islands	0.506	▲ 0.001	179	—	Mali	0.419	▲ 0.003
158	▼ (1)	Papua New Guinea	0.505	▲ 0.002	180	—	Mozambique	0.416	▲ 0.003
159	▼ (1)	Comoros	0.503	▲ 0.002	181	▲ (1)	Sierra Leone	0.413	▲ 0.005
160	—	Yemen	0.498	—	182	▼ (1)	Guinea	0.411	—
161	—	Lesotho	0.497	▲ 0.003	183	▲ (1)	Burkina Faso	0.402	▲ 0.006
162	▲ (5)	Togo	0.484	▲ 0.009	184	▼ (1)	Burundi	0.400	▲ 0.003
163	▼ (1)	Haiti	0.483	▲ 0.002	185	▲ (1)	Chad	0.392	▲ 0.004
163	—	Rwanda	0.483	▲ 0.004	186	▼ (1)	Eritrea	0.391	▲ 0.001
163	▲ (1)	Uganda	0.483	▲ 0.005	187	—	Central African Republic	0.350	▲ 0.002
166	▼ (1)	Benin	0.480	▲ 0.003	188	—	Niger	0.348	▲ 0.003

---

[61] Source: https://en.wikipedia.org/wiki/List_of_countries_by_Human_Development_Index

20   APPENDIX L – SERVICE ATTRIBUTES

Attributes	Author
Customisation/ variety	Maister and Lovelock (1982); Schmenner (1986); Haywood-Farmer (1988); Silvestro et al. (1992); Kellogg and Nie (1995); Skaggs and Huffman (2003); Bowen (1990)
Customer Interaction	Schmenner (1986); Haywood-Farmer (1988)
Customer Contact	Chase (1978); Chase (1981); Maister and Lovelock (1982); Haywood-Farmer (1988); Wemmerlöv (1990); Silvestro et al. (1992); Schmenner (1986); (Mills and Margulies, 1980); Bowen and Bowers (1986); Bowen (1990)
Labour Intensity	Schmenner (1986); Haywood-Farmer (1988); Silvestro et al. (1992); (Thomas, 1978)
Service focus	Larsson and Bowen (1989b); Buzacott (2000); Skaggs and Huffman (2003);Tinnilä and Vepsäläinen (1995); Johnston (1996)
Customer inputs	Kellogg and Nie (1995); Sampson and Froehle (2006); Larsson and Bowen (1989b)
Discretion	Silvestro et al. (1992); Buzacott (2000)
Volume	Silvestro et al. (1992)
Complexity	Tinnilä and Vepsäläinen (1995); Shostack (1987)
FO-BO* Value	Silvestro et al. (1992); Metters and Vargas (2000)
Type of inputs	Morris and Johnston (1987); Lovelock and Young (1979); Lovelock (1983); Fitzsimmons and Sullivan (1982)
Tangibility	Shostack (1977); Bowen and Bowers (1986)
*Front Office – Back Office	