EXPLORING THE INTEGRATION AND APPLICATION OF KNOWLEDGE IN A CHARITABLE NON-GOVERNMENT ORGANISATION

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ABSTRACT

Although the strategic importance of knowledge is widely recognised, there is no unified concept of the characteristics and role of knowledge within organisations, and the process of knowledge application remains theoretically underdeveloped. Organisations therefore often lack clear frameworks for integrating and applying their dispersed knowledge. Using a case study in international development non-government organisation, this study describes the nature of knowledge in an organisation and explores Knowledge Integration (KI) and application from multiple stages-multiple factors perspective. Data was gathered from 42 individual interviews, document analysis and participant observations and analysed using template analysis technique.

The findings show that knowledge in an organisation is seen as continuously evolving holistic variable resource. KI and application is a complex process and influenced by multiple and interrelated individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interactions characteristics.

This study introduced new '*multiple stages- multiple factors approach'* to KI and application process. From a practical perspective, this study provides managers with better understanding of the features of knowledge in organisations and clarifies how knowledge dispersed in an organisation can be effectively and efficiently integrated and applied to accomplish organisational tasks and enhance competitive advantage.

Limitations of this study are noted together with proposed directions for future research.

LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
BSF	Building Sustainable Future
CLT	Corporate Leadership Team
CoP	Communities of Practice
CSO	Civil Service Organisation
DCITA	Department of Communications, Information Technology and the Arts– (Australian)
DFID	Department For International Development- UK
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
HR	Human Resource
HRD	Human Resource Development
ICT	Information and Communication Technology
ID	International Development
IDA	International Development Organisation

IF	Innovation Fund
ILT	International Leadership Team
INGO	International Non- Government Organisation
IT	Information Technology
KA	Knowledge Absorption
KBA	Knowledge Based Aid
KBT	Knowledge Based Theory
KBV	Knowledge Based View
KC	Knowledge Combination
KGA	Knowledge Governance Approach
KI	Knowledge Integration
KM	Knowledge Management
KMS	Knowledge Management System
KS	Knowledge Sharing
NCVO	National Council for Voluntary Organisations
NGO	Non- Government Organisation

NPO	Not for Profit Organisation
OPS	Overseas Programme Staff
PCM	Programme Cycle Management
PEU	Programme Effectiveness Unit
PHM	Programme Heads and Managers
PLT	Programme Learning Team
PPA	Programme Partnership Agreement
PVO	Private Voluntary Organisation
RBV	Resource Based View
TA	Template Analysis
TAS	Technical Advisors and Support staff
TSO	Third Sector Organisation

DEDICATION

This thesis is dedicated to the memory of my father, Obbo Gutema Berri and my loving mother adde Mariame Dheressa.

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CHAPTER 1

INTRODUCTION

'Knowledge has become the key economic resource and the dominant, if not the only, source of comparative advantage' (Drucker, 1995 p.29).

1.1. Research background and motivation

In today's economy, when changes happen at an ever faster speed, knowledge has been identified as the most important strategic resource of organisations. Many organisations emphasise the effective and efficient application of their knowledge. '*As the foundation of industrialised economies has shifted from natural resources to intellectual assets, executives have been compelled to examine the knowledge underlying their business and how that knowledge is used.*'(Armstrong and Taylor, 2014 p.173). The need to get as much value as possible from knowledge is greater now than in the past. Since the last thirty years, the importance of Knowledge Integration (KI) and application has been increasingly highlighted by both academics and practitioners (Wu and Lin, 2009). KI and application is the fundamental basis of competition for many organisations because competitive performance depends not on how much organisations know but on how they use what they know. For example, Grant (1996a) argues that the critical source of competitive advantage is KI rather than knowledge itself. Organisations differentiate themselves on the basis of using what they know (Davenport and Prusak, 1998).

Empirical evidences show that knowledge is particularly essential strategic resource for charitable Non-Government Organisations (NGOs), because *charitable NGOs are in a*

growing competitive situation and they are knowledge-intensive organisations. Like for profit organisations, charitable NGOs are in a competitive market for resources. Charitable NGOs require resources to survive and so must interact with others who control these resources and sustain their competition (Hillman and Collins, 2009; Pfeffer and Salancik, 1978). Their knowledge and expertise is vital to acquire resources, deliver better services and develop strategies for sustainable competition. In other words, the competitive performance of charitable NGOs depends on how they effectively and efficiently integrate and apply their dispersed knowledge.

Also empirical evidences suggest that *charitable NGOs are knowledge-intensive organisations* because most of their services involve knowledge transfer and capacity building activities for which they rely upon human and intellectual capital as opposed to physical capital to sustain a competitive edge within the market place (Swart and Kinnie, 2003). In this context, '*knowledge intensive organisations refer to those organisations engaged in delivering services and /or products where there is a reliance on human capital to produce these outputs'* (Renshaw and Krishnaswamy, 2009 p.457). As a result of growing competitions and knowledge-intensive tendencies of charitable NGOs, the *strategic importance of knowledge is highlighted* and managers of charitable NGOs give greater attention to KI and application strategies.

Over the last decades, research on organisational learning and Knowledge Management (KM) in charitable NGOs has developed quickly (Matzkin, 2008); advise about the effective design of knowledge and learning systems in different contexts have increased (Krohwinkel-Karlsson, 2007). The idea of Knowledge Based Aid (KBA) was introduced (King and

McGrath, 2000). The aim of KBA was to become more efficient and effective in acquiring and using knowledge in the 21st century development work. Since the idea of KBA was introduced, KM became central to the development cooperation among bilateral and multilateral agencies for the 21st century development agenda.

Despite these efforts charitable NGOs are facing challenges in managing their knowledge resource. The major challenges are the divergent perspectives among the academics and practitioners on the concept of knowledge and KI and application process.

By working in charitable NGOs for over 20 years, I have had an opportunity to experience the strategic importance of knowledge and challenges that these organisations are facing in effective and efficient use of their knowledge resources. This motivated me to explore the concept of knowledge in a charitable NGO and to investigate how knowledge can be integrated and applied in these organisations. Having a constructionist view, I adopted a qualitative research approach and used a case study to understand the perceptions of people on KI and application process.

The purpose of this study is to explore how knowledge in an organisation is understood and how it is integrated and applied in charitable NGOs. Based on a case study in international development NGO, this research investigates how knowledge in an organisation is understood and how it is integrated and applied in a process of accomplishing organisational tasks. Before embarking on the analysis of KI and application process we need to understand the concepts of *knowledge, knowledge in an organisation, knowledge integration* and *charitable NGOs.*

What is Knowledge? A number of philosophers and knowledge management scholars have written much on the concept of knowledge for years. However, there is no consensus

understanding about the characteristics of knowledge and the way this resource should be used in an organisation. Knowledge is seen as a justified true belief (Nonaka, 1994; Pailthorp, 1969) which is a dynamic human process of justifying personal belief toward the truth (Nonaka and Takeuchi, 1995). Knowledge Based View (KBV) scholars tend to perceive knowledge as a *fixed resource* that can be captured, stored and disseminated (Barney, 1991; Conner, 1996; Grant, 1996a; Grant, 1996b). Some scholars view knowledge as *a dynamic resource* that interacts and interchanges continuously (Davenport and Prusak, 1998; Nonaka and Takeuchi, 1995). Knowledge is a multi-dimensional resource which can be personal, situated and socially constructed (Crane, 2013; Davenport and Prusak, 1998). '*Knowledge is multifaceted and complex, being both situated and abstract, implicit and explicit, distributed and individual, physical and mental, developing and static, verbal and encoded'* Blackler (1995) (cited in Armstrong and Taylor, 2014 p.175).

These different views show that knowledge is a mixture of various elements; it is fluid as well as formally structured; it is intuitive and therefore hard to capture in words or understand completely in logical terms. Knowledge is also part of human complexity and difficult to predict. These suggest that, although academics and practitioners tried to define the concept of knowledge for many years, there are still different understandings of the concept. '*Epistemologists have been struggling with defining the concept of knowledge for thousands of years, yet a universally accepted definition of knowledge has not surfaced'* (Van den Berg, 2013 p.166).

In addition to variety of definitions, KBV scholars provide different dimensions and categories to knowledge. The most commonly identified knowledge dimensions are *tacit* and *explicit* knowledge (Nonaka, 1994; Polanyi, 1966). *Tacit knowledge* refers to the knowledge

that is difficult to codify and communicate in symbolic form and/or natural language. *Explicit knowledge* can be articulated, codified and communicated in symbolic form and/or natural language. The main categories of knowledge are *individual knowledge* and *organisational knowledge*. *Individual knowledge* is the knowledge possessed by individuals and refers to cognitive issues, individuals' expertise and skills (Sitlington, 2012). It involves all the knowledge possessed by the individuals that can be applied independently to specific types of tasks and problems. Individual knowledge encompasses both tacit and explicit knowledge. *Organisational knowledge* is accumulated knowledge of individuals within an organisation. Organisational knowledge '*encompasses shared and accumulated knowledge of individuals within an organisation that creates the organisational memory drawn upon in decision-making'* (Sitlington, 2012 p.113).

These divergent perspectives suggest that knowledge has no clear unified conceptual understanding. To sum up, these literatures suggest that the concept of knowledge range from *fixed resource* that can be captured, stored and disseminated to *dynamic resource* that interacts and interchanges continuously. However, this study is not concerned with broader conceptual analysis of knowledge. The focus of this study is '*knowledge in an organisation'*, particularly knowledge in charitable NGO context.

What is knowledge in an organisation? In an organisation context knowledge refers to a dynamic multi-dimensional understanding gained from interpretation, absorption and application that change continuously (Crane, 2013). The assumption in this study is that knowledge in an organisation can be seen as a '*conceptual whole'* that encompasses individual knowledge, organisational knowledge and the knowledge that resides in informal social interactions and networks. This is because knowledge in an organisation is

continuously changing and it is not logical to classify it into different dimensions and categories.

Unlike the KBV, which tends to perceive knowledge as a fixed resource (Barney, 1991; Conner, 1996; Grant, 1996a; Grant, 1996b), in this study, knowledge is seen as a variable intangible resource that has different dimensions and resides in various locations. In other words, this study argues that knowledge in an organisation is understood in its entirety as a conceptual whole without categorising it into tacit, explicit, individual or organisational knowledge. In order to clarify these plural concepts, in this research, knowledge in an organisation is viewed as *holistic variable resource*. This study is concerned with how this holistic variable resource is integrated and applied in a charitable NGO.

What is knowledge integration? The application of knowledge resource is not a straight forward process because knowledge is dispersed in an organisation without definite location. The specialisation of organisation members turns organisations into distributed knowledge systems (Tsoukas, 1996). A range of knowledge that is required for production or service is dispersed among organisational members. Therefore, to apply knowledge for productions and services, organisations have to integrate dispersed fragments of specialised knowledge (Becker, 2001; Grant, 1996a; Grant, 1996b).

Becker (2001) analyses the problem of the dispersed nature of knowledge in an organisation and suggested that one of the strategies to solve the problem of knowledge dispersion is KI. Javanmardi Kashan and Mohannak (2013) argue that to be applied for competitive advantage, knowledge dispersed in various locations has to be integrated.

These arguments suggest that in the process of accomplishing organisational tasks, knowledge embedded in individual brains, organisational repositories and informal social interactions has to be shared, interpreted and integrated. In other words, KI takes place in production, service delivery, team work, decision making and innovation activities because in the process of accomplishing these tasks knowledge from different sources are shared, interpreted and applied.

However, the review of KBV literatures suggest that the concept of KI is vague and inconsistent (Grant, 1996; Yang 2005; Haddad and Bozdogan, 2009 and Mohannak, 2011). In this study KI refers to bringing together diverse knowledge from multiple sources and locations to bear on a complex problem or task (Haddad and Bozdogan, 2009). In this context, KI is seen as a process that involves knowledge sharing, knowledge absorption, knowledge combination and application. In other words, KI is understood as a process of absorbing and combining the shared knowledge with the existing knowledge and applying it to organisational tasks.

What is charitable Non-Government Organisation? The term Non Government or Non Profit is a relatively recent addition to the management literature. There has been a lack of clarity about the definition and nature of the Non Profit Organisations (Dichter, 1999). One of the problems encountered in identifying a workable definition of Non Profit Organisations is lack of consistency in the use of the term. Major terms used in literatures are: charitable Non-Government Organisations, Not for Profit Organisations, Charities, Private Voluntary Organisations, Third Sector Organisations and International Development Agencies. Although different terminologies are used, there are some fundamental common features. These terms are adopted to refer to a set of organisations between the private and public

sectors, that is, organisations which are neither statutory, nor profit maximising (Morris, 2000).

In this study, '*charitable Non-Government Organisation* or shortly *charitable NGO'* is used. The term, NGO, came into existence in 1945 because of the need for the United Nations to differentiate in its Charter between participation rights for intergovernmental specialised agencies and those for international private organisations (Fenwick, 2005). The operational definition of NGOs is '*self-governing, private, not-for-profit organizations that are geared to improving the quality of life of disadvantaged people'* (Vakil, 1997 p.2060).

Charitable NGOs are private, not-for-profit organisations that aim to serve particular interest of a society by focusing on advocacy and/or operational activities. '*The advocacy NGOs work on behalf of others who lack the voice or access needed to promote their own interests. Operational NGOs provide critical goods and services to clients with unmet social, political and economic needs including, education, health, environmental protection and human rights'* (Teegen et al., 2004 p.467).

Charitable NGOs make significant contribution to economic and social development and constitute a sizable economic force (Salamon, 2007). For example, the analysis of the accounts of non-profit institutions, including calculations of the value added by volunteers, conducted across eight countries, revealed that non-profit institutions contribute an average of 5% to GDP (Renshaw and Krishnaswamy, 2009 p.457). DCITA (2005) (cited in Renshaw and Krishnaswamy, 2009 p.457) report that in 2000 Australia, non-profit sector contributed $29.6 billion to the GDP, exceeding the economic contribution of the Mining sector.

1.2. Problem definition

From a practical perspective, organisations are stressing the strategic importance of effective KM to improve their performance and remain competitive (Zack, 1999). Due to this strategic importance a large number of organisations invest in Information and Communication Technology (ICT), particularly Knowledge Management Systems (KMS) and knowledge sharing incentives. Many organisations are trying to actively manage their knowledge and intellectual capital (DeTienne et al., 2004). Most large organisations in the USA and Europe have some sort of KM initiative in place (Davenport and Völpel, 2001). Many companies have been trying to influence the creation, exchange and application of knowledge (see Von Krogh et al., 2001; Yin, 1994). As mentioned earlier, KM has become a key strategy for charitable NGOs to maintain a competitive edge. Particularly, the effective application of knowledge resource is vital to the sustainability of charitable NGOs within the globalised competitive situations. Thus, this study focuses on analysing KI and application process in a charitable NGO.

1.2.1. Charitable NGOs and knowledge integration

Over the last decades, research on organisational learning and KM in charitable NGOs has developed quickly. For example, Matzkin (2008) explored Peruvian NPOs and how KM awareness and practices could create more efficient organisations, states that there is medium to low levels of KM awareness in Peruvian Non-profit sector. Implicit KM practices were observed on a large scale independently of size and categories of NPOs. There are some empirical studies that attempt to advise about the effective design of knowledge and learning systems in different contexts (Krohwinkel-Karlsson, 2007).

In 2000, a number of international development agencies and NGOs started to organise around the idea of Knowledge Based Aid- KBA (King and McGrath, 2000). The KBA was initiated by the World Bank President, James Wolfensohn, in 1996 that World Bank would become a "Knowledge Bank''(King and McGrath, 2000). The idea of KBA is to conceptualise how knowledge interacts with international development. The aim of KBA was to become more efficient and effective in acquiring and using knowledge in the 21st century development work.

Since the idea of KBA was introduced, KM became central to the development cooperation among bilateral and multilateral agencies for the 21st century development agenda (King and McGrath, 2000). A number of bilateral and multilateral organisations have embarked on KM related projects. For example, the UK Department for International Development (DFID) has embarked upon a knowledge sharing project (McGrath, 2002). DFID has been developing its own policy for better internal KM. Through its research strategy and support to the Global Development Network, *'DFID is developing its own theory/practice of how it should support partner countries' knowledge generation and dissemination'* (McGrath, 2002 p.349). The Japan International Cooperation Agency (JICA) is developing a new KM network (Kato, 2001); as is the German Agency for Technical Cooperation [GTZ] (Bergmann, 2001). The European Commission, the Swiss Agency for Development and Cooperation and the Canadian International Development Agency are also examples of international development agencies that embarked on the idea of KBA (King and McGrath, 2000).

Two fundamental reasons drive charitable NGOs to focus on leveraging knowledge for their strategic purposes.

First, like for profit organisations, charitable NGOs are in a competitive market for resources. Competitive environments force charitable NGOs to change their relationship to cope with shortages of resources. Resource Dependence Theory (Hillman and Collins, 2009; Pfeffer and Salancik, 1978) suggest that the key to organisational survival is to acquire and maintain resources. Organisations require resources to survive, and so must interact with others who control these resources.

Goerke (2003) states that charitable NGOs need to become more competitive and increasingly 'business-like'. They need to start creating partnerships with profit-driven businesses and this process may require a quantum leap to take place. Charitable NGOs increasingly absorb the culture and manner of market into their internal structures and operations. This argument is supported by Eikenberry and Kluver (2004) who noted that charitable NGOs are increasingly adopting the methods and values of market to guide policy creation and management. According to the research carried out by Hume and Hume (2008) on Australian charitable NGOs, these organisations are driven to commercial practices to position their strategic performance. The major strategic performance, in this context, is donor appeal for funding and resources, staff retention, service strategy and delivery.

In the UK, a number of charitable NGOs diversify their income through social enterprises and various types of trading activities. For example, in 2000 the National Council for Voluntary Organisations (NCVO), an umbrella organisation that provides support and advocacy to civil society in the UK, has established a '*sustainable funding project'* initiative to support income diversifications for voluntary organisations. This initiative involves becoming more business-like, earning income, developing an asset base and considering loan finance. In this initiative,

NCVO encourages charitable NGOs to explore income sources across a spectrum of opportunities that range from charitable donations at one end to trading goods and services at the other end (NCVO, 2009).

It is evident that, in recent years, most charitable NGOs tend to shift towards commercial revenue generation and social enterprising to cope with resource constraints. As a result of these shifts marketing discourses are developed and increasingly dominate charitable NGOs. New and emerging discourses include commercial revenue generation, contract competition, sustainable funding, social entrepreneurship, marginal cost, focus on clients demand, competition for grants, donations, prospects, service level agreements and contracts, trading goods and service.

Second, some empirical evidences suggest that charitable NGOs are knowledge-intensive organisations. This claim is based on the type of value these organisations need to offer their customers. Most of the services of charitable NGOs involve knowledge transfer and capacity building activities. For example, (Lettieri et al., 2004; Renshaw and Krishnaswamy, 2009) argue that charitable NGOs exist within knowledge-intensive industry because they rely upon human and intellectual capital as opposed to physical capital to sustain a competitive edge within the market place (Swart and Kinnie, 2003).

However, research suggests that charitable NGOs are still falling behind in KM research and practices. For example, Renshaw and Krishnaswamy (2009) state that KM, while more established as a concept and methodology within the for-profit sector, is a concept that has only begun to be explored within the non-profit sector. Krohwinkel-Karlsson (2007) states

that current KM research suffers from weak connections between theory and practice. Notably, there are differing views about how key concepts of 'knowledge' and 'learning' should be understood, and how both relate to performance. Hume and Hume (2008) suggest that research to date has been limited to its application to the commercial sector and only minimal examination of the application of this field to the non-profit sector has been undertaken. Recently, Greenaway and Vuong (2011) argue that the NGO sector is falling behind in KM both as a process and system.

As stated above, despite the lack of clarity of KM, many international development NGOs are making huge investments in KM initiatives without promising results. '*Often organisations do not understand what they need until they invest heavily in a system that fails to provide it'* (Davenport and Prusak, 1998 p.1). In 2010, the World Bank invested $606 million on what it considers "core knowledge". According to the World Bank official report 2011, this initiative was to strengthen capacities of developing countries to collect and disseminate high quality and relevant development data. The World Bank made its development data available for download free of charge through its open data initiative. The World Bank is continually expanding the amount of data available for download and develops new applications to enable easy access to data across platforms and devices.

However, the results were more of information sharing and data access rather than integrating and applying deep insights and understanding from various sources. The main reason for unintended results was the focus on information management rather than KM. Information management systems were identified as the key component to enable linking external and internal resources of the bank. A technology solution, to push knowledge out of the Bank's repositories, implemented the knowledge initiative (Kramarz and Momani, 2013). '*The*

conception of the Knowledge Bank was heavily centred on product deliveries' (Kramarz and Momani, 2013 p.418). The product, in this context, refers to knowledge. In other words, knowledge was perceived as a product that can be delivered using information technologies.

Similarly, from 2011-2015, the UK Department for International Development (DFID) invested £480 million in Civil Services Organisations (CSOs) through its Partnership Programme Agreement (PPA). The purpose of the investment was mainly for knowledge sharing within and beyond the CSOs. However, most investments resulted in information access rather than improving efficiency in KM. This shows that most organisations manage information when they mean to manage knowledge.

To sum up, the literature review and empirical analysis suggest that neither the concept of knowledge in an organisation (Van den Berg, 2013) nor the process of KI and application (Nonaka and Toyama, 2003) was sufficiently understood in charitable NGOs. As a result of lack of clear theoretical guide, KI and application process depends on haphazard approach (Hansen, 1999; Von Krogh et al., 2000). This suggests that KI and application is difficult to achieve with the existing theoretical framework proposed by the KBV.

In summary, four considerations motivate this research.

First, *increasing strategic importance of knowledge for charitable NGOs.* KM has become a key strategy for charitable NGOs to maintain competitive edge. The strategic importance of knowledge is highlighted in charitable NGOs due to growing competitions and knowledge intensive tendencies of these organisations. As a result, effective KI and application is vital to the sustainability of charitable NGOs within the globalised competitive situations.

Second, *contradictory claims on KI process.* For the last thirty years, the KBV scholars have made inconsistent and contradictory claims on KI and application process. The major contradictions are disagreement on units of analysis of KI and application. For example, individualist scholars (Grant, 1996a; Grant, 1996b; Simon, 1991) argue that the individual knowledge is a centre to the KI analysis because knowledge resides in individuals. Collectivist scholars argue that collective knowledge is a centre for the KI analysis because knowledge is fundamentally a social phenomenon.

Third, *inconsistency of arguments of KBV with other KI theories and approaches.* Central to the KBV argument is that KI and application can take place using KI mechanisms such as directives, rules, working practices and organisational routines. However, other KI approaches suggest that effective KI should also take into account individual and informal social interaction factors into the analysis. In other words, the KBV underemphasised important constructs in the analysis of KI and application in an organisation.

Fourth, *lack of sufficient empirical evidence of KI and application in charitable NGOs.* Empirical evidence is crucial in the context of KI and application analysis because KI and application is embedded in working practices of organisations. As a result, views and perspectives of practitioners have determining impact on the analysis of KI. However, empirical research of KI and application process in charitable NGOs was insignificant. These suggest gaps on KI and application analysis both at theoretical and practical level.

Thus, this study aims to answer the following research questions:

1. How do we describe knowledge in an international development NGO?

2. How can the dispersed knowledge in this organisation be integrated and used to accomplish organisational tasks?

3. How do individual knowledge sharing behaviours influence KI and application in the international development NGO?

4. How do organisational knowledge governance practices influence KI and application in the international development NGO?

5. How do informal social interactions among organisational members influence KI and application in the international development NGO?

These research questions are addressed by analysing the data gathered from semi-structured interviews, document analysis and participant observations in the case organisation. The detailed analysis of the data and the answers to the research questions are described in the finding chapters (Chapter 6 and Chapter 7).

1.3. Research aims and objectives

The main aim of this research is to explore how knowledge in charitable NGOs integrated and applied. Empirical evidence suggest that most international development NGOs, especially large and global ones, utilise various mechanisms such as knowledge sharing and integration for leveraging KM towards achieving their goals. I carried out the case study at a large International Development NGO based in London, UK.

Although this study is mainly concerned with integration and application of knowledge in the charitable NGO, it is crucial to consider inherent differences of understandings of knowledge in organisations. Unless the understanding of the concept of knowledge in an organisation is

established, it would be challenge to analyse the ways in which knowledge can be integrated and applied because knowledge is unique intangible resource with different understandings. Jashapara (2004) argues that one of the challenges associated with KI is lack of consensus understanding of the nature of knowledge in organisations. *'Integrating different type of knowledge is inherently complex; classification of knowledge is arbitrary and KI perspectives are qualitatively very different'* (Raymond et al., 2010 p.1766).

This study draws on the philosophy of Knowledge (Crane, 2013; Davenport and Prusak, 1998; Nonaka, 1994; Pailthorp, 1969), Behavioural Theory of a firm (Bock, 2005; Cyert and March, 1963), Knowledge Governance Approach (Foss, 2007 ; Grandori, 2001) and social capital and network perspectives (Inkpen and Tsang, 2005; Lin, 2008). This study also reflects the perspectives of Human Resources Developmnt (Armstrong and Taylor, 2014), psychological safety (Gong et al., 2012) and Knowledge Leadrshiop (Mabey et al., 2012) into the analysis of KI and application process. By combining these views and theoretical frameworks, this study analysed the factors that impact KI and application process in an organisation. The study also provides concrete illustration of KI and application process through a case study at international development NGO.

To sum up, this study focuses on two issues of KM: (i) evaluating the nature of knowledge in international development NGO and (ii) analysing how knowledge in the organisation can be integrated and applied. More specifically, this study explores how the case organisation can integrate and apply its knowledge resource through the interplay between individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction and network characteristics.

1.4. Scope of the study

In scoping the study, the following four understandings of knowledge and KM were considered:

First, *knowledge in an organisation as distinct from organisational knowledge:* This study is not concerned with broader conceptual analysis of knowledge. The focus of this study is knowledge in an organisation. Knowledge in an organisation is different from traditional understanding known as 'organisational knowledge'. Organisational knowledge refers to *'the shared and accumulated knowledge of individuals within an organisation that creates the organisational memory drawn upon in decision-making'* (Sitlington, 2012 p.113). The study is not concerned with tacit and implicit dimensions of knowledge (Nonaka, 1994; Polanyi, 1966) because these dimensions continuously interchange. The view in this study is that putting knowledge into categories undermines the dynamism and interchangeability of knowledge in an organisation. This study also does not address particular typologies of knowledge such as contextual knowledge, partners' knowledge, local knowledge and supporters' knowledge and so on because the assumption is that the inherent attributes of the concept of knowledge remain the same for all typologies of knowledge.

This study has a perspective that knowledge in an organisation is a dynamic holistic resource that encompasses individual knowledge, organisational knowledge and the knowledge that resides in informal social interactions and networks in an organisation.

Second, *knowledge as distinct from information:* In this study '*information'* refers to the organised data that produce meaning and is a lower level. '*Knowledge'* refers to meaningful content; assimilated information; internally oriented for use and has a higher level' (Zins,

2007 p.486). Thus, the study focuses on the integration and application of knowledge in an organisation rather than traditional information processing and facilitating data access using ICT.

Third, *internal knowledge integration:* This study explicitly centres on internal KI and application. The study does not cover integration of knowledge between different organisations (Inkpen and Tsang, 2005). Rather, the study focuses on the integration and application of knowledge in single organisation. Although knowledge sharing and knowledge absorption are intermediate processes in KI and application process, the detail analysis of knowledge sharing and absorption is outside the scope of this research. However, some key factors that influence knowledge sharing and knowledge absorption were analysed.

Fourth, *three main sets of factors that influence KI and application process:* Although, KI is a complex process that involves various social and human elements, this study is not concerned with broader social and human factors that impact KI and application. The focus of this study is on three main sets of factors; namely, individuals knowledge sharing/ receiving behaviours, organisational knowledge governance practices and informal social interaction characteristics.

1.5. Research Design

The assumption in this study is that KI and application is complex process that involves different stages and influenced by variety of interrelated individual, organisational and informal social interaction factors. This research has applied a case study methodology to examine the KI and application process in the natural setting and from the perspectives of international development NGO practitioners. In this research, a case study was appropriate because it helps to create an in-depth, rich account (Saunders et al., 2011; Yin, 2003) of KI

and application in an organisation. Case studies are particularly valuable for investigating complex social processes such as KI and application.

The case study was carried out at a large International Development NGO based in London, UK. The case organisation has 430 employees, operating in 40 countries for the last 51 years and works with around 480 partners. The data was collected using semi-structured interviews, document analysis and participant observations. In interviewing different groups, samples were taken from all organisational hierarchies that range from the director to lower level staff and volunteers.

The interview involved knowledgeable groups of people across the organisation who views the KI and application from diverse perspectives. This included people from different positions in the organisational hierarchy and various professional backgrounds. Accordingly, the interviews were carried out with 42 people from the headquarters at all levels and overseas programme offices. Each respondent was interviewed for approximately one hour. The interviews were quite wide ranging and thoroughly explored the KI and application processes in the case organisation. The case study was carried out at the time when the case organisation was undertaking two live projects- *Building Sustainable Future (BSF)* and *Programme Partnership Agreement (PPA)*. These live projects helped to investigate the KI and application practices in real-time context.

Also I collected data from the organisation's documents to obtain background information on the evolution of the organisation, information sharing practices, internal structure, knowledge sharing culture, networks and IT practices as well as data on the live projects (BSF and PPA). The data were collected from both electronic and printed sources.

Alongside interviews and document analysis, I was observing how information and knowledge was shared and integrated between the people in the case organisation in informal ways. I participated in six staff briefings and two International Development (ID) briefings. I observed how information and knowledge sharing takes place in those contexts.

These multiple sources of data were used with the view that taken together, they add up to a more complete view of KI and application practices in the case organisation, that is, the focus of the investigation. For example, after each interview, I referred to written documents that are related to some of the key expressions made by the interview respondent. In this sense, most of the interview responses were checked against the written documents. In addition, the case study included several follow-up visits and observations in a long term context. This was with the aim to get very close to my data and respondents as much as possible.

The data was analysed using Template Analysis (King, 1998). Template Analysis was used because it focuses on the research questions from the outset. Template Analysis also gives more flexibility in the analytical process because it provides an opportunity to move between theoretical model and emerging data to answer the research questions. The procedure in TA was establishing preliminary coding, producing initial template, developing template, interpreting and presenting the analysis and comparing the themes to the findings from literature review.

The detailed analysis involves finding emerging themes and identifying how the themes combine and positively or negatively influence KI and application in the case organisation. The analysis involves the whole contents of the data as well as focusing on the main themes related to the research questions. This helped me to understand and describe the general

overview of KI and application in the case organisation as well as interpret the main themes in terms of answering the research questions.

1.6. Research Contributions

The study contributes to KI literature by describing the features of knowledge in an organisation and exploring KI and application process. The study introduced new multiple stages-multiple factors approach to KI and application in the international development NGO. This new approach was based on the argument that knowledge in an organisation cannot be efficiently integrated and applied without sharing, absorbing and combining. This multiple stages-multiple factors is a holistic approach that shows how KI is influenced by individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interactions and network activities in the organisation. The study also analysed the interplay of these various factors and identified how they negatively or positively influence KI and application process.

The practical implication of this study is that it clarifies the process through which knowledge in an organisation can be applied. The findings in this study give managers possible guidelines on how to manage their knowledge resources more effectively and efficiently. The study also clarified the implications of the findings for different practitioners such as charitable NGOs, management consultants, human resource practitioners and other business communities.

1.7. Structure of the Thesis

This thesis consists of eight chapters. After the introduction, chapter two and three are literature reviews. Chapter two describes knowledge in an organisation in which different

perspectives of the concepts of knowledge are discussed and defined. This chapter also critically analyses the literature on the KBV. Chapter three analyses the KI and application perspectives of behavioural view of a firm, knowledge governance approach, social capital and network theories, human resource development, knowledge leadership and psychological views. At the end of this chapter, the gaps in literature were identified and the main research questions that emerged from the literature review presented.

Chapter four discusses the discourse and research methodology adopted in this study. This chapter describes the case study method including advantages and disadvantages, sampling of research participants, data collection and analysis method. Chapter five and six presents the findings. Chapter five describes the general overview of KI and application in the case organisation. Chapter six presents detailed analysis of KI and application process as related to aims and objectives of the study and the research questions.

Chapter seven presents the discussion of the findings and describes the proposed new approach to KI and application process. In this chapter, the theoretical and practical contributions of this research were described and the limitations of the study and directions for future research provided. The final chapter is the conclusion.

CHAPTER 2

KNOWLEDGE IN AN ORGANISATION AND KNOWLEDGE BASED VIEW

2.1. Knowledge in an organisation

A number of philosophers and KM scholars (Crane, 2013; Davenport and Prusak, 1998; Nonaka, 1994; Nonaka and Takeuchi, 1995; Pailthorp, 1969) have written much on the concept of knowledge. However, recent studies show that the understanding of knowledge is far from clear. '*Epistemologists have been struggling with defining the concept of knowledge for thousands of years, yet a universally accepted definition of knowledge has not surfaced'* (Van den Berg, 2013 p.160).

Knowledge is seen as a justified true belief (Nonaka, 1994; Pailthorp, 1969) which is a dynamic human process of justifying personal belief toward the truth (Nonaka and Takeuchi, 1995). Knowledge Based View (KBV) scholars tend to perceive knowledge as a *fixed resource* that can be captured, stored and disseminated (Barney, 1991; Conner, 1996; Grant, 1996a; Grant, 1996b). Knowledge is also viewed, by other scholars, as *a dynamic resource* that interacts and interchanges continuously (Davenport and Prusak, 1998; Nonaka and Takeuchi, 1995). Knowledge is *'a fluid mix of framed experience, values, contextual information and expert insights that provides a framework for evaluating and incorporating new experiences and information. It originates in and is applied in the minds of knowers'* (Davenport and Prusak, 1998 p.4). This definition suggests that knowledge is not clear or simple concept. It is a mixture of various elements; it is fluid as well as formally structured; it

is intuitive and therefore hard to capture in words or understand completely in logical terms. Knowledge is also part of human complexity and difficult to predict.

In a broader sense, knowledge is defined as *'a dynamic human process of justifying personal belief toward the truth'* (Nonaka and Takeuchi, 1995 p.58). Nonaka and Takeuchi (1995) elaborated on the idea of knowledge conversion and stressed the mutual complementary nature of tacit and explicit knowledge. They argue that the tacit and explicit knowledge interact with and interchange into each other in the creative activities of human beings. *'In a knowledge creating company, there are four patterns of knowledge creation- socialisation, articulation, combination and internalisation-these patterns of knowledge creation continuously interchange in a spiral way'* (Nonaka and Takeuchi, 1995 p.99). They argue that the spiral nature of knowledge evolves continuously with interplay between tacit and explicit knowledge at individual and organisational levels.

Nonaka et al. (2000) further argue that knowledge is described as dynamic, since it is created in social interactions amongst individuals and organisations and it is context specific, as it depends on a particular time and space. They also argue that without being put into context, knowledge is just information, not knowledge. Information becomes knowledge when it is interpreted by individuals and given a context and anchored in the beliefs and commitments of individuals (Nonaka et al., 2000).

In addition to inconsistent definitions, KBV scholars provide different dimensions to knowledge. The most popular knowledge dimensions are tacit and explicit knowledge (Nonaka, 1994; Polanyi, 1966). Recently, Van den Berg (2013) introduced another dimension of knowledge known as '*encapsulated knowledge'*.

Tacit knowledge refers to the knowledge that is difficult to codify and communicate in symbolic form and/or natural language (Polanyi, 1966). Different scholars describe tacit knowledge in different ways. For example, (Conklin, 1996; Guerrero and Pino, 2001) state that tacit knowledge is similar to *informal knowledge* that usually live in the human memory and valuable asset. Conklin (2001) argues that informal knowledge is background and formal knowledge foreground because formal knowledge lacks history and context behind the formal document that involve thinking and learning. Boisot (1998) argues that knowledge is scattered in society and is not fully captured, codified, shared and used. Mabey and Finch-Lees (2008) argue that organisational learning resides not only in standard operating procedures, systems and structures but also resides in a process of *episodic learning* and collective memories of what works and what does not work.

Alavi and Tiwana (2002) state that although knowledge is held at all organisational levels, the most valuable knowledge remains unarticulated, taking the form of *know- how*, *expertise* and *intuitions*. They also suggest that different levels of 'tacitness' exist in knowledge and may be unclear to categorise knowledge into defined dimensions. Tacit knowledge is defined as '*the value endowing meta-resource originating from thought, reflection, or experience that remains resident in the human mind'* (Van den Berg, 2013 p.175). Meta-resource in this context refers to knowledge because knowledge coordinates other organisational resources.

Explicit knowledge is the knowledge that can be articulated, codified and communicated in symbolic form and/or natural language (Polanyi, 1966). Lam (2000) states that explicit knowledge is the knowledge that can be easily codified, stored at a single location and transferred across time and space independent of individuals. Sometimes writers use the terms '*explicit knowledge'* and *'codified knowledge'* interchangeably. For example, Van den Berg

defined codified knowledge as *'the value endowing meta-resource originating from thought, reflection, or experience that is expressed as information using systems of symbols'* (Van den Berg, 2013 p.168).

Encapsulated knowledge refers to the knowledge concealed in an artefact's design and technology; embedded in machines and other physical technologies (Van den Berg, 2013). Encapsulated knowledge facilitates the retention of complexity that may only be made explicit through reverse engineering, inspection, or compositional analysis (Popadiuk and Choo, 2006).

The KBV also categorises knowledge into *individual knowledge* and *organisational knowledge*. *Individual knowledge* is the knowledge possessed by individuals and refers to cognitive issues, individuals' expertise and skills (Sitlington, 2012). Individual knowledge is defined as *'that part of organisation's knowledge which resides in the brains and bodily skills of individuals'* (Lam, 2000 p.491). It involves all the knowledge possessed by individuals that can be applied independently to specific types of tasks and problems. Individual knowledge encompasses both implicit and explicit knowledge.

