ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

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Collaboration and Knowledge Sharing Among Multicultural Teams: The Case of Ernst & Young

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Collaboration & Knowledge Sharing Practice for Multicultural Team: The Case of Ernst & Young

A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfilment of the Requirements for the Degree of Master Of Science in Information Science

By

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August, 2015

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_____ Advisor	_____ Signature

Declaration

I declare that the thesis is my original work and has not been presented for a degree in any other university.

_____

Date

This thesis has been submitted for examination with my approval as university advisor.

_____

Advisor

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Acronyms

CBK: Center for Business Knowledge

CoPs: Community of Practices

EMEIA: Europe, Middle East, India and Africa

EY: Ernst & Young

GVTs: Global Virtual Teams

KM: Knowledge Management

KMS: Knowledge Management System

KWeb: KnowledgeWeb

MAKE: Most Admired Knowledge Enterprise

MNC: Multinational Company

OL: Organizational Learning

PDI: Power Distance Index

PEOU: Perceived Ease of Use

PU: Perceived Usefulness

STO: Short Term Orientation

TAM: Technology Acceptance Model

TAS: Transaction Advisory Services

UAI: Uncertainty Avoidance Index

Abstract

Information technology has inevitably become a facilitator of knowledge sharing among members of global virtual teams. Often members are separated not only geographically but also culturally. So, the general objective of this research was to study how knowledge dynamics specifically knowledge sharing is affected by national cultural differences in multicultural teams. This study also dealt with communication, preference for collaboration tools and knowledge sharing in knowledge intensive, decentralized organization. In addition, the study explored technological, cultural and individual barriers to knowledge sharing at Ernst & Young (EY).

The researcher selected a single case study which is one typical multinational enterprise (EY).The paper adopted disproportional stratified sampling method followed by the random sampling of candidates using lottery method which allowed for a representativeness of the sample. Self-administered questionnaires, document review and personal observation were used as data collection techniques. The survey was conducted online with KwikSurveys tool. The method of analysis was a low level analysis as the basis for the findings.

The study concluded the significance of understanding and managing culture differences to the knowledge sharing and collaboration in cross-cultural teams. The paper also investigated how communication is enabler of knowledge sharing. The research result furthermore showed rate of utilization of collaborative tools and its preference by EY staffs by making use of Technology Acceptance Model (TAM) model. Finally, this thesis reported on the results of a quantitative study of technological, cultural and individual barriers for knowledge sharing at EY.

Finally, the researcher recommends that multinational firms can win the battle of developing a true knowledge sharing and collaboration culture by working as a unit, reducing cultural distances and tackling barriers.

Keywords: communication, national culture, knowledge sharing, multinational organization, knowledge sharing barriers, Technology Acceptance Model and collaboration.

Chapter One

Introduction

1.1 Introduction

Several attempts have been made to develop a definition of knowledge in business context. Knowledge can be defined as "expertise or skill acquired through education and experience" (Chawla, 2011). As it is well known, knowledge sharing is a fundamental knowledge management process. Particularly, for multinational/Multicultural organizations, the ability to effectively share knowledge across the organization can lead to new competitive intelligence being created and best practices being achieved, organization wide. In this research multicultural firm, multinational firms, and international firms are used inter changeably.

Therefore, given the nature of Multicultural Company; Ernst &Young (EY) consisted of different nationalities and their collaboration resulted in knowledge sharing. Hence, this study investigated the process of knowledge sharing in cross-cultural teams using the national culture dimensions proposed by Hofstede (2001). Based on these dimensions, the researcher studied the cross-cultural team as a knowledge-sharing environment, where different cultural dimensions affect the knowledge-sharing process. The study also investigated the effect of national culture differences through different values and beliefs which cause challenges in communication among employees in multinational organizations which in turn influence knowledge sharing. This study not only tried to explore existed collaboration tools and their usage but also it tried to discover barriers for not using them for knowledge sharing among subsidiaries. This helps respective managers to "unpack" the concept and use for their purpose. In general, the outcome of this research is believed to help better understand the cultural differences among subsidiaries' team members working to deliver a project and lead to a better management of these differences to promote knowledge sharing.