Organisational knowledge is the accumulated knowledge of individuals within an organisation. Organisational knowledge *'encompasses the shared and accumulated knowledge of individuals within an organisation that creates the organisational memory drawn upon in decision-making'* (Sitlington, 2012 p.113). Although organisational knowledge includes knowledge and experience of individuals, it is also a function of organisational culture, systems and procedures inherent in organisational transactions, norms, interactions and the physical structure of the organisation, Walsh and Ungson (1991) (cited in Sitlington,

2012 p.113). Organisational knowledge also encompasses tacit and explicit knowledge. The most common tacit organisational knowledge is routines (Becker, 2004).

Although the definitions of knowledge range from practical to philosophical and from narrow to broad concept, this study is not concerned with broader conceptual analysis of knowledge. The focus of this study is '*knowledge in an organisation'* because knowledge in an organisation is different from the general understanding of knowledge in the society. Lambe (2011) argues that the dynamics of knowledge use within organisations are substantively different from the dynamics of knowledge use within societies, thus it is difficult for KM to be effective without an understanding of these different dynamics and their interactions.

The analysis in this section suggests that knowledge in an organisation is a broad concept that has multiple classifications, several meanings, dynamic and continuously changing (Davenport and Prusak, 1998; Nonaka and Takeuchi, 1995). Knowledge is dynamic because it is active and undergoing continuous change and development. The dimensions of knowledge are interchangeable because tacit knowledge can be converted to explicit knowledge and vice versa (Nonaka and Takeuchi, 1995). It is difficult to put a demarcation line between individual and organisational knowledge because organisational knowledge is the accumulated knowledge of individuals within an organisation (Sitlington, 2012) and one advances the other.

Knowledge in an organisation refers to an understanding gained from interpretation, absorption and application. This understanding can be seen as a '*conceptual whole'* that encompasses individual knowledge, organisational knowledge and the knowledge that resides in informal social interactions and networks of organisational members.

Although the main locations of knowledge are individuals' brains, organisational repositories and social interactions, it is not possible to put clear demarcation between the knowledge in these locations. Individual knowledge, organisational knowledge, tacit knowledge and explicit knowledge continuously interchange and co-existence at the same time. Sometimes, it is not even possible to know the existence and location of knowledge, but it can only be inferred from individual and organisational activities. '*Knowledge is continuously shaping and being shaped by social practices of individuals in an organisation'* (Schultze and Stabell, 2004 p.558). In this study, knowledge in an organisation is understood as a conceptual whole without categorising it into tacit, explicit, encapsulated, individual or organisational knowledge. In other words, unlike the KBV, which tends to perceive knowledge as a fixed resource (Barney, 1991; Conner, 1996; Grant, 1996a; Grant, 1996b), in this study, knowledge is seen as a variable intangible resource that has different dimensions and resides in various locations. In order to clarify these plural concepts, in this research, knowledge is viewed as *holistic variable resource*.

As a holistic variable resource, knowledge has no fixed structure or form, but it is fluid and flexible. In addition to fluidity and flexibility of knowledge, the subjective human perceptions and meanings people give to the concept of knowledge are important aspects in the KI. Raymond et al. (2010) argue that the challenges associated with KI are the fundamental differences in the way people perceive the nature of knowledge. Also knowledge is influenced by human and contextual factors. That is to say, the individual cognitive and behavioural factors as well as the context in which the knowledge is shared and integrated may vary depending on individuals and organisations. From psychological perspectives, for example, Gong et al. (2012) argue that individual behaviour at work is influenced by personal

characteristics of individuals (personality and attitudes) and the environment in which individuals work and interact.

KM literatures suggest that knowledge in an organisation is dynamic and interchangeable. Due to the dynamic and interchangeable nature of knowledge in an organisation, it is not sensible to categorise knowledge into locations and forms. The assumption in this study is that when we analysis the integration and application of knowledge in an organisation, it is appropriate to view knowledge as *holistic variable resource*, rather than categorising and locating it in specific place. The important question in this research is to clarify how knowledge in an organisation is understood and to explore the process of KI and application in an international development NGO. In other words, the main objective of this study is to analyse how knowledge as a *holistic variable resource* can be integrated and applied in an organisation.

2.2. The Knowledge Based View (KBV) of a firm

Although Economists and strategy theorists formulated the outline of a KBV of a firm (Demsetz, 1991; Grant, 1996a; Grant, 1996b; Kogut, 2000), the origin of KBV is attributed to (Grant, 1996a; Grant, 1996b; Spender, 1996). Grant (1996a) articulates the theoretical foundation for a KBV, both as a theory of organisation and as a theory of strategy. Grant's perspective on KI is widely used within the field of strategy.

Drawing on research into competitive dynamics, the Resource Based View of the firm, organisational capabilities, competencies and organisational knowledge and learning, Grant proposed the Knowledge-Based Theory (KBT) of organisational capability. The aim of the KBT proposed by Grant was to extend understanding of the determinants of competitive

advantage in dynamically-competitive market environments by analysing the role of knowledge in organisational capabilities. In knowledge based perspective, a firm is seen as '*a knowledge-integrating institution'* (Grant, 1996a; Grant, 1996b) or *'a social community specialising in the speed and transfer of knowledge'* (Kogut and Zander, 1996 p.503). The general concept of the KBT is the assertion that one of the strategic capabilities of the firm is its ability to integrate knowledge (Grant, 1996a; Grant, 1996b) i.e. to transform dispersed, tacit and explicit competencies into a wide body of organisational knowledge (Nonaka, 1994).

Central to the KBT of a firm is KI because Grant stated that a comprehensive KBT of a firm embraces KI. He argues that the primary role of a firm and the essence of organisational capability is integration of knowledge. KI involves knowledge creation because when knowledge is integrated at individual level or at organisational level, new knowledge is created as a result of combinations of ideas, insights, concepts or perspectives.

The KBV scholars stress the importance of the distinction between tacit and explicit knowledge (Nonaka, 1994; Polanyi, 1966) because they assume that tacit knowledge is difficult to imitate and relatively immobile and constitute the basis for sustained competitive advantage. However, knowledge is dynamic, complex and contextual resource. The categories of knowledge into tacit and explicit dimensions (Nonaka, 1994; Polanyi, 1966) and individual and organisational (Sitlington, 2012) may not seem relevant or clear in the context of real organisations because knowledge in an organisation is fluid, flexible and dynamic resource that changes continuously. The concept of knowledge in the organisation is different from the philosophical understanding suggested by KBV scholars.

In Grant's view, knowledge is held by individuals and yet it is also embedded in the organising principles by which people voluntarily cooperate in an organisational context.

Although the KBV analytical framework incorporated key relevant theories, it did not consider the behavioural aspects that influence whether individuals want to share their knowledge voluntarily or not. Also the influences of organisational practices and informal interactions have not been considered in the KI analysis.

Methodologically, empirical research was not sufficiently incorporated in the KBV analysis. In other words, empirical studies that figure out how knowledge in organisations can be integrated and applied were not given due attention. For example, Haddad and Bozdogan (2009) argue that KI has been explored in some detail as a concept but there is a lack of insights about what organisations actually do to integrate their knowledge. This underscores the gap in empirical research in KI.

To sum up, the analysis of KI and application requires a holistic understanding of knowledge because classifying knowledge into dimensions and categories may not seem relevant in the context of real organisations. KI also need wide-ranging analysis that incorporates behavioural theories, organisational knowledge governance practices and informal interaction perspectives. Moreover, the KI process need to be illustrated in the context of organisations because I believe that practitioners' understandings, views and perceptions are important elements in designing how knowledge in an organisation is integrated and applied.

Research on KBV rests on fundamental inconsistencies in how knowledge is conceptualised beyond the commonly accepted distinction between tacit, explicit, individual and organisational knowledge. Grant himself stated that '*the emerging knowledge based view is not, as yet, a theory of a firm. There is insufficient consensus as to its precepts or purpose let alone its analysis and predictions, for it to be recognised as a theory'* (Grant, 1996b p.110).

Also some researchers including Grant argue that KBV is an outgrowth of the resource-based view where the concept of resources is extended to include knowledge (Deeds and Decarolis, 1999; Grant, 1996a; Grant, 1996b). Other researchers see KBV as an extension of organisational learning providing new insights into organisational functioning (Kogut and Zander, 1992; Kogut and Zander, 1996). Given these theoretical perspectives on knowledge, KBV is not yet a theory that links independent variables to a specific KI and application process (Eisenhardt and Santos, 2002). Thus, arguably, KBV is not a definite theory so far and is not yet able to guide management practices. Therefore, it is difficult to achieve efficient KI with the existing theoretical framework because organisations have no clear framework in which they manage their knowledge resources.

I believe that comprehensive analysis that incorporates individual, organisational and informal social interaction factors as well as the views of practitioners in an organisation can provide more insightful theory of KI and application. In order to address this gap, this study explores how knowledge is understood in an international development NGO and how it is integrated and applied.

2.2.1. Knowledge Integration (KI)

The concept of KI was introduced in the early 1980s (Nelson and Winter, 1982). *'Production requires the complex integration of multiple types of knowledge within the team production'* (Grant, 1996b p.112). KI takes place in production, service delivery, team work, decision making and innovation activities because in the process of accomplishing these tasks knowledge from different sources are shared, interpreted and applied. The notion of KI is *'an ongoing collective process of constructing, articulating and redefining shared beliefs through the social interaction of organisations members'* (Huang and Newell, 2003 p.167).

Following the knowledge-based theory of firm, (Alavi and Tiwana, 2002 p.1030) define KI as *'synthesis of individuals' specialised knowledge into situation-specific systemic knowledge'*. This definition is based on the fact that the specialisation of organisation members turns organisations into distributed knowledge systems in which a range of knowledge that is required for production or services is dispersed over organisation members (Tsoukas, 1996). Therefore, organisational members have to integrate dispersed fragments of specialised knowledge held by individuals, i.e., to apply this dispersed knowledge in a coordinated way (Becker, 2001; Grant, 1996a; Grant, 1996b).

KBV scholars define KI differently. Grant views KI as a process of coordinating the specialised knowledge of individuals. Yang defines KI as *'creating, transferring and maintaining information and knowledge'* (Yang, 2005 p.123). Best et al, (2008) (cited in Riley et al., 2012) define KI as *'the effective production and use of evidence into the decisions, practices and policies of organisations and systems'*. The conceptual definition of KI was given by Haddad and Bozdogan as *'bringing together diverse knowledge from multiple sources to bear on a complex problem or task'* (Haddad and Bozdogan, 2009 p.11). *'KI is a fundamental process by which firms gain the benefits of internal and external knowledge, create competitive advantage and develop capability'* (Mohannak, 2011 p.13).

As illustrated in this review, there are different conceptual understandings of KI and scholars give different definitions to the concept of KI. It seems that one of the reasons for different understanding of the concept of KI is lack of distinction between the concepts of information and knowledge. This leads to lack of clear understanding of the information sharing and KI. I argue that there is a clear distinction between knowledge and information and consequently between knowledge sharing and KI. My view is that knowledge sharing is only one aspect,

may be the prerequisite, of KI because, in order to combine and assimilate external knowledge into existing knowledge, the external knowledge needs to be shared in the first instance. Okhuysen and Eisenhardt (2002) empirically demonstrated the distinction between knowledge sharing of one's information and KI by which individuals combine their information in order to create new meanings. Another reason for different understanding of the concept of KI is lack of consensus on the sources and locations of knowledge, i.e. individual and organisational knowledge.

My understanding of KI is slightly different from definitions provided by KBV scholars, but closely related to the definition given by Haddad and Bozdogan. From my experience and understanding, I see KI as a *process* that involves sharing, absorbing, combining and utilising knowledge. KI is a process that incorporates knowledge sharing, knowledge absorption, knowledge combination and application. Hence, by combining various definitions and adding my own experience, I define KI as '*the process of absorbing and combining shared knowledge with existing knowledge to develop organisational capabilities and apply it to organisational tasks'*.

This definition is used throughout this thesis. Four important concepts need to be clarified in this definition. *Knowledge sharing*- refers to the willingness and act of individuals in an organisation to share with others the knowledge they have acquired or created (Gibbert and Krause, 2002). *Knowledge absorption* refers to the process of recognising the value of new external knowledge and assimilating with the existing knowledge (Cohen and Levinthal, 1990). *Knowledge combination* refers to creating or developing new insights and understanding. *Knowledge application* refers to utilising the coordinated knowledge, which is also referred to as capabilities, to perform organisational tasks or to solve problems (Grant,

1996a; Grant, 1996b). Sometimes knowledge combination overlaps with knowledge application. KI is also about cooperation between different practices, i.e. how knowledge which is created in one working context is used by another. As Grant stated:

> *'If Grant and Spender wish to write a joint paper together, efficiency is maximized not by Grant learning everything that Spender knows (and vice versa), but by establishing a mode of interaction such that Grant's knowledge of economics is integrated with Spender's knowledge of philosophy, psychology and technology, while minimizing the time spent transferring knowledge between them'* (Grant, 1996b p.114).

Examples of KI capabilities are combining a variety of individual skills to create revenues and pooling various functional and personal expertise to accomplish tasks. A hospital's capability with respect to cardiovascular surgery is dependent upon integrating the specialist knowledge of surgeons, anaesthetists, radiologists, operating room nurses and several types of technicians. McDonald's Restaurants' capability in preparing and serving hamburgers stems from the integration of specialised knowledge across a large numbers of restaurant employees (Grant, 1996a).

Although the existing KBV literature provides many insights into KI, central to the analysis are KI mechanisms through which individual knowledge is integrated. In this context, KI mechanisms refer to techniques of integrating individual specialised knowledge in the organisation. KBV scholars outlined the mechanisms through which knowledge is integrated. In other words, the main focus of the KBV scholars' analysis was the techniques and mechanisms of KI. For example, Grant (1996a) states that central to the KI analysis was exploring the coordination mechanisms through which firms integrate the specialised

knowledge of their members. The main mechanisms proposed by KBV scholars are described below:

2.2.1.1. Overview of Knowledge Integration Mechanisms

KI mechanisms are related to techniques used in integrating individual knowledge into organisational knowledge. Central to previous KI research was the analysis of the mechanisms through which individual knowledge is integrated within firms in order to create organisational capabilities. The key KI mechanisms stated by KBV scholars were *direction* (Demsetz, 1991; Grant, 1996a; Grant, 1996b) and *organisational routines* (Becker, 2001; Felin and Foss, 2009; Nelson and Winter, 1982), group problem solving (Okhuysen and Eisenhardt, 2002; Stasser et al., 2000); thinking along (Berends et al., 2011; Berends et al., 2004); networked knowledge communities (Kodama, 2005; Kodama, 2011; Okhuysen and Eisenhardt, 2002); simple informal interventions (Okhuysen and Eisenhardt, 2002) and knowledge transfer (Hollingshead, 1998; Sammarra and Biggiero, 2008).

Directive- directives refer to specific sets of rules, procedures, heuristics and instructions developed through the articulation of specialists' tacit knowledge for efficient application by non-specialist and specialists in another fields (Grant, 1996b). Directives are working standards that regulate interactions between individuals in the organisation and facilitate KI.

Organisational routines- Organisational routines provide a mechanism for coordination which is not dependent upon the need for communication of knowledge in explicit form (Grant, 1996b). Converting tacit knowledge into explicit knowledge in the form of rules, directives, formulae and expert system involve substantial knowledge loss (Polanyi, 1966).

Organisational routines help to integrate knowledge without loss of its contents. Grant states that direction and organisational routines are two inter-related mechanisms.

Group problem solving- Group problem solving consists of direct combinations of knowledge previously dispersed between individuals in order to solve a problem or make a decision. The argument is that while individuals own knowledge, the interaction of individually owned knowledge with collective or group level knowledge contributes to KI.

Thinking along - Thinking along is a KI that is concerned with the application of knowledge. Application of knowledge is viewed as is an active process of KI. 'Thinking along', is an interactive process that allows a person with a problem to tap into someone else's knowledge base without them having to get involved in each other's' ways of knowing (Berends et al., 2011). Thinking along is the temporary application of knowledge. It is a temporary interaction without regularised pattern.

By thinking along, knowledge is not integrated by transferring it, but by applying it temporarily to a problem of somebody else. The process of thinking along takes place in interactions between organisation members. Central to thinking along is the generation of new ideas, comments or questions. When thinking along with somebody, one develops new ideas with regard to a problem. The individual involved may not know in advance about the subject. His /her knowledge is developed during the interaction between the individuals. In this process, each individual need not to be engaged in collaborative problem solving with regard to a shared problem. The episode consists of temporary cognitive work with regard to somebody else's problem. Much of the knowledge used in thinking along is tacit and situated.

Networked knowledge communities - The 'networked knowledge communities', as a means of obtaining knowledge that is required by a company to quickly establish its own position in an environment encompassing new markets and technologies (Kodama, 2005; Kodama, 2011). Networked knowledge communities represent a process of integrating diverse core knowledge inside and outside the company. It is obtaining new knowledge in the form of new product and services and is a vital element of the dynamic view of strategy.

Simple informal interventions - Simple informal interventions such as directions to manage time, questioning others and so on are effective techniques to integrate knowledge. Okhuysen and Eisenhardt (2002) propose that simple informal interventions as an effective KI mechanism in small groups. Management interventions in social activities of organisational members promote the organisational values by standardising behaviours that allow the creation of predictability, order and consistency and acts as a coordination mechanism of knowledge in an organisation (Moreno- Luzón and Begona Lloria, 2008). This suggests that informal intervention of management in the social activities of its members ease smooth communication and interaction among organisational members and facilitate KI.

Knowledge Transfer - Knowledge transfer refers to the notion in which one organisation learns from the experience of another. Knowledge transfer is '*an event through which one organisation learns from the experience of another'* (Easterby- Smith et al., 2008 p.677). This refers to external knowledge transfer. Sammarra and Biggiero (2008) state some examples of external knowledge transfer includes training members of the recipient organisation, planned socialising activities, transferring experienced personnel and providing documents, blueprints or hardware.

Knowledge transfer in organisations is seen as a process through which one unit (e.g., group, department or division) is affected by the experience of another (Argote and Ingram, 2000). This definition refers to internal knowledge transfer. At the individual level, people are important repositories of organisational knowledge and agents of learning. They are able to transfer tacit as well as explicit knowledge and to adapt their knowledge to new contexts. Argote and Ingram (2000) state that by embedding knowledge in interactions that involve people, organisations can achieve both internal and external knowledge transfer.

To sum up, the analysis of KI mechanisms shows that most of the mechanisms suggested by KBV were related to organisational mechanisms to integrate and use the knowledge in the organisation. For example, directives and routines are organisational level constructs used to integrate knowledge (Foss, 2009). While focusing on KI mechanisms, the KBV underemphasised the analysis of individual level factors and informal social interaction antecedents that play important role in KI and application process. In other words, KBV lacks the comprehensive analysis of how individual, organisational and informal social interaction antecedents combine and influence KI and application process.

Moreover, KBV assumes that KI mechanisms enable organisations to integrate individual specialised knowledge into organisational knowledge and create capabilities that help organisations to achieve sustainable competitive advantage. However, recent studies argue the lack of strong relationships between KI mechanisms and KI. For example, Moreno- Luzón and Begona Lloria (2008) in their analysis of the influence of organisational design variables on the creation of knowledge within large Spanish company suggested that there is insignificant relationship between standardisation of work processes (the existence of written

regulations, procedures and instructions for work) and knowledge creation and application. Another gap in KBV is the contradictory approaches of KI and application process.

2.2.1.2. Different approaches to knowledge integration

Over the last 30 years, the literature on the KBV of a firm has expanded in two contradictory perspectives- individualist (Grant, 1996a; Grant, 1996b; Simon, 1991) and collectivist (Haddad and Bozdogan, 2009; Nelson and Winter, 1982; Riley et al., 2012; Teece et al., 1997). The individualists argue that the individual level knowledge is a centre to the knowledge based analysis because knowledge resides in individuals. The collectivists argue that organisational level knowledge (collective knowledge) is a centre for the knowledge based analysis because knowledge is fundamentally a social phenomenon. Another dispute is how knowledge can actually be shared and integrated in an organisation. Accordingly, the literatures in the field of KBV can be broadly categorised into two extreme approaches- *Individualist approach* and *collectivist approach.*

Individualist approach- The individualist KBV scholars argue that the individual level knowledge is a centre to the knowledge based analysis because knowledge resides in individuals (Grant, 1996a; Grant, 1996b; Simon, 1991). This was originated from the assumption that most knowledge resides in individuals and focus on individual specialised KI (Grant, 1996a; Grant, 1996b). Simon (1991) argues that all organisational learning takes place inside human heads; an organisation learns in only two ways: (a) by the learning of its members, or (b) by ingesting new members who have knowledge that the organisation did not previously have. Individualist KBV scholars assume a priori individual-level knowledge and argue that individual-level controls are necessary since they confound the analysis and potentially provide a more parsimonious explanation of knowledge integration.

Individual KBV scholars emphasise that the role of individuals as the primary actors in knowledge creation and the principal repository of knowledge. For example, (Grant, 1996a; Grant, 1996b) argues that individuals are primary locus of knowledge and should be the basis for understanding new value creation and organisational outcomes. The recent literature supporting this argument is Foss (2007) that states firm level constructs such as capabilities, dynamic capabilities, absorptive capacities, communities of practices are *macro-level (*firm-level) constructs. Macro-level constructs are not clearly rooted in micro-foundations, which mean that their origin and nature not clear.

The review of literatures on Knowledge Governance Approach (KGA) and social capital suggest that, although individuals are the primary actors in learning and knowledge creation, they are not the only source because knowledge also resides in organisational repositories and informal social interactions. Individual learning cannot take place independently because individual knowledge is influenced by organisational knowledge and the knowledge in informal social interactions. Bhatt (2000) argues that individual knowledge is necessary for developing the organisational knowledge base; however, organisational knowledge is not a simple sum of the individual knowledge. Literatures on learning organisation suggest that organisational learning is based on individual learning and hence organisations cannot learn independently of their members. Learning in an organisation takes place in interactions with people, technologies, systems and practices. Social capital literature suggests that learning takes place in informal social interactions and networks of organisational members (Inkpen and Tsang, 2005).

These suggest that organisational knowledge is formed through unique patterns of interactions between technologies, techniques and people. Also there are knowledge in the organisational

repositories and in informal social interactions that may not be comprehended by individual brains (Mabey and Finch- Lees, 2008). Also individuals cannot learn and integrate their specialised knowledge in isolation. Instead, they do this through interactions with people, technologies and organisational practices.

Collectivist Approach- Collectivist approach KBV scholars assume that collective (firm-level) knowledge is centre for the knowledge based analysis. From the collectivist perspective, *'knowledge is fundamentally a social phenomenon that is different from the aggregation of individuals'* (Nahapiet and Ghoshal, 1998 p.246). Nelson and Winter (1982) state that possession of technical knowledge is an attribute of a firm as a whole. Firms are organised entities that are not reducible to what any single individual knows. Firms are not even a simple aggregation of competencies and capabilities of various individuals, equipment and installations of the firm. Spender (1996) points out that the collectivist presumes that the firm has an ability to know independently of its employees or their conscious reasoning.

Collectivists also assume that individuals are homogeneous in sharing knowledge and they emphasise collective knowledge-based work (Eisenhardt and Martin, 2000; Teece et al., 1997). They argue that individuals are homogeneous, infinitely malleable, or randomly distributed into organisations. Based on this argument, collectivists propose that knowledge must be viewed as collective (firm–level) and KI is more effective if approached collectively. For the collectivist KBV theorists the unit of analysis is *collective knowledge* (firm-level knowledge).

But behavioural theorists (Bock, 2005) suggest that individuals are not homogenous in sharing knowledge because different behavioural factors influence the knowledge sharing differently. They suggest that knowledge sharing depends on individuals' intentions and

behaviours. In the process of interaction of individuals there are so many variables in personal characteristics and situations that make behaviour difficult to analyse and predict (Gong et al., 2012). These suggest that individual knowledge sharing is influenced by individual behaviours and identities, organisational practices and informal social interaction factors. Kogut (2000) argues that organisations are not collections of rational agents; rather organisations learn and have knowledge to the extent that their members are flexible whose sense of self is influenced by the organisation's evolving identity.

To sum up, since the concept of KI was introduced by Nelson and Winter (1982), the research into KI has developed into individualist and collectivist extreme approaches. However, there was limited analysis that took place in between these two extreme views of knowledge based scholars. In other words, previous KI analysis did not incorporate micro (individual) level, macro (collective) level and informal social interaction factors into the analysis of KI. That is to say, previous KI and application analysis underemphasised the individual, organisational and informal social interaction factors in a single analysis to explore their impacts on the KI and application in an organisation.

The main drawbacks of KBV literatures are that they perceive knowledge as a *fixed resource and categorise it into dimensions and locations*. Both individualist and collectivist scholars assume that knowledge is categorised into individual specialised knowledge and collective organisational knowledge respectively. This led to the debates on the *units of analysis* and *priority of approaches*. Felin and Hesterly (2007) state that a critical implicit debate underlying much of knowledge and capabilities work is whether the individual or the collective is a source of new value or competitive advantage.

The assumption in this study is that knowledge in an organisation is a dynamic variable resource. Thus, classifying knowledge into dimensions (tacit, explicit) and categories (individual, organisational) undermine the dynamic nature of knowledge. Tacit and explicit knowledge continuously interchange. The individual knowledge and organisational knowledge are interrelated and both evolve continuously. As a result, in this study knowledge in an organisation is conceptual as *holistic variable resource* that change continuously.

Another drawback of KBV is focusing on *mechanisms* of KI and underemphasising the *process* of KI. KBV assumes that KI and application takes place at a single stage process. They argue that the use of appropriate KI mechanisms lead to effective integration of individual specialised knowledge into organisational knowledge (Grant, 1996a; Grant, 1996b). However, the single stage process undermines the interaction of different factors that influence KI and application in an organisation. This study focuses on the processes of KI and application and analyses KI process at multiple stages incorporating multiple influencing factors.

Based on a thorough review of literatures on individual knowledge sharing behaviours, KGA, social capital, HRD and psychological perspectives, I explored multiple sets of factors that facilitate or inhibit KI in an international development NGO. Central to this study is to analyse how individual knowledge sharing behaviours; organisational knowledge governance practices and informal social interaction antecedents individually as well as in combination impact on KI at multiple stages of the process.

CHAPTER 3

NOWLEDGE INTEGRATION AND APPLICATION PROCESS

During the process of accomplishing organisational tasks, knowledge embedded in individual brains, various repositories and relationships has to be shared, interpreted and integrated. Under this circumstance, the central activity of KI and application is the *processes* rather than the mechanisms of integration. The process of KI refers to how and in what way KI takes place in an organisation.

There are increasing research and arguments of scholars in Behavioural Theory of a firm (Bock, 2005; Cyert and March, 1963), KGA (Foss, 2007 ; Foss, 2009; Grandori, 2001), Social Capital (Bourdieu, 1989; Coleman, 1988; Granovetter, 1983; Inkpen and Tsang, 2005) and Network Theory (Lin, 1999; Lin, 2008) on how different variables impact on KI and application process in an organisation.

Unlike the KBV that tends to see KI as a single process, this study assumes that knowledge is integrated in a multiple stage processes and applied to multiple organisational tasks. The following section analyses the multiple stages of KI from multiple perspectives. Multiple stages involve knowledge sharing, knowledge absorption and knowledge combination and application. Multiple perspectives involve looking at KI from individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction and network characteristics of organisational members.

3.1. Knowledge Sharing

Knowledge sharing is the act of making knowledge available to others within an organisation. However, knowledge sharing was conceptualised by scholars in various ways. It ranges from the exploration of new knowledge through renewed combinations of existing knowledge to the exploitation of existing knowledge (Szulanski, 2000; Uzzi and Lancaster, 2003). Knowledge sharing is the willingness of an individual in an organisation to share with others the knowledge they have acquired or created (Gibbert and Krause, 2002). Knowledge Sharing in organisation is a process by which knowledge held by individuals is converted into a form that can be understood, absorbed and used by other individuals (Ipe, 2003). Knowledge sharing can also be seen as a process of knowledge exchange. It has been argued that the motivation for these different exchanges is related to the expectation of receiving something in return (Fiske, 1991). Knowledge sharing is about ensuring that existing knowledge is distributed within or across organisational boundaries (Grant, 1996a; Grant, 1996b).

As these various definitions suggest there is no clear conceptual understanding of knowledge sharing. Moreover, the concepts of knowledge sharing, knowledge absorption and KI are sometimes muddled up. For example, knowledge sharing is defined as *'a process by which knowledge held by individual is converted into a form that can be understood, absorbed and used by other individuals'* (Ipe, 2003 p.341). This definition includes the processes of knowledge absorption, integration and usage. However, knowledge absorption and integration presumes knowledge sharing because knowledge may not be absorbed and integrated if not shared in the first place. Okhuysen and Eisenhardt (2002) empirically demonstrate the relevance of a distinction between knowledge sharing of one's information and KI by which individuals combine their information to create new meanings. Although they stated the

distinction between sharing and integration, the distinction between knowledge and information was not clarified. Information and knowledge are different concepts, although some interchangeability and dynamism exists between them. Dretske (1981) sees knowledge in a hierarchal view- *Data, Information and Knowledge,* and state that data is a raw number and facts, information is processed data and knowledge is authenticated information.

In this study, knowledge sharing is viewed as *'the willingness and act of individuals in an organisation to share with others the knowledge they have acquired or created'* Gibbert and Krause (2002) (cited in McNeish and Mann, 2010 p.20). Knowledge sharing is a fundamental step in the process of KI. Since it is assumed that knowledge is dispersed and embedded in individuals, it would be difficult to initiate KI without knowledge sharing. Even if knowledge resides in organisational repositories, individuals are agents through which most knowledge is transmitted from one source to the other. Without effective functioning of knowledge sharing, the knowledge embedded and dispersed in individuals will be less likely integrated into the organisational level knowledge.

This suggests that knowledge sharing is a vital *moderating factor* in KI. While the KBV focuses on the mechanisms of KI, the knowledge sharing processes and how actually the knowledge is shared before it is absorbed and integrated was not fully addressed. The factors that facilitate or hinder this sharing process were underemphasised in the previous KI analysis. My argument is that knowledge sharing is influenced by several factors that are related to individual, organisational and informal social interactions. Bock (2005) argue that the movement of knowledge across individuals and organisational boundaries, into and from repositories, into organisational routines and practices is ultimately dependent on employees'

knowledge sharing behaviours. Tohidinia and Mosakhani (2010) add to the argument by suggesting that individual factors had a great impact on knowledge sharing and receiving.

Foss (2007) argues that knowledge sharing is influenced by the deployment of governance mechanisms, particularly formal aspects that can be manipulated by management. Hence, if managers and practitioners tend to involve their organisational members in knowledge sharing activities, they should investigate individual barriers and try to remove them (Riege, 2005). Organisational climate had a positive impact on subjective norms about knowledge sharing (Tohidinia and Mosakhani, 2010).

The social capital scholars argue that knowledge sharing is facilitated by intensive social interactions of organisational members (Inkpen and Tsang, 2005; Lane and Lubatkin, 1998; Yli- Renko et al., 2001; Zahra et al., 2000). Human interactions and networks are one of the key vehicles for sharing knowledge and that trust among individuals was related to informal networks (Cardinal and Hatfield, 2000).

The aim of this research is to analyse how various individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction factors combine and influence KI at knowledge sharing, knowledge absorption and knowledge combination and application stages. Due to interconnectivity of factors in an organisation, many researchers analyse the relationship between factors in an organisation. For example, Senge (1990) (cited in Costa et al., 2013 p.1) suggests that the analysis of organisational learning is only successful when it is based on an understanding of how the whole organisational system is connected, rather than a focus on individual parts. Armstrong and Taylor (2014) argue that organisational learning is based on individual learning and the

significance of KM and the techniques available to support it can be learned in formal training sessions or monitoring programmes designed and facilitated by the HR functions.

This study assumes that individual, organisational and informal social interactions factors are interconnected and influence and co-influence KI and application process in an organisation. Accordingly, this section analyses how individual knowledge sharing behaviours, organisational knowledge management practices and informal social interaction characteristics facilitate or hinder KI at knowledge sharing stage.

3.1.1. Individual Behaviours and Knowledge Sharing

An organisation's ability to effectively leverage its knowledge is highly dependent on its people. It is through the organisational members that knowledge is created, shared and applied in an organisation. In other words, leveraging knowledge is only possible when people can share the knowledge they have and build on the knowledge of others. The use of the term '*sharing'* implies that this process of presenting individual knowledge in a form that can be used by others. Sharing involves some conscious action on the part of the individual who possesses the knowledge. The Behavioural Theory of a firm suggests that knowledge sharing depends on individuals' intentions and behaviours. Without the intention of individuals to share their knowledge, it is difficult to accomplish knowledge sharing.

Individuals' knowledge does not transform easily into organisational knowledge even with the implementation of knowledge management technologies. Different norms govern people's behaviour in economic and non-economic activities. Also appropriate behaviour varies according to context and the nature of the goods being exchanged (Fukuyama, 1995). Thus, whether knowledge sharing is viewed as an economic or non-economic exchange, it is

socially constructed and depends upon individual perceptions and contextual factors such as organisational structures and incentives (Wasko et al., 2004). People will be motivated to engage in knowledge sharing if they receive something in return for the knowledge they share; with the expectation that benefits of knowledge sharing will outweigh the costs (Bock, 2005).

In this study, I develop an integrative understanding of the factors that support or inhibit individuals' knowledge sharing behaviours. The main individual factors of knowledge sharing analysed in this section are opportunistic behaviour, perception of competition and power politics.

Opportunistic behaviour- Williamson (1996) argues that in reality, individuals are opportunists and tend to hoard rather than share knowledge. Particularly in principal-agent situations when both parties have conflicting interests, the individual's behaviour is often anticipated to be self-interest seeking or opportunistic (Nickerson and Zenger, 2004). Under this situation individuals may hold their knowledge. Davenport (1998) argues that hoarding knowledge and looking guardedly at the knowledge offered by others are natural human tendencies. However, there are different perspectives to this argument that state opportunistic behaviour in knowledge only exists to a minor degree than expected. [1]

Cabrera and Cabrera (2002) in their analysis of knowledge sharing and social dilemmas, posited that shared knowledge becomes a public good from which interdependent members of an organisation can benefit directly, whether or not they have contributed. This may lead to

[1] Some literature focused more on the assumption that opportunistic behaviour in knowledge sharing activities only exists to a minor degree, and that individuals are willing to share knowledge than often anticipated (Adler 2001; Boer, Van Ballen and Kumar 2004; Cross and Parker 2004 and Ferrary 2003).

opportunistic behaviour and free-riding as there is a possibility to benefit without contributing. They argue that the cost to individuals may not only be in the effort and time spent in sharing knowledge but also by sharing knowledge they may diminish their own opportunities for advancement or enhance the advancement opportunities of others. Some people see knowledge sharing as *'fear of losing one's unique value'* (Renzl, 2008). Christensen (2005) states that the willingness of organisational members to engage in knowledge sharing can be viewed on a continuum from *purely opportunistic behaviour* regulated by management authority to an apparently *altruistic attitude* fostered by social norms and group identity. This emphasises that individuals across an organisation are different in knowledge sharing behaviours. This suggests that appropriate individual motivation contributes to reducing opportunistic behaviour in knowledge sharing.

Perception of competition- Individual behaviour and perception about knowledge sharing is very important antecedent in knowledge sharing. Environments that are highly competitive are likely to have problems with knowledge sharing (Ipe, 2003). Davenport and Prusak (1998) argues that hoarding knowledge may, in part, be the result of perceived competition between users and potential providers of knowledge. Such competition is likely to vary across pairs of providers and users. A major barrier to informal exchange of knowledge is the risk that the receiver of knowledge may use it against the interests of the sender (Haas and Hansen, 2005; Inkpen and Tsang, 2005; Tsai, 2002). Also individuals may choose either to use or disregard the new information shared with them based on their perceptions.

Power politics- Some individuals perceive that power comes from the knowledge they possess. This individual perceptions may lead to knowledge hoarding instead of knowledge sharing (Davenport, 1997; Gupta and Govindarajan, 2000). According to Brown (1999)

individuals use knowledge for both control and defence. In a competitive environment, withholding knowledge from those considered competitors is often regarded as being useful to attain one's goals (Pfeffer, 1992). Power politics is therefore an important aspect of knowledge sharing in organisations (Weiss, 1999).

The study carried out by Donnelly (2008b) analysis how knowledge management practice was deployed in multinational consultancy firms and stated that *'knowledge hoarding'* is linked to power and individual's position in networks and the firm. The study argues that power and individual's positions are strong obstacles in diffusing knowledge at both local and national/international levels. This finding was supported by Seba and Rowley (2010) who state that some employees in a public sector organisation see knowledge as private property and view that knowledge is closely coupled with power and related to their promotion prospects.

These findings suggest that, if the type of knowledge to be shared is linked to power, individuals may hesitate to share that particular knowledge. Under competitive situations withholding knowledge that is related power to may be increased.

3.1.2. Knowledge Governance Mechanisms and Knowledge Sharing

Knowledge Governance Approach (KGA) refers to choosing organisational structures and mechanisms that can influence the processes of sharing, integrating, creating and using knowledge in preferred directions and towards preferred levels (Foss, 2007). The concept of knowledge governance has existed since 1960. Peter Drucker asserts that like other assets, knowledge should be properly governed and understood. Many scholars have moved the

argument to one that emphasises the '*division of knowledge'* (Grant, 1996a; Grant, 1996b; Kogut and Zander, 1996) and the "embeddedness" of organisational knowledge (Lam, 1997).

The term "*knowledge governance*" seems to have been first used by Grandori (1997) who offers a series of examples of "*governance mechanisms*" that support knowledge sharing and integration processes such as decision rights, routines, rewards systems, modes of communication and so on. She argued that governance mechanisms can be combined in multiple ways across governance structure and influence various knowledge-related processes via their effects on individuals' knowledge sharing, creating, integrating and use. KGA has recently become a new research field, which attempts to systematically analyse the intersection of organisations and their knowledge resources (Foss and Michailova, 2009).

Foss (2007) examines the links between knowledge-based units of analysis with diverse characteristics and governance mechanisms with diverse capabilities of handling knowledge transactions. In this context, knowledge transaction refers to *'knowledge sharing, integration and creation'* (Foss, 2007). It is the transfer of an identifiable "piece" of knowledge from one actor to another (Grandori, 2001) and associated economic exchanges such as incentives and rewards for knowledge sharing.

The foremost principle of designing knowledge governance mechanism is about how to make the dispersed and embedded knowledge flow smoothly within organisation using organisational mechanisms. Nooteboom (2000) argues that only through organisational design will the knowledge localised and dispersed in each carrier in an organisation be effectively linked and be utilised. This suggests that appropriate and effective design of knowledge governance mechanism is a necessary condition for effective application of organisational knowledge. KGA scholars argue that knowledge sharing and integration is influenced by the

deployment of formal governance mechanisms that can be manipulated by management. The formal aspects of governance mechanisms refer to *organisation structure* (Cohen and Levinthal, 1990), *job design* (McEvily and Chakravarthy, 2002), *reward systems* (Beugelsdijk, 2008) and *leadership* (Mabey and Freeman, 2010; Srivastava et al., 2006).

However, KGA did not address how the specific governance mechanisms impact on specific knowledge processes. The concept of *'knowledge process'* which is frequently mentioned in the KGA literature do not specify the impacts of governance mechanisms on particular knowledge process such as knowledge sharing, knowledge absorption or KI. KGA mentioned the knowledge based units of analysis that have diverse characteristics, however, did not address which unit of analysis is appropriate to which governance mechanism. Knowledge based units of analysis are various; they can be knowledge sharing, knowledge absorption, KI, knowledge exchange, routines, capabilities and so on. Knowledge governance mechanisms are also diverse and they can be structure, culture, decision rights, information systems, accounting system and so on.

This study focuses on specific knowledge based unit, *'knowledge integration process'* and analyses how the specific knowledge governance mechanisms significantly impact on knowledge sharing and integration. In this section, the impacts of four key knowledge governance mechanisms on knowledge sharing are analysed. These mechanisms are: *organisation structure, incentives, organisational culture* and *Knowledge Management Systems (KMS). The* following section analyses how these four knowledge governance mechanisms influence knowledge sharing:

Organisational structure and knowledge sharing- Many scholars argue that the organisational hierarchies and functional boundaries inhibit open information flows and

become barriers to interpersonal relationships and knowledge sharing (Dixon, 2000; Hinds and Pfeffer, 2003; Leonard and Sensiper, 1998; Von Krogh et al., 2000). Osterloh (1999) examines how knowledge transfer is influenced by organisational structure and stated that the knowledge localised and dispersed in each carrier in an organisation can only be linked and utilised through the use of organisational design. Tsai (2002) states that formal hierarchal structure, in the form of centralisation has significant negative effect on knowledge sharing and informal lateral relations in the form of social interaction has significant positive effect on knowledge sharing.

Dougherty (1992) suggests KI problems by analysing 18 case studies of product innovations and found out that different departments (‘thought worlds’) are systematically varied. Thought worlds, in this context, refer to the knowledge that people from each department or functional areas have about product innovation. Dougherty (1992) states that the system of meanings on issues like perspectives on the future or identification of critical aspects of the innovation processes varies across ‘thought worlds’. This means that people not only know different things, but also know things differently, thus creating difficulties in KI. These difficulties were exacerbated by many established routines (Job Descriptions and standard definitions) that encourage the separation of thought worlds.

KGA focuses on the level of individual employees and their motivation to share knowledge. They argue that personal relationship is a precondition for establishing psychological contracts based on emotional loyalties- often called team spirit. Emotional loyalties refer to a situation in which individuals are inspired or governed by emotion, feeling of devotion, duty, or attachment to somebody or something. Foss (2007) argues that team-based structures

enhance personal relationships and raise the intrinsic motivation to cooperate in knowledge sharing.

These suggest that formal hierarchies, departmental boundaries, job descriptions, standard definitions and established routines inhibit knowledge sharing. On the other hand, decentralisation, team-based structure, lateral relations and informal social interactions facilitate knowledge sharing. The interactive impact of these factors provides significant influence on knowledge sharing.

Incentives and knowledge sharing- According to expectancy theory (Vroom, 1966), intentions to perform a certain action are in part determined by consequence expectations. The more positive outcomes are perceived by a person to be associated with a given action, the more inclined the person will be to perform that action. Therefore, sharing knowledge may be, in part, determined by the incentives an employee perceives are associated with such behaviour. In other words, individuals will be motivated to share knowledge if they receive something in return with the expectation that the benefits will outweigh costs of sharing knowledge (Bock, 2005).

Osterloh et al. (2002) propose two kinds of incentive mechanisms for knowledge sharing- *intrinsic* and *extrinsic*. Intrinsic mechanisms refer to non-financial rewards such as praise, publicly, peer affirmation and job promotion. Extrinsic mechanism is one that is characterised by material and financial reward. Gibbert and Krause (2002) argue that a lack of sufficient extrinsic and/or intrinsic rewards to compensate individuals for the costs of sharing knowledge can become a barrier to knowledge sharing. Knowledge sharing takes both time and effort that individuals expect to be compensated for. Sharing personal insights with one's

co-workers may carry a cost for some individuals that may yield, at the aggregate level, a co-operation dilemma, similar to the notion of a public good (Cabrera and Cabrera, 2002).

Feasible incentive measures for knowledge sharing include intrinsic and extrinsic reward systems (Gupta and Govindarajan, 2000; Osterloh and Frey, 2000). Huber (1991) suggests that organisational incentive structures such as pay for performance compensation schemes (extrinsic rewards) discourage knowledge sharing if employees believe that knowledge sharing will hinder their personal efforts to distinguish themselves relative to their co-workers. Bock (2005) prove that extrinsic rewards can hinder the development of favourable attitudes towards knowledge sharing. Hung (2011) argue that economic incentives did not achieve the desired outcome of increased knowledge sharing. Instead, reputation feedback had the most significant effect on all measures of knowledge sharing because people expect future benefits from their present actions.

The analysis of the above literatures shows that some incentives encourage knowledge sharing while other incentives discourage knowledge sharing. This suggests that there is no agreement among scholars on the relationship between incentives (intrinsic or extrinsic) and knowledge sharing. The analysis of the literatures suggests that whether the incentive is intrinsic or extrinsic, it must be compatible with the intended knowledge sharing target. In other words, incentives should directly impact on conditions of individual knowledge sharing actions and lead to knowledge sharing. In this respect, organisations may wish to put effort to analyse how various kinds of incentive mechanisms may or may not prompt the desired behaviours of specific knowledge sharing. In other words, organisations must be able to establish compatible knowledge sharing incentives.

To sum up, compatible incentive systems facilitate knowledge sharing and incompatible incentive systems inhibit knowledge sharing.

Organisational Culture and Knowledge Sharing- Organisational culture refers to the shared basic assumptions that an organisation learned while coping with the environment and solving problems of external adaptation and internal integration that are taught to new members as the correct way to solve those problems (Park, 2004). Each organisation has its unique culture, which develops overtime to reflect the organisation's identity in two dimensions: visible and invisible. The visible dimension of culture is reflected in the espoused values, philosophy and mission of an organisation, while the invisible dimension lies in the unspoken set of values that guide employees' actions and perceptions in an organisation (McDermott and O'Dell, 2001).

Organisational cultures shape members' assumptions about what is knowledge in their context, which knowledge is worth sharing and utilising and how new knowledge is created and legitimated. Also, organisational cultures and sub-cultures are immediate mediators of the relationships between individual and organisational knowledge. Organisational culture creates the context for social interactions that determines how effectively knowledge is created, transferred and utilised. David and Fahey (2000) identify four ways in which culture influences the behaviours central to knowledge creation, sharing and use. First, culture and particularly sub-cultures, shape assumptions about what knowledge are and which knowledge is worth managing. Second, culture defines the relationships between individual and organisational knowledge, determining who is expected to control specific knowledge as well as who must share it and who can hoard it. Third, culture creates the context for social interactions that determine how knowledge will be used in particular situation. Fourth, culture

shapes the processes by which new knowledge, with its accompanying uncertainties, is created, legitimated, and distributed in organisations.

Organisational culture has been identified as a major catalyst or a major hindrance to knowledge creation and sharing (Alavi and Leidner, 2001). The creation of a knowledge sharing culture is thought to be one of the most important knowledge sharing enablers (Davenport and Prusak, 1998). Nielsen (2006) argues that one key challenge to facilitate effective knowledge sharing is to establish a culture that supports knowledge sharing. Bhatt (2000) states that only by changing organisational culture can an organisation gradually change the pattern of interaction between people, technologies and techniques because the core competencies of organisations are entrenched deep into organisational practices. In this sense, organisational culture shapes the process of knowledge creation and sharing.

The review suggests that organisational culture can impact knowledge sharing positively or negatively based on whether the organisation has knowledge sharing or knowledge hoarding culture.

Knowledge Management Systems (KMS) and Knowledge Sharing- The tools and systems that facilitate knowledge sharing in organisations are usually known as KMS (Davenport and Prusak, 1998). In today's marketplace, due to strategic importance of knowledge and knowledge sharing many organisations develop in-house KMS to effectively leverage their knowledge. Many organisations, particularly those compete on the basis of services and expertise (e.g. management consulting, professional services firms and charitable NGOs) implement information systems designed specifically to facilitate collection, codification, sharing, integration and dissemination of knowledge repositories.

The potential benefits of effective knowledge repositories include the time and costs saved by reusing and leveraging existing knowledge rather than creating new knowledge from scratch. Huysman and Wulf (2006) state that the ICT and knowledge sharing are closely linked, because ICT enable rapid search, access and retrieval of information and support communication and collaboration among organisational employees. Tohidinia and Mosakhani (2010) argue the level of ICT usage reflects a positive effect on knowledge sharing behaviour. Zhang and Ng (2013), in explaining knowledge sharing intentions in construction teams in Hong Kong, argues that ICT support has a significant effect on professionals' perceived behavioural control over knowledge sharing.

KMS helps organisations to achieve greater efficiencies and economies of scale (Alavi, 1997; Watson and Hewett, 2006). Many researchers state that KMS is more holistic than an ICT system because it supports knowledge distribution and involves a number of enabling elements of people, process, leadership and culture. KMS can play an important role in facilitating knowledge flows within an organisation by allowing employees to exchange experiences, work methods, improvement ideas and market hints by posting documents onto a database that is accessible to all members of a group.

Although KMS facilitate knowledge sharing and integration, it seems that the notion of technology-driven management of knowledge focuses more on information management, rather than KM. This is to say less attention is given to the role of people and social dynamics in knowledge sharing. KMS scholars argue that organisations use different information systems to facilitate knowledge sharing through creating or acquiring knowledge repositories, where employees share expertise electronically and access the shared experience to other staff (Connelly and Kelloway, 2003). To the contrary, authors of the management discipline argue

that knowledge sharing is mostly about people and adaptations to the social dynamics of the workplace rather than technology (Cross and Baird, 2000; Davenport, 1997; Hickins, 2000). Brown (2001) notes that knowledge will not necessarily circulate freely firm-wide just because the technology to support such circulation is available. Their arguments suggest that effective KM cannot take place without extensive behavioural, cultural and organisational change.

To analyse the impacts of KMS on knowledge sharing two points needs to be clarified: *First*, there should be a distinction between information sharing and knowledge sharing (which is confused with information sharing). Although there are different definitions and approaches about information and knowledge, in this context, '*information* refers to the organised data that produce meaning and *knowledge* refers to meaningful content assimilated for use and has a higher level' (Zins, 2007 p.486). This suggests that knowledge is assimilated information; internally oriented and mostly resides in individuals' brains. The notion of knowledge sharing is to get the knowledge out of one's brain and to put it to organisational task. Such a process also entails encoding knowledge into transferable information. KMS can facilitate the encoding and sharing of knowledge.

Second, knowledge sharing should be viewed in terms of both people- driven and technology-driven approach. It is people- driven because knowledge can only be shared if people have willingness and abilities to share. Knowledge sharing is based on people needs, emotions, interests and capacities. It is also technology-driven because organisations use different information systems and tools to develop knowledge repositories and to facilitate electronic knowledge sharing.

In summary, knowledge sharing can be thought of as a system composed of people, tools and technological factors and the interactions of them.

3.1.3. Informal Social Interaction and Knowledge Sharing

Social capital and network theories (Inkpen and Tsang, 2005; Lin, 2008) suggest that knowledge sharing is facilitated by intensive social interactions of organisational members. *'Knowledge is not an object to be captured, stored and passed around. Rather, knowledge is something that people do in social interactions; knowledge is constructed and shared in talk and text interactions'* (Crane, 2013 p.2).

Social capital refers to the capital that exists in relationships and networks between people. It is defined as *'the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition'* Bourdieu (1985) (cited in Adler and Kwon, 2000 p.96). Social capital is called a resource or asset because by manifesting itself in forms such as trust, norms, information benefits, and power, it can be beneficial to its members. Bourdieu's definition makes clear that social capital is broken down into two elements: first, the social relationship that allows individuals to claim access to resources possessed by their associates and second, the amount and quality of access to those resources. Bourdieu (1989) argues that one means in which information can be acquired is by use of social relations that are maintained for other purposes.

Coleman (1988) analyses the role of social capital in the creation of human capital and argues that just as physical capital and human capital, social capital facilitates productive activities. Coleman's central argument is that social capital is a network of relationship and is a valuable

resource (i.e., capital) for the individual or organisation. This valuable resource exists in the structure and content of the actor's social relations. Social capital can be created at individual and organisational levels. For inter organisational knowledge sharing to take place in a network, either or both levels of social capital must be present.

An important form of social capital is the potential for information that exists in social relations. Portes (1998) state that social capital exists in the structure of human relationships. Granovetter (1985) highlights the importance of concrete personal and networks of relations, what he calls '*relational embeddedness'*. Informal relational embeddedness plays a vital role both in knowledge sharing within organisations and in the process of organisational learning (Cross and Baird, 2000; Davenport and Prusak, 1998; Hansen, 1999).

Social capital is operationalised in a number of social disciplines. During recent years, the concept of social capital has become one of the most popular exports from sociological theory into everyday language. It has informed the study of families, youth behaviour problems, schooling and education, public health, community life, democracy and governance, economic development and general problems of collective actions (Adler and Kwon, 2002).

Although social capital is widely operationalised in research and everyday language, there is no clear meaning of the concept. Fulkerson and Thompson (2008) argue that social capital has become popular in sociology journals, but its meaning has been contested since its inception. It is difficult to isolate specific concepts that comprise the general notion of social capital, because social capital is applied to different types of problems.

This range of applications has been accompanied by a great deal of confusion concerning the actual meaning of social capital and growing controversy about its alleged effects (Adger,

2010). Debates include determining whether it is the property of individuals, small groups (Bourdieu, 1989; Coleman, 1988) or collectives (Portes, 2000; Putnam et al., 1994). Social capital scholars are struggling to define social capital because the concept is filled with so many different variables. Some scholars suggested that social capital has been used so widely, in so many different ways that it is no longer capable of definition, but it is a collective chaos (Fine, 2008). Fulkerson and Thompson (2008) state that many scholars, about one in five, have apparently avoided the messiness of social capital by not offering a definition at all.

The transition of the concept from an individual asset to a community or national resource gave rise to the present state of confusion about the meaning of the social capital. The division is between those who understand social capital as an *individual resource (individualists)* and those who understand it as *a community or national resource (collectivists).*

The individualist approach- The original theoretical development of the concept by (Bourdieu, 1989; Coleman, 1988) understood social capital at *individual level.* For example, Bourdieu clarified formal educational credentials that an individual possesses and the intangible complex of values and knowledge of cultural forms in his or her behaviour. Coleman viewed social capital as a source of control and community ties and the benefits they yield to individuals. For example, old people could walk the streets at night without fear and children could be sent to play outside because tight community controls guarantee their personal safety.

The *collectivist approach*- Collectivists understands social capital at the social level, as residing in human relationships and view it as a form of social control. This concept was introduced by the political scientist, Robert Putnam. Putnam et al. (1994) equate social capital with the level of "civicness" in communities (Bourdieu, 1989; Coleman, 1988) such as towns,

cities, or even entire countries. Putnam et al. (1994) built his ideas on the influential work of Coleman who viewed social capital as a source of control. However, he took the social capital to a collectivist view, in particular in his major study of the roots of democracy in Italy. Collectivists argue that the benefits of social capital accrued not so much to individuals as to the collectivists. He argues that social capital benefits society as a whole in the form of reduced crime rates, lower official corruption and better governance. He argues that the underlying processes of co-operation entail the development of trusting relationships and shared values for a common good of the society.

Analysis of various social capital literatures suggests that social capital can be possessed and used by both individuals and groups or communities. Individuals and communities can increase their benefits by participating in social interactions. One of the main benefits of social interaction is knowledge sharing. It is assumed that, in social interaction, participants actively support each other in learning and knowledge sharing process, thus learners have to be closely connected and interact frequently. Inkpen and Tsang (2005) state that the most useful information is rarely that flows down the formal chain of command in an organisation, rather, it is that which is obtained from someone you have dealt with in the past and found to be reliable. This suggests that most important knowledge flows within trustworthy relationship among individuals in an organisation.

In the context of knowledge sharing in the organisation, the social capital benefit refers to social ties, trusting relationship and development of shared vision among members in a network. Networks are channels for knowledge flow in an organisation and relationship building. Nahapiet and Ghoshal (1998) define social capital as ‘the resource embedded within, available through and derived from the network of relationships possessed by an

individual or social unit'. Inkpen and Tsang (2005) suggest that knowledge sharing is facilitated by intensive social interactions of organisational members.

It is assumed that, in the social interactions, participants actively support each other in learning and KI process. The intensity of the relationship varies based on the complexity of the learning and knowledge. The more ambiguous and complex the learning and knowledge, the more the learners must interact for a successful exchange to occur (Nonaka, 1994; Polanyi, 1966).

In an empirical study, Cardinal and Hatfield (2000) found that human networks were one of the key vehicles for sharing knowledge and that trust among individuals was related to informal networks. Through network and social exchanges, people build webs of trust (Fukuyama, 2002; Putnam et al., 1994) within which they are willing to share knowledge and coordinate actions.

Chow and Chan (2008) provide empirical evidence about the influence of social network, social trust and shared goals on employees' intention to share knowledge. They found out that social networks and shared goals directly influence the attitude and subjective norms about knowledge sharing and indirectly influence the intention to share knowledge.

To illustrate the use of social capital in KI and application, in this study, social capital is perceived as a concept rooted in social networks and social relations. Lin (2008) argues that social capital has a network-based conceptual origin because it is contingent on social networks and interactions. These interactions and networks provide necessary condition for access to and use of embedded social capital resources. One of the major social capital resources is knowledge in an organisation. The literature reviewed suggest that the

characteristics of social relationships and networks in organisations influence the efficiency by which individuals and collectives create knowledge by affecting their ability to access, transfer, absorb and apply knowledge (Phelps et al., 2012).

From the analysis of network- meditated aspects of social capital, three social capital aspects that are related to knowledge sharing are derived. They are: social ties (Granovetter, 1985; Tsai and Ghoshal, 1998); shared vision (Tsai and Ghoshal, 1998) and mutual trust (Borgatti, 2003; Cross and Baird, 2000). In the next section the impacts of these factors on knowledge sharing are analysed.

Social Ties- Network ties create inter-unit linkages to facilitate knowledge sharing among organisation members (Nahapiet and Ghoshal, 1998). Inter-unit linkages within organisations exhibit open communication between individuals and units and contribute to knowledge sharing. Also informal communication channels help speed up the process of searching and transferring knowledge because individuals do not follow hierarchal communication structure to share knowledge.

When we analyse the impacts of social ties on knowledge sharing and integration, we need to understand the strengths of the social ties which refer to the level of interactions that exist among network members. The strength of an interpersonal tie is defined as '*a combination of the amount of time, the emotional intensity, the intimacy and the reciprocal services which characterises the tie'* (Granovetter, 1973 p.1361). In this sense social networks have both strong and weak ties in which individual and organisational behaviour is embedded.

Granovetter's argument asserts that our acquaintances *(weak ties)* are less likely to be socially involved with one another than are our close friends *(strong ties).* Weak ties refer to the power

of indirect influences outside the immediate circle of family and close friends to serve, for example, as an informal employment referral system (Granovetter, 1973). Individuals with few weak ties will be deprived of information from distant parts of the social system and will be confined to the local news and views of their close friends (Granovetter, 1983). In other words, weak ties promote the regular flow of important information in differentiated structures. An argument central to this assertion is that weak ties serve crucial functions in linking otherwise unconnected segments of a network. Portes (1998) argues that weak ties can be sources of new knowledge and resources while dense networks (strong ties) tend to convey redundant information.

Van Staveren and Knorringa (2007) made similar distinction of social ties and stated that the recognition of diverse social contexts in which economic relationships are shaped. They suggest the distinction between two types of social capital- *bonding* and *bridging* social capital. They argued that bonding social capital emerges from strong social ties, which are based on common identity such as family and kinship, gender, ethnicity, religion and organisational culture. Bonding capital connects only members of homogeneous groups (strong ties). On the other hand, bridging social capital emerges from weak social ties across the society in which individual and organisational behaviour is embedded but held together by sharing some common values. Bridging social capital refers to generalised social relationships across groups and it exists among people who are heterogeneous, having different identifications and belonging to different groups (Van Staveren and Knorringa, 2007).

Weak ties promote the regular flow of knowledge, help to build initial relationships and acquire and share new knowledge across different organisational units. Strong ties help to

acquire and share high quality and fine-grained knowledge among the network members that have intense interactions (Mu et al., 2008).

Shared Vision- The term *shared vision* embodies the collective goals and aspirations of the members of an intra -corporate network (Tsai and Ghoshal, 1998). Shared vision in the network develops similar perception among network members; develop organisational identity and motivate individuals to share their knowledge. When a shared vision is present in the network, members have similar perceptions as to how they should interact with one another. This can promote mutual understandings and facilitate exchanges of ideas and resources. Thus, a shared vision can be viewed as bonding mechanisms that establish organisational identity.

Organisation identification is a vital organisational design for promoting exchange and combination of expert knowledge under complex division of knowledge (Kogut and Zander, 1996). If there is identity among organisation members, individuals are likely to be motivated to share knowledge and therefore, assist knowledge flow thoroughly and exchange efficiently (Brown, 2001; Kogut and Zander, 1996).

Mutual Trust- Interpersonal trust is known as an individual or a group's expectancy in the reliability of the promise or actions of other individuals or groups (Politis, 2003). In order to let the knowledge embedded in relationships or flow in the network function well, trust is considered to be a basic requirement. Coleman (1988) argues that a group within which there is extensive trust is able to accomplish much more than a comparable group without trust.

Research show that trust increases overall knowledge sharing and integration. Abrams et al. (2003) state that trust make knowledge exchange less costly, increase the likelihood that

knowledge acquired from a colleague is sufficiently understood and absorbed that a person can put it in use. Recently, Chang et al. (2012) based on a large-scale survey of the relationship of social capital and knowledge sharing, concluded that perceptions of trust and shared vision have significant and direct effects on knowledge sharing.

Individuals tend to share their knowledge in organisational climate where they highly trust others, and their organisations (Bock, 2005). Trust enables knowledge sharing and risk taking by decreasing the feeling that others will take advantage of someone. Janczak (1999) in his study of the roles on middle managers in KI, stated that middle managers who trust other managers could focus their attention on sharing knowledge within the company, rather than trying to exploit own knowledge as a source of power and self-interest.

Team members require the existence of trust in order to communicate openly and share knowledge. However, when organisational members compete against one another for resources and markets, suspicion may replace trust in their relationships and, consequently, knowledge sharing may be sacrificed (Inkpen and Tsang, 2005). It is also evident that interpersonal trust or trust between co-workers is essential attribute in organisational culture, which is believed to have a strong influence over knowledge sharing.

To sum up, the existence of mutual trust among the network members facilitates knowledge sharing by decreasing the feeling that the receiver of knowledge will take advantage of the provider. On the other hand, suspicion hinder knowledge sharing by increasing a sense of competition among network members.

3.2. Knowledge Absorption

Even specialised knowledge is smoothly shared and transferred within an organisation; how to absorb and unify the shared individual knowledge into organisational one is vital to organisational KI. *'The exchange of knowledge is not to be seen as a mere knowledge transfer: an expansion of perspectives and problem perception is only possible when the knowledge that is exchanged is assimilated into the individuals' own knowledge structures, thus giving rise to new knowledge'* (Godemann, 2008 p.637).

Knowledge absorption refers to the willingness and capacity in which knowledge receivers assimilate and transform the knowledge shared to them. Absorptive capacity is defined as *'the ability to recognize the value of new external information, assimilate it and apply it to commercial ends'*(Cohen and Levinthal, 1990 p.128). This definition introduces three capabilities: (1) recognising the value of knowledge, (2) assimilating it and (3) applying new external knowledge to business task.

Emphasising the process perspective of absorption capacity, (Lane et al., 2006 p.856) define absorptive capacity in a similar way as *'a firm's ability to utilize externally held knowledge through three sequential processes: (1) recognizing and understanding potentially valuable new knowledge outside the firm through exploratory learning, (2) assimilating valuable new knowledge through transformative learning, and (3) using the assimilated knowledge to create new knowledge and commercial outputs through exploitative learning'*.

In this definition the concepts of absorption capacity and learning are related. That is to say absorption capacity involves three types of learning- *exploratory, transformative and exploitative*. In other words, learning involves combining what you know (existing

knowledge) with the knowledge you get from external sources- i.e. the individual absorption is recognising and assimilating external knowledge.

Zahra and George (2002) categorise absorptive capacity into four dimensions–*acquisitions, assimilation, transformation* and *exploitation*- where the first two dimensions form *potential absorptive capacity* and the latter two are *realized absorptive capacity* (Jansen et al., 2005). Potential absorption capacity refers to knowledge acquisition and assimilation that involves identifying and acquiring new external knowledge and assimilating the knowledge obtained from external sources. Realised absorption capacity refers to knowledge transformation and exploitation and encompasses deriving new insights from the combination of existing and newly acquired knowledge and incorporating the transformed knowledge into operations.

Cohen and Levinthal (1990) argue that organisational absorptive capacity is a function of absorptive capacity at the individual level and develops over time. In other words, the development of an organisation's absorptive capacity builds on the prior investment in the development of its individual absorptive capacities. Individuals are heterogeneous and vary in their abilities; motivation and the way they use opportunity for knowledge sharing that are offered by an organisation (Szulanski, 2000). These differences reflect on their respective absorption capacities (Minbaeva, 2007). Cohen and Levinthal (1990) also argue that absorptive capacity depends on processes and routines within an organisation that enable the organisation to share, communicate and transfer individual level learning to the organisational level. Thus, individual absorption capacity is path-dependent, cumulative and builds on existing knowledge.

Literatures suggest that key antecedents that influence absorptive capacity are *prior related knowledge* and *organisational factors*. The prior knowledge base refers to existing individual

units of knowledge available within an organisation and it includes basic skills and learning experiences. Organisational factors refer to the structure of communication and distribution of knowledge (Cohen and Levinthal, 1990). Similarly, (Minbaeva et al., 2003) propose that absorptive capacity has two elements: prior knowledge (employees' ability) and intensity of effort (employees' motivation). Thus, the definition of employees' ability is their educational background and acquired job related skills. Minbaeva et al. (2003) argue that prior knowledge base (employees' ability) and intensity of effort made by the organisation (employees' motivation) are related to the concept of potential and realised absorptive capacity. They argue that potential absorptive capacity is expected to have high content of employees' ability while realised absorptive capacity is expected to have high content of employees' motivation.

'Absorptive capacity is determined by a set of internal factors, which are grouped into three basic categories: organisational knowledge, formalisation and social interaction' (Vega-Jurado et al., 2008 p.392). Recently, (Foss et al., 2010) suggest *two clusters of antecedents related to* absorptive capacity: (1) prior related knowledge and (2) internal mechanisms. Internal mechanisms include learning experience, problem solving methods and in particular a shared language. The different analysis of the determinants of absorption capacity can be summarised into three categories: prior related knowledge, organisational factors and social interactions.

In this section, I examined the effects of these determinants on the potential absorption capacity and realised absorption capacity and explored how these determinants interact and facilitate or inhibit the absorption capacities of individuals in the KI process.

3.2.1. Prior related knowledge base and Knowledge Absorption

Prior knowledge base refers to the character and distribution of expertise within the organisation that embrace a set of skills, knowledge and experience that an organisation possesses. Cohen and Levinthal (1990) argue that the ability of individuals to absorb new external knowledge depends on the level of their prior related knowledge because prior related knowledge facilitates the learning or absorption of new related knowledge. Prior related knowledge enables individuals to store new knowledge into their memories and to recall and use it. Research on memory development suggests that accumulated prior knowledge increases both the ability to put new knowledge into memory, or the acquisition of knowledge, and the ability to recall and use it.

3.2.2. Organisational Factors and Knowledge Absorption

It is argued that hierarchical structures may not efficiently support the fast flow of information, co-located decision-making or the co-creation of knowledge from specialised and tacit individual knowledge bases (Grant, 1996a; Miles et al., 2000). Although a number of organisational factors influence absorption capacity, in this analysis, I focus on the key factors that have significant impacts on the absorption capacities of individuals. These include communication structures, formalisation, participation and job rotation.

Communication structure - The structure of communication between the external environment and the organisation, as well as among the subunits of the organisation influence absorption capacity (Cohen and Levinthal, 1990). As opposed to hierarchical communication, lateral communication enhances absorption capacity. Egelhoff (1991) argues that lateral communications promote non-routine and reciprocal information processing and contribute to

a unit's ability to overcome differences, help interpret issues, and build understanding about new external knowledge. Jansen et al. (2005) argue lateral communications enhance knowledge acquisition and assimilation through deepening knowledge flows across functional boundaries and lines of authority. This enables employees to combine their sets of existing and newly acquired knowledge. This contributes to the acquisition and assimilation of new external knowledge (potential absorption capacity). They also stated that lateral communications are positively related to transformation and exploitation of new external knowledge (realised absorptive capacity).

Formalisation- Formalisation is the degree to which rules, procedures, instructions and communications are formalised or written down (Khandwalla, 1977). Jansen et al. (2005) suggest that formalisation enhances transformation and exploitation of new external knowledge (i.e. realized absorptive capacity) by increasing the likelihood that unit members will identify opportunities for transformation of new external knowledge (Rodan and Galunic, 2004). Through formalisation, units also codify best practices so as to make knowledge more efficient to exploit, easier to apply and to accelerate its implementation (Kogut and Zander, 1996; Lin and Germain, 2003). However, formalisation tends to limit the intensity and scope of efforts expended in knowledge acquisition. It inhibits rich, reciprocal knowledge interaction and hinders individuals in assimilating new external knowledge (potential absorptive capacity) because it limits the intensity and scope of efforts expended in knowledge acquisition.

Participation- Participation in decision-making indicates the extent to which subordinates take part in higher-level tasks including goals setting, decision making, idea generations and so on. Participation is the degree to which mutual organisational goals are carried out with the

involvement of lower level employees. Participation allows for the interplay between a variety of perspectives and leads to rich internal network of diverse knowledge (Hage and Aiken (1967) (cited in Jansen et al., 2005 p.7). Participation supports assimilation of external knowledge and facilitates acquisition and assimilation of new external knowledge (i.e. potential absorptive capacity).

Job rotation- Job rotation is the lateral transfer of employees between jobs (Campion et al., 1994). Job rotation enhances diversity of backgrounds to increase problem solving skills and to develop organisational contacts (Cohen and Levinthal, 1990). This diverse knowledge structures created by job rotation support explorative learning (McGrath, 2001) and increase the prospect that new external knowledge is related to existing knowledge. Job rotation and extensive training for broader skills enhance multi-skilling (Owan 2011). Hence, job rotation enhances the acquisition and assimilation of new external knowledge (i.e. potential absorptive capacity).

3.2.3. Social Interaction Mechanisms and Knowledge Absorption

Social integrations are practices that reduce the barriers to information exchange within an organisation (Zahra and George, 2002) and enhance within units networks. Unit networks may motivate employees to assist each other and allow two-way interactions that help them interpret and understand new external knowledge (Cohen and Levinthal, 1990; Morrison, 2002). Social network ties are aspects of social interaction that are related to absorption capacity.

Strong ties- Strong ties tend to convey redundant information in the close network; help firms to acquire higher-quality and fine-grained knowledge (Mu et al., 2008) and enhance

transformation and exploitation of new knowledge (realised absorption capacity). On the other hand, *'strong ties diminish access to divergent perspectives and limits the openness to external knowledge and alternative ways of doing things, producing collective blindness'* (Nahapiet and Ghoshal, 1998 p.245). It constrains unit members to perform broad searches for a variety of external knowledge sources. Therefore, strong ties inhibit the acquisition and assimilation of new external knowledge (potential absorption capacity).

Weak ties- Weak ties help individuals and firms to build initial relationships and promote regular flow of novel and important information from distance parts of the team/organisation or from different structures. Weak ties can be sources of new knowledge and enhance knowledge acquisition and assimilation (potential absorption capacity). To sum up, absorption capacities of individuals are influenced by the interplay of prior organisational knowledge, organisational factors and social interactions mechanisms.

3.3. Knowledge Combination and Integration-The Combined Impacts

Knowledge combination refers to assimilating and internalising knowledge to broaden, extend and reframe individual receiver's knowledge. Knowledge application refers to making knowledge more active and relevant for creating values for an organisation (Bhatt, 2001). Although individual, organisational and informal social interaction factors have influences on KI and application individually, they do not exert significant influence in isolation. The three major sets of determinants of knowledge sharing namely: individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction characteristics have emerged from the literature review.

As revealed in this analysis, there are interrelationships between these sets of knowledge sharing determinants. The individual knowledge sharing behaviours are influenced by organisational knowledge governance practices and vice versa. For example, organisational incentive influence whether individuals share or not to share their knowledge. The organisation structure influence information flow in a sense that hierarchical organisation block informal interaction of organisational members. Lateral matrix organisations facilitate interactions and communications between members of the organisation. Organisational culture also influence knowledge sharing because it shapes how people in the organisation communicate and interact. KMS affects the information flow and networking conditions of an organisation because it facilitates access to information and knowledge. If individuals do not trust each other they do not network; and even if they network they do not share their knowledge (Bhatt, 2000).

This suggests that multiple, overlapping and ongoing individual, organisational and informal social relationships are embedded in the process of KI and application. The analysis showed that these determinants interact and influence KI and application process.

3.4. Identified gaps in Knowledge Integration Research

The analysis of the literature shows main gaps in KI and application research. These gaps are inconsistency in conceptual understanding of knowledge in an organisation, lack of consensus on KI and application process and underemphasised important constructs in KI and application process.

3.4.1. Inconsistency in conceptual understanding of knowledge in an organisation

The analysis of literatures suggests that giving a specific location and classification to knowledge is one of the fundamental problems in KBV because these categories undermine the dynamism and interchangeability of knowledge in an organisation. Davenport and Prusak (1998) view knowledge as a dynamic resources which change continuously. In addition, sometimes we do not know the existence of knowledge, we can only infer it. Although different understanding of the concept was evident, my understanding of knowledge is closer to the views of (Davenport and Prusak, 1998; Nonaka and Takeuchi, 1995). I agree with the view that knowledge is dynamic and continuously evolving because knowledge in an organisation is fluid and flexible resource that resides in individual members' brains, organisational repositories and informal social interactions. At the same time knowledge in these locations interchange, interact and co-exist. Based on this perspective, this study analyses the integration and application of knowledge in the organisational context.

3.4.2. Lack of consensus on knowledge integration and application process

As discussed under the individualist and collectivist approaches of the KBV (section 2.2.1.2), there is no consensus on KI process. The KBV scholars tend to take extreme positions in choosing a level of KI analysis- *purely individualist* or *purely collectivist.* Also KBV tends to see KI as a single stage process suggesting that effective KI mechanisms lead to successful knowledge integration and application (Grant, 1996a). But behavioural theory, KGA and social capital and network literatures suggest that KI and application takes place in multiple stages that involve knowledge sharing, knowledge absorption and knowledge combination and application.

3.4.3. Underemphasised constructs in KI and application process

The centre of previous KI analysis was macro (organisational) level integration mechanisms. My argument is that KI is not only depends on macro level constructs but also on micro (individual) level constructs and their interactions. As a result, this study focuses on the analysis of individual, organisational and informal social interaction determinants in an international development NGO. In other words, effective KI requires the combined analysis of individual, organisational and informal social interactions because these aspects and characteristics are interrelated and co-influence the KI and application process. 'Knowledge integration process needs to be systematic, reflexive and cyclic so that multiple views and multiple methods are considered'(Raymond et al., 2010 p.1766).

To sum up, in KBV, the concept of knowledge is not clearly understood and KI and application process is not developed as a theory. The literature review suggests that KI lacks viable theory and empirical evidence, particularly in international development NGOs. These points to several questions not answered by the KBV literatures.

3.5. The Research Questions

To address these theoretical gaps and to provide concrete illustration to the findings from the literature review, this study aims to answer the following research questions.

1. **How do we describe knowledge in an international development NGO?**

This question is based on the perspectives of the concept of knowledge as a fluid mix of framed experience, values, contextual information, and expert insight that provides a

framework for evaluating and incorporating new experiences and information (Davenport and Prusak, 1998). The tacit and explicit forms of knowledge exists at multiple levels, such as individuals, groups and organisations because the two forms of knowledge are interrelated and exist simultaneously. This refers to the assumption that knowledge in an organisation resides in human brains and embedded in documents or repositories, organisational routines, processes, practices and norms as well as evolves continuously and varies from organisation to organisation.