1.2 Statement of the problem

The researcher motivation to work on knowledge sharing & collaboration issues at EY raised from the finding done by Ernst and Young center for business innovation (Ruggles, 1998). This research has found that the process of knowledge sharing among firms was influenced by a range of factors. The industrial questionnaire conducted as part of the research identified factors like communication, trust, management emphasis, culture and incentive systems to all play a part in influencing the levels of knowledge sharing. The biggest impediment was identified as culture. Broadly, it is the values, beliefs, and assumptions held by the members of the organization.

Taking the above mentioned findings and the researcher preliminary assessment on the subject; it is learned that understanding the cultural difference has become more important when doing business in a global society. But not addressing this issue properly resulted in practical business problems. Therefore, knowing such difficulties give insight to leaders of businesses to develop a new processes, knowledge management techniques, knowledge management technologies and knowledge sharing issues management and procedures for overcoming resistance to knowledge sharing, which might translate to increased innovation, productivity and competitive advantage.

On the other hand, as it well known teams in multinational companies are formed by members from different cultures and collaboration is expected to overcome all intercultural differences. But, failure to collaborate may result:

- No cost savings through the transfer of best practices;
- Lack of better decision making as a result of advice obtained from colleagues in other subsidiaries;
- Decrease in revenue by not sharing of expertise and products among subsidiaries;
- Lack of Innovation through the combination and cross-pollination of ideas.

Therefore, such a problem can be tackled by addressing one of the ongoing challenges for KM programs by carefully selecting, implementing and avoiding investing in collaboration tools that few people will actually use. In doing so, MNC have to see first their rate of utilization of collaboration tools and employee preferences to overcome barriers for knowledge sharing.

Otherwise, failure to see collaboration tools preference by employees for knowledge sharing may result for leaders unable to set up suitable strategy or system that would enhance the knowledge sharing process. So, the goal of this paper is to provide leaders of businesses to use the findings and help to develop new processes and procedures for overcoming resistance to knowledge sharing in multicultural settings, which might translate to increased innovation, productivity and competitive advantage. Thus, with attention to the problem statement presented above, the research will intend to get answers for the following research questions.

- What is the impact of national cultural differences on knowledge sharing in multicultural firms using cultural dimension as a frame of reference for the case of EY?
- What is the relationship between communication and knowledge sharing in multicultural organizations like EY?
- To what extent do staffs share knowledge across race, age, gender and nationality within EY?
- What is/are the employee preference of collaboration tools for knowledge sharing at EY?
- What are the challenges facing multinational/multicultural organizations like EY in sharing knowledge among subsidiaries?
- What could be the possible solution to solve challenges facing multinational organizations in sharing knowledge among subsidiaries?

1.3 Objective

The general objective of this research was to study factors for knowledge sharing & collaboration in multinational/multicultural firms by analyzing cultural dimensions & employees' preference for collaboration tools for the purpose of knowledge sharing.

1.3.1 Specific Objective

Specific objectives include:

- To assess the impact of national cultural differences on knowledge sharing in multicultural firms like EY.

- To examine relationship between communication and knowledge sharing in multinational/multicultural organizations like EY.
- To understand to what extent subsidiaries share knowledge across race, age, gender and nationality within multinational/multicultural organization like EY.
- To analyze employees' preference of collaboration tools for knowledge sharing at EY.
- To explore barriers to knowledge sharing among EY subsidiaries.
- To provide recommendations and future research directions.

1.4 Scope of the study

Due to limited time and resources, this study is confined to projects delivered by EY in Ethiopia by multinational teams. i.e. only countries involved in delivering a project work with Ethiopians and in Ethiopia were considered and collaboration tools technological details is beyond the scope of this study.

1.5 Significance

This study will benefit researchers who intend to work on knowledge sharing and cultural differences. The study also can be helpful to those who wanted to explore issues regarding knowledge sharing in cross-cultural teams and will enable them to highlight more issues in the knowledge sharing process due to national cultural differences. It will also help organizations to better understand individuals in the context of national cultures and then guide them to improve knowledge sharing practices in cross cultural team environments. In general, the purpose of this study was to analyzed the feedback and data extracted from employees in developing a strategy to encourage knowledge sharing among employees to create high performance work teams.