2. **How can the dispersed knowledge in this organisation be integrated and used to accomplish organisational tasks?**

This question is based on individual's absorption capacity (Cohen and Levinthal, 1990) that state the willingness and capabilities of individuals to recognise external knowledge assimilate it and apply to organisational tasks. This argument is supported by (Godemann, 2008) who states that an expansion of perspectives and perception is only possible when the knowledge that is exchanged is assimilated into the individuals' own knowledge structures. These literatures suggest that even the specialised knowledge is smoothly shared within an organisation; how to absorb and unify the shared individual knowledge into organisational one is vital to organisational knowledge integration process. KI is seen as a process that involves sub-processes of knowledge sharing, knowledge absorption and knowledge combination and application.

3. **How do individual knowledge sharing behaviours influence knowledge integration and application in the international development NGO?**

This question is based on the Behavioural Theory of the firm (Bock, 2005; Cyert and March, 1963) that argue the movement of knowledge across individuals and organisational boundaries, into and from repositories, into organisational routines and practices is ultimately dependent on employees' knowledge sharing behaviours.

4. **How do organisational knowledge governance practices influence knowledge integration and application in the international development NGO?**

This question is based on the frameworks of the Knowledge Governance Approach (Foss, 2007 ; Foss, 2009; Grandori, 2001) that suggest knowledge sharing and integration is influenced by deployment of formal knowledge governance mechanisms and managerial practices.

5. **How do informal social interactions among organisational members influence knowledge integration and application in the international development NGO?**

This question is based on Social Capital and network theories (Bourdieu, 1989; Granovetter, 1973; Inkpen and Tsang, 2005; Lin, 2008) that suggest intensive informal social interactions and networks among organisational members facilitate knowledge sharing and integration.

The study also analyses the interrelationships of the individual, organisational and informal social interaction factors and their combined impacts on KI and application in an organisation.

CHAPTER 4

RESEARCH METHODOLOGY

4.1. Methodological Considerations

The aim of this study is to explore how knowledge in an organisation is understood and how it is integrated and applied to accomplish organisational tasks. In doing so, exploring the perceptions and views of organisational practitioners is crucial part of this analysis. This involves gathering, analysing and interpreting views and perceptions of knowledge sharing and integration from practitioners in an international development NGO. The dominant discourse used in this study is constructivist discourse because I believe that KI and application mainly depends upon the perspectives of individuals in an organisation. In other words, the truth claim in this research is based on the understanding of real issues in the organisation, identifying problems and constructing the relationships from these realities.

Knowledge is socially constructed and the creation of meaning occurs in ongoing social interactions grounded in working practices (Cook and Brown, 1999). I believe that knowledge is the result of shared meaning, and sometimes subjective, because there are multiple and diverse interpretations of a certain reality. My methodological choice depends on my interpretive epistemological view. Methodological decisions reflect epistemological frameworks of the researcher (Denzin, 2008; Lincoln et al., 2011). Bunniss and Kelly (2010) argue that research methodology is not simply about data collection strategies, but, more importantly, it addresses the philosophical beliefs of the researcher.

In addition to my interpretive epistemological view, my research deals with unique intangible resource i.e. knowledge in an organisation, which has no definite understanding by both researchers and practitioners. Different scholars have various perspectives on the concept and locus of knowledge. KBV tend to perceive knowledge as a fixed resource (Barney, 1991; Conner, 1996; Grant, 1996a; Grant, 1996b). For example, (Grant, 1996a; Grant, 1996b) argues that most of the knowledge in an organisation is held by individuals and focus on integrating individual specialised knowledge. To the contrary, (Davenport and Prusak, 1998) view knowledge as a fluid mix of experience, values, contextual information and expert insights. Nonaka (1994) states that the tacit and explicit forms of knowledge exists at multiple levels, such as individuals, groups and organisations because the two forms of knowledge are interrelated and exist simultaneously.

These suggest that the concept of knowledge in an organisation ranges from f*ixed resource* with specific form and location to *dynamic resource* having various forms and locations. My view is that, in real life organisations, knowledge is not a fixed resource and we cannot give one specific location for it. Knowledge is revealed in working practices, directives, rules and organisational routines. Also, sometimes, it is not possible to know the existence and location of knowledge, but it can only be inferred from individual and organisational activities. Although the main locations of knowledge are individual brains, organisational repositories and informal social interactions, it is not possible to put clear demarcation between these locations.

Unlike the KBV, which tend to perceive knowledge as a fixed resource, in this study, knowledge refers to variable resource that resides in individual brains, organisational repositories and informal social interactions. Therefore, knowledge is viewed as holistic

concept without categorising into forms and locations. Knowledge is a variable intangible resource that has different dimensions (tacit and explicit) and resides in various locations. In order to clarify these plural concepts, in this research, knowledge is viewed as *holistic variable resource* that is characterised by fluidity and flexibility. In addition to the fluidity and flexibility of knowledge, the subjective human perceptions and meanings people give to the concept of knowledge are important aspects in the KI and application process.

Also knowledge is influenced by human and contextual factors. The individual cognitive and behavioural factors as well as the context in which knowledge is shared and integrated may vary depending on individuals and organisations. Thus, KI study must adopt a research methodology and approach that is suitable to analyse individual perceptions, organisational practices and informal social interaction characteristics in organisational context. This suggests the interpretive approach to the analysis of KI and application in an organisational context. Green and Glasgow (2006) refer to the importance of context by balancing the internal and external validity (generalisation) and suggested that external validity is subsumed under an increasing push for greater internal validity (strength of study design) to control variables within and beyond the study setting. Bunniss and Kelly (2010) state that within the interpretive paradigm, knowledge generation happens when relevant insights emerge naturally through researcher-participant discourse. I share their perspectives and my analysis of knowledge integration is based in the realities and context of the organisation.

The assumption in this study is that success or failure of KI in an organisation depends on the way organisation members conceptualise knowledge and how they share, absorb and integrate knowledge in their particular context. Honebein (1993), in describing the importance of context to meaning and understanding, stress the social aspect of constructivism and stated

that knowledge is the result of shared meaning and understanding and constructed socially through collaboration and discussion. This study explores contextual and diverse constructs that are related to individual human factors (knowledge sharing behaviours), organisational practices and informal social integration characteristics.

The methodology in this research is interpretive because of the complexity and uniqueness of the nature of knowledge- that is '*knowledge is fluid and flexible resource'*. Due to this dynamic nature of knowledge and changing factors, it is not possible to establish clear causal relationship between dependent and independent variables in KI analysis. Bunniss and Kelly (2010) argue that interpretive research provides very good ways to study complex, unstable, non-linear changes. As a result, quantitative analysis is not appropriate in this study because in individual human factors, organisational practices and informal social interaction characteristics that determine KI are variable and changing. In other words, clear causality and generalisability in a sense understood by positivists is limited in this research.

My research question is how knowledge in an organisation is understood, shared, absorbed, integrated and applied. In answering these questions, the study focuses on analysing how different sets of constructs in the organisation are interrelated and influence the KI rather than looking for fixed casual relationships. *'The qualitative research describes how things change over time rather than what is happening at single point of time'* (Easterby- Smith et al., 2008 p.688). This study was carried out over a period of eight months rather than a single time survey data collection.

This study adopted a case study methodology with aim to explore KI processes in particular organisational context over a specific period of time. A case study methodology is appropriate because it helps to create an in-depth, rich account (Saunders et al., 2011; Yin, 2003) of KI

and application in an organisation. A case study is also appropriate because it enables to gather and analyse qualitative data from different perspectives. This includes different participants' views, perceptions, meanings and interpretations of the processes of KI and application.

To sum up, the case study methodology is used in this research based on two assumptions:

First, although knowledge resides in various dimensions and locations, it is dynamic and interchangeable and the case study better provide interpretive analysis. Second, individual human factors, organisational contextual factors and informal social interaction characteristics might have a differentiating effect on KI and application processes.

4.2. Case Study Approach

A case study is an empirical enquiry that investigates a contemporary phenomenon with its real life context using multiple sources of evidence (Yin, 2009; Yin, 2003). Case studies have a long tradition in academic and organisational research focusing on working practices (Barley, 1996; Janczak, 1999; O'Mahoney, 2008). Case study is used in a number of qualitative studies in various sectors. For example, Hallen and Eisenhardt (2012) investigate how entrepreneurial firms obtain investment ties in the context of internet security industry using case studies**.** Manning et al. (2013) used in-depth case study to examine the importance of interface management in supporting the effective global re-organisation of knowledge work in automotive supplier company. In the charitable NGO sector, Raymond et al. (2010) analysed the integration of local and scientific knowledge for environmental management using case studies. Alison Corfield, for her PhD thesis, used case studies to investigate the effectiveness and potential longevity of knowledge management in three international

development charities (Corfield, 2010). Hume et al. (2012) examined the role of knowledge management in not-for-profit organisations using case study.

Likewise, this study used case study methodology to examine KI and application process in the natural setting and from the perspectives of the practitioners in an international development NGO. KI plays a critical role in most international development NGOs, especially large and global ones, because they utilise various mechanisms of knowledge sharing and integration for leveraging KM towards achieving their goals.

The rationale for choosing the case study methodology is based on the classic works of (Eisenhardt, 1989; Yin, 1993). Yin advocates that *'a case study is the method of choice when the phenomenon under study is not readily distinguishable from its context'* (Yin, 1993 p.3). The study of KI cannot be distinguished from the context in which it is integrated and applied because KI and application are interrelated and sometimes overlap. Grant (1996b) states that KI involves cooperation between different practices in which knowledge created in one working context is used in another. For example, product innovation involves the integration of the knowledge created by engineers, designers and market analysts. In a decision making process, the knowledge of accounting/finance, product/service and marketing are coordinated. These show that in the process of KI, knowledge is also applied. The impossibility of looking at KI and application activity, set apart from the context of its application, suggests that case study is a method that provides suitable approach for capturing significant research evidence in KI and application process.

4.2.1. Purpose of the case study

In the context of my research there is no specific theory to be tested because the literature review suggests that KBV is no yet predictive theory that guides management practice. As described in section 2.2. above, Grant and other KM scholars agree that KBV is a definite theory. This suggests that KI process has not been well understood both by scholars and practitioners. As a result, there are restrictive theoretical propositions that do not reflect the views and experiences of the participants on KI (Bryman, 1988).

The case study was adopted with a view of exploring and expanding the KBV (Eisenhardt, 1989). Although KBV was proposed as a theory, arguably it is not yet viable theory because a number of fundamental constructs and questions related to the concept and locus of knowledge as well as the integration process have yet clearly defined and explored (see Von Krogh et al., 2001). The practical implications of how organisations create new value from knowledge are radically different, depending on the underlying assumption about the understanding of the locus of knowledge (Felin and Hesterly, 2007). Moreover, KBV lacks empirical evidence, particularly in international NGOs. A case study is adopted in this research to determine the characteristics of KI from the views, perceptions and judgments of a variety of practitioners in the case organisation.

Case studies are particularly valuable for investigating complex social processes. KI is a complex process because it involves variety of individual behaviours, organisational practices and informal social interaction characteristics. KI and application process is also involves different stages and influenced by various interrelated factors. For example, a survey method may not be appropriate instrument for investigating the complex process of KI because it lacks in-depth and rich accounts of practitioners' views and perceptions (Yin, 2009; Yin,

2003). These rich and in-depth accounts of practitioners' views and perceptions can be better captured in interview conversations. Case study method is commonly used to document and evaluate intent and application of phenomena that are complex, such as KI and application (Lantolf, 2000 ; Yin, 2009). The individual views and perspectives are very important in knowledge sharing, absorbing and integration (Raymond et al., 2010).

4.2.2. Procedure of the case study

4.2.2.1. The Research setting

In order to use the case study approach, I took a certain decision. This decision included whether to research one or many cases and how the most appropriate case, or cases, can be identified. In making this decision, I assessed two major factors: access to organisations and appropriateness/uniqueness of the case organisation in relation to my research questions. In this research a single case study is adopted due to access challenges and the uniqueness of the case organisation (see below).

Access challenges - I tried to access more than one organisation to carry out multiple case studies. In choosing the study setting, I approached six large international development NGOs in the UK with the assumption that large organisations with high level of organisational complexity would necessitate significant efforts in KI. Most NGOs approached replied that they cannot provide access to their staff for interviews and consultations due to lack of staff time. Out of the six NGOs contacted, four of them replied to me stating that they have no time for student research. Some of them put in their policies that they cannot offer their staff time for study interviews. For example, the policy of one of the international NGO contacted was

not to offer participation of their staff in student research. They can only provide access to written documents of the organisation.

The main reason that many international development NGOs were unable to provide access was lack of time. At the time of study, many international NGO were extremely busy providing emergency responses caused by crises and conflicts in many parts of the developing world. I addition, the funding regime has changed recently and most NGOs lack financial resources to run their operations. These lead to redundancies and most NGOs manage large volume of workloads with limited human resources. As a result, it was not possible for many NGOs to offer their staff time for case study interviews and consultations. Out of the six NGOs requested, one NGO offered me only 3 staff for interview out of about 300 staff they have. I did not consider this organisation for the case study because it does not meet the sampling criteria of my research. One organisation (the case organisation) offered me full access for the study. I found this organisation is unique and appropriate for the study of KI and application process.

Uniqueness of the case organisation- The organisation selected for the case study was unique in many aspects. Studying the underlying processes of KI required a research setting that allowed an analysis of KI on an internal, national and international basis. '*One of the possible selections of case study site suggested in the literature is to look for an exemplary case or cases'* (Yin, 1993 p.12).

In selecting the research setting, I sought an organisation characterised by large size, relatively old age and high degree of formalisation (Guo and Acar, 2005). In recent years, NGOs are increasingly forming alliances, partnerships, and collaborations both within and across sectors to achieve important public purposes. For example, based on the survey data of

95 urban charitable organisations in Los Angles (Guo and Acar, 2005) found out that an organisation is more likely to increase the degree of formality of its collaborative activities when it is older, has a larger budget size and receives government funding. One basic typology of collaboration is sharing of information and knowledge. Foster and Meinhard (2002), using a sample of 645 non-profit organisations in Canada, posited that organisational factors such as size and type were found to be related to the extent of formal collaborative activity. Ebaugh et al. (2007), based on seven organisational characteristics in the United States, predicted that faith-based organisations are most likely to collaborate with different types of organisations.

The selected case organisation was an exemplary organisation from the available sample of NGOs based in the UK because it has an established learning and knowledge management practices. The case organisation is also a faith-based organisation and collaborating with different types of organisations. Partnership is one of the case organisation's core values and critical element of its operating model. The case organisation works with a number of overseas offices and partnership organisations throughout the world and has been in operation for more than 51 years.

The case organisation is a leading NGO in partnership work and has relationships with some 480 partners globally. In addition to providing funds for contractual delivery relationships, a large part of the organisation's work is aimed at enhancing the capacity of partners who share the organisation's aims and values, either financially (through core and programme funding) or organisationally (through training, networking, leadership development and so on). The case organisation is currently developing a partnership policy and guidance to help develop

the organisation's approach to partnership development and management both in the north and the south.

The case organisation utilises various mechanisms for leveraging knowledge management practices towards achieving its goals. As described in the background to the case organisation section (4.2.2.3.) below, the organisation is committed to learning and KI that was demonstrated by its policies and significant investments.

The organisation made relatively significant investment in learning and knowledge management. For example, one Director said '*While our organisation was half the size of X (X is a similar international development NGO), our learning and knowledge management budget is twice that of X'*. The case organisation assigned key personnel for learning and knowledge management activities in different divisions. Also significant investments were made into IT connectivity and knowledge management software such as Microsoft SharePoint, Programme Cycle Management (PCM) and internet and intranet facilities. There are strong community of practices that facilitates learning and KI throughout the organisation and beyond.

In Conclusion, from the evidence found, it appears that the case organisation has made relatively better progress in internal and external learning and KI. Therefore, the case organisation can be regarded as an illustrative and exemplary case when examining KI and application process. So it was beneficial to understand how this organisation approached KI and application on an internal, national and international basis.

4.2.2.2. Advantages and disadvantages of single case study

Advantages of a single case study- One of the main advantages of single case study is greater depth in data collection and analysis (Siggelkow, 2007). '*Single case study enable the creation of more complicated theory than multiple cases because single case researchers can fit their theory exactly to the many details of a particular case'* (Eisenhardt and Graebner, 2007 p.30). As discussed earlier, KI is a complex process that is influenced by a variety of variables related to individual behaviours, organisational practices and informal social interactions. A single case study provides an opportunity to carry out the detailed study of the views and perceptions of individuals and groups at different levels in the organisational hierarchy. An in-depth analysis of the interactions and influences of different variables in a single organisation provide better understanding of the KI process. I believe that in the context of KI, in-depth study of respondents' views and perceptions at different levels and sub-units can provide better understanding and rigorous theory than comparative studies of two or more organisations.

This study explored the KI process in the international development NGO by analysing sub-units at different levels in the case organisation. At each hierarchical level, data related to individual knowledge sharing behaviours, organisation knowledge governance practices and informal social interactions characteristics were gathered and analysed. The analysis was within the sub-units separately as well as between different sub-units as a whole (Yin, 2003). This was to identify the influence of various individual factors, organisational mechanisms and informal social interactions on KI and application process at all hierarchical levels.

In this case study, I adopted a ''*multi- stages- multi- factors analytical approach''* to the KI. Multi-stages- refers to analysing the KI at different levels of the integration process including

knowledge sharing, absorbing and combining/applying stages. Multi-factor analysis refers to incorporating constructs related to individual knowledge sharing behaviours, organisational governance practices and informal social interactions characteristics and evaluating their relationships and influences on KI.

Drawbacks of a single case study- Some researchers argue the limits on the generalisability of conclusions drawn from single case study and lack of representativeness of a single event. However, 'generalising' in this context is finding links between the constructs and providing analytical generalisation. Also 'generalisation in this context refers to generalise from experience and observation to theory, not from sample to population' (Symon and Cassell, 2012 p.365). Analytical generalisation is related to the transferability of the analytical model. In other words, the comprehensive and integrative analytical model of the KI and application process can be transferred. For example, the multi-stages- multi-factors analytical approach adopted in this research can be applied to some other instances.

Moreover, case studies, unlike experiments and surveys, are generalisable to theoretical propositions and not to populations or universe (Eisenhardt and Graebner, 2007). In this sense, the case study, like the experiment or survey, does not represent a 'sample'. In addition, the potential benefits of data richness and depth compensate for the associated shortcomings of limited representativeness and generalisability of single case study (Ibeh et al., 2006).

In addition, the purpose of this research is '*to develop theory, not to test it, and so theoretical (not random or stratified) sampling is appropriate'*(Eisenhardt and Graebner, 2007 p.30). In other words, this study is not proving or disproving theories but broadening understandings of KI and application process using fresh data and observations from the perspectives of

practitioners in the case organisation. The single case is selected because it is particularly suitable for revealing and extending relationships and among constructs. The constructs analysed in this study are related to individual, organisational and informal social interactions in the organisation.

The implicit assumption is that theory building from cases is less precise, objective, and rigorous than large-scale hypothesis testing (Eisenhardt and Graebner, 2007). However, the in-depth analysis of the KI and application process carried out in this large international development NGO can be used as a starting point for building theoretical propositions (Hollenstein, 2005) on KI and application process. These propositions stated in this research can be tested in future quantitative research.

Access to the research setting- Access to the research setting was not based on personal or professional relationship with participants in the case organisation, but obtained through the formal request I made to the organisation. As mentioned earlier, some of the factors considered in choosing the organisation were accessibility and suitable contact. I approached the organisation and asked them to help me in my research by participating in interviews and providing me access to organisational documents.

I contacted the Director of the organisation in writing who then referred me to the Information and Knowledge Management Advisor. I sent detailed information sheet of my research to the Information and Knowledge Management Advisor who then distributed it to the relevant staff and managers in the organisation. The Information and Knowledge Management Advisor told me that the majority of the people in the organisation were interested to the research. Then the Information and Knowledge Management Advisor directed me to the Programme Learning Manager that became a main contact person for the study. My first face-to-face meeting was

with Programme Learning Manager that provided me with the highlights of the key areas of learning and KI in the organisation. I also agreed terms of reference of the study in relation to confidentiality, time schedule and access to key people who can provide information. After access is obtained, I approached all interview participants on one-to-one basis and the interview was negotiated and arranged to the convenience of each interview participant.

4.2.2.3. The Background of the case organisation

The case organisation is an official international aid agency based in London, UK. The case organisation was established 1960 and two years later, officially registered in England and Wales as official international aid agency. Since then the organisation has continued to grow, alleviating poverty and working for global justice.

The operations of the case organisation are global and it employs some 430 people worldwide with a turnover of over 61 million pounds (Annual Report 2011-12). The development of its turnover has been positive in 2012 due to the increase in community support and institutional funding. The field work was carried out for eight months, from February 2012 to September 2012. During the field work the case organisation was managing two major projects: *Programme Partnership Agreement (PPA)* with Department For International Development (DFID) and *Building Sustainable Future (BSF) change programme.*

Programme Partnership Arrangement- Department For International Development (DFID) provides significant funding to Civil Society Organisations (CSOs) annually in line with its overall strategy to alleviate poverty and promote peace, stability and good governance. The case organisation's PPA is a contract with DFID for nearly 4.2 million pounds per year, over three years. An important aspect of the PPA work is promoting collaboration and learning, as

well as facilitating links between partners and other organisations including academic institutes and sister agencies to harmonize their work and increase the effectiveness of the development programmes.

The case organisation first received the PPA support in 2001. The current PPA was started in 2011 and ends in 2014. The current PPA is a strategic funding provided to the case organisation to facilitate learning and knowledge sharing across the organisation and beyond. The outcome of the PPA project is evaluated on the basis of improving organisational capacity building, providing contextual knowledge, communicating and sharing knowledge within and beyond the organisation. Part of my case study was to explore the extent to which the PPA project helped the case organisation to learn from its work.

Building Sustainable Future (BSF) change programme- At the time of the case study, the case organisation was also undertaking organisational change project, called ‘‘*Building Sustainable Future (BSF)’’*. The BSF was a 2-3 years project that started in January 2012 and ends in March 2014. The BSF programme is about the changes required in the organisation to enable the case organisation to operate in a simple, more focused and effective way to impact its 10 year priorities. The case organisation’s 10 years priorities are a strategic plan that commenced in 2008. The strategy has four major aims: change, promoting sustainable development, achieving peace, security and recovery and building the organisation’s partnerships with the Catholic community in England and Wales.

In order to deliver its objectives set out in 10 years strategy, the case organisation undertook the BSF change project. The aims of the project were to shift the organisation from breadth to greater depth; make reinvestment in the context of financial realities; have a sustainable structure in a volatile and changing environment; and to make investment in partner facing

work and to deal with overstretch. The change project consists of three phases- data gathering and scoping, design and planning and implementation. BSF draws together the divisional and cross-organisational projects so that the organisation better able to manage the interdependencies and control the volume of change. In the process of the BSF change process there were extensive sharing and synthesis of information and knowledge at all levels in the organisation.

The case organisation's commitment to learning and KI is demonstrated by its policies and significant investment in learning and knowledge management programmes. In 2004, the case organisation introduced the approach of learning organisation. Also, in recognition of the need to strengthen learning across international programmes, in 2008 the Programme Learning Team (PLT) was established within the Programme Effectiveness Unit (PEU) of the International Division. The learning and innovation is guided by the organisations' programme learning and innovation strategy 2012-15.

PLT engages with managers and programme staff across the organisation, and is linked to the Human Resources Division's Organisational Development and Learning Team whose remit is training and capacity building of the organisation's staff. The PLT also liaises with and links together technical specialists outside the team including those working on Accountability, Safeguarding, Disaster Risk Reduction, Climate Change, Conflict, HIV and Advocacy capacity building.

To improve organisational capacities in KM, significant investments have been made into IT connectivity and tools including Programme Cycle Management (PCM) and its associated database; Web promise for monitoring international programmes and a Microsoft SharePoint based internal document system. The organisation believes that it has made relatively

significant investment in learning and knowledge management. The case organisation assigned key personnel for learning and knowledge management activities in different divisions. For example, at the time of the study, the case organisation had an Information and Knowledge Management Advisor, Programme Learning Manager and HIV Knowledge Management Advisor. Recently, the organisation employed one additional Knowledge Management Coordinator in its PEU. This was in addition to Organisational Development and Learning Team that undertakes training, development and organisational learning activities of the organisation. The Information and Knowledge Management Advisor and Programme Learning Manager were my primary contacts during the study.

The use of Communities of Practice (CoP) is one way in which the case organisation facilitates learning and KI. In the CoP, communication takes place face -to- face, online, or a mix of the two. This allows the organisation to have global CoPs in a sense that staff, managers and overseas partners can participate in discussions and knowledge sharing fora. HIV CoP operates both internally across the organisational boundaries and externally with other agencies. Knowledge sharing was strengthened due to existence of the CoPs because different insights and views are shared between the individuals involved in the CoP.

The CoP in the case organisation provide a collegiate environment where problems can be openly discussed; practical solutions to problems suggested and debated and staff and managers participate in decision making process. In this process, knowledge from different expertise is integrated and applied to accomplish organisational tasks. For example, there is a well-established HIV community of practice where HIV related knowledge is shared across the organisation and beyond. At the time of the study, the gender networks and livelihoods teams were also developing their own CoPs for knowledge sharing and integration.

The learning and KI process in the organisation were identified by case respondents who were asked to give some examples of knowledge sharing, absorption and integration. The respondents were asked to elaborate on how and why knowledge sharing and integration takes place in the organisation. How the organisational structure, hierarchies and management initiatives and practices impact on flows of knowledge. Also how knowledge sharing takes place in informal social interactions and networks within organisational members. And also how KI takes place across the departmental boundaries of the organisation was analysed with the assumption that KI is influenced inter unit interactions and partnership relationships.

The respondents were further asked to explain how they absorb and unify the shared knowledge with their existing knowledge. The KI practices investigated were all kinds, ranging from day-to-day knowledge sharing to established routines of knowledge sharing and integration activities.

4.2.2.4. Research Ethics

As my empirical research involves human subjects, ethics and informed consent was part of my research. My research was approved by the University of Birmingham Ethics Committee. The participants of interview understood the aims and objectives of the research. The participants had been willing to participate and they have been assured of the confidentiality of the data they provided. The interviews were carried out in a fair, considerate and respectful manner. To ensure this, I strictly followed the University of Birmingham's ethical code of conduct and guiding principles. I considered ethical issues at different stages of my research by identifying areas of ethical concern and anticipated possible problems and seek to overcome them.

I provided detailed information sheet to each respondent in advance of the interview time. Each respondent was interviewed privately in a separate room at the organisation's headquarters in London. The voluntary nature of the participation, consent, confidentiality and anonymity has been restated clearly at the time of interview. The participants have been told that the rights to informed consent, rights not to answer any question and/or to withdraw if they wished. I clarified the information provided and answered any questions the participants had. In an interview before the substantive discussion started, I requested permission to undertake the interview, summarised the themes to be covered and confirmed the amount of time available.

I made sure that the participants had read the information sheet and signed the informed consent form. All respondents, except two overseas respondents who have been interviewed through Skype, signed the consent form. The two overseas respondents were asked their consent and agreed to participate for which I have recorded verbal consent. The copies of the signed consent forms were kept by the researcher (me) and the respondents.

4.2.2.5. Sampling of the research participants

I adopted purposive sampling strategy to select cases that best enable me to answer my research questions and meet my research objectives**.** In other words**,** I applied heterogeneous or maximum variation sampling strategy (Patton, 2002) that enables me to collect data to describe and explain the key themes of KI and application in the organisation**.** That was to ensure maximum variation and to develop as many diverse properties as possible.

In interviewing different groups, samples were taken from all organisational hierarchies that range from the director of the organisation to lower level staff and volunteers. Accordingly,

the consultations were carried out with people from the headquarters at all levels and overseas programme offices. The numbers of individuals interviewed from the case organisation's headquarters in London were 35: this includes Director's office (3), Organisational Development and People Division (6), Advocacy and Policy Division (2), Communities and Supporters Division (5) and International Division (26). The numbers of individuals interviewed from overseas regional offices were 7**:** this includes African regional office (3), Latin America and Caribbean regional office (1), Asia and Middle East regional office (3). The respondents were reflective and saw knowledge sharing and integration process from different perspectives**.** Summary list of interviews respondents at the case organisation are depicted below:

Role	**Number of respondents**	**Interview time**	
		Hours	Minutes
Directors (D)	6	4:31	271
Department /Programme Head (DPH)	7	6:36	396
Managers (M)	5	5:14	314
Technical Advisors (TA)	10	10:00	600
Programme Support Officers- HQ (PSH)	6	5:10	310
Programme Support Officers - Overseas (PSO)	6	5:21	32
London Volunteers (LV)	2	1:08	68
Total	**42**	**38**	**2280**

Table 1- List of interview respondents at the case organisation

4.3. Data Collection Methods

Method refers to the particular techniques to collect and analyse data. A hallmark of case study research is the use of multiple data sources; a strategy which also enhances data credibility (Patton, 1990 ; Yin, 2009; Yin, 1994; Yin, 2003). In this research, I followed Yin's recommendation for multiple sources of evidence in collecting the case study data. Yin (1994) recommends six sources of evidence - *interviews, documents, archival records, direct observations, participant observations* and *physical artefacts*.

In this research, I used semi-structured interview, document analysis and participant observation methods. These multiple sources of data were used with the view that taken together, they add up to a more complete view of the KI and application practices that is the focus of the investigation.

Multiple data sources are also used to ensure triangulation. Denzin (1984) identifies four types of triangulation: *Data source triangulation*, when the researcher looks for data to remain the same in different contexts; *Investigator triangulation*, when several investigators examine the same phenomenon; *Theory triangulation*, when investigators with different viewpoints interpret the same results; and *methodological triangulation*, when one approach is followed by another to increase confidence in the interpretation. Data source triangulation would support the principle in case study research that the phenomena be viewed and explored from multiple perspectives (Bunniss and Kelly, 2010).

The collection of data from semi-structured interviews, organisational documents and participant's observation were used to make comparison of data from different sources and enhanced data quality based on the principles of idea convergence and the confirmation of

findings (Knafl and Breitmayer, 1989). In other words, the data gathered from the documents and participant observations helped me to confirm the semi- structured interviews findings ensuring the data source triangulation. In approaching the data collection task, I was guided by findings from the literature review, the aims and objectives of the study and the research questions.

4.3.1. Semi- structured interviews

Interviews are an important source of data in my research and are in general the most important data sources in case study research (Yin, 2009; Yin, 1994; Yin, 2011). *'Interviews are a highly efficient way to gather rich, empirical data, especially when the phenomenon of interest is highly episodic and infrequent'* (Eisenhardt and Graebner, 2007 p.28). Interviews are usually considered as a primary ways of gathering information, and knowing people and their views on certain phenomena (Symon and Cassell, 2012).

The main focus of the primary data collection involved both unstructured and semi-structured interviews. Semi-structured interviews (Barriball, 1994) are a widely used technique in academic and practitioners' research. In the context of international development research (Corfield, 2010) states that semi-structured interviews often provide valuable information that was not anticipated by the researcher. Unlike formal interviews, which follow a rigid format of set questions, semi-structured interviews focus on specific themes but cover them in a conversational style (Corfield, 2010). Semi-structured interviews are considered as best technique to know about the motivations behind individual's choices, beliefs, attitudes and behaviours. Likewise semi- structured interview was an appropriate method to gather data on how participants understand knowledge in the organisation and how and why they share,

absorb, integrate and apply knowledge. The interview process took place in two steps- pilot phase and main interview.

Pilot phase

The interview data collection was started by a small pilot activity, where the context of the study was explored and content of the interview tested. The data from this pilot activity was to understand the context of the organisation and to modify the interview questions accordingly. The pilot interview was carried out through group discussion that involved four participants- three from International Division and one from Organisational Development and People Division. The individuals involved in the group discussion were Programme Learning Manager, Monitoring and Evaluation Advisor, Livelihoods Advisor and Information and Knowledge Management Advisor.

The data collected from this pilot discussion helped to identify key issues related to KI and application in the case organisation and to adapt the interview questions to the languages and discourses used in the organisation. The pilot discussion facilitated the understanding of the interview questions in the context of the case organisation. In other words, this preliminary data collection formed the basis of a set of questions for the detailed semi-structured interviews directed towards the 42 managers and staff at the main interview.

The main interview

I used semi-structured interviews as the main data collection method because KI and application process is dependent on the context as well as it is influenced by individual views and perspectives. I believe that these rich and in-depth data can be best captured through the semi-structured interview which allows live researcher-participant conversations. The other

benefit of semi- structured interview was that it helped to clarify items that participants might found confusing. This was done through one-to-one conversations. Semi-structured interview provided an in-depth understanding of the respondents' motives, patterns of reasoning and emotional reactions that is not possible with questionnaires (Thomas and Harden, 2008).

But *'interviews also often provoke a "knee-jerk" reaction that the data are biased in which impression management and retrospective sense making are deemed the prime culprits'* (Eisenhardt and Graebner, 2007 p.28). To overcome this limitation, I interviewed highly knowledgeable groups of people across the organisation who views the phenomena from diverse perspectives. This included people from different positions in the organisational hierarchy and various professional backgrounds. Also the study was carried out at the time when the case organisation was undertaking two live projects- *Building Sustainable Future* and *Programme Partnership Agreement*. These live projects helped to investigate the KI and application practices in real-time context and *'mitigate retrospective sense making and impression management'* (Eisenhardt and Graebner, 2007 p.28).

The interviews were conducted during working hours, at the headquarters in London and at the participants' convenient time schedule. All participants were given a short brief about the nature of the research in advance. Participants were assured of their right to withdraw from the interview at any point and they were asked to acknowledge and sign research consent forms.

The interview questions were prepared in a simple and understandable language relevant to the organisation. This was to reveal the various ways in which respondents interpret a general question. Although the questions were general format more insights have been gained through detailed open discussions during the interviews. Although, I was familiar with the languages

and concepts used in the charitable NGO sector from long time work experience, I was interested to get more detailed understanding of the language relevant to the case organisation. I listened carefully to the respondents comments and understood what is really going on. In most of the interviews my relationship with the respondents were well managed and the respondents provided spontaneous views and comments.

The interviews were quite wide ranging and thoroughly explored the KI processes among the case organisation staff at all levels. The interview also explored knowledge sharing that take place across organisational boundaries. Although the key words and phrases used in designing the interview questions and probes were derived from literature reviews and the research questions, some of them were not relevant to some of the interviewees. To support data collection from individual respondents who were not familiar with the language of KI, I modified some of the interview question terminologies that suits individual respondents. That is to say, in some cases, the interview questions were tailored to individuals according to their roles and responsibilities *(interview questions are listed in appendix 1*).

Each participant was interviewed for approximately one hour and all interviews were tape recorded, with the participant's consent, and transcribed. I took notes during interviews to capture some insights, beyond the participants' words, that were observed during the conversations. The participants were free to use their own words and images, and to draw on their own perceptions, concepts and experiences. I did not influence the respondents answer, but rather concentrated on listening and learning from the respondents; understanding their views and insights on KI practices. The respondents were able to talk freely about their perspectives on the KI activities without losing focus on the information requirements of the study.

My main duties after each interview were to read through the notes, remember and reflect on what has been discussed in the interview. Based on my memories and reflections, I wrote down additional notes immediately after each interview to capture more detailed information. My role was to understand, describe, analyse and interpret the KI and application process from the participants' perspectives.

The interview data collected from the participants were used as illustrations in the data analysis and interpretation. The cases that represent the themes in the whole data were carefully selected and quoted. To ensure the confidentiality and anonymity of the interview participants I am quoting from, I used appropriate anonymous codes rather than real names of the participants. For example, D1, D2-----Dn (Directors); H1, H2-----Hn (Heads of programmes); TA1, TA2----TAn (Technical Advisors); O1, O2-----On (Officers and support officers); IP1, IP2------IPn (International Programme managers and officers) and V1, V2,-----Vn (Volunteers).

4.3.2. Organisational documents

Although interviews provide the main data for the analysis, documents and records are also valuable for a KI case study. This was to avoid reliance on only one source of data. The process of combining multiple data sources is refers to data triangulation. Scholars (Jick, 1979; Yin, 1994) suggest that the use of multiple sources of evidence provide confidence that conclusions are not based on a single source that may be open to bias or error (construct validity). Yin further suggests that to ensure construct validity, the interview data needs to be verified and triangulated with documentary analysis. To ensure this, after each interview, I referred to written documents that are related to some of the key expressions made by the

respondent. In this sense, most of the interview responses were checked against the written documents.

Also I collected the organisation's documents to obtain background information on the evolution of the organisation, information sharing practices, internal structure, knowledge sharing culture, networks and IT practices as well as data on the live projects (BSF and PPA). The data were collected from both electronic and printed sources. The documents reviewed were learning and development strategies, thematic tools, programme learning strategy documents, leadership meeting minutes, BSF strategy papers and consultations notes, briefings notes, PPA documents, recent away day notes, evaluation reports and newsletters. (*Major documents reviewed are listed in Appendix 2).*

These documents provided additional evidence, and were confirmation of the existence of written systems and procedures of storing and sharing knowledge (Jick, 1979; Yin, 1994). For example, the strategic paper 2005 was used as evidence that the organisation introduced and applied ways of working based on principles of subsidiarity to ensure devolved decision making to lowest level in the hierarchy.

4.3.3. Participant Observations

Observation refers to gathering data by watching and/or listening to people, events and then recording what has been discovered (Thomas and Brubaker, 2000). Alongside the interviews and document analysis, I was observing how information and knowledge was shared and integrated between the people in the case organisation in informal ways. My observations were how people informally pop into one another's desk or across the corridor and share information and knowledge.

I also participated in six staff briefings and two International Development (ID) briefings. I observed how information and knowledge sharing takes place in that context. Most of the participants and presenters of the briefings were either the people who have been interviewed or those who are going to be interviewed. The briefings include presentation, questions and answers, discussions, workshops and brainstorming sessions. The briefings were followed by open informal discussion where the staff had opportunities to talk to leaders and senior managers and share insights. I took handwritten notes at the time of each observation.

In addition, the case study included several follow-up visits and observing the organisation in a long term context. This was with the aim to get very close to my data and respondents as much as possible. I have been in the organisation's headquarters for over a year (February 2012 - March 2013) two days a week. I was sitting in programme learning team and also interacted with people in programme effectiveness unit, fundraising team and African liaison team on the same floor. Also I carried out informal discussions with key people involved in learning and knowledge management as well as managers of BSF and PPA live projects. For example, I had regular contacts and informal discussions with Programme Learning Manager, International Change Manager (also BSF Coordinator), PPA performance manager and Information and Knowledge Management advisor. This helped me to get more insights and comments on the KI practices. Also this gave me opportunity to ensure that what individual respondents comment during the interviews fits with what they actually doing.

For this study, the continuation of contacts with main informants at the organisation meant that the activity identified during the interviews and document analyses were still operational. In other words, the aim of the visits was to confirm the continuing existence of the KI practices and to gain additional information about the process. It should be noted that the two

live projects- PPA and BSF were still in implementation process and I was interested to know how KI and application was sustainable in those projects and to capture related emerging issues.

Observation of actual practice increased the understanding of the interview, as the same individuals were observed when they were involved in actual KI activities. For example, the data gathered from observation confirms that individuals are free to comment, shape, modify and contextualise their duties as far as it contributes to the common organisational goals. This was consistent with the interview data related to how the organisation structure and hierarchies influence knowledge sharing.

4.3.4. Managing and organising the data

To manage the overwhelming amounts of data, the data gathered from interview, document analysis and participant observations were saved in a separate file with codes that help me to identify each individual respondent. The voice records were given codes and stored in secured file. The transcribed data were coded and kept in secure file. This enabled me to track and organise both voice and written data sources including notes and key documents.

4.4. Analysis of the data

The interviews data, organisational documents and observations notes were coded using Template Analysis -TA (King, 1998). TA was viable for this study because it provides flexible approach to the analytical process and the researcher can move between theoretical model and emerging data to answer the research questions. In this context '*template'* refers to structured list of themes or codes. TA emerged in the USA during the 1990s. It has been used in researching health, sociology and management fields in the UK.

TA appears to have emerged from more structured approaches such as Grounded Theory (Strauss and Corbin, 1994) and Interpretative Phenomenological Analysis (Giorgi, 1997). Grounded Theory is an approach that takes the view that there is a reality out there and individuals have an impact on and are affected by this reality (Glasser, 2011; Strauss and Corbin, 1994). Grounded theory seeks to generate theory from qualitative data with no preconceived notions, views and without undertaking detailed literature review.

Phenomenology suggests that the reality and non-reality is waiting to be discovered by a process of reduction (Lenthall, 2007; Waring, 2008). Phenomenology is characterised by openness, awareness and seek to develop a cohesive understanding of the meanings, feelings and emotions of the research subjects and the researcher within the situation of the study (Lenthall, 2007).

TA approach can be positioned between qualitative content analysis (Mayring, 2000) and grounded theory (Strauss and Corbin, 1994). Qualitative content analysis is where codes are all predetermined and their distribution is analysed statistically. The main idea of the procedure of qualitative content analysis is that the data is analysed step-by-step, following rules of procedure, devising the material into content analytical units (Mayring, 2000). *'In grounded theory, however, the researchers use no a priori definition of codes'* (King, 1998 p.118) and there are no predetermined codes.

The argument of TA is that within the middle ground of these two extremes, there is scope for wide variation in analytical techniques. In other words, TA lies between top down content analysis and bottom up grounded theory. *'TA is a style of thematic analysis that balances a relatively high degree of structure in the process of analysing textual data with the flexibility*

to adapt it to the needs of a particular study' (King, 2012 p.426). TA involves the development of a coding "template", which summarises themes identified by the researcher(s) as important in a data set, and organises them in a meaningful and useful manner (King, 2004 ; King, 2012).

In TA, hierarchical coding is emphasised; that is to say, broad themes encompass successively narrower, more specific ones. Major or more general themes appear near the top of the hierarchy of themes and gathered below them (as sub themes) are other themes that exemplify different aspects, types, or interpretations of the major themes. Sub-themes can themselves have sub-themes and so on to give potentially many levels of themes, though the research does not have to use all levels (King, 2004). It is usual in TA for codes to be organised hierarchically, with groups of similar codes clustered together to produce more general higher-order codes. Hierarchical coding allows researchers to analyse texts at different levels of specificity (King, 2004 ; King, 2012). Broad higher-order codes help provide a general overview of the direction of the interview, while detailed lower order codes enable fine distinctions to be made, both within and between cases (King, 2004).

TA is widely applied in research in health, social care and sociology related fields as well as a number of organisational and management research. Since TA first appeared in 1998, a number of publications describing studies that used TA have grown considerably. King (2012) has identified over 200 research articles that have used TA. Studies using TA vary considerably in size, from single autobiographical case (King, 2012) to studies that in qualitative terms may be considered large (Donnelly, 2008a). For instance, Donnelly included 81 interviews in his analysis of Careers and Temporal Flexibility in the new economy: An Anglo-Dutch comparison of the organisation of consultancy work. Also TA was largely used

in many management research literatures. For example, Kenny and Briner (2010) used TA in exploring ethnicity in organisations in the UK. Tremblay et al. (2007), in their analysis of an implementation of an On-line Analytical Processing (OLAP) used by knowledge workers at a regional health planning agency in the State of Florida, applied TA. A PhD Thesis by Rogers (2010) on '*Personal Experience of sufferers from Whiplash Injury compared to the experience of Doctors managing the Condition'* used TA technique.

4.4.1. Advantages and Disadvantages of Template Analysis

TA focuses on the research question from outset and provides an opportunity to identify what is actually essential in answering the research questions. Unlike grounded theory, TA approach helps to address the research questions in more detail rather than immersing into individual accounts and struggling with the data without clue or structured guide. Unlike content analysis, TA is not ridged technique but it provides a structured guide to the analysis. TA gives more flexibility in the analytical process because the researcher can move between theoretical model and the emerging data to answer research questions. King suggests that the researcher may think that the theoretical model is at the top and more important in answering the research questions. However, after looking at the field data the researcher may think that the data is more important in answering the research questions.

In TA it is common that the research questions may be modified in the process of the data analysis to reflect what is actually emerged from the data. Hence, TA allows moving from concrete respondents data to abstract and vice versa until all the emerging themes are categorised and higher order abstract themes formed (King, 2012).

In addition, unlike a grounded theory approach (Strauss and Corbin, 1998) which does not start with literature review, TA normally starts with at least a few predefined codes which help to guide the analysis. Also TA is particularly useful when different types of data are collected (King, 2004). In this case study data were collected through semi-structured individual interviews, document analysis and participant observations. Also, in this study, data were collected from a range of stakeholders (King, 2012) such as directors, head of programmes, managers, technical advisers, lower level staff and overseas staff. This enabled comparisons to be made between different perspectives.

King (2012) suggests that TA is more applicable to applied type of research such as business and management studies based in real organisations. My study is for a Doctorate in Business Administration (DBA) which is practice-based research undertaken in a particular international development NGO. The aim of this research is to explore how the knowledge in the organisation is integrated and applied. This analysis requires dynamic and flexible approach because knowledge in an organisation is dynamic and the KI and application constructs are variable. I believe that TA is appropriate analytical technique for KI and application case study in an international development NGO.

Some researchers comment that TA gives emphasise to the coding structure. This is seen as disadvantage because they may think that this emphasis may decrease researcher's personal engagement with data. However, this can be overcome by taking caution and being open at each stage of the analysis. To overcome this disadvantage, I was fully engaged with the respondents' accounts throughout the process of the analysis and moved forward and backwards in the analysis. This was done by taking care and caution at initial coding, template development and final coding stages. Also this potential disadvantage is compensated by the

flexibility of the TA in which researchers can tailor to the needs of their individual research questions for the qualitative data analysis.

4.4.2. Procedures of the Template Analysis

The aim of the study was to analyse KI and application practices in the case organisation. More specifically, the study focuses on how knowledge in an organisation is understood, shared, absorbed, combined and applied in different units of the organisation at different levels. The main themes related to the research questions were categorised under the clusters of *knowledge in the organisation, individual knowledge sharing behaviours, organisational knowledge governance practices,* and *informal social interaction and network characteristics*. The assumption is that different themes impact the knowledge integration at different stages of the process. The different stages of KI and application process are knowledge sharing, knowledge absorption and knowledge combination and application. The detailed analysis involves finding the emerging themes and identifying how they combine and positively or negatively influence KI and application in the case organisation.

As explained in the sampling section, the interview data were collected from people in Director's office, Organisational Development and People Division, Advocacy and Policy Division, Communities and Supporters Division, International Division and Overseas Regional offices. Accordingly, the analysis of the data was embedded in these organisational units. Within these organisational units the data analysis was carried out at four levels in the organisational hierarchy- Corporate Leadership Team (CLT), Senior Management (SM), Technical Advisors and Support staff (TAS) and Overseas Programme Staff (OPS) level. Corporate Leadership Team (CLT) consists of the Director and Directors of Divisions. Senior Managers include Programme Heads and Team Managers. Technical Advisors and Support

staff (TAS) includes Technical Advisors, Programme Officers, Support officers and volunteers. Overseas Programme Staff (OPS) consists of regional managers, coordinators and support staff from African, Latin American and Caribbean and Asia and the Middle East.

For analytical purpose, the respondents from all hierarchies in all the organisational units involved have been categorised into four. These categories are: Directors (D), Programme Heads and Managers (PHM), Technical Advisors and Support Staff (TAS) and Overseas Programme Staff (OPS). The study focused on gathering and analysing the experience of these four categories of people and their interactions in KI and application process. These categories of people were interviewed and data gathered and analysed separately. This was to make comparison between different hierarchical levels, between organisational units as well as between headquarters and overseas offices.

In presenting the accounts of interpretation of the data, King suggests three approaches: (King, 2012 p.446).

1. A set of individual case studies, followed by a discussion of illustrative examples between cases.

2. An account structured around the main themes identified, drawing illustrative examples from each transcript (or other text) as required.

3. A thematic presentation of the findings, using a different individual case study to illustrate each of the main themes.

I used the third approach, thematic presentation of the findings using different individual cases to illustrate each of the main themes. Although framing discussion around each and

every individual case study provide good grasp of perspectives of individual participants, this was not possible in my research context because of the large number of interviews (42). Also I could not present the analysis of the similarities and differences of all individual cases because of the word limit for the DBA thesis. Due to these reasons, I used the thematic presentation of the findings, using different individual case studies, as required, to illustrate each of the main themes.

The proposed procedure in TA was establishing preliminary coding, producing initial template and developing template, interpreting and presenting the analysis and comparing the themes to the findings from literature review (King, 2004 ; King, 2012). *Figure 1*- below shows the TA process used in this research. Although this was a proposed procedure used as a framework, I followed iterative process in shaping and developing the template.

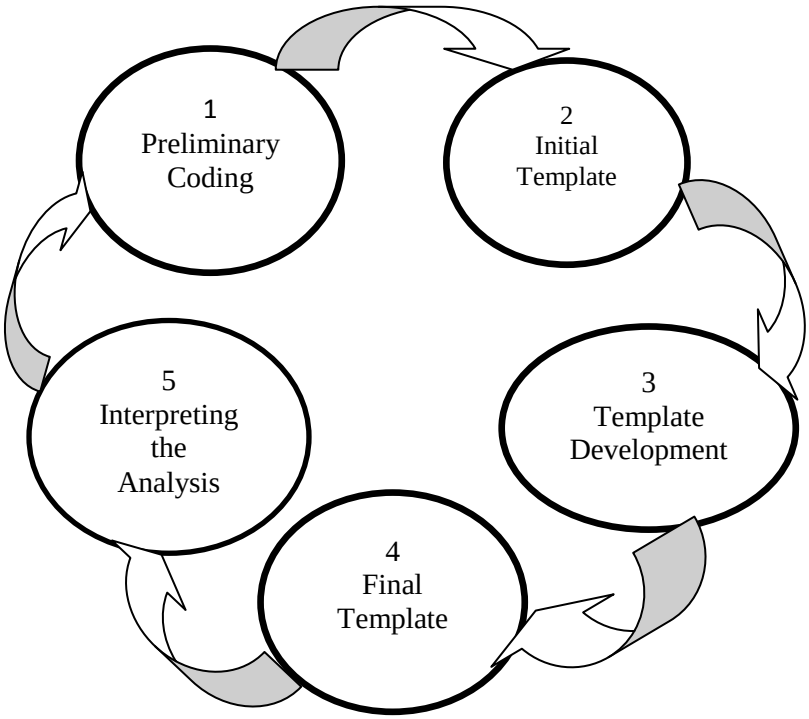

Figure 1- Template Analysis Process

1. **Preliminary coding-** The preliminary themes for the data analysis were identified from the combination of literature review, the pilot discussion with key staff in the organisation and my experiences. My argument was that KI has some theoretical insights but not definite theories to be tested. Because of this, I allowed fresh constructs to emerge from the data during the analysis process, rather than being guided by specific hypotheses. However, some key issues, words and phrases related to KI and application were identified from the academic readings. Various literatures from KBV, behavioural theory of a firm, KGA, and social capital and network, HRD, knowledge leadership and psychological theories suggest that KI is influenced by individual knowledge sharing behaviours, organisational knowledge governance mechanisms, informal social interaction and network characteristics. Also literatures from the empirical research on knowledge management suggest that knowledge in an organisation is different from the understandings of knowledge management philosophers.

   In addition to the theoretical insights, I was reading and re-reading the transcribed documents to understand the whole essence of individual accounts in the case organisation. The analysis referred to searching of texts for recurring words, themes or core meanings (Patton, 2002) and classifying them into individual, organisational and informal social interactions categories. The data were expressed in the particular discourse (Mabey and Finch- Lees, 2008) and language of the respondents. The preliminary codes are summarised in Appendix-3.

2. **Initial template**- 'Developing the initial template begins with clustering of the preliminary codes' (King, 2012 p.436). The first issue for the researcher is how broad

the initial template should be. King (2004) suggests the danger of starting with too many pre-defined codes. He stated that too many predefined codes may obstruct the judgment in the analysis by preventing researcher from considering the data which conflict with their assumptions. The other extreme issue is starting with too unfocused pre-defined codes. This can lead to lack of clear direction and feeling overwhelmed by the mass of rich and complex data. Therefore, in this analysis a middle ground was adopted not to include too many or too little codes in the initial template. To limit the scope of initial template, I used interview guide, observations during the pilot phase and my own experiences (King, 1998 ; King, 2004 ; King, 2012; McDowall and Saunders, 2010). It is noted that the interview guide was developed based on the academic literature and my own experiences of the KI and application process in charitable NGO.

In the clustering process, the themes moved around anywhere in the emerging structure until the place is found where they seem to function best. King (2004) advocates one of the following three positions when starting out the TA:

a. Have pre-defined codes/ a priori codes based on the theoretical position of the research. OR
b. Develop codes after some initial exploration of the data OR
c. Take a half way position- some initial codes (possibly from the interview questions).

In my research the second option seems to be appropriate because the initial codes were identified from exploring the data from sample of selected respondents. I avoided pre-defined codes based on the theoretical position because I did not want to focus on data that fit the priori themes and overlook the data that do not relate to them. I had

interpretive phenomenological approach (Giorgi, 1985; Giorgi and Giorgi, 2003; Smith, 2003) in developing the initial template. I read the interview transcripts to understand the overall meaning because I wanted to include the detail accounts of personal experiences of the respondents rather than focusing on the theoretical concepts.

Accordingly, the initial template was created based on the preliminary coding of the 11 interviews. The sample of the 11 interviews included 3 directors, 1 manager, 3 technical advisors and 4 overseas staff. This was selected to get the perspectives of different categories of people in the preliminary coding stage. I read the 11 interview transcripts and understood certain common accounts. Key ideas of the 11 respondents were identified from their individual transcripts and listening to their audio recordings.

The similarities and differences of the individual accounts as related to the preliminary codes were identified. Based on this analysis, the codes identified in the preliminary themes were clustered. After a long process of moving around the themes and categories, I produced the initial template shown in appendix *4.* The initial template is clustered into 6 major themes and 22 sub-themes and a number of sub- sub themes.

3. **Template Development**-The step of template development involved revising and incorporating as much data as possible into the initial template. This involves adding new codes, deleting redundant codes, merging codes together and re-defining and changing the code levels. Based on broad categories of constructs identified in the initial template, I listened to all the tape recorded interviews several times. I also read interview transcripts again and again. I worked through the archival documents and observational insights. I coded all interview transcripts and incorporated the codes in

the initial template where they fit. In situations where there were no codes that accommodate the new themes, additional codes developed.

The template development involved iterative processes of categorising and re-categorising the themes; coding them in hierarchies; changing higher order to lower order and vice versa; deleting and/or inserting codes. This process was depending on the level of stress given by the respondents and my interpretations as well. For example, themes such as '*people have social contract with each other'*, '*personal satisfaction'*, '*misinformation'* and '*time taken to share knowledge'* were deleted from the initial template because they didn't seem more important reasons why respondents share their knowledge. Themes such as *'checking mechanisms and sounding board'*, *'I work better when balancing ideas with others'*, '*the more you share your influence increases'* and '*to get wider picture and increase scope of thinking'* were inserted because they were mentioned by many respondents in various ways and seems to be the main reasons why respondents share or hoard knowledge. For more details of other changes and developments refer to the initial template *(Appendix 4)* and final template *(Appendix 5).*

4. **Final template**- The key decision in TA was when to stop the process of template development. As recommended by (King, 1998 ; King, 2004 ; King, 2012), coding was complete when all researchers agreed on all higher ordered codes and lower order codes. In my case, as a sole researcher, I stopped the coding when I felt that new themes are not emerging anymore and ensured that all sections of the individual accounts related to my research questions are coded and categorised in sufficient detail.

In the final template, the themes were categorised in hierarchies, sub codes and sub-sub codes and developed to the lower level details. Also the frequencies of the themes were given weight in relation to the number of respondents that mentioned a particular theme. For example, the theme ‘‘*to be valued and gain influence’’* was mentioned by 3 Directors, 5 Programme Heads and Managers, 3 Technical Advisors and Support staff and 2 Overseas Managers and Staff. Based on these analyses, I identified and defined the constructs of interest related to the research questions. These constructs are related to concepts of knowledge in the organisation, individual knowledge sharing behaviours, organisational knowledge governance mechanisms and informal social interaction and network characteristics.

The core aim of the analysis was to develop constructs and establish relationships between them. The constructs were developed from categorising the themes into hierarchies. The relationships between the ideas and views of the respondents were established and higher and lower codes were identified. Data from document analysis and participant observations were converged in the analysis process rather than handled individually. This convergence of data from different sources gave strength to the findings because the various strands of data were merged together to reflect better understanding of the KI and application process. In other words, the final template *(Appendix 5)* was developed after several iterations and consists of major themes, sub themes and sub-sub-themes that include sufficient details.

The final template consists of 6 major themes, 13 sub themes and 3 integrative themes. The sub themes have categorised into sub-sub themes to cover sufficient details of all the codes. The integrative themes (King, 2012) refers to the way many

participants seem to describe certain phenomena. It was difficult to put integrative themes under higher or lower order categories because they are common across all themes. For example, the three main integrative themes in which many respondents describe knowledge sharing were ‘‘*our organisation is collaborative and we need to share, ‘‘to inspire, engage and strengthen the organisation's work’’ and ‘‘our organisation is organic’’.*

5. **Interpreting and presenting the findings-** Drawing together the coded data depends on the research objectives and research questions (King, 2012). In this analysis, I considered all the contents of the interview data; document analysis data and observational data because I wanted all important themes should be included in the analysis. Analysing the whole contents of the data helped to understand and describe the general overview of KI and application in the case organisation. At the same time, I focused on main themes and interpreted them in terms of answering my research questions. To address both perspectives, my findings are presented into two main sections. General overview of KI and application and detailed analysis of the KI and application in the case organisation**.** Accordingly, the findings were presented in two chapters, namely Chapter 5 and Chapter 6.

CHAPTER 5

OVERVIEW OF KNOWLEDGE INTEGRATION IN THE CASE STUDY ORGANISATION

The analysis of the data shows a large number of themes that are related to knowledge management in the case organisation. Some of the themes are important to the organisation but not related to the aims and objectives of my study. For example, themes that have great importance to the research participants were: *managing contextual knowledge, partners' knowledge, local knowledge and supporters' knowledge.* However, the aim of this research is to explore how individual, organisational and informal social interaction themes facilitate or hinder knowledge integration in the organisation and how the shared knowledge is absorbed, combined and applied.

Knowledge is seen as an important resource for operational and strategic activities of the organisation. The organisation has broad range of vision to leverage its knowledge to the current operations and future strategies. These include the need to develop the capacity of their partners in developing countries to generate knowledge in their context; multi-directional knowledge sharing to and from partners and communities; raising awareness of poor peoples' local existing knowledge and knowledge about the supporters of the organisation.

In the case organisation, knowledge is understood and applied in various ways. Knowledge plays key roles in engaging with supporters, donors and policy makers. It is also used to develop helpful international projects and programmes and to build the capacities of the partners. The aim of the knowledge management strategy of the case organisation is to

manage knowledge and learning effectively and efficiently so that they improve the way they work and increase the impact of their work. The organisation is capturing learning and sharing knowledge across the organisation to improve organisational practices. Leveraging knowledge is given prominence in the formal and informal activities of the organisation. One respondent stated:

> *'Currently, knowledge is shared widely; most database is shared; most stories and files are shared to all members of the organisation; budget is transparent; managers consult and liaise with their staff, the organisation became more collaborative, everybody need to share and the way the organisation works is much more partnership' (D1).*

Most people interviewed in the case organisation share their knowledge using different verbal and non-verbal methods of communications. Microsoft SharePoint is used for accessing, processed and semi- processed information that can be accessed by all staff. The common ways of information and knowledge sharing methods are communities of practices, emails, staff e-bulletins, staff briefings, pictures, stories, videos, music, symbolic gifts, diagrams, drawings and lunch time talks.

The annual planning and review process includes learning from current experience to inform future plans. There are established tools that aid the process of learning and KI. The practice of learning before, during and after a cycle of work is applied throughout the organisation. Most of the successes and failures are captured through monitoring and evaluation of the projects and programmes.

The KI is also inbuilt in the process of accomplishing daily task of the organisation. Collaboration work was one of the cultures of the organisation. Staff and managers work together, in person and through the use of technology. This practice is widespread throughout the organisation. Different elements of the knowledge management programme were intended to promote ways of working that would lead to knowledge sharing and integration. Since the current Director took the position, there was the culture change towards the ownership of knowledge. Knowledge in the case organisation is seen as a resource that belongs to the organisation and everybody should share.

> *'When I started, knowledge was seen as power for some individuals. Our view was to open up structure for sharing learning and knowledge. We believe that knowledge in in the organisation is organisation's knowledge not individual or section or department. Unless there is good reason, knowledge should not be held (D1).*

Various formal and informal knowledge sharing methods are used across the organisation to ensure that the learning from organisation's programmes and partners is shared widely both internally and externally. However, the major KI initiatives taken by the case organisation are *HIV Communities of Practice* and *Innovation Fund programme.*

The idea of HIV Communities of Practice (CoP) was first discussed in the case organisation in 2004 as part of restructuring of what was then HIV support section. Members of the organisation are expected to work collaboratively and one of the collaboration mechanisms was use of CoP. Communities of Practice was made up of groups of people who share a passion for something that they know. The CoP is made up of the HIV team, the HIV advisory group, the HIV cross organisational management group and the Catholic HIV and AIDS Network. Members of CoP interact regularly to learn how to do their job better.

In the CoP, communication takes place face -to- face, online, or a mix of the two. This allows the organisation to have global CoPs in a sense that staff, managers and overseas partners can participate in discussions and knowledge sharing fora. HIV CoP operates both internally across the organisational boundaries and externally with other agencies. Knowledge sharing was strengthened due to existence of the CoPs because different insights and views are shared between the individuals involved in the CoP.

Another initiative of knowledge sharing and integration was the Innovation Fund (IF) programme. In 2009/10 the IF was started in programme learning team. This fund was established to enable the organisation's programme staff and partners to carry out pilot projects with an emphasis on innovation, learning and improving programme practices. A special emphasis of the IF programme lies on the sharing of learning, knowledge and wider replication of the learnings. There are various communication channels to share the knowledge and learning from the IF projects. These include International Development (ID) surgeries, lunchtime talks, partners' visits, and circulations of reports, case studies, learning materials, internal and external publications and the organisation's website.

The analysis of the large number of emerged themes during the study and managing each classifications of knowledge (such as *contextual knowledge, partners' knowledge, local knowledge and supporters' knowledge*) was beyond the scope of this research. The aim of this research is to explore how knowledge is understood and how it is integrated and applied. The conceptual model developed from the review of prior literature showed that knowledge integration involves three-stage process- *knowledge sharing*, *knowledge absorption* and *knowledge coordination and application*.

The literature review also suggested that sets of individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction characteristics either negatively or positively impact on KI and application process. In other words, different constructs of these sets of factors have different impacts at different stages of the KI process. My argument is that effective KI process require the combined analysis of individual, organisational and informal social interaction constructs because they are interrelated and co-influence KI processes at different stages. From the analysis of the data, the constructs related to KI and applications were emerged. These constructs are categorised under five major themes.

(i) *Knowledge in the organisation:* Knowledge in the organisation refers to understanding that is gained from interpretation and application. In the case organisation, knowledge is understood as processed, interpreted and applied information. The constructs related to knowledge in the organisation are: *information and knowledge are continuum; knowledge is deep understanding of information* and *knowledge is analysed and applied information*. These themes are selected because they are main ways in which respondents express the concept of knowledge.

(ii) *Individual knowledge sharing behaviours*- Individual sharing behaviours refers to the motives, perceptions and characteristics of individuals to share their knowledge to others. The constructs related to individual knowledge sharing behaviours are: *expectation for recognition and constructive use of knowledge, knowledge triangulation and knowledge ownership for power and influence*. These themes are selected because they are significant reasons why individuals share their knowledge.

(iii) *Organisational knowledge governance mechanisms*- Organisational knowledge governance mechanism refers to conscious and formal organisational practices that are related to KI and application. The constructs related to knowledge governance mechanisms are: *management style* and *ways of working* of the organisation. These themes are selected because they are the main constructs in which the knowledge sharing practices of the case organisation were embedded.

(iv) *Informal social interaction characteristics*- Informal social interactions refer to knowledge sharing opportunities that individual member of an organisation may have in informal group interactions and networks. The constructs related to informal social interactions are: *informal conversations* and *informal reference groups*. The main reasons for selecting these themes were that they are significant informal social interactions constructs that influence knowledge sharing in the organisation.

(v) *Knowledge absorption determinants*- Knowledge absorption determinants refer to factors that individuals take into account when they absorb and assimilate knowledge someone shared to them. The main determinants related to knowledge absorption are: *relationship history between the knowledge provider and knowledge receiver*, *relevance of shared knowledge to the existing knowledge* and *selective judgment (discernment)* of the knowledge receiver. These themes are selected because they significantly influence individual knowledge absorption in the organisation.

Each of these constructs was used as a category to identify further sub-codes within the text generated from the interview data. The codes were expressed in the particular discourse and language of the respondents. The frequency of statements pertaining to each sub-code and category were then interpreted and recorded. The final template presented in *(Appendix 5)*

demonstrates the density of comments related to each construct and the particular contextualisation of the issue within the case organisation. The details of the findings are analysed in chapter 6 below.

CHAPTER 6

DETAILED ANALYSIS OF THE KNOWLEDGE INTEGRATION IN THE CASE ORGANISATION

The central aim of this study is to describe the knowledge in an organisation; to explain how the dispersed knowledge is integrated and applied and to explore the impact of individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interactions and networks on KI and application process.

The data collected from the respondents in the case organisation were examined using template analysis (King 2004) within a 'contextual constructivist' discourse (Madill et al., 2000). As described in section 4.4. above, template analysis was used because it provides flexibility to the data analysis and helps to focus on emerging data to answer the research questions. The detailed analysis involves how the emerging themes individually as well as in combination influence KI and application positively or negatively. As described in chapter five above, there were wide range of themes emerged from the data.

To answer the research questions stated in section 3.5. above, it was important to select relevant themes and examine in detail. The selection of the themes was based on the scope of my research. The focus was to select themes that are related to my research questions and my judgment of how the themes shed light on KI and application processes in the case organisation.

The relevant themes were categorised into in five clusters. Each of these themes was used as a category to identify further sub-codes within the text generated from the interview data. The

codes were expressed in particular discourse and language of the respondents. The frequency of statements pertaining to each sub-code and category were then interpreted and recorded. The analysis focused on how the themes emerged under each cluster facilitates or inhibit KI at each stage of the process. Finally, in the knowledge combination section (6.2.3), the combined impacts of the themes were analysed. This analysis was important because the individual, organisational and informal social interactions factors facilitate and /or inhibit KI process individually as well as in combinations.

Accordingly, the research questions were answered in the following sections: The following section 6.1. addresses the first research question: How is knowledge viewed in the case organisation?

6.1. How is knowledge viewed in the case organisation?

The data analysis shows that the concept of knowledge in the organisation is different from the original assumption. In the original assumption of the KBV, knowledge was conceptualised as fixed resource. Also knowledge was categorised into tacit and explicit dimensions as well as individual knowledge and organisational levels. However, the knowledge management literatures and empirical findings shows the dynamic nature of knowledge (Davenport and Prusak, 1998; Nonaka and Takeuchi, 1995). This suggests that knowledge in an organisation is conceptualised as holistic variable resource that is fluid, flexible and continuously changing.

The analysis of case study data suggest that, knowledge in the organisation is seen as processed, structured and used information. Some respondents mentioned that knowledge is deep understanding of information with background and it is on higher level than information.

It was also stated in the organisation's knowledge management strategic document that 'Information is "organised data" and knowledge can be thought of as "distilled wisdom" or "interpreted information". It was highlighted that knowledge is more than just something that is written down; it is also the embodied practical wisdom we have at our disposal' (Knowledge and learning management strategy 2006). In the case organisation, knowledge is perceived as a combination of information that is processed, structured and used.

This is consistent with the argument of Kristopher Thomas, who analysed knowledge management in international organisations and described knowledge as '*information with which, when applied in an appropriate context, something can be done'* (Thomas, 2012 p.23) When information is transformed and used it will be knowledge. As one respondent expressed:

> *'When information is interpreted and used for purpose it become knowledge; knowledge is a learning that is genuinely applied; knowledge is how you apply, use, integrate and transfer information; knowledge is information that is acted up on; it is about the transformation and application or thinking about potential application of information' (TA6).*

This suggests that the concept of knowledge is understood in relation to the application of information to perform organisational tasks and achieve objectives.

> *'Knowledge is something with key objectives and real values from information; knowledge is one step up than information, it is a deeper thing than information; it implies experience, use, relevance and application' (IP3).*

Knowledge is also understood as dynamic and flexible resource. Some respondents highlighted the interchangeable nature of information and knowledge. In both written documents and oral communications, the concepts of information and knowledge were used interchangeably. The relationship between knowledge and information was sometimes not clear. Most respondents comment the dynamic relationship between information and knowledge. That is to say information becomes knowledge when it is interpreted, analysed and assimilated. Knowledge become information when it is put into document and accessed. For example, one of the directors interviewed stated that:

> *It is difficult to put a demarcation line between information and knowledge. When knowledge is shared, integrated and put into a system, it is information. When that information is accessed by someone else, it is absorbed, integrated and applied, it become knowledge again. There is a dynamic relationship between information and knowledge (D3).*

Some respondents perceive information and knowledge as a continuum- at lower end of the continuum is information and at higher end knowledge. Similarly, information sharing and knowledge sharing seems to be a continuum.

This suggests that knowledge in the organisation refers to deep understanding of particular information and its application because when a particular knowledge is absorbed and understood it can be applied to particular task. In the process of interpretation and application of information, the understanding of individuals changes because knowledge evolves every time external information received and assimilated into the existing knowledge. Although the philosophical analysis of the concept of knowledge is beyond the scope of this research, we

learn that understanding of the concept of knowledge in organisational context is an important requirement to analyse KI and application process in an organisation.

Therefore, we learn that the previous study that sees knowledge as a fixed resource with a specific location is contrary to the actual understanding of knowledge in the case organisation. Knowledge is dynamic and the individual understanding of a certain phenomenon varies from time to time showing that knowledge in the organisation is neither categorised nor fixed. This suggests that the understanding of knowledge in an organisation as *holistic variable resource* seems to be appropriate in KI and application analysis.

The following section 6.2. addresses the second research question: How is dispersed knowledge integrated and used in the case organisation?

6.2. How is dispersed knowledge integrated and used in the case organisation?

KBV tends to suggest that KI takes place at a single step process using appropriate integration mechanisms. This approach is demonstrated in the KBV proposals that suggest the use of appropriate KI mechanisms such as directives, standard working practices and organisational routines lead to KI (Grant, 1996a; Grant, 1996b). The analysis of the literature in this study suggested that KI and application is a multiple stage process and require cross level analysis. In this context, multiple stage process refers to knowledge sharing, knowledge absorption, knowledge combinations and application.

Multiple stage analysis seems to be appropriate to KI and application process because knowledge sharing does not guarantee knowledge absorption and application because the shared knowledge must be absorbed and assimilated before it can be used. The importance of

multiple level and cross level analysis is gaining increasing attention in recent organisational research (Schoorman et al., 2007). The multiple stage knowledge integration model adopted in this study suggests that KI starts at individual (micro) level and extends to organisational (macro) level.

In other words, knowledge in an organisation is integrated in three stages: knowledge sharing, knowledge absorption and knowledge combination and application. KI begins with the first KI stage (i.e. knowledge sharing). Knowledge sharing involves offering of knowledge to other individual or group. The second stage of KI is absorbing the knowledge. In this process the individual receiver assimilates the new knowledge with existing knowledge. The third stage of KI is combination of knowledge in which the knowledge receiver combine the new knowledge and existing knowledge to gain improved insight and understanding which is applied to organisational tasks. At combination stage of the KI process, knowledge is integrated as well as applied. In other words, KI and application overlaps in the process of KI. This suggests that there is no demarcation line between KI and application in the process of accomplishing organisational tasks.

Cross level analysis refers to incorporating individual level constructs, organisational level practices and informal social interaction characteristics into the analysis of KI and application (Schoorman et al., 2007). In other words, the cross level model analyses the influences of individual, organisational and informal social interactions factors on KI and application at the three stages of the KI and application process.

The following section 6.2.1. answers how knowledge is shared in the case organisation in which I analysed the impacts of individual knowledge sharing behaviors (section 6.2.1.1),

knowledge governance practices (section 6.2.1.2.) and informal social interaction constructs (section 6.2.1.3) on knowledge sharing in the case organisation.

6.2.1. How knowledge is shared in the case organisation

6.2.1.1. Individual knowledge sharing behaviours and knowledge sharing

The data analysis revealed three main individual constructs that either facilitate or hinder knowledge sharing. These constructs are: (i) *Expectation for recognition and constructive use of knowledge* - Expectation for recognition and constructive use refers to positive perception or appreciation that an individual knowledge provider receives by sharing his/her knowledge to knowledge receiver. *(ii) Knowledge triangulation*- Knowledge triangulation refers to checking your own knowledge by sharing it to others and getting feedback from them and *(iii) knowledge ownership for power and influence*- knowledge ownership for power and influence refers to the emotional feeling of ownership of knowledge for reputation, status and career prospects that come from the ownership of knowledge.

These constructs were emerged from the interview data. They cannot be measured but can only be described as '*perceived facilitators* or *perceived inhibitors'* of knowledge sharing. The impacts of these constructs are based on individuals' experiences and perceptions interview respondents and difficult to establish objective measures. Although such themes do not have objective measure, they are important to the process of knowledge sharing in the case organisation because they are key reasons why individual respondents share or hoard knowledge. In other words, one should not assume fixed relationship between the independent variables (knowledge sharing constructs) and dependent variable (the knowledge sharing). This is because the independent variables are derived from subjective perceptions of the

respondents and may change from time to time. So it is assumed that these knowledge sharing constructs and knowledge sharing are loosely related. The detailed analysis of these individual knowledge sharing constructs are described below:

Expectation for recognition and constructive use- Some respondents felt that if the knowledge they were sharing was needed by the receiver and the receiver value that knowledge, they would like to share. The value can be in terms of improving the understanding of knowledge receivers on particular phenomena and enabling the knowledge receivers do their jobs better.

> *''If people want information on how to evaluate programme, set up monitoring framework, communicate information, and I feel that it is in my job description, I will advise them because I have personal knowledge of it i.e. a kind of my technical knowledge, I will provide mechanisms to support my peers'' (TA6).*

The data also shows that some respondents share their knowledge to others, when they expect their knowledge is used constructively. Constructive use refers to the expectation that the shared knowledge is used in a productive way or at least not against the interest of the provider. Respondents' comments describing this are:

> *''I am sharing my knowledge with the expectation that the knowledge is applied in a constructive way and help others do something differently'' (IP3).*

> *''I share knowledge to be valued and raise my individual profile; to inspire, engage and strengthen my organisation's work'' (TA7).*

''Knowledge sharing is part of the culture and we share for collaboration and transparency'' (TA2).

The above comments are positive and describe the individual factors that facilitate knowledge sharing. The negative comments are related to the *suspicion* of the knowledge providers as to how the shared knowledge is used. The main suspicion is that the shared knowledge may be used distractively or against the interest of the provider. A respondent's comment that describes this theme is:

''*You do not disclose your knowledge, even if it is useful to them, if somebody constrain your own job or have an impact on your life. Me as a political animal, give some knowledge at some time and keep some. I will be selective, I do not give all knowledge I have whether I think they have to know or whether they think they have to know because sometimes I don't know how knowledge is used; somebody may use it the way you do not like''* (TA6).

Other negative comments are related to *'fear of incorrect use'* of the shared knowledge. The incorrect use of knowledge by receiver may affect personal integrity of the knowledge provider. This illustrates that if the providers do not have confidence on the capacity of the receiver to understand and apply the knowledge, they may hesitate to share that particular knowledge.

The data were analysed at four levels in the organisational hierarchy- director level, programme heads and managers, technical advisors and overseas managers and staff. The four levels of analysis revealed similarities and differences in the respondents' motives to share knowledge. Although most respondents would like to share their knowledge to other

colleagues to inspire, engage and strengthen the organisation's work, these were the most significant knowledge sharing motives for directors and managers than other categories of respondents. Also most respondents would like to share their knowledge to be valued and to gain influence. Most technical advisors hesitate to share their knowledge if they expect that the knowledge they share is used in the way they do not want.

To sum up, some individuals interviewed share their knowledge if they expect that the knowledge they are sharing is recognised and used constructively by the receiver and hoard if they expect that the knowledge is disregarded and used destructively against their interest. This suggests that individuals are motivated by feedback for recognition and constructive use of the knowledge they share to others. This is consistent with the findings of Donath, 1999 (cited in Hung, 2011 p.417) that argue *'reputation feedback, as extrinsic benefits, would lead to active participation in knowledge sharing and ''reciprocity'', that an individual's sharing and people's expectation of future benefits from their present actions'* (Hung et al, 2011, p. 418). This implies that knowledge management practices with built-in reputation feedback are crucial to support successful knowledge sharing in an organisation.

Triangulation of knowledge- Data analysis shows that some respondents share their knowledge to check the accuracy of their own knowledge and to build confidence. For some people interviewed in the case organisation, lack of confidence of which knowledge to share was the main hindrance to knowledge sharing.

> *''The challenge in sharing knowledge is to find evidence of what you know in your role and the difficulty of ensuring your evidence, differentiating about which is good practice; which knowledge should be shared to others'' (TA6).*

Individuals seek feedback for the knowledge they share to ensure the accuracy of their knowledge (triangulation of knowledge). The most frequent positive comments related to triangulation of knowledge are ‘‘*I share to gain knowledge as well and I work better when I balance my ideas with others’’*. These comments describe the factors that facilitate knowledge sharing.

> ‘‘*I share my knowledge to others because I like to gain knowledge as well. I am fad up with people who do not share. The reason I left university is, in academia, people are holding to knowledge, and no trust because they think knowledge will be stolen and published’’ (TA10).*

This suggests that, from the knowledge provider’s perspective, the motive to triangulate their own knowledge either facilitate or hinder knowledge sharing depending on the feedback given from the receiver. The feedback from the knowledge receiver can be positive, i.e. the shared knowledge is acknowledged, or negative, that is, the shared knowledge is considered as noise.

The positive feedback leads to knowledge sharing because the knowledge provider feels that his/her knowledge is acknowledged by the receiver. If the feedback is negative, the individuals may not be sure about the accuracy of their own knowledge on certain phenomena. As a result, they less likely share it to others because of lack of confidence and the resulting fear of criticism. Some individuals hoard their knowledge assuming that the receiver may wrongly interpret the shared knowledge and use it inappropriately. Inappropriate use of that knowledge may lead to wrong outcome or decision that affects credibility of the individual knowledge provider.

In summary, individuals share knowledge if they expect that the accuracy of their knowledge can be triangulated by sharing to others. This depends on the feedback from receivers. If the providers receive positive feedback from the receivers, they are encouraged to share their knowledge with confidence. If the providers receive negative feedback, they seek more information and resources before they share it to others or may not share at all.

Power and influence- The data analysis shows that some respondents perceive sharing certain type of knowledge reduce their power and influence, particularly if it is their personal expert knowledge. Some individuals tend to hoard their personal expert knowledge because they feel that such knowledge is valuable to them in terms of increasing their status, reputations and career prospects.

> *''If the knowledge I am sharing is important and valuable to me, I make decision when, where and to whom I share or not to share at all'' (TA6).*

This example suggests that, under competitive situations, sharing individual valuable knowledge depends on time, place and audience (the receiver) and individuals are selective in sharing their knowledge. However, under non-competitive situations the motive for power and influence may not hinder knowledge sharing.

> *''I want to share any knowledge, if it is not confidential; however, if it is my personal knowledge, I judge the level of sharing'' (O3).*

Conversely, however, the negative theme emerged from the analysis of the data shows that knowledge sharing increases power and influence because the more you share, the better you influence others.

''Knowledge sharing does not reduce my power and personal influence. It is the other way around. The more you share the more influential you can be. When you share your knowledge, teach and train other people how to do things you get more influence because they know that you know better than they do in particular thing and this increase your influence. Also the more you share, the more you get feedback on your knowledge and this increase your power and influence'' (H3).

The perception of power and influence varies among respondents at different positions in the organisational hierarchy. For example, most directors and some programme heads feel that they want to share knowledge if it is not confidential because they believe that the more they share their influence increases. However team managers, technical advisors and overseas managers and staff are neutral in this respect.

In summary, the data analysis suggest that perceiving knowledge ownership as a source of power and influence do not constrain knowledge sharing in non-competitive situation, rather it facilitates because the more they share, the more power and influence they will have. But in particular competitive situations, when individuals perceive that power and influence comes from a particular knowledge, they may not share that particular knowledge to their competitors.

To sum up, the individual knowledge sharing constructs analysed in this study suggests that some individuals in the case organisation share their knowledge if they expect that the knowledge they share is recognised and used constructively and hoard if they expect that the knowledge is disregarded and used destructively against their interest. The motive for knowledge triangulation facilitates knowledge sharing if positive feedback is received. However, negative feedback decreases knowledge sharing by reducing confidence of the

knowledge provider. Perceiving knowledge ownership as a source of power and influence facilitates knowledge sharing by encouraging individuals to share their knowledge to increase their power and influence. But in particular competitive situation, perception of power and influence may reduce the sharing of particular knowledge to particular audience.

The following sub-section 6.2.1.2 presents how organisational knowledge governance practices impacts knowledge sharing.

6.2.1.2. Organisational knowledge governance practices and knowledge sharing

The analysis of the data revealed that in the case organisation, the two main organisational knowledge governance practices that influence knowledge sharing positively or negatively are *management style* and *ways of working.* *Management style* is *'the interpersonal approach adopted by managers in dealing with employees'* (Harder, 2008 p.3). In the context of knowledge sharing, management style refers to the degree to which managers encourage participation and interaction between employees of the organisation at different levels.

I analysed a range of interview respondents' comments on the impacts of organisational hierarchy on knowledge sharing. The analysis of these comments shows that participation level of employees in organisational activities varies based on the supports they receive from their individual line manager. This ranges from those line managers *supporting* employees (supportive management style) to participate and interact in most aspects of the organisational activities to those *restricting* participations and interactions (restrictive management style). Supportive management style is when a manager openly tell the employees the situations, aims and objectives and involve the staff and make them part of the whole picture. Restrictive

management style refers to a situation when managers assign tasks to employees within the scope of their job descriptions and expects the result.

The data revealed that regardless of organisational hierarchies, the supportive management style facilitates knowledge sharing in an organisation. In other words, hierarchy do not hinder knowledge sharing if the management style is supportive. Positive comments from the respondents describing this theme are ‘‘*hierarchy depends on how connected we are; the case organisation is hierarchical, conversely, there are too much consultations’’ (H3); ‘‘managers trickle down information differently’’ (O3).*

Some respondents expressed the negative impacts of hierarchy on knowledge sharing. For example, ‘‘*communication rules restrict knowledge sharing’’ (TA2); ‘‘managers decide whether or not to pass the information down’’ (O3).* However, the majority of respondents did not perceive significant negative impact of organisational hierarchy on knowledge sharing. For example, one respondent said:

> ‘‘*I do not have a view whether hierarchy affects knowledge sharing; I think it is the attitude that influences knowledge sharing, not the hierarchical structure’’ (H4).*

In this context attitude refers to the management style of an individual manager. Another respondent commented:

> ‘‘*Although our organisation’s hierarchy seem to hinder knowledge sharing by blocking open communication between people at different levels in the organisation, the control of knowledge depends on individuals managing the initiatives. The organisation encourages networking and interaction outside line managers; there are a lot of openness and transparency that encourage knowledge sharing’’ (TA8).*

Another respondent commented as:

> *''Even though more hierarchical levels are risk to the knowledge sharing, it depends on the management style of each line manager. Sometimes, when line manager changes, information sharing changes; control of knowledge depends on individual manager. However, there is no consistency across the organisation'' (IP4).*

These comments suggest that some managers in the case organisation encourage knowledge sharing by using supportive mechanisms such as informal communications and interactions outside the hierarchical relations.

Restrictive management style hinders knowledge sharing because in a restrictive style both managers and employees tend to focus on authority relations and follow formal hierarchies. Under this situation, there is less communication and consultation between managers and staff. Due to hierarchies, knowledge flows can be blocked and information is filtered and delayed. In other words, in a restrictive management style, managers and employees tend to be more formal in their communications. As a result, the sharing of insights and feelings between managers and staff will be hampered.

> *''Trickling down information from higher level of meeting and at each level needs more; some managers are good at that but no consistency between individual managers (O3). Hierarchy affects knowledge sharing, not in a way we structure our organisation but it depends on how line managers cascade information. We do not really have that; managers are expected to communicate more'' (TA2).*

This suggests that supportive management style positively influence knowledge sharing while restrictive management style negatively influence knowledge sharing.

The explanation for this argument is that organisational hierarchy hinders knowledge sharing only if the management style is restrictive. Supportive management style facilitates knowledge sharing by moderating the 'hierarchical-multi-layer structures' and de-emphasising formal authority relationships. This is consistent with Harder's (Harder, 2008) argument that stated a management style that is supportive of employees' needs for autonomy promotes autonomous motivation for knowledge sharing.

However, restrictive management style hinders knowledge sharing by emphasising formal authority relationships. This suggests that regardless of the formal hierarchy, individual supportive management style can facilitate knowledge sharing and restrictive management style inhibit knowledge sharing in the organisation.

Ways of working- Ways of working refers to shared working practices adopted by the members of an organisation. Working practice is related to behavioural norms and beliefs that guide actions of organisational members (Rousseau, 1990) that emerge from previous experience and cultural reinforcement (Church and Waclawski, 2001). The case organisation is a faith based development NGO. Some of the organisation's working practices are rooted in 'subsidiarity principle' (Pope, 1931).

The notion of subsidiarity principle is that authority needs to be delegated to the lower level as much as possible. Thus, subsidiarity principle comprises multiple decision making centres in which different individuals have got autonomy to make decision at certain level. Although the concept of subsidiarity principle is traced back to the middle ages, it was first introduced in the 19th century (Pope, 1891). In late nineteenth century, Catholic Social theorists became the principal proponents of the idea of subsidiarity, as they sought some sort of middle way

between the perceived excesses of both laissez-faire liberal capitalist society and Marxian socialist alternatives (Carozza, 2003).

Young (2006) argues that subsidiarity principle is to negotiate agreements giving lower-level actors a real voice in decision making. The subsidiarity principle also implies an obligation on higher-level people to help realize the potential of the lower level people (Marshall, 2008). In essence, subsidiarity principle refers to giving support while still respecting the initiatives and capabilities of those who receive it (Mele, 2005).

The subsidiarity principle has usually been applied in a political context, mostly in European Union (Marshall, 2008)[2]. Although subsidiarity principle is applied in different contexts of power delegation, it can stimulate deeper consideration about how, in any context, tasks should be allocated vertically within a multi-level system.

In 2005, the case organisation's Corporate Leadership Team (CLT) developed seven strategic change papers that were important in realising the organisation's objectives. One of the strategic papers was introducing subsidiarity principle.

> ''*The centralised decision making at Director or Senior Manager Level is no longer appropriate for growing organisation like ours; that requires many operational decisions to be taken. So the authority has to be exercised in such a way that workers have sufficient liberty to use their capabilities to do whatever they can to achieve common goals. Devolved decision making to lowest level involved seeing staff and*

[2] The nations of Europe adopted principle of subsidiarity as one of the central constitutional principles for the European Union and made effective with the signing of the Amsterdam Treaty in 1999 (Marshall, 2008, p.80).

volunteers as key stakeholders; ensuring staff support each other and being leaders in their own area of work'' (Strategic change paper, 2005).

The aim of subsidiarity principle was to establish devolved decision making to overcome the practical constraints of formalised team leader and centralised decision making in the case organisation. It was stated as follows:

''We seek to build the organisation as a community based on our values and specifically on partnership, trust and mutual respect between managers and staff, in a spirit of subsidiarity'' (Strategic change paper, 2005).

Since then, most of the case organisation's working practices are collaborative and team based. This was demonstrated in several network groups and communities of practice across the organisation such as HIV/ AIDS communities of practice, genders network and accountability network. At the heart of these was a strong sense of identification with the organisation's culture, history and core capabilities which is rooted in subsidiarity principle. In other words, strong sense of social consensus governs the organisation. High degrees of participation were made possible through strong cultural controls rooted in subsidiarity principle.

The subsidiarity principle was implemented in the case organisation and demonstrated in staff consultation that took place in 2012. For example, the finding from the data gathering on behaviours and ways of working during the first phase of the BSF project was stated as follows:

''The level of consultation and participation was well-debated and contentious issue right across the organisation because people care about the organisation; they want

to have their say in the running and future of the organisation'' (Strategic change paper, 2005).

The themes emerged from the data suggest that the organisation's ways of working facilitate knowledge sharing in several ways because knowledge sharing is informal as well as embedded in some processes and procedures of the organisation. The process and procedures are based on subsidiarity principle. Particularly, since the current Director was appointed, the feeling for knowledge ownership was changed. There is a culture that promotes knowledge sharing. Knowledge sharing is built in the day-to-day processes and procedures of the organisation.

''Knowledge sharing is built in processes and procedures of the organisation. Our view was to open up structure for sharing learning and knowledge. Unless there is good reason, knowledge should not be held. Currently, knowledge is shared widely; most database is shared; most stories and files are shared to all members of the organisation; budget is transparent; managers consult and liaison with their staff, the organisation became more collaborative, everybody need to share and the way the organisation work is much more partnership''(D1).

In order to understand the characteristics of ways of working that impact knowledge sharing, I termed the constructs as *communicative, consultative and collaborative* ways of working.

Communicative ways of working encourage open and honest communication among staff and managers; providing constructive feedback to each other. This suggests that communicative ways of working is characterised by web of communications between staff and managers at different levels. In this process, staff and managers freely share their knowledge.

Consultative ways of working refers to the degree to which the managers consult individual team members in making decisions. In the process of consultation between managers and individual staff, some knowledge smoothly flows from managers to staff and vice versa.

> *''Knowledge is shared more informally through consultation. Although there are too many layers of managers, conversely, there are too many consultations'' (M1).*

Collaborative ways of working refers to the level of trust and respectful relationship that exists between employees and managers. Collaborative ways of working encourages teamwork to support each other, respect differences and use various talents effectively. Under this situation, the flow of knowledge among team members and between managers and employees can be smooth because of the feeling of collaboration and supportive spirit. The data shows that a working relationship based on *collaborative* spirit facilitate knowledge sharing among the members of the team.

> *''Our organisation is collaborative and we need to share knowledge because employees are encouraged to share their views and insights openly to each other. Programme staff working on specialist area share knowledge because there is a community spirit and people work together and share knowledge'' (H5).*

Although the case organisation is hierarchical, its ways of working are characterised by communicative, consultative and collaborative practices. These practices facilitate knowledge sharing between managers and employees as well as among individual staff and teams. This suggests that ways of working based on subsidiarity principle facilitate knowledge sharing in hierarchical organisation by encouraging communication, consultation and collaboration

between higher level managers and lower level staff as well as laterally across the organisation.

To summarise, the data suggest that major organisational knowledge sharing practices in the case organisation are: (i) *management style*- supportive management style facilitates knowledge sharing by de-emphasising authority relationships. Restrictive management style hinders knowledge sharing by emphasising authority relationships. (ii) *Ways of working* based on subsidiarity principle facilitate knowledge sharing by encouraging open communication, consultation and collaboration between managers and staff. Ways of working that discourage communication; consultation and collaboration hinder knowledge sharing.

The following sub-section 6.2.1.3 presents how informal social interaction characteristics impacts knowledge sharing.

6.2.1.3. Informal social interaction characteristics and knowledge sharing

The analysis of the data revealed that *informal conversations* and *informal reference groups* are two main constructs that influence knowledge sharing positively or negatively.

Informal conversation- In this context, informal conversation refers to spontaneous or pre-planned face-to-face communication of members of an organisation. Informal conversations are distinct from other methods of workplace communications such as telephones, emails, documents, memos, FAX, voicemail and social media. For most office workers, informal communication is a frequent workplace activity.

In informal conversation, the parties may discuss on unexpected or expected topics that may be work related or not. Sometimes the informal conversation may be unexpected or

spontaneous because you may not know who initiate the topic of discussion. Under spontaneous conversation, the structure of the discussion may be guided by the initiator. However, the recipient may change the structure based on his/her interest. Under this situation, any member of an organisation or outsider can initiate the conversation and the recipient's role would be to respond to the conversation. For example, somebody may come to your desk and initiate the conversation. It can also happen when you grab a coffee or you walk around in your office premises.

Also the topic of discussion may not be pre- planned by the recipient because the recipient may not know that the conversation will take place. The topic of conversation is primarily chosen by the initiator because the initiator wants to get some information or knowledge on certain topic or just to build relationship. However, the recipient may develop an interest in the topic of conversation. This type of conversation may be between team members who have similar roles, skills and experiences. It can also be between people having different skills and knowledge across the organisation. It depends on who the initiator thinks is a resourceful person for his/her topic of interest.

This suggest that informal conversation that takes place in an organisation ranges from spontaneous talk on arbitrary topic with unexpected individual to pre-planned dialogue on specific topic with specific person in the organisation. In order to understand these ranges of informal conversations that take in the organisation, I termed the constructs *spontaneous conversation* and *purposeful conversation*. This construct emerged from the interview data in which different respondents referred to different terms. Spontaneous conversation refers to unscheduled, arbitrary dialogue with unexpected individual on unplanned agenda. Purposeful conversation refers to a dialogue that was previously thought in which the initiator set out

specifically to visit recipient to share knowledge and/or to build relationship. Purposeful conversation is not considered as a formal communication as the recipient may not know that the conversation takes place, but it may be pre-planned by the initiator only.

The data revealed that knowledge is rarely shared in spontaneous conversations because spontaneous conversation may be ad hoc, random and parties may not have intention to do so. In spontaneous conversation some information may be shared but deep insights and understanding of certain phenomena (knowledge) is rarely shared. The respondents commented that spontaneous conversation helps to share information and build relationship. It was also commented the relationship that is built in spontaneous conversation can be a ground for knowledge sharing because some people tend to meet again for further conversation.

> *''Knowledge cannot be shared in initial conversation but only information can be shared in that context because I may not share my insights in a first random conversation. For conversation to share knowledge, it must be purposeful, planned and scheduled and there must be repeated dialogue and follow up''* (D3).

This suggests that most knowledge sharing takes place in purposeful conversations because purposeful conversations elicit further explanations and more deep discussion on certain phenomena. In other words, in the follow up conversation, further dialogue takes place between initiator and recipient to share insights and views.

Informal reference groups- An informal reference group refers to informal network of people within a working group and/or across the organisation. People have a tendency to form informal reference groups that can be used for variety of purposes related to their work, personal or social life. Social categorisation theory (Billig and Tajfel, 1973) suggests that

people have a generic tendency of mentally categorising themselves into specific groups. The identity derived from these group memberships is a powerful driver for the formation of cliques in social setting. Previous research has established that 'interpersonal similarity can influence knowledge sharing because similar people are more likely to share knowledge than dissimilar' (Mäkelä et al., 2012).

Informal reference groups can be formed in hierarchical relationship, sometimes bypassing the hierarchies and/or laterally across the organisation. Most of the time the informal reference groups are formed voluntarily when individuals with common interest come together. In most cases, informal reference groups are planned and selective because individuals pick people in the organisation which have certain similarities with them. The similarities can be in terms of gender, expertise, political view, hobbies and so on. Also, individuals may choose resourceful person in terms of the knowledge, power or authority they have in the organisation.

The data revealed that there are a number of informal visible and invisible reference groups in the organisation. Some individuals may have regular face-to-face, telephone or email communications with selective people in the organisation. In these groups, the members informally share knowledge about their areas of work or overall understanding of the situations in the organisation. Most informal reference groups create a bond of relationship with each other because the individuals in the network are similar in many aspects and their formation is based on interest. As a result of trust and common interest, the flow of knowledge among these group members is smooth.

> *''I like interacting with people having common view with me, similar personality type and those I trust'' (TA6).*

The data also revealed that informal reference groups facilitate knowledge sharing because different insights and perspectives are shared among the informal reference group. Deep insights and views may be exchanged among these informal reference group members particularly if their relationship is close and regular. Due to the existence of these groups, sometimes, knowledge flows freely through the hierarchy of the organisation without filter, i.e. from lower level staff to higher level directors and vice versa. In the case organisation, for example, the lower level individuals try to influence the higher level decision makers through the informal relationship they have with the higher level managers, what they call ‘‘*influencing without authority*’’.

> ‘‘*We have something that we call influencing without authority, in which some individuals informally share their views and perspectives to the directors to influence as well as inform decisions*’’ *(O1).*

> ‘‘*I meet with some directors and chat about personal things with them because we know each other*’’ *(IP1).*

Although the data suggest that informal reference groups facilitate knowledge sharing in the organisations, the level of knowledge sharing through these informal channels depends on the extent to which individuals in the organisation are willing to join or form informal reference groups. Also knowledge sharing depends on the level of their trust and bonding relationships. This suggests that the more informal reference groups with bonding relationship exist in the organisation, the better knowledge is shared. The less informal reference groups exist in the organisation; the less knowledge is shared. This is consistent with the argument of (Mäkelä et al., 2012) that states interpersonal similarity can influence knowledge sharing in such a way that similar people are more likely to share knowledge than those who are dissimilar.

To summarise, the informal social interaction factors analysed in this study are *informal conversations* (spontaneous and purposeful) and *informal reference groups*. Purposeful conversation facilitates knowledge sharing in the organisation by encouraging planned, repeated and deep dialogue between knowledge provider and receiver. Spontaneous conversation facilitates information sharing and enhances relationship building which is a base for knowledge sharing. The more informal reference groups with bonding relationship exist in the organisation the better knowledge is shared.

The literature review suggests that absorbing and unifying the shared knowledge into the individual's existing knowledge is vital to KI and application process. Section 6.2.2 below presents how individuals in the case organisation absorb the knowledge shared to them.

6.2.2. How individuals in the case organisation absorb the knowledge shared to them?

The three major knowledge absorption constructs emerged from the data analysis are *relationship history between provider and receiver of knowledge; relevance of shared knowledge to the existing knowledge and individual's selective judgment or discernment of knowledge.* These constructs are derived from respondents' comments in which different respondents used these terminologies when they expressed how they absorb and assimilate the knowledge someone shared to them. These constructs influence individual knowledge absorption positively or negatively. The following section analyses how these constructs impact knowledge absorption.

6.2.2.1. Relationship History and knowledge absorption

Relationship history refers to the length of time and the degree of relationship that existed between the provider and receiver of knowledge. Relationship history involves knowing the background of the person sharing the knowledge; evaluating the credibility of knowledge provider and identifying the motives behind the knowledge sharing.

> *''I consider the source of the information, previous history of similar work; understand methodology of the research and where it fit for me'' (H4).*

The analysis of the data revealed that in a long time relationships trust can be built between knowledge provider and receiver in which the knowledge shared between the parties is most likely absorbed. This is because from the long-time relationship the receiver of knowledge thinks that provider's knowledge is reliable and credible. If the receivers perceive that the external knowledge (provider's knowledge) is reliable and credible, they absorb and assimilate it into their existing knowledge. If receivers doubt the reliability and credibility of the provider's knowledge, they less likely absorb it or they may question the knowledge shared to them.

This suggests that if long time trusting relationships exist between the providers and receivers, both parties may have better confidence on the credibility and reliability of each other's knowledge. Under this situation the shared knowledge is absorbed by the receiver.

6.2.2.2. Relevance of shared knowledge to existing knowledge

The data shows that knowledge receivers evaluate the knowledge shared to them in relation to the context in which the external knowledge fits with their existing knowledge. Knowledge

receivers look at the context in which they are going to use the knowledge shared to them. If they think that the knowledge shared to them is coherent with their existing knowledge and useful to them, they would probably assimilate and absorb it. On the other hand, if they doubt the relevance and use of the knowledge shared to them, they may disregard it.

> *''I am selective and would like to identify areas related to my programme work; if pre-existing knowledge I go back to my knowledge and see where it fits, if it is completely new I seek another source and go for experience, context and background'' (H6).*

Sometimes it is difficult to find the connection between the new knowledge and the existing knowledge. However, most individuals interviewed tend to see the connections before they absorb.

> *''I sense the value of knowledge someone share it to me but also search where it fits for me'. Sometimes you cannot see its connection but if I feel the connection, it helps'' (H4).*

This suggests that if the external knowledge is coherent with the existing knowledge and useful, the receivers most likely absorb and assimilate it. If the external knowledge is incoherent to the existing knowledge, the receivers less likely absorb it.

6.2.2.3. Knowledge discernment or selective judgement

Discernment refers to selective judgment of individuals when they are absorbing external knowledge. There is a tendency that individuals actively look into the external knowledge shared to them. Most people interviewed consider a number of criteria to evaluate the shared

knowledge in order to assimilate them into their existing knowledge. However, the criteria may vary from individual to individual and sometimes the judgments are different.

The data shows that some individuals evaluate the knowledge shared to them based on their individual world view.

> ‘‘*My world view comes first and then I consider all information I have to make the judgement’’ (D3).*

Some individuals evaluate knowledge shared to them against the obvious truth and common sense.

> *‘‘My natural instinct is to observe something and evaluate against the natural actions’’ (D2).*

Some individuals evaluate the knowledge shared to them in relation to its use and applicability. *‘‘I evaluate whether that knowledge is good or bad for me’’ (O3).*

Some individuals look at the source of the information and who provided it; for example, they look at the position and expertise level of the individual provider. Others evaluate in relation to the responsibility they have in the organisation.

> *‘‘I ask myself what is my responsibility in taking that knowledge. That is discernment for me’’ (D2).*

These comments suggest that individuals consider certain common criteria such as *source of knowledge, applicability and receiver’s responsibility* to take in the external knowledge. However, judgments vary from individual to individual depending on individual’s world

view, obvious truth they think and common sense they have. In other words, individual judgments and their absorption capacities are influenced by their individual world view, their perceptions, confidence, background, and so on. The analysis of these individual factors is beyond the scope of this research and future studies may address which individual factors influence judgments and absorption capacities. However, the major themes arose in relation to these factors are that individuals are different in their absorption capacities and absorption capacities develop through time with experience and application.

To summarise, individual knowledge absorption is influenced by: (i) relationship history- the longer trusting relationship exists between the providers and receivers, the better confidence on the credibility and reliability of the knowledge and the better knowledge is absorbed by the receiver and vice versa. (ii) relevance of new knowledge to existing knowledge- the more the external knowledge is coherent with the existing knowledge, the better it is absorbed by the receiver and the less the external knowledge is coherent to the existing knowledge the less individuals absorb it and (iii) and selective judgment or knowledge discernment- in order to assimilate the new knowledge into their existing knowledge, most people evaluate *source of knowledge, applicability, and receiver's responsibility to take in external knowledge.*

The analysis of data shows that the individual knowledge receivers absorb and internalise the knowledge shared to them before they apply it to perform organisational tasks. Section 6.2.3. below presents how knowledge is combined and applied in the case organisation.

6.2.3. How is knowledge combined and applied in the case organisation?

Although the constructs related to individual, organisational and informal social interactions characteristics impact on KI and application process, these constructs may not exert

significant influence in isolation. The constructs interact and influence KI and application process. Thus, the interrelationships of the constructs play an important role in shaping the KI and application process.

The analysis showed that the KI and application constructs are interdependent and interwoven in the organisation. The individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction characteristics influence KI and application in an organisation. The influences are revealed at both knowledge sharing and knowledge absorption stages. Accordingly, this research is rooted in a combined framework that showed how individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction characteristics facilitate or inhibit KI and application process independently as well as through their interrelationships.

As revealed in the analysis, there are interrelationships between the sets of KI constructs because they co-influence each other. The observation of the final template *(appendix 5)* demonstrates that there are a number of themes that are revealed across all the themes. These themes are known as integrative themes (King, 2012). The integrative themes shown in category 6 in the final template cut across all themes. These integrative themes are: *the organisation is collaborative and we need to share (6.1); we share to inspire, engage and strengthen organisation's work (6.2)* and *our organisation is organic (6.3).* These three themes cut across all themes because they are common discourses spoken by most participants when they refer to knowledge integration and application practices.

In addition, there are lateral links between the themes in the final template *(appendix 5)* that need to be highlighted. For instance, some of the sub-themes categorised under *management style* (3*.1.2. Hierarchical, conversely, too much consultation*) are manifested in *ways of*

working sub-theme (3.2.2.1 Staff and managers interact and communicate). These themes express similar perception on knowledge sharing. The sub-theme shown in *informal reference group theme (4.2.2.2. interact regardless of the hierarchies)* was also revealed in the *ways of working sub-theme (3.2.2. managers consult and liaison with staff).* A *recognition and construction use theme (2.1.2.4.sharing is essential element in organisation culture)* was manifested under 'w*ays of working theme' (3.2.1. knowledge sharing is built in some processes and procedures).* '*The informal conversation theme' (4.1.2.2. in conversation you get new perspectives)* was related to the '*feedback and triangulation theme' (2.2.2.1. to get wider picture and increase scope of thinking).*

The detailed analysis of the links between the themes is indicated in the Figure 2 below*:*

The links between themes at knowledge sharing and absorption stages of KI and application process

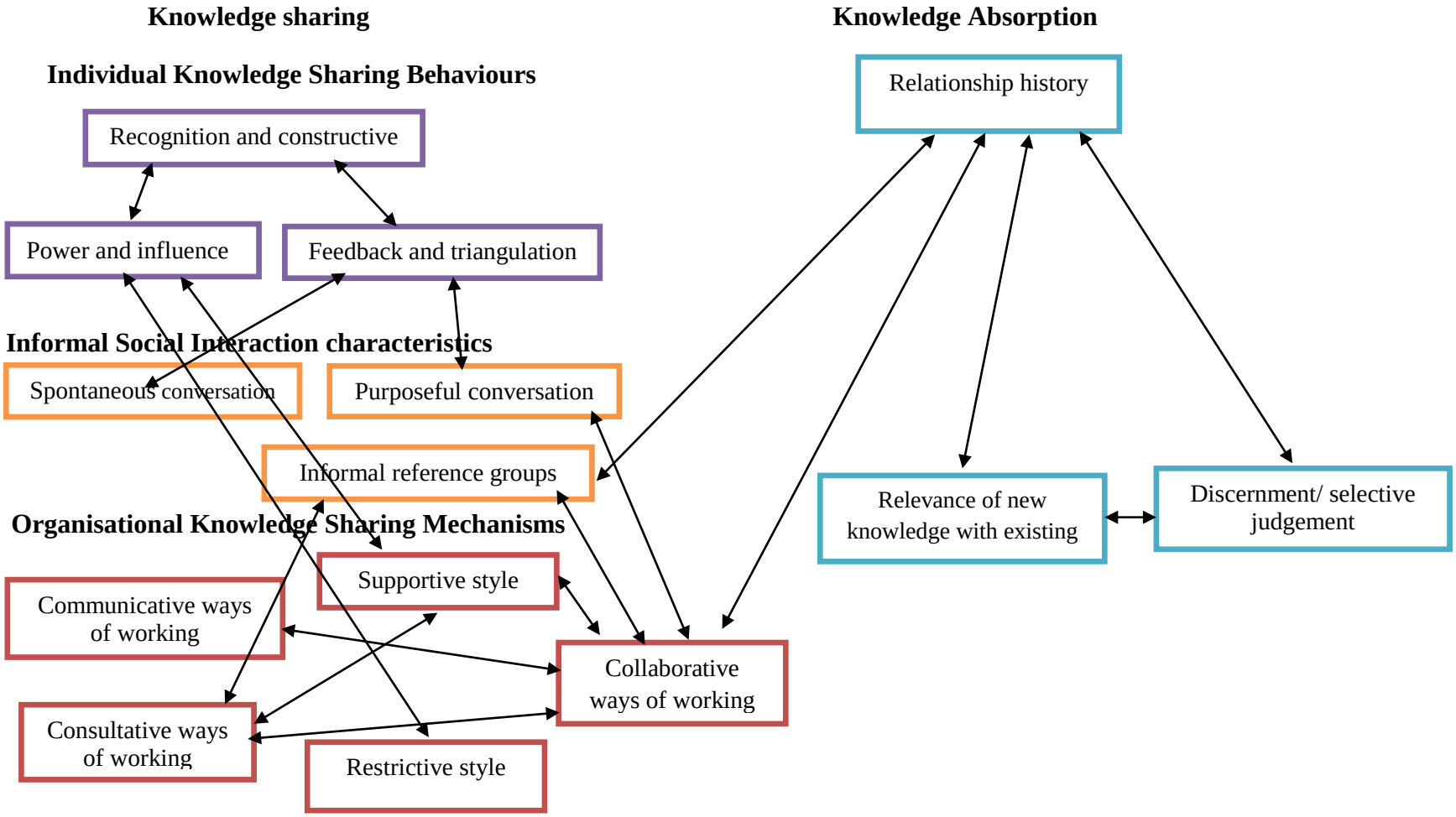

Figure 2 The links between Knowledge Integration and Application themes in the case organisation

Figure 2 above was drawn from the analysis of the interrelationship of KI and application themes in the case organisation. This figure is developed to show how the themes and sub-themes related to knowledge sharing and knowledge absorption are interrelated and how one theme positively or negatively influences the other theme(s). For example; the need for *power and influence* is positively related to *restrictive management style* and negatively related to *supportive management style*. *Relationship history* is positively related to *collaborative ways of working* and *informal reference groups*. *Recognition and constructive use of knowledge* is positively related to *power and influence* and so on.

These co-influences of the individual themes have cumulative effect on knowledge sharing and knowledge absorption. These suggest that in analysing the KI and application process in an organisation, the influences of individual constructs alone may not reflect the actual practices in the organisation. Therefore, one should not consider the impact of individual construct separately but must aware of the cumulative influences of the constructs on KI and application. So the individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction constructs discussed above influence KI and application process individually as well as in combinations. Thus, this study proposes the integrative model to the analysis of the KI and application in an organisation.

6.2.4. Interpretation of the findings

In order to fully understand the findings of this study and contribution to knowledge and professional practice in the field of KM, I discussed interpretation of the emerged themes and compared and contrasted them to published literature. This was to situate

the new finding into pre-existing KBV literature. This study showed how knowledge in the organisation is conceptualised and how dispersed knowledge is shared, absorbed, combined and used in the case organisation. Also the study showed how the sets of individual, organisational and informal social interaction and network characteristics individually as well as in combination facilitate or hinder KI and application process.

Knowledge- In this research, knowledge is viewed as the most important strategic resource of organisations and also knowledge in an organisation is dispersed and resides in different locations. In the previous KBV literature, knowledge was viewed as a fixed resource (Barney, 1991; Conner, 1996; Grant, 1996a; Grant, 1996b). Previous studies also focused more on philosophical analysis of knowledge and provides different categories and dimensions to knowledge (Nonaka, 1994; Polanyi, 1966).

Unlike previous literatures, this study view knowledge in the organisation as *holistic variable resource.* This holistic variable resource is viewed as the understanding that is gained from interpretation, absorption and application of information in an organisation. This variable understanding is seen as holistic resource because various categories and dimensions of knowledge are interrelated, dynamic and continuously evolving. Hence, this study argues that giving categories to knowledge undermine the dynamic nature of knowledge in an organisation.

Knowledge integration- This study showed how KI and application takes place in an organisation. In previous studies, KI was assumed to take place at a single stage. Individual specialised knowledge can be integrated using integration mechanisms such as directives, rules, standard working practices and routines (Grant, 1996a; Grant, 1996b). To the contrary, this study showed that KI takes place in multiple stages. The

three main KI and application stages analysed in this study are knowledge sharing, knowledge absorption and knowledge combination and application. KBV emphasised on identifying KI mechanisms and assumes that using effective KI mechanisms can lead to effective KI. However, KI mechanisms suggested by KBV are more of organisational level constructs. While focusing on organisational level constructs, KBV underemphasised the roles of individual behaviours and informal social interactions and network factors in KI and application process.

To the contrary, this study incorporated the underemphasised individual and informal social interaction constructs into the analysis of KI. The sets of constructs analysed in this study are related to individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction and network characteristics. This study showed how these constructs individually as well as in combination impact on KI and application in the case organisation. As stated above, the three stages of KI and application analysed in this research are knowledge sharing, knowledge absorption and knowledge combination and application.

1. ***Knowledge sharing-*** Knowledge sharing is influenced by the combinations of individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction characteristics.

   i- Individual knowledge sharing behaviours- The individual knowledge sharing constructs related to knowledge sharing are: *recognition and constructive use of knowledge, triangulation of knowledge* and *power and influence.*

(a) *Recognition and constructive use of knowledge*- the data showed that some individuals in the case organisation share their knowledge if they expect that the knowledge they share is recognised and used constructively by the receiver and hoard if they expect that the knowledge they share is disregarded and used destructively against their interest. This suggests that from the knowledge provider's point of view, the perception of the end result of knowledge sharing influences knowledge sharing positively or negatively. If the individual knowledge provider perceives that the knowledge they share is needed, recognised and constructively used by the receiver, they share their knowledge. On the other hand, if the providers perceive that the knowledge they share is disregarded or used destructively; they may not share their knowledge.

(*b)Triangulation of knowledge*- The data shows that positive feedback increases knowledge sharing by triangulating and building confidence on provider's knowledge. Negative feedback decreases knowledge sharing by reducing confidence of the knowledge provider. This suggests that, from the knowledge provider's perspective, the motive to triangulate their own knowledge either facilitate or hinder knowledge sharing depending on the type of feedback they receive from knowledge receivers. If the feedback is positive, individuals share their knowledge because they feel that their knowledge is accepted by the receiver. If the feedback is negative, individuals are not sure about the accuracy of their own knowledge on certain phenomena and less likely share it to others because of lack of confidence and the resulting fear of criticism.

(c) Power and influence- The data analysis shows that if individuals perceive that the knowledge they hold is valuable to them they hesitate to share it to others. This finding is consistent with previous studies that state individuals would less likely share their knowledge to others if it is related to their status, reputations and career prospects (Brown, 1999; Davenport, 1997; Gupta et al., 2000; Pfeffer, 1992 ; Weiss, 1999). This finding is also consistent with more recent studies that argue '*some people in multinational consultancy firms tend to hoard knowledge as knowledge is linked to power and individual's position in network'* (Donnelly, 2008b p.77) and some employees in public sector see knowledge as private property and view that knowledge is closely coupled with power and related to their promotion prospects (Seba and Rowley, 2010).

Conversely, the data analysis also shows that, perceiving knowledge ownership as a source of power and influence facilitates knowledge sharing. The data suggested that under normal non-competitive situations, the motive for power and influence encourage individuals to share their knowledge. Some individuals in the case organisation perceive that they share knowledge to increase, refine and reveal their knowledge which in turn increases their power and influence. However, in particular competitive situation, the motive for power and influence may hinder knowledge sharing. This is consistent with the findings of (Ipe, 2003) which suggested that environments that are highly competitive are likely to have problems with knowledge sharing.

Even though different findings suggest contradictory arguments on the power politics related to knowledge sharing, I argue that the perception for power and influence increase knowledge sharing. Under normal situations the more you share, the more you reveal your knowledge to others and raise your profile that in turn increase your power and influence. For example, as discussed in knowledge triangulation section above, knowledge sharing is a two way process in which exchange may take place. In the knowledge exchange process both providers and receivers create new knowledge, refine their existing knowledge and gain more power and influence. This demonstrates that the motive for power and influence facilitate knowledge sharing in organisations. However, in exceptional competitive situations some individuals may hesitate to share to their competitors.

One of the central interpretations of this finding is that, in previous studies knowledge sharing was analysed from the knowledge providers' point of view. For example, (Bock, 2005) argue that the movement of knowledge across individuals and organisational boundaries, into and from repositories, into organisational routines and practices is ultimately dependent on employees' knowledge sharing behaviours. They further state that as knowledge largely resides within individuals, it remains unexposed and unrecognisable by others until the knowledge owner make the object available. The previous arguments attribute the knowledge sharing only to the knowledge provider.

To the contrary, this study analysed the knowledge sharing from both providers' and receivers' point of view. The finding in the case organisation suggests that knowledge sharing is not only controlled by the knowledge provider, but it is a joint

phenomenon that includes the contribution of the knowledge receiver. The contribution of the knowledge receiver can be in terms of valuing, recognising and providing positive feedback to the provider as well as proactively seeking knowledge.

ii- Organisational knowledge sharing practices- The data suggest that the main organisational practices that facilitate or hinder knowledge sharing are *Management Style* and *Ways of Working.*

(a)- *Management Style*- the analysis of the data shows that *supportive management style* facilitates knowledge sharing by de-emphasising authority relationships. Supportive management style refers to open communications and involving employees in the entire functions of the organisation. The supportive management style moderate hierarchical relationship between managers and staff by de-emphasising authority relationship. In other words, supportive management style moderate the authority relationship in '*hierarchical- multi- layer structure'* that is believed to hinder knowledge sharing (Tsai, 2002). This is consistent with the findings of (Noorderhaven and Harzing, 2009 p.719) that argue '*as the emphasis on authority relations within the multinational companies decline, attention to knowledge flows increases'*. To the contrary, *restrictive management style* hinders knowledge sharing by emphasising authority relationships. Restrictive management style refers to limited communications between managers and employees and focus on authority relationships.

This suggests that regardless of the formal hierarchies, supportive management style facilitates knowledge sharing in an organisation and restrictive management style

hinder knowledge sharing. This contrasts with the traditional understanding that argue formal structure hinders knowledge sharing and lateral relations facilitate knowledge sharing (Tsai, 2002). This is to say, if there is supportive management style, knowledge can be freely flow in hierarchical organisations.

The explanation for this argument is that organisational hierarchy hinders knowledge sharing only if the management style is restrictive. However, if the management style is supportive, knowledge can be shared freely in the hierarchal organisations.

(b) Ways of working- The data revealed that one of the knowledge sharing mechanisms embedded in the case organisation is ways of working that was based on the principles of subsidiarity. The ways of working in the case organisation is rooted in '*subsidiarity principle*'. Subsidiarity principle refers to multiple decision making centres in which different individuals have got autonomy to make decision at certain level. The data suggest that the ways of working of the organisation are characterised by communicative, consultative and collaborative practices. These practices facilitate knowledge sharing by encouraging open communication, consultation and collaboration between managers and staff in the organisation. This is consistent with Willem and others (Willem et al., 2008) that propose the dominance of an organisation-wide social identity has clear benefits for the integration of knowledge between units in organisations. In this context, organisation-wide social identity is related to ways of working in the case organisation.

iii- Informal social interaction characteristics- The finding revealed that the main informal social interaction characteristics that influence knowledge sharing are *purposeful conversation* and *informal reference groups*.

(a) Purposeful conversation– The interview data revealed that informal conversations that take place in an organisation ranges from spontaneous talk on random topic with unexpected individual (spontaneous conversation) to pre-planned dialogue on specific topic with specific person in the organisation (purposeful conversation).

The analysis of the data suggest that purposeful conversation facilitates knowledge sharing by encouraging planned, repeated and deep dialogue between knowledge providers and receivers. Spontaneous conversation rarely facilitates knowledge sharing but in can enhance relationship building which is a base for knowledge sharing.

From my observation for over a year (February 2012 - March 2013) two days a week and follow-up visits, I also observed that most people in the case organisation relies on internal personal networks in order to obtain the information necessary to do their job. Some people seem to *request* information rather than *look* for it. This is consistent with Noorderhaven and Harzing (2009) that acknowledge informal social interaction between managers and staff from different units of an organisation are important factors stimulating knowledge sharing. Face-to-face social interactions form a communication channel particularly contribute to transfer of knowledge.

(b) Informal reference groups – Informal reference group refers to informal network of people within a working group and/or across the organisation that are based on common interest and interpersonal similarities. The data suggest that the more informal reference groups with bonding relationship exist in the organisation, the better knowledge is shared. The less informal reference groups exist in the organisation, less interaction exists and less knowledge is shared. The level of knowledge sharing through the informal reference group depends on the extent to which individuals in the organisation are willing to join or form these groups. Also the more the group members have trust and bonding relationships, the more knowledge is shared among the group members.

This is consistent with social categorisation theory that suggests 'interpersonal similarity can influence knowledge sharing in such a way that similar people are more likely to share knowledge than those who are dissimilar'(Mäkelä et al., 2012 p.439).

2. *Knowledge Absorption*- In order to assimilate and absorb external knowledge, individual receivers evaluate the knowledge shared to them based on various criteria. The data suggest the main constructs that influence individual knowledge absorption are *relationship history, relevance of the shared knowledge to the existing knowledge* and *discernment or selective judgement of the knowledge receiver.*

(i) Relationship history- relationship history refers to the length of time and the degree of relationship that existed between knowledge provider and receiver. This involves knowing the background of the person sharing the knowledge; evaluating the credibility the provider and motive behind the knowledge sharing. Data suggest

that the more trusting relationship exists between providers and receivers of knowledge, the better knowledge is absorbed because receiver has confidence on the credibility and reliability of knowledge provider and vice versa.

If the receivers perceive that the external knowledge is reliable and credible, they absorb it. If they have doubt on the reliability and credibility of the external knowledge, some receivers less likely absorb it or they may question the knowledge shared before they absorb it.

(ii) Relevance of knowledge- Relevance of knowledge refers to the coherence of the external knowledge to the existing knowledge. Relevance of knowledge also refers to receivers' perceptions of the potential usefulness of knowledge that influence the decisions to accept or reject specific information items (Schamber and Bateman, 1996).

The data shows that the knowledge receiver evaluate the knowledge shared to them in relation to the context in which the external knowledge fits with the existing knowledge. The more the external knowledge is coherent with the existing knowledge and useful, the better it is absorbed by the receiver. The less the external knowledge is coherent and useful, the less individuals absorb it. This is consistent with (Cohen and Levinthal, 1990), individual knowledge absorption is influenced by prior related knowledge that is related to existing individual skills, learning experience and distribution of knowledge in organisation.

(iii) Discernment- Discernment, in this context, refers to selective judgment of individuals when they are absorbing external knowledge. The data show that

individual judgments and their absorption capacities are influenced by their individual world view, perception, confidence, background, and so on. Although the analysis of these individual factors is beyond the scope of this research, the major themes arose in relation to these factors are that individuals are different in their absorption capacities and absorption capacities develop through time with experience and application.

3. Knowledge combination and application- The analysis shows that the sets of individual, organisational and informal social interactions factors impact on KI. However, these constructs are interdependent and interwoven in organisations. They interact with each other and exert cumulative influence on KI and application in an organisation.

The data revealed that there are interrelationships between the sets of KI determinants because they co-influence each other. For example, the existence of informal reference groups in an organisation facilitates consultation and open communication between managers and staff. The communicative, consultative and collaborative ways of working shows that knowledge sharing is built in processes and procedures of the organisation. In this situation, the knowledge sharing will be essential element in organisation culture. This in turn encourages members of the organisation to recognise each other's knowledge and constructively use the shared knowledge. The knowledge shared in informal conversation can provide new perspective to the knowledge receiver as well as help to triangulate the individual's knowledge. The trusting relationship between knowledge provider and receiver facilitate knowledge sharing as well as knowledge absorption.

Therefore, the interactive impacts of the constructs provide the actual relationship of KI in the case organisation. To summarise, the finding showed how the individual, organisational and informal social interaction constructs individually as well as in combination influence KI and application in an international NGO.

CHAPTER 7

DISCUSSION

This study has investigated the KI and application process in the specific international development NGO and advanced understanding of the concept of knowledge in an organisation and KI and application process. The study expanded the Knowledge Base View (KBV), particularly the previous work of (Grant, 1996a; Grant, 1996b). Although knowledge based theory has origin for over 20 years, it was not yet developed as a theory and it cannot predict management practices. The strategic importance of knowledge based perspective was evident and a number KM researchers and practitioners have used KBV as a research framework for over 20 years. Despite using the KBV as a research framework, there was limited attempt to expand the original theory suggested by Robert Grant in 1996. As a result, I was interested to expand the original theory of KBV, even if its origin was for over 20 years.

KBV scholars perceive knowledge as a fixed resource i.e. product perspective (Hayes and Walsham, 2003). However, many KM scholars do not agree with this argument. For example, Nonaka and others argue that '*Knowledge is not a self-contained substance waiting to be discovered and collected; knowledge is created by people in their interactions with each other'* (Nonaka et al., 2008 p.7). This is consistent with relational perspective of knowledge (Hayes and Walsham, 2003). Davenport and Prusak (1998) argue that knowledge is *a dynamic resource* that interacts and interchanges continuously. Recently, Crane (2013) support these arguments and state that knowledge,

as a multi-dimensional concept, can be personal, situated and socially constructed at the same time.

The KBV also suggests that individual specialised knowledge can be integrated and applied using KI mechanisms such as directives, rules, standard working practices and organisational routines. Central to the argument of the KBV was that knowledge can be integrated using appropriate organisational integration mechanisms that lead to KI. This suggests that KI tend to be a single step process. But there is contrary argument that posits KI mechanisms alone do not provide KI because there are intermediate processes that influence KI (Bock, 2005; Foss, 2007 ; Inkpen and Tsang, 2005). These arguments suggest that, in order to integrate, knowledge must be shared, absorbed and assimilated (Cohen and Levinthal, 1990).

This study proposes three stages process to KI and application process that include knowledge sharing, knowledge absorption and knowledge combination and application. Also this study explores how KI is influenced by individual knowledge sharing/receiving behaviours, organisational knowledge governance practices and informal social interaction characteristics. These sets of factors have significant impact on KI and application in an organisation. The analysis of the case data suggested that these major constructs consists sub-constructs identified in the finding chapter of this thesis.

The main contributions of these findings are that knowledge in an organisation cannot be integrated and applied in a single stage but rather it is a complex process that involves holistic analysis and multiple perspectives. The analysis was based on the assumption that knowledge is a unique resource and knowledge in the organisation is

different from the traditional definition and categories provided in previous studies. In other words, knowledge is not seen as a *product* that can be captured, stored and disseminated but it is seen as a *process* that changes and evolves continuously. A key theoretical contribution of this study is introducing '*Multiple Stages- Multiple- Factors Approach'* to KI and application process. In this new approach, KI is a process that takes place at three stages and influenced by various factors at each stage.

To highlight the contribution of this study, the Multiple Stages- Multiple- Factors KI and application process proposed in this study (Figure 4) is compared with the single KI process proposed by the KBV (Figure 3).

Figure 3 below is a model that summarises the theoretical analysis of the KI literatures, particularly the works of (Grant, 1996a; Grant, 1996b) and (Spender, 1996). Figure 4 is a model developed from the analysis of data in the case organisation.

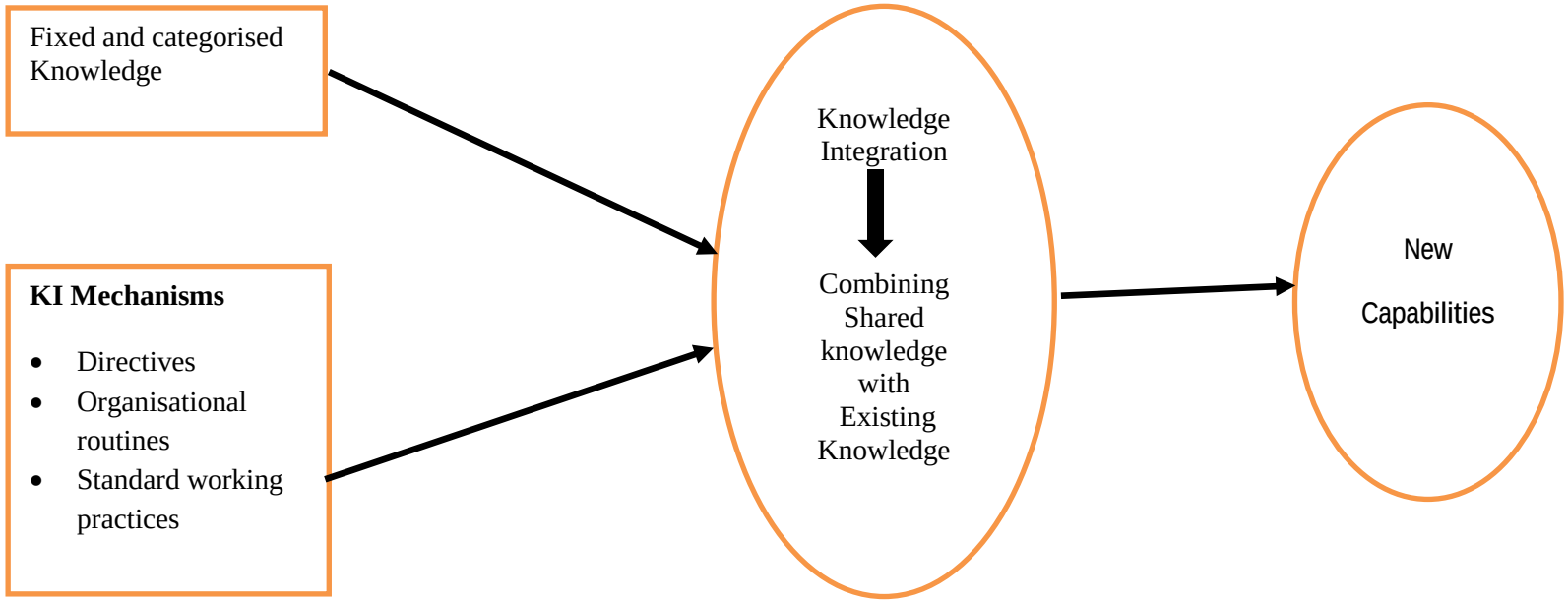

Figure 3- KBV perspective of Knowledge Integration Process (Grant, 1996a; Grant, 1996b; Spender, 1996)

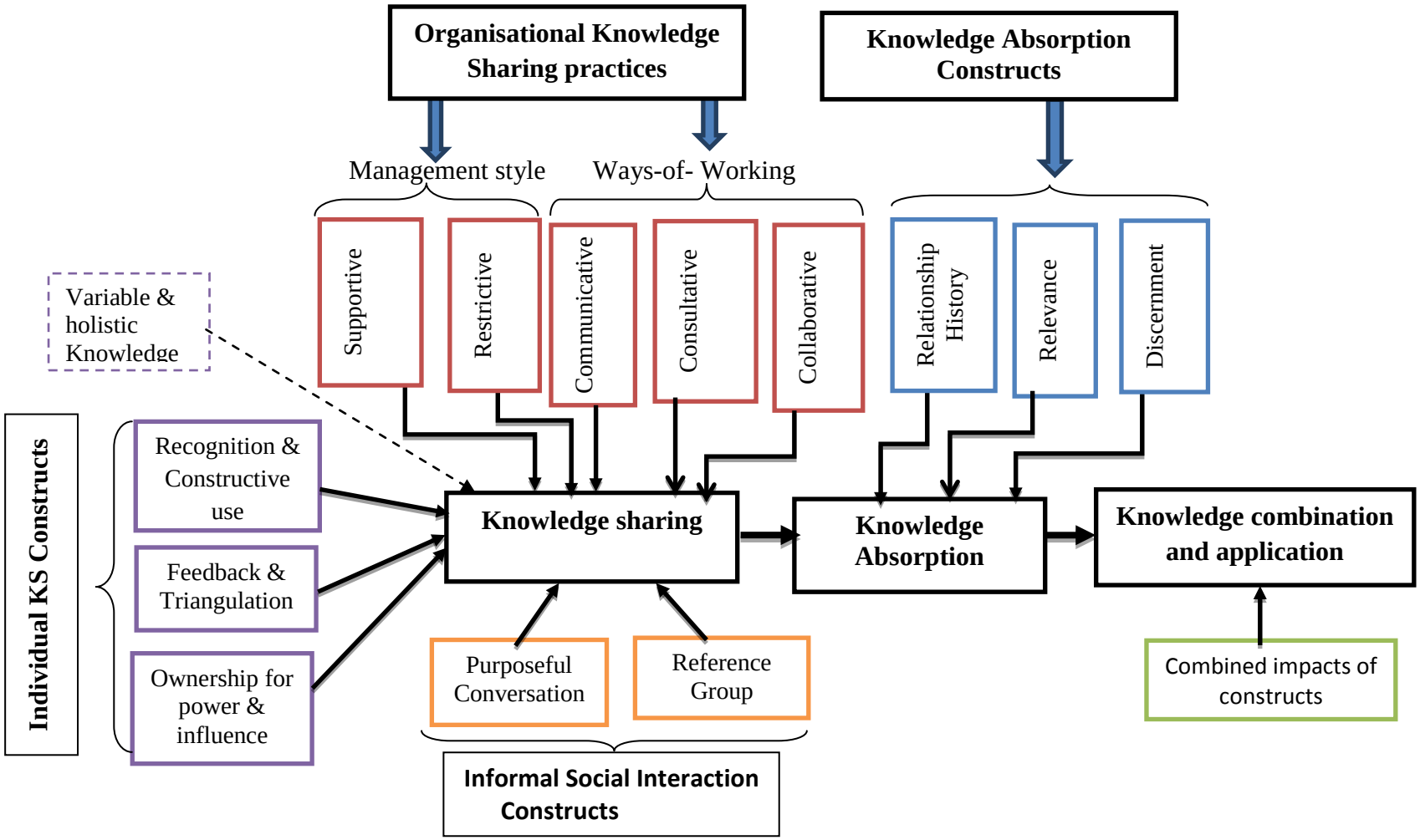

Figure 4 – New Proposed Multiple Stages- Multiple Factors KI and Application process (Derived from the case study data analysis)

7.1. Multiple Stages- Multiple- Factors KI and application process

The findings in this study proposed new 'Multiple Stages- Multiple- Factors' KI and application process. *The importance of multilevel and cross-level perspectives is gaining increasing attention in recent organisational research'* (Schoorman et al., 2007 p.344). In this context, multiple stages refer to the different stages of KI and application processes, namely knowledge sharing, knowledge absorption, knowledge combination and application. This model suggests that KI starts at individual knowledge sharing and receiving level (micro level) and extends to organisational KI and application level (macro level).

The first stage of KI is knowledge sharing. Knowledge sharing is influenced by individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction characteristics. The individual knowledge sharing behaviours that influence knowledge sharing are recognition and constructive use, feedback and triangulation and ownership for power and influence. The organisational knowledge governance practices that influence knowledge sharing are management style that includes supportive and restrictive management styles and ways of working that include communicative, consultative and collaborative ways of working.

The second stage of KI is absorbing the external knowledge shared by the provider to the receiver. In this process the individual receiver assimilates and combines the external knowledge with his/her existing knowledge. This is influenced by previous relationship history, relevance of external knowledge and selective judgement of an individual knowledge receiver.

The third stage of KI is the knowledge combination and application i.e. the assimilated and absorbed knowledge can improve the insights and understandings of the knowledge receivers. At the same time the improved insights and understandings can be applied to organisational tasks. The data revealed that, sometimes, the KI and application overlaps. This blurs the demarcation line between KI and application in the process of accomplishing organisational tasks.

Knowledge combination and application is influenced by the combined impacts of individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction characteristics and knowledge absorption constructs stated in figure 4. above. In other words, knowledge combination and application refers to the combined impacts of the KI constructs to indicate the integrative impact of the various constructs. Once the individual, organisational and informal social interaction characteristics are understood separately, these constructs needs to be combined to explore their integrative impacts on KI and application process in an organisation (Mäkelä et al., 2012). As described in section 6.2.3 above, the constructs that influence knowledge sharing and knowledge absorption interact and show cumulative impacts on knowledge combination and application. The data revealed that knowledge combination and application is influenced by interaction of sets of individual, organisational and informal social interaction factors.

Drawing on perspectives from multiple disciplines (behavioural perspective, knowledge governance approach, knowledge leadership, social capital and network, psychological perspective and human resource development) as inputs to the analysis, I provided a model that was applicable to KI and application in the context of an organisation. KI and application required different dimensions so that it could be applied to interpersonal, intergroup, or inter-

organisational levels of analysis. Multilevel research addresses the levels of theory, measurement and analysis required to fully examine research questions (Hitt and Mathieu, 2007).

In summary, investigating KI and application process as a multiple stages-multiple factors phenomenon may be one of the most promising research avenues to clarify the complicated knowledge governance problems within organisations (Foss, 2007), (see also Schoorman et al., 2007).

Table 2 below shows the multiple stages- multiple factors KI and application process as a new proposed approach to KI and application process in the case organisation. This new proposed perspective of KI and application process is compared with the old KBV perspective of KI.

New Proposed perspective of Knowledge Integration and application	
KBV perspective of Knowledge Integration (Grant, 1996a; Grant, 1996b)	**Multiple Stages-Multiple Factors KI and Application Approach (from case analysis)**
Knowledge • Fixed resource- product perspective (captured, stored and disseminated) • Categorised into explicit and tacit • Mostly located in individuals (individual specialised knowledge)	**Knowledge** • Holistic variable resource- process perspective (flexible, contextual and evolves continuously) • Dynamic and interrelated whole • Located in individual, organisational repositories and informal interactions
Knowledge Integration *Single step process* • *Appropriate mechanisms lead to KI*	**Knowledge Integration** *Multiple Stages process* • *Knowledge sharing, absorbing, combining and applying leads to KI*
Determinants of KI • *KI mechanisms (Organisational related factors)* ▪ *Directives* ▪ *Rules* ▪ *Standard working practices* ▪ *Organisational routines*	***Determinants of KI*** • *Interaction of individual, organisational and informal social interaction factors* ▪ *Individual knowledge sharing/receiving behaviours* ▪ *Organisational knowledge governance practices* ▪ *Informal social interaction and network characteristics*
	Knowledge sharing- willingness and abilities to share knowledge to others **Knowledge sharing factors** Individual knowledge sharing factors • *Recognition, triangulation and power/influence* Organisational knowledge governance factors • *Management style (supportive, restrictive)* • *Ways of working (communicative, consultative, Collaborative)* Informal social interaction and network characteristics • *Informal conversations (spontaneous, purposeful)* • *Informal reference groups (trust, common interest, bonding relationships)*
	Knowledge Absorption-assimilating the new knowledge to the existing knowledge **Knowledge Absorption factors** • *Relationship History between provider and receiver* • *Relevance of shared knowledge to existing* • *Selective judgment/ discernment of knowledge*
Integrated (coordinated) knowledge- CAPABILITIES	**Knowledge combination/ application**- developing new insights and understanding • *Interactive impacts of individual, organisation, informal social interaction factors* • *Applying integrated knowledge- CAPABILITIES*

Table 2- The New Proposed Knowledge Integration and Application approach

7.1.1. Explanation to the new proposed Multiple Stages- Multiple Factors KI and Application Approach

The multiple stages- multiple factors model was introduced as a new approach to KI and application in an organisation. This new approach was based on the argument that knowledge in an organisation cannot be efficiently integrated and applied without sharing, absorbing and combining.

The previous KI approach was trying to integrate and apply different categories of knowledge differently. For example, the KBV suggested that individual specialised knowledge can be integrated using integration mechanisms (Grant, 1996a; Grant, 1996b). It seems that the previous KBV analysis tries to integrate individual specialised knowledge without referring to organisational knowledge and knowledge in informal social interactions which have impact on individuals' specialised knowledge. Some scholars also tried to integrated tacit and explicit knowledge separately, undermining their continuous interrelationship and dynamism (Nonaka and Takeuchi, 1995). The previous approach may not prove successful in integrating and applying knowledge because in an organisation context, the forms and dimensions of knowledge are interrelated and interchange continuously.

To the contrary, this new approach took wider multi-level analytical view. In this study, knowledge in the organisation is viewed as holistic, fluid, flexible and contextual resource. This is because different forms and dimensions of knowledge are interrelated, dynamic and continuously changing. Knowledge is a factor subject to continuous transformation; it assumes many forms and behaves in unpredictable ways (Schilirò, 2008).

Knowledge is also unique resource and often called '*meta-resource'* (Van den Berg, 2013). This is to say that knowledge coordinates other organisational resources (Choo and Bontis, 2002). Van den Berg (2013) argues that knowledge is a meta-resource because it is knowledge that confers strategic significance to all resources. Although knowledge in an organisation resides in various locations, the main locations identified in this study are individuals' brains, organisational repositories and informal social interactions. I believe that the understanding of the concept of knowledge in an organisation as a holistic variable resource leads to clear understanding of the process of KI and application.

In analysing the KI, KBV gave emphasise to KI mechanisms such as directives, rules, standard working practices and organisational routines. The KI mechanisms suggested by KBV are mostly formal organisational level constructs. This study argues that KBV underemphasised important constructs of KI and application constructs related to individual and informal social interactions.

This study shows that KI is also influenced by individual knowledge sharing behaviours and informal social interactions and network activities in an organisation. In other words, this study took holistic approach and identified and analysed main constructs related to individual knowledge sharing behaviours, organisation knowledge governance practices and informal social interaction characteristics. The study also analysed the interplay of these various factors and identified how they negatively or positively influence KI and application process.

The implication of this finding is that understanding the concept of knowledge in an organisation, in the first instance, is important requirement to analyse KI and application. In addition, the context in which knowledge is understood impacts the way knowledge is integrated and applied. I argue that the understanding of knowledge in an organisation as a

holistic variable resource can ease the KI and application process because knowledge in an organisation is fluid, flexible, dynamic and contextual resource. In other words, the nature of knowledge in an organisation is dynamic and knowledge interact with various elements.

It is difficult for KI and application to be effective without an understanding of the different dynamics of knowledge and how they interact. Eisenhardt and Santos (2002) argue that concrete and tangible expressions of knowledge in realistic organisational context is an important way to overcome the challenges of KI created by the existence of different knowledge and different ways of expressing knowledge. These suggest that KI research requires a pluralistic understanding of knowledge and a view of organisations as complex systems, where meaning is socially constructed through ongoing activities of people in an organisation.

7.2. Theoretical contributions

This study contributes to KM literature by clarifying the concept of knowledge in the organisation and empirically examining the KI and application process in an international development NGO. The study describes the nature of knowledge in an organisation and identified and analysed important sets of KI and application constructs that were underemphasised by the KBV. This research examines the relationships among individual knowledge sharing/receiving behaviours, organisational knowledge governance practices, and informal social interaction characteristics and how these factors individually and jointly influence KI and application process in the case organisation.

The results proved that, unlike the KBV that classify knowledge into categories and dimensions, knowledge in an organisation is perceived as a *holistic variable resource*. The

argument in this study is that in the process of integrating and applying knowledge, we cannot categorise knowledge into tacit, explicit, individual, or organisational because knowledge in an organisation is dynamic and continuously evolving. Thus, knowledge in an organisation is viewed in its entirety as a holistic concept and characterised as a fluid, flexible and variable resource.

The results also proved that KI and application takes place at three stages- *knowledge sharing, knowledge absorption* and *knowledge combination and application.* In other words, this study proposed *multiple stages KI and application approach* as contrary to *single step approach* suggested by KBV. The findings of this study fill the gap in the literature that is lack of empirically examining the mediating roles of knowledge sharing and knowledge absorption in KI and application process. This study demonstrates that knowledge sharing and knowledge absorption are important intermediate stages through which knowledge in an organisation can be integrated and applied to accomplish organisational tasks.

The results also prove that, unlike the previous approaches that suggest knowledge sharing is influenced by the willingness and abilities of the knowledge provider, this study suggest joint effort of both knowledge providers and knowledge receivers. This study showed how both knowledge providers' side and knowledge receivers' side factors influence KI and application in an organisation. The study also showed how individual, organisational and informal social interactions constructs interact and influence KI and application in an organisation.

7.3. Practical contributions

This study has clarified the concept of knowledge in an organisation and identified the process through which individual knowledge sharing behaviours, organisational governance

practices and informal social interactions characteristics individually and jointly facilitate KI and application. This provides managers with better understanding of knowledge in their organisation and possible guidelines on how to manage their knowledge resources to accomplish organisational tasks. The implications of the findings of this research for different practitioners are described below:

7.3.1. Charitable NGOs

The fundamental roles of charitable NGOs are to serve particular interest of a society by providing advocacy on behalf of others who lack voice and services to clients with unmet needs. Many charitable NGOs tend to consider themselves as knowledge-intensive organisations because most of their functions are related to knowledge transfer and capacity building activities.

To provide efficient and effective services and to meet the needs of their clients, charitable NGOs have to integrate their internal knowledge. This involves integrating and applying different expertise and insights of their employees, knowledge that resides in organisational repositories and informal interactions. Charitable NGOs also need to integrate local knowledge to their organisational expertise. The local knowledge refers to the knowledge of their clients in terms of identifying unmet needs and understanding the perceptions and views of the clients. They also need to integrate their donors' knowledge to their own expertise because they need to understand and meet the aims and objectives of their donors to acquire resources.

That is to say, charitable NGOs integrate both internal and external knowledge to play their services delivery roles. The KI and application framework proposed in this study can serve as

analytical tool for effective integration and application of knowledge for individual NGO internally. It also helps to integrate and apply external knowledge such as knowledge of donors into their expertise for effective service deliveries.

Also the KI and application analysis proposed in this study suggests a fresh understanding of a knowledge based aid approach of international development agencies. The implementations of the current knowledge based aid approach tend to focus on information sharing and data access rather than KI and application. This study improved the understanding of knowledge in the organisation by clarifying the differences and relationships of information and knowledge. The analysis also showed how information management is different from knowledge management. I believe that the model proposed in this study shift information management discourse to knowledge management discourse. Information management discourse dominates the present initiative of charitable NGOs because organisations are striving to manage their knowledge but the implicit practice is data processing and information management rather that KM.

To sum up, I believe that the model developed in this study take a step forward in knowledge management by clarifying how knowledge in charitable NGOs should be understood and providing practical guide of integrating and applying knowledge resource.

7.3.2. Management consultants

Management consultants are knowledge intensive service providers because they sell their skills and expertise to their clients. The roles of management consultants involve gathering and analysing organisational data; and integrating those data into their consultancy practices to provide business solutions to their clients. The major challenges are to understand the

concepts of knowledge in an organisation and to differentiate knowledge from information. As a result, KM consultants tend to advise companies on managing information rather than knowledge. In previous study knowledge in an organisation is classified into tacit and explicit; justifying that tacit knowledge is a source of competitive advantage because it is less imitable and transferable. This study found out that classification does not reflect a true feature of knowledge in an organisation because it undermines the dynamic relationships and interchangeability between tacit and explicit knowledge. This new understanding of the features of knowledge may reduce the challenge that organisations face in implementing knowledge management strategies.

Moreover, KM consultants tend to provide knowledge management solutions from formal organisational efforts. This involves designing suitable organisational structure; introducing effective KMSs and providing knowledge sharing incentives. However, this study showed that organisational efforts alone do not prove effective knowledge management. Individual knowledge sharing/ receiving behaviours and informal social interaction characteristics have significant impact on KI and application practice. However, these factors were given less practical attention by KM consultants.

The multiple stages- multiple factors approach of KI and application proposed in this study can be used as KM analytical model for knowledge consultants in two ways: (i) clarify knowledge in an organisation. Knowledge in an organisation is viewed as holistic dynamic resource that evolves continuously. This finding also showed that knowledge is interpreted and applied information and clarified the relationship between knowledge and information. (ii) The multiple stages- multiple factors KI and application approach proposed in this research showed how different factors related to individual, organisational and informal social

interactions interact and impact KI and application process in an organisation. This will help KM consultants to provide comprehensive analysis of KM issues and provide practical solutions in specific context of their client organisation. In other words, holistic view of knowledge and the integrative analysis will provide more practical approach to KM consultants.

7.3.3. Human resources practitioners

The main function of HR specialists is developing and administering effective learning and development strategies and justifying related investments. The KI and application process proposed in this study shows the relationship between individual learning and individual absorption capacity. As described in this study, learning takes place in the process of KI. Individual absorption capacity is central to individual learning and development because individual absorption is recognising and assimilating external knowledge with exiting knowledge. The study also identifies the factors that influence individual absorption capacities (learning).

This understanding is crucial in training and development process because HR specialists can apply the KI and application approach suggested in this study as a model to develop effective training and development strategies of their organisations.

7.3.4. Implication for business communities

To summarise, the findings suggested in this study contribute to KM initiatives for organisation in several ways.

First, many organisations lack clear understanding of the concepts of *information, knowledge* and *learning.* As a result, most organisations struggle with identifying whether they manage information, knowledge or learning. The findings in this study clarified the concepts of information, knowledge and learning. Information is perceived as a passive data and it is at a lower level of understanding when compared to knowledge. Knowledge is analysed, interpreted and applied information and it is a higher level of understanding. The findings also shows a dynamic relationship between information and knowledge because sometimes knowledge becomes information and vice versa. Learning is a process of understanding and it is part and parcel of KI because in the process of KI, individuals broaden, extend and reframe their understanding (i.e. learning).

Second, the main KM problem of many organisations is how to embed knowledge management into systems and processes of their organisations. The findings in this study showed how the *supportive management style* and *ways of working* encourage KI and application in an organisation. The supportive management style and ways of working are mechanisms that can help organisations to embed KM into their working practices using their existing management systems and processes.

Previous studies showed that authority relationship in '*hierarchical- multi- layer structure'* is believed to hinder knowledge sharing (Tsai 2002). This case study shows that *supportive management style* help to embed KM into the day- to- day activities of the organisation by moderating hierarchical relationship between managers and staff and de-emphasising authority relationship. The study also shows that *ways of working* based on subsidiarity principle help to embed KM in the day- to- day activities of the case organisation because it

facilitate knowledge sharing by encouraging open communication, consultation and collaboration between managers and staff in an organisation.

Third, many organisations invest in knowledge sharing incentives assuming that motivating knowledge providers alone result in effective knowledge sharing. Unlike the previous approach that see knowledge sharing from knowledge providers' perspectives, this study showed that effective knowledge sharing and integration is a joint effort that involve knowledge providers and knowledge receivers. This approach helps organisations to design appropriate knowledge sharing/ receiving strategies that encourage knowledge flows in an organisation.

Fourth, many organisations face challenges in bridging the gap between knowledge creation and knowledge application. This study showed that knowledge is applied in the process of integration because sometimes KI and overlaps with knowledge application. That is to say, while individuals assimilate and internalise knowledge, the knowledge become more active and relevant for creating values for the organisation (i.e. knowledge application).

Fifth, the findings proposed in this study showed that knowledge in an organisation is perceived as holistic variable resource. This study also highlighted the strategic importance and centrality of knowledge resource. This centrality of knowledge shows that most of organisational performances are directly or indirectly attributed to effective use of knowledge in an organisation because knowledge coordinates other resources (meta-resource).

7.4. Limitations of the research

This research has certain limitations.

First, this study adopted single case study at large international development NGO. Although some scholars argue that single case study will provide better understanding of the KI process because of its persuasive power and in-depth analysis of the interactions and influences of different variables in an organisation (Siggelkow, 2007), others scholars argue that single case study may constrain comparative analysis between different organisations and limit the generalisability of the conclusions. However, the argument in this study is that one has to see this as a trade- off between in-depth analysis of single case study and comparative analysis of multiple case studies.

Second, although the framework in this analysis shows the multiple stages- multiple factors analysis, one cannot conclude the linear relationship between KI constructs and KI because the variables are changing. One variable may have significant influence at one time and insignificant influence at other time because individuals, organisations and informal social interactions are dynamic and changing. Also other new variables that impact KI may emerge. Therefore, one should not apply the analytical model proposed in this study assuming fixed relationship between KI constructs and KI.

Third, the study would have been strengthened if quantitative data analysis was carried out to test the propositions stated in section (7.5.1) and enrich the causal relationships. However, this was not possible due to lack of time and resources.

7.5. Directions for future research

I believe that, the general understanding clarified in this study paves the way to analyse the KI and application process in the context of specific international development NGO. The study provided propositions together with suggestions for future research:

7.5.1. Propositions

This study provided *one* proposition that is related to the concept of knowledge in an organisation and *eleven* propositions that are related to KI and application process in an organisation.

First, this study focused on describing the features of knowledge in an organisation and showed that knowledge in an organisation is understood as holistic variable resource that is fluid, flexible, contextual and continuously changing. In the case organisation, knowledge is understood as processed, interpreted and applied information. Also it was revealed that information and knowledge have dynamic relationship and the relationship continuously evolves.

> ***Proposition 1.*** *Knowledge as an understanding is seen as holistic variable resource that is fluid, flexible and continuously evolving.*

Second, this study identified three stages of KI and application analysis and suggested the following proposition:

> ***Proposition 2.*** *Knowledge in an organisation can be integrated and applied in three stages process that includes knowledge sharing, knowledge absorption and knowledge combination/application.*

Third, the study showed the positive and negative impacts of individual, organisational and informal social interaction variables on KI and application process in different units and levels in the case organisation. Accordingly, the study identifies *seven* themes that positively or negatively influence knowledge sharing. The knowledge sharing themes proposed are categorised into three sets: (i) individual knowledge sharing and receiving behaviours- *expectation for recognition and constructive use of knowledge, motive for triangulation of own knowledge,* and *perception of knowledge as a source of power and influence.* (ii) Organisational knowledge governance mechanisms- *management style* and *ways of working* and (iii) Informal social interaction characteristics-*informal conversations* and *informal reference groups* in the organisation. The following propositions are related to knowledge sharing in the case organisation:

> ***Proposition 3a:*** *Some individuals share their knowledge if they expect that the knowledge they are sharing is recognised and used constructively by the receiver and they hoard if they expect that the knowledge is disregarded and used destructively against their interest.*
>
> ***Proposition 3b:*** *Positive feedback from knowledge receiver increase knowledge sharing by triangulating and building confidence of provider's knowledge and negative feedback decrease knowledge sharing by reducing confidence of the knowledge provider.*
>
> ***Proposition 3c:*** *Perceiving knowledge ownership as a source of power and influence facilitates knowledge sharing by encouraging individuals to share their knowledge to increase, refine and reveal their knowledge so that they can increase their power and*

influence. But in particular competitive situation this perception may reduce the sharing of particular knowledge.

Proposition 3d: *Supportive management style facilitates knowledge sharing by de-emphasising authority relationships and restrictive management style hinders knowledge sharing by emphasising authority relationships.*

Proposition 3e- *Devolved decision making rooted in the ways of working based on subsidiarity principle facilitate knowledge sharing by encouraging open communication, consultation and collaboration between managers and staff and centralised decision making inhibit knowledge sharing.*

Proposition 3f: *Purposeful informal conversation facilitates knowledge sharing by encouraging planned, repeated and deep dialogue between knowledge provider and receiver while spontaneous conversation enhances relationship building and facilitates information sharing rather than knowledge sharing.*

Proposition 3g*: The existence of informal reference groups with bonding relationship facilitate knowledge sharing in an organisation.*

Fourth, the study identifies *two* themes that positively or negatively influence knowledge absorption in the case organisation. They are *history of prior relationship between knowledge provider and receiver* and *coherence of external knowledge with the existing knowledge*. Although most people adapt their thinking approach, discernment and selective judgement to assimilate shared knowledge into their existing knowledge, these themes are significant in the case organisation. The following two propositions are derived from these themes:

Proposition 4a. *The longer trusting relationship exists between the knowledge providers and receivers, the better confidence on the credibility and reliability of the knowledge and the better knowledge is absorbed by the receiver and vice versa.*

Proposition 4b- *The more the external knowledge is coherent with the existing knowledge, the better it is absorbed by the receiver and the less the external knowledge is coherent to the existing knowledge the less individuals absorb it.*

Fifth, the study also shows how the themes and sub-themes co-influence and positively or negatively impact each other as well as exert cumulative impact on KI and application in the organisation. The study proposes integrative model to the analysis of KI and application process in the case organisation.

Proposition 5. *The more the positive and negative impacts of various sets of themes analysed in combination (integrative approach), the better their cumulative effects can be revealed and contribute more to KI and application. The more positive and negative impacts of various sets of themes analysed in isolation (isolated approach); the less the cumulative impacts revealed and less contribute to KI and application.*

In summary, the results of this study confirm that the three stages KI model is appropriate in the context of real organisations. It also shows positive and negative impacts of the individual, organisational and informal social interaction constructs at the three stages of KI and application process. Due to changing behaviours of KI constructs, it was not possible to establish casual relationships between the dependent and independent variables because the constructs are derived from perceptions of interview respondents in the case organisation and seen perceived facilitators and perceived inhibitors of KI and application process.

The primary contribution of this study is exploring the process of KI and application and the framework was illustrated in an international development NGO. The trends in KI and application will increase as more and more organisations are competitive and become knowledge intensive. The trend shows that in the next decade, many organisations are moving towards knowledge intensive activities and the strategic importance of knowledge is increasing (Christensen, 2007). As a result, effective and efficient KI practices help organisations to achieve sustainable competitive advantage.

7.5.2. Suggestions for future research

The propositions provided in this study (7.5.1.) can be tested by quantitative large scale study that may establish causal relationship between the proposed KI constructs and KI. Also the propositions may be tested across other organisation of other sectors including private and public sector organisations as well as in small and large companies. The future study may focus on the following points:

This study did not analyse typologies of knowledge such as technical knowledge, expert knowledge, customer knowledge and general knowledge and so on because the assumption was that whatever classification is given, knowledge in an organisation is seen as holistic variable resource that is fluid, flexible and continuously evolving. That is to say, this study assumes that the attributes of the concept of knowledge is similar for various types of knowledge.

1. *The future research may examine how these typologies of knowledge will fit into the attributes of the holistic understanding of the concept of knowledge proposed in this research.*

This study proposed that knowledge in an organisation can be integrated and applied in three stages process that includes knowledge sharing, knowledge absorption and knowledge combination/application.

2. *The future research may examine the extent to which knowledge sharing, knowledge absorption and knowledge combination/ application stages are interrelated and if the causal sequence is manifested in KI studies in other contexts.*

This study proposes multiple stages- multiple factors to the analysis of KI and application process within a single organisation.

3. *The future study may address how the multiple stages- multiple factors analytical approach proposed in this study can be extended to KI between different organisations.*

This study showed the positive and negative impacts of individual, organisational and informal social interaction constructs on KI and application process in different units and levels in the case organisation.

4. *The future study may test how these sets of knowledge sharing constructs impact knowledge sharing in settings of multiple organisations with relatively heterogeneous population.*

This study identified how 'history of prior relationship between knowledge provider and receiver' and 'coherence of external knowledge with the existing knowledge' positively or negatively influence knowledge absorption in the case organisation.

5. *The future study may test how these themes influence knowledge absorption in the settings of multiple organisations with the relatively heterogeneous population.*

This study highlighted that, due to changing behaviours of KI constructs, it was not possible to establish casual relationships between the dependent and independent variables. In other words, the constructs emerged from the data cannot be measured but can only be described as '*perceived facilitators* or *perceived inhibitors'* of knowledge sharing.

6. *The future research may address the changing behaviours and dynamism of the dependent variables through long term embedded research or take more representative samples of organisations.*

CHAPTER 8

CONCLUSIONS

This study begins noting the strategic importance of KI and application to organisations. In the present knowledge economy, competitive performances of organisations are attributed to effective integration and application of knowledge in an organisation. However, knowledge in an organisation is dispersed, mainly due to specialisation, and resides in various locations. To be used knowledge dispersed in various locations must be integrated.

Although the necessity of KI was highlighted by KBV scholars and practitioners, the way knowledge in organisations was understood and how it is integrated and applied was not sufficiently clarified. Knowledge in an organisation is fragmented, complex and difficult to locate. Using a case study at international development NGO, this research showed how the concept of knowledge in an organisation is understood and explored the process through which it is integrated and applied for accomplishing organisational tasks and enhance competitive advantage. The main conclusions of this study are stated below:

1. **Knowledge in an organisation is understood as holistic variable resource-** The concept of knowledge in an organisation is different from previous understanding of the KBV. KBV see knowledge as a fixed resource that mostly residing in individual brains. KBV also highlight the importance of classifying knowledge into tacit, explicit, individual and organisational categories. The findings in this study suggest knowledge in an organisation is holistic variable understanding that is gained from interpretation, absorption and application. The argument in this study is that knowledge in an organisation is viewed as *holistic variable resource* that resides in individual brains,

organisational repositories and informal social interactions. The knowledge in individual brains, organisational repositories and informal social interactions are interrelated because they influence each other. In this sense knowledge in an organisation is understood as dynamic unique resource that is fluid, flexible and contextual that resides in various locations and change continuously. Knowledge is '*fluid'*, because it is unstable and likely to change; knowledge is 'flexible', because it is influenced by various factors and knowledge is *'contextual'*, because the meaning and understanding of knowledge varies from organisation to organisation.

2. **Knowledge in an organisation is integrated in three stages-** KBV argue that knowledge can be integrated simply by using KI mechanisms such as directives, rules, organisational standard practices and routines. The KBV argument tends to conclude that KI and application is a single step process. The argument in this study is that KI mechanisms alone do not provide efficient integration of knowledge because there are intermediate processes that influence KI and application. The intermediate processes in this context refer to knowledge sharing, knowledge absorption and knowledge combination and application.

   This study analyses the intermediate processes of KI and application and suggest that KI in an organisation takes place at three stages namely, knowledge sharing, knowledge absorption and knowledge combination and application.

   The first stage of KI process is *knowledge sharing*. Knowledge sharing refers to the willingness and abilities of individuals to share their knowledge to others. The second stage of KI process is *knowledge absorption.* Knowledge absorption refers to the

willingness and capacity in which knowledge receivers assimilate and transform the knowledge shared to them. In other words, to be applied, the shared knowledge by the provider needs to be absorbed and assimilated by the receiver. The third stage of KI process is *Knowledge combination and application.* Knowledge combination refers to creating or developing new insights and understanding to make new meaning. Knowledge application refers to using the coordinated knowledge, which is also referred to as capabilities (Grant, 1996a; Grant, 1996b) to perform organisational tasks or to solve problems.

The three stages of KI and application are interrelated and should not be seen as a straight line step-by-step process. Sometimes knowledge is shared and absorbed at the same time; also sometimes the shared knowledge is applied straight without absorbing. Knowledge may also be shared before and during the application because individuals learn and gain knowledge at all stages of the KI process.

3. **KI and application is influenced by three sets of factors-** The analysis of the findings suggested that the individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interaction constructs influence KI and application in an organisation at the three stages of the KI and application process- *knowledge sharing, knowledge absorption and knowledge combination and application.*

Knowledge sharing in the case organisation is influenced by individual knowledge sharing behaviours. Individual sharing behaviours refers to the motives, perceptions and characteristics of individuals to share their knowledge to others. The three main individual knowledge sharing constructs analysed in this study are *motive for recognition and constructive use knowledge, need for feedback and triangulation of own knowledge* and

motive for power and influence. Organisational knowledge governance mechanism refers to conscious and formal organisational practices that are related to knowledge sharing. The two main knowledge governance constructs analysed in this study are *management style* and *ways of working*. Informal social interactions refer to knowledge sharing opportunities that exists within informal interactions and networks in an organisation. The two main informal social interaction constructs analysed in this study are *purposeful conversation* and *informal reference groups*. Unlike the previous approach that see knowledge sharing from knowledge providers' perspectives, this study showed that effective knowledge sharing is a joint effort that involve knowledge providers and knowledge receivers.

Knowledge absorption in the case organisation is influenced by *relationship history between knowledge provider and knowledge receiver*, *relevance of new knowledge to existing knowledge* and *discernment* (selective judgement) of individual knowledge receiver.

Knowledge combination and application is influenced by integrated factors because different sets of individual, organisational and informal social interaction constructs interact and negatively or positively influence the KI in the organisation. The argument in this study is that although the sets of constructs influence KI and application in an organisation at different KI stages, they may not exert significant influence in isolation because these constructs interact and exert combined influence on KI and application.

To conclude, organisations no longer expect that the practices that made them successful in the past will keep them viable in the future. The effective and efficient KI and application practices help organisations to achieve sustainable competitive advantage because competitive

performance depends not on how much organisations know but on how they use what they know. This study shows that in KI and application practices it is crucial to understand the dynamic features of knowledge in an organisation and view knowledge in an organisation as holistic variable resource that changes continuously. This study also showed that KI and application is a dynamic process that takes place at different stages and influenced by different interrelated factors. It is influenced by multiple factors related to individual knowledge sharing behaviours, organisational knowledge governance practices and informal social interactions characteristics.

Thus, this study proposed ‘‘*multiple stages- multiple factors approach’’* to the analysis of KI and application in an international development NGO. I hope this new approach will give organisations a good framework to integrate and apply their dispersed knowledge and enhance competitive advantage.

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List of Appendices

Appendix 1 - Interview Questions at the case organisation

Research Topic**: Exploring Knowledge Integration in Charitable Non-Government Organisation (NGO)**

The purpose of the Research

This research is exploring the process of knowledge integration and application in an international development NGO.

Objectives

- To examine the conceptual framework of knowledge integration and to explore how the people in international development NGO perceive knowledge sharing, absorption, integration and application.
- To identify individual, organisational and informal social interaction factors that facilitates or hinders knowledge sharing and integration processes.
- To propose appropriate methods and mechanisms of KI and application in the context of international development NGO.

Confidentiality

- All information that is collected about your views and perceptions during the course of the interview will be kept strictly confidential.
- Your name or any contact details will not be recorded on the interview transcripts.

- I am the only person who has your consent form and any of your contact details.
- Your participation in this study will not be discussed with other interviewees in the organisation.

Anonymity

- The presentation of the data does not allow to identity your participation in the research.
- Any information about you which is disseminated will have your name and address removed so that you cannot be recognised from it.
- I am not under an obligation to report anything you say that could be defined as illegal.

Participation

- You are free to not to answer any question
- You can withdraw from the interview at any time without a given reason.

Results of the study

- The results of the study will be used in my Doctoral thesis.
- The material may be published in Academic journal and will be presented at academic and professional conference and seminars- Confidentiality and anonymity will be kept at all times.
- I can provide you the summary of research findings, if you wish.
- Do you have any question, please?

Permission

- Can we go ahead with interview?
- It is possible to tape record the interview please?

The interview questions

Part One- General

- What sort of information and knowledge are you using in your work on a daily basis?
- What do you understand by information and knowledge?

Organisational factor

- Can you tell me what the organisation is doing to share knowledge in the organisation?
- What methods of knowledge sharing are commonly used in the organisation?
- Do you find these methods are interesting in themselves?
- What do you think others are feeling about knowledge sharing in the organisation?
- What systems you have in place to capture, store and share knowledge?
- To what extent do these systems help you to manage the knowledge resources in the organisation?
- To what extent do conversation among people encouraged in the organisation?

- How do organisational structure and hierarchy impact on flows of knowledge in the organisation?

Individual factors

- Can you tell me why you share your knowledge with others?
- What type of knowledge you are willing to share?
- What drives you to share your individual knowledge?
- Do you see any risk in sharing your own knowledge?
- How would you like to share your expertise that is sometimes difficult to articulate?
- Under what conditions do you share your expertise? Can you give me an example?

Social capital factors- internal networks

- Can you tell me what social interactions and networks exist outside the organisational hierarchies?
- What type of people you have interactions with internally?
- How does knowledge sharing takes place in these interactions and networks?
- Which of these networks are most used in the organisation?
- To what extent you participate in these networks?
- What is interesting about these knowledge sharing networks?

- What do you think other members of the organisation feel about these networks?
- Can you give an example where you receive useful knowledge from these informal internal interactions?

Informal social interaction factors- External networks

- Can you tell me what external networks you have?
- What type of people you have interactions with externally?
- What are your reasons for participating in these knowledge sharing networks?
- How does knowledge sharing takes place in these networks?
- To what extent do you participate in these networks?
- What is interesting about these knowledge sharing networks?
- What do you think other members of the organisation feel about these networks?
- Can you give an example where you receive useful knowledge from these informal external interactions?

Assimilation and absorption

- Can you tell me how you absorb and unify the shared knowledge with your existing knowledge?
- How you make sense of information you receive from someone or somewhere?

- How you receive, interpret and apply knowledge shared to you?
- How do you perceive and value the external knowledge somebody shared it to you?
- What do you think is the unifying or assimilating power of the external knowledge to your existing knowledge?
- What determine the absorption capacities of individual knowledge receivers?
- How do you think the individual absorption capacity develops?

Possible probes

- Can you describe in more detail ------?
- What happened then?
- What did you feel when -------?
- Can you give further example?

Appendix 2- List of major documents reviewed at the case organisation

1. The organisation's Programme Learning Strategy.
2. Evaluation of the organisation's Partnership Programme Arrangement (2008- 2011).
3. Towards a Holistic Care and Mitigation Response to HIV- A planning and Review Tool for Mapping the Availability and Accessibility of Services.
4. Programme Partnership Arrangement (PPA) Proposal Form 2011-2014.

5. The organisation's HIV Communications Framework.

6. The organisation's HIV Community of Practice- An example of 'Learning processes within agencies'.

7. Livelihoods Learning Plan 2012 – 2014.

8. Thematic review: The organisation's international work in HIV-related care and mitigation.

9. Away Day Notes: PEUMT Away Day 7th March 2012.

10. The organisation's Accountability Framework (CAF) revised version January 2011.

11. Voice and Accountability Tool Guidance Notes.

12. The organisation's Southern Africa Region: Accountability - Case Study.

13. The organisation's Conceptual Framework- Sustainable Livelihoods.

14. Strategic change paper 2005.

15. Annual Report 2011-12.

Appendix 3- Preliminary codes of data at the case organisation

1. **Knowledge in the organisation**

- Knowledge is structured information.
- Information and knowledge are two different part of the same process.
- Sharing information in order to give knowledge.
- Information is any sort of data that is coming in.

- Knowledge is reflected information.

2. **Individual knowledge sharing behaviours**

- Part of the daily activity.
- To enhance the performance.
- To enhance accuracy and confidence of your knowledge.
- For continuity of work.
- Not reinventing the wheel and to create continuum.
- Sometimes do not how knowledge is used.
- Weigh up the impact of the shared knowledge.
- Personal integrity is affected if that knowledge is used incorrectly.
- To get conversation from sharing.
- Sharing is human nature.
- Sharing is risk in competitive situation.
- You speak to somebody you trust.
- To pass knowledge/ to educate people.
- External sharing depends on the sensitivity of the information.
- Share if it is useful to them.
- Knowledge sharing depends on knowledge seeking.
- If personal knowledge I would judge the level of sharing.
- Sharing depends on audience, sensitivity and confidentiality.
- To be valued to others, to be applied in a constructive way.
- To do something differently, it is how we learn.
- Knowledge sharing may bring down your influence.

- I want great influence.
- Support, to strengthen the organisation's work.
- The risk is if I am wrong.
- People's expectation and demand for particular knowledge is an incentive.
- Expectations that raise profile.
- Somebody may use it the way you do not like.
- As a manager to inspire, encourage staff, to engage them.
- I'm enriched by the stories of my colleagues.
- A sense of variety of roles motivates me to share.
- If not confidential it is possible to share any knowledge.
- To link the experiences.
- To develop expertise of partners.
- Sharing expertise to others make people happy.
- Sharing is risk in terms of cost and time.
- Main driver is that people are using the knowledge provided.

3. **Organisational Knowledge governance mechanisms**

- Knowledge is shared implicitly and explicitly.
- Culture is changed towards the ownership of knowledge.
- Knowledge in the organisation is not individuals' knowledge, it is organisation's.
- Most stories and most files are shared.
- Database is shared and everybody is connected to database.
- Knowledge sharing is built in some processes and procedures.
- Sharing is essential element in organisation culture.
- Ideas which are integral to the organisation, sometimes as a part of the culture.

- Interactive workshops, partnership work help to tease out the shared understanding.
- Knowledge sharing is informal as well as embedded.
- Stories, experiences and insights are shared through Intranet.
- Managers have 18 months reflection space, deliberately separate from planning.
- Managers are privileged to get exposure to knowledge from different parts.
- Opportunities are opened to talk to the directorate- it is open culture of sharing.
- Design of the building facilitate knowledge sharing.
- Sometimes communication is strict and we are advised what we communicate.
- Internal communication team has rules on how to communicate
- There is something that cannot be passed up and passed down as well.
- Trickling down information from higher level of meeting and each level needs more.
- No consistence between individual managers- My manager is better.
- Most work involves several teams, sharing is mostly team based.
- Internet, HIV COP, Gender network and youth networks are good.
- Very hierarchical, due to church structure; information flow is very partial.
- I have ways of getting information about what is going at the top.
- The hierarchical situations and authorization process causes delay in knowledge flow
- SharePoint, newsletter, email, publications, website, Skype and situational Report
- Learning forum every year in which we share information across partners.
- The learning forum is documented across specific thematic areas.
- Online meeting is a breakthrough in the organisation- people in different countries participate.
- Working groups are good, but depends on who facilitate the group.

- More levels are risk to Knowledge sharing it but depends on the style of a line manager.
- Some informal networks with people at the higher level it is an opportunity.
- Control of knowledge depends on individuals managing the initiatives.
- Programme staff working on specialist area share knowledge.
- We are a community together in which we share knowledge.
- System store data and information not knowledge.
- People are tied with frame of reference.
- No deliberate holding of knowledge from top.
- Team work is encouraged.
- The structure our organisation doesn't really have much effect on knowledge sharing.
- It depends on how line mangers cascade information.
- Control of information is not really visible; there is a lot of information out there all the time.
- I think knowledge is fairly, fully shared by senior managers.
- We give people too much information rather than not enough.
- I have to decide whether to pass it to my team; I have to read it first myself and say well.
- The biggest and most popular way of knowledge sharing is word of mouth.
- The organisation is very organic and we share knowledge.
- HIV network are good and people are interested, engaged and a lot of knowledge is shared.
- Sometimes managers are busy and cannot pass information on time.
- Implication of communicating knowledge is seen at team managers' level.

- We encourage lateral interaction to facilitate knowledge sharing across the hierarchical levels.
- The hierarchy nevertheless, negatively impact on knowledge sharing.
- We organise trainings and workshops to address these imbalances.
- We planned to have great systems in place with a lot of cross organisational workings.

4. **Informal social interactions characteristics**

- Communication internally will go to people outside the organisation.
- Information go to people externally who do not want to know.
- Conversation gives me new insight and when I got back to my desk I change the way I do my work.
- I receive more knowledge; the way I intended to do my job may be changed a little bit.
- Knowledge is shared in conversations.
- I interact with any people internally (open, trust, no suspicion).
- We talk a lot to each other.
- Social interaction depends on personality types.
- Introvert people prefer to share on 1-2-1.
- Extrovert can also share in group.
- In 1-2-1 conversation the quality of knowledge shared is good.
- Extrovert sharing is widely spread, but may be shallow.
- Trust of someone's knowledge facilitate Knowledge sharing.
- The organisation is great place to talk and share with people.
- Specialist working groups interact and share frequently.
- Action learning, communality of interest, people with similar jobs.
- My networks are internal and external.

- Face to face is always a best way of sharing knowledge.
- Plenty of room in the organisation premises for social interactions.
- Plenty of spaces to make you walk up to the pavilion or go around the building.
- A lot of opportunities that put the initial conversation.
- Better social events in the pavilion.
- Can meet up people from other divisions in pavilion.
- I like to interact with anybody because everybody got something to give.
- Actively interact with everybody in the organisation.
- As a manager I do not walk down the stair case without talking to somebody.
- Football team, yoga, other activities help to share.
- This office environment created a space to informally discuss and share knowledge.
- But outside London such facilities are less.
- People to interact more within their division.
- Exchange of practice- Interact to share what we know, under what condition purposeful.
- Purposeful conversation is for exchange.
- Conversations depend on relationships of team members.
- There are more team meetings, regular updates can be made.
- Many social opportunities for Cross organisational interactions.
- At Christmas party, we meet different level of staff.
- Summer staff days out for five days- do not go with your whole team, mix up with others.
- Lunch time exercise café, yoga, platelets, tennis, drinks, summer barbeque.
- Nice to meet people who you don’t meet on work- new relationship building.

- Interaction to know people.
- To build Relationship in the organisation.
- Depends on personality - Majority is very sociable – Open personality.
- Sometimes confidential information is shared in a relaxed environment.
- Vital information for your work can be shared in informal social interaction.
- I like dealing with people who have different life experiences from my own.
- I like dealing with people who challenge me and ask me questions.
- Get something that didn't thought of you- new perspective.
- Conversation happens instinctively- sometimes on the train on the way home.
- Sometimes conversation might happen again in few weeks later.
- Something it might spark up on I can talk about that, I could use that.
- It is much more stimulating.
- Some unstructured conversation may start at your desk, on the stairs or when having a cup of coffee.
- People are different, some people interact everywhere, and some people aren't.
- I like dealing with people who are open and easy to deal with.
- I like dealing with enthusiastic people.
- Lunchtime talks, football team, Yoga, plates, pubs – opportunities created by the organisation.
- Articulate issues in more relaxed way, particular way, it is opportunity for knowledge sharing.
- Conversation is useful all the time, it is critical element, but can also sometime be negative.
- Got useful knowledge verbally largely.

- Conversation is more relaxing, open, off-limit, automatic, no filter.
- New insight and best ideas come up in conversations.

Appendix 4- Initial Template of knowledge integration in the case organisation

KNOWLEDGE IN THE CASE ORGANISATION

1. **Information are knowledge are continuum**

- Knowledge is one level up than information.
- Difference of information and knowledge is how we use it.
- Level of learning.
- Level of experience.
- Subjective understanding.
- Combination of information and observation.

2. **Deep understanding of information with background**

- Knowledge is the understanding of information.
- How to use information.
- Active use of information.
- K is internalised and used.
- Reflected information.

3. **Analysed and applied information**

- Key objective and real value from information.
- Evaluated information.
- Structured and used information.
- Processed information for application.
- Interpretation of information.
- Transformation and use of information.
- Material that is processed for application.

INDIVIDUAL CHARACTERISTICS IN KNOWLEDGE SHARING

1. **Recognition and constructive use**

- Motive to be valued.
- Their knowledge is appreciated.
- Used in a constructive way.

2. **Building capacity of colleagues**

- Enable their colleagues performs better.
- People have social contract with each other.
- To establish trust.

- Knowledge sharing is human nature.
- The way people learn.

3. **Personal satisfaction**

- Sharing expertise to others.
- Seeing the knowledge is used constructively.
- Make people happy.

4. **Linking experiences and skills**

- Share knowledge to link experiences and skills in the organisation.
- To ensure continuity of operation in their absence.

5. **Perceive value of knowledge**

- When knowledge is important and valuable to individuals share some or not at all.
- Power and influence.
- Perceive that knowledge sharing reduce their power and influence.
- Fear of dominating others.

6. **Misinformation**

- Assume that the receiver may get it wrong.
- Inappropriately use the shared knowledge.

7. **Time taken to share**

- Think sharing the knowledge take more time.
- Some knowledge is not easily articulated.

ORGANISATIONAL MECHANISMS AND INITIATIVES OF KNOWLEDGE SHARING

1. **Formal structure/ hierarchies**

- Formal hierarchy block open communication between people at different levels.
- Knowledge may be lost at various levels.
- Hierarchy create information imbalance in the organisation.
- Silos of working groups.
- Knowledge is shared within the working groups having similar visions, duties and responsibilities (silos) a tendency not to share outside the working groups (silos).

2. **Culture (knowledge sharing/hoarding)**

- People are willing to interact and share what they know.
- No knowledge hoarding culture in the organisation.
- Knowledge sharing culture is not embedded into the daily activities of the organization.

3. **Knowledge Management System**

- The organisation's document management system improved knowledge sharing.
- Simplifying gathering, processing, storing and disseminating knowledge.
- Manage volume of database.
- Easy online sharing and no geographic limit.
- IT system causes information overload.
- Difficulty filtering important knowledge.
- Take more time for searching.

INFORMAL SOCIAL INTERACTION CHARACTERISTICS OF KNOWLEDGE SHARING

1. Dialogue and conversations

- People interact and make conversations and dialogue.
- Different views and perspectives emerge, discussed and shared.

2. Informal exchange of ideas and resources

- A peer support where individuals freely walk around.
- Chat to each other to ask questions.
- Discuss ideas of interest.

- Share information and resources related to their job or individual and social issues.

3. Telling stories and anecdotes

- People share rich and concrete knowledge about their practices, challenges, success, and so on.

4. Individual World view

- Individual worldview shapes the thinking approach.
- Assumption of individuals on certain phenomena.
- Influences how to view and absorb external knowledge.

KNOWLEDGE ABSORPTION

1. Sharer's background

- Absorb external knowledge based on the source of the knowledge in terms of expertise, trust, right hierarchy (position) and social status of the sharer.

2. Discernment /judgment

- Checking / verifying the truth and novelty of the shared knowledge against own understanding.
- Triangulating and filtering through facts, figures and asking someone.

KNOWLEDGE COORDINATION

KI- Organisational level- the organisation's initiatives

1. **Knowledge Cloning**

- Accompanier supports a partner in the acquisition of their knowledge in their context.
- Brokering knowledge using the organisation specific tools.
- Helping people to analyse their own knowledge in their situation.

2. **Communities of practice**

- Provides a collegiate environment where problems can be openly discuss.
- Provide practical solutions suggested and debated.
- Decision making/ problem solving.
- Knowledge is integrated in team meeting or group decision making process and new insight may emerge.

3. **Working group/ leadership meetings**

- The working groups are task focused.
- Knowledge related to specific task/problem is shared and integrated.
- No purposive knowledge integration for future use.
- Corporate Leadership Team and International Leadership Team have substantive agenda besides the business agenda for open discussion and sharing ideas.
- However, not recorded and applied, it is just for reflection.

- The way of organisation’s work’’ and ‘’ the organisation is organic.

Appendix 5- Final Template of KI and application in the case organisation

FINAL TEMPLATE OF KI AND APPLICATION IN THE CASE ORGANISATION				
	Categories of interview respondents			
	D*	PHM*	TAS*	OMS*
1.Knowledge in the case organisation				
1.1. Information & knowledge are continuum				
1.1.1. Knowledge is one level up than information	√	√√	√√	√
1.1.1.1. Difference of info. & knowledge is how we it	√		√√√	
1.1.1.2. Level of learning	√	√√	√√√	√
1.1.1.3. Level of experience	√√	√√	√√	
1.1.2. Subjective understanding	√	√√√	√	√
1.1.3. Combination of information &observation	√√	√	√√	√
1.2. Deep understanding of information with background				

1.2.1. Knowledge is the understanding of information	√√	√√√√	√√	√
1.2.1.1. How to use information	√√	√√	√√	
1.2.1.2. Active use of information	√√√√	√	√√	√
1.2.2. K is internalised and used	√√	√√	√	
1.2.2.1. Reflected information	√	√	√√	√√
1.3. Analysed and applied information				
1.3.1. Key objective and real value from information	√√√	√√√√√	√√	√√
1.3.2. Structured and used information	√	√√	√√√√	
1.3.1.1.Processed information for application	√√	√√	√√√√	√
1.3.3. Interpretation of information	√√	√√√	√√	√√
1.3.3.1. Transformation and use of information		√√√	√	
1.3.3.2. Evaluated information	√√	√	√	
1.3.3.3. Material that is processed for application	√√	√	√√	√

2. Individual Knowledge sharing behaviours				
2.1. Recognition & constructive use				
2.1.1. To be valued & gain influence	√√√	√√√√√	√√√	√√
2.1.2. Desire to improve people's knowledge & skills	√	√	√√	√√
2.1.2.1. Share if it is useful and demanded			√√	√
2.1.2.3.Applied in a constructive way & raise profile	√	√√	√	√
2.1.2.4. Sharing is essential element in organisation culture	√√	√√	√	√
2.1.2.4.1. Share to ensure collaboration and transparency	√	√	√	
2.1.2.5. Incorrect use of knowledge affects personal integrity	√	√√	√	√
2.1.2.5.1. Somebody may use it the way you do not like		√√	√√√	
2.1.2.5.2. Sometimes don't know how knowledge is used	√		√	
2.2. Feedback and Triangulation of knowledge				
2.2.1. KS is checking mechanisms & sounding board		√	√	

2.2.1.1. To enhance accuracy & confidence of knowledge	√			
2.2.1.2. Share to gain knowledge as well		√	√	
2.2.2.1. To get wider picture & increase scope of thinking	√√		√	√
2.2.2.1.2. Work better when balancing ideas with others		√	√√	
2.2.2.2. I ‘m enriched by the stories of my colleagues	√	√		
2.3. Power and influence				
2.3.1. If not confidential want to share any knowledge	√√√√			
2.3.1.1. If personal knowledge I judge the level of sharing		√√	√	√
2.3.1.2. Sharing is risk in competitive situation			√√	
2.3.1.2.1. People might interpret it in a wrong way	√		√	√
2.3.1.2.2. Knowledge sharing may bring down influence	√√		√	
2.3.1.2.3. Sharing is risky in terms of cost and time	√		√	√
2.3.1.2.4. There more you share your influence increases	√√	√√√		

3. Organisational Knowledge Sharing Mechanisms				
3.1. Management style				
3.1.1. Hierarchy depends on how connected we are	√√√		√√√√	√√√√
3.1.1.1.Communication rules restrict sharing		√	√√√√	
3.1.2.Hierarchical, conversely, too much consultation	√	√		√
3.1.2.1. Managers trickle down information differently		√√	√√	√
3.1.3. Different types and different levels	√	√√	√√	√
3.1.3.1. Managers decide whether to pass it down		√√	√√	√
3.2. Ways of working				
3. 2.1.KS is built in some processes and procedures	√√√	√	√	
3. 2.1.1. Knowledge ownership culture is changed	√√√			
3.2.2. Managers consult & liaison with staff	√√	√√√	√√	√√
3. 2.2.1. Staff & managers interact and communicate	√√	√√√	√	√√

3.2.3. The way we work much more partnership	√√	√		√
4. Social Interaction Characteristics				
4.1. Conversation				
4.1.1. Knowledge shared in purposeful conversations	√√	√	√√√√	
4.1.1.1. Spoken conversations must be followed up	√	√	√√	
4.1.2. Shared more informally through conversations	√	√		
4.1.2.1. In one- to- one the quality of sharing is good			√√√	
4.1.2.2. In conversation you get new perspectives	√	√	√	
4.1.3. Unstructured conversation is building relationship	√√√	√	√√√√	
4.1.3.1. Relationship facilitate KS in informal interaction	√		√	√
4.1.3.2. Initial conversation is for information sharing	√		√	
4.1.4. If I value their knowledge I give and receive			√√	
4.1.5. Trust facilitates sharing in informal conversation	√		√	

4. 1.6. Meeting people outside the working groups	√√√	√	√√	
4. 1.7. Some are naturally open and enjoy others not			√	
4. 1.7.1. Informal conversation not suit all types of KS		√		
4.1.7.2. Not sure if conversation is KS or gossip		√		
4.2. Informal reference group				
4.2.1. Influencing without authority		√√	√	
4.2.2. Not difficult to access knowledge at the top		√√	√√	√
4.2.2.1. Informal networks with top people- opportunity	√		√	√
4.2.2.2. Interact regardless of the hierarchies	√√		√	
4.2.3. I interact with people of common nature	√		√√√√	
4.2.3.1. How to interact is individual & personal		√	√	√
4.2.3.2. People learn differently & gain info differently		√	√	√
4.2.4. Have ways of getting information from the top		√		

5. Knowledge absorption				
5.1. Relationship History				
5.1.1. Look at background of a person sharing	√√√	√√	√√√√	
5.1.1.1. Through time you may act on it	√	√	√	√
5.1.2. See for credibility & reliability of knowledge	√	√	√√√√√	
5.1.3. If I doubt I debate on the knowledge shared	√			
5.1.3.1. Take that information & look evidence for that			√	
5.2. Relevance of knowledge				
5.2.1. I see in the context of how I am going to use	√	√	√	
5.2.1.1. I would try to contextualise it	√√	√	√	
5.2.2. Selective & identify areas related to my work			√	
5.2.2.1. I go back to my knowledge & sense its value	√√	√		
5.2.3. I see where it fits, but sometimes difficult to fit	√	√		

5.2.4. Confidence, relevance impact the absorption			√	
5.3. Knowledge Discernment				
5.3.1. The first is filter individual worldview	√√			
5.3.1.1. Observe & evaluate against natural actions	√√			
5.3.2. Don't take face values, digest & analyse	√	√		
5.3.2.1. Seek confirmation from the person in charge			√√√	
5.3.3. Want to be sure what they tell is accurate	√			
5.3.3.1. Evaluate whether knowledge is good or bad			√	
5.3.4. Ask own responsibility in taking knowledge	√			
6. Integrative themes				
6.1. The organisation is collaborative, need to share				
6.2. To inspire, engage & strengthen organisation's work				
6.3. Our organization is organic				

Note*				
D- Directors				
PHM- Programme Heads and Managers				
TAS- Technical Advisors and Support staff				
OMS- Overseas Managers and Support staff				