1.6 Organization of the Thesis

This research paper is organized in five chapters. The first chapter deals with the background of the study which mainly introduces the problem area, states the problem, the general and specific objectives of the study and the scope and significance of the study. The second chapter reviews the background information regarding the case company. In this chapter, multicultural firms and Ernst & Young profile are reviewed. In chapter three the research methodology is briefly discussed.

In chapter four discussions of literature review is conducted by classifying the review by theories & researches into knowledge sharing in multinational environment. So, the first few sub sections are about Hofstede's idea of cultural dimensions, cultural Impacts of knowledge sharing, combining communication, culture dimensions and knowledge sharing and collaboration tools concepts are reviewed. This chapter ends by giving review of all researches done by different researchers on similar topic. The fifth chapter presents the study findings, and presentation of the results. The last chapter summarizes the research, provides conclusions and discusses further areas of research.

Chapter Two

Background of the study

2.1 Multicultural teams

Multicultural teams can be defined as "a collection of individuals with different cultural backgrounds, who are interdependent in their tasks, who share responsibility for outcomes, who see themselves and are seen by others as an intact social entity embedded in one or more larger social systems, and who manage their relationships across organizational boundaries and beyond." (Claire Halverson 2008)

Therefore, one can extend the above idea by saying multinational/multi-cultural professional services firms promote knowledge sharing cultures to maintain consistency in the internal flow of organizational knowledge. Sharing knowledge with member firms across geographic boundaries is becoming a competitive advantage. (Samaar.A.et al, 2011). Also, member firms in different countries are not only sharing knowledge but also work collaboratively in a global environment enabled by emerging technologies; organizations are now using virtual teams in greater numbers to confront this competitive challenge, and to exploit opportunities posed by globalization (Oertig & Buergi, 2006).

Now a days consulting has become a trans-continent business involving a multinational companies. But, despite the significant research work done on the subject on multinational companies practicing knowledge management throughout their globally dispersed subsidiaries, very little is known about Ernst &Young (EY) knowledge sharing practice. Therefore, this study utilized EY, a multicultural & multinational professional services organizations, as a case.

2.2 Ernst & young

EY is a global organization of member firms in more than 140 countries, headquartered in London, UK. EY has four main service lines and is one of the "Big Four" audit firms. EY is the most globalized, integrated professional services organization in mind set, actions and structure.[1]

[1] www.ey.com

EY is the result of a series of mergers of ancestor organizations[2]. In 1903, the firm Ernst & young was established in Cleveland by Alwin C. Ernst and his brother Theodore. In 1906, Arthur Young & Co. was set up by the Scotsman Arthur Young in Chicago. As early as 1924, these American firms allied with prominent British firms, Young with Broads Paterson & Co. and Ernst with Whinney Smith & Whinney. This led to the formation of Anglo-American Ernst &Whinney, creating the fourth largest accountancy firm in the world in 1979.[2] Also, the European offices of Arthur Young merged with several large local European firms, which became member firms of Arthur Young International in 1979. In 1989, the number four firm, Ernst & Whinney merged with the then number five, Arthur Young, on a global basis to create Ernst & Young.[2]Most professional service organizations are collections of locally controlled national practices. EY's business units, almost all of which are purposely no single countries, are grouped into four integrated geographic areas across the world. The four areas are:

EMEIA(Europe, Middle East, India and Africa)

- Americas
- Asia-Pacific
- Japan

EY has four main service lines [2]

- **Assurance:** comprises Financial Audit (core assurance), and Fraud Investigation and Dispute Services.
- **Advisory Services**: consisting of four subservice lines: Actuarial, IT Risk and Assurance, Risk, and Performance Improvement.
- **Tax Services**: includes Business Tax Compliance, Human Capital, Indirect Tax, International Tax Services, Tax Accounting and Risk Advisory Services, and Transaction Tax.
- **Transaction Advisory Services (TAS):** includes commercial, financial, real estate and tax due diligence, mergers and acquisitions, valuation and business modelling, corporate restructuring and integration services.

[2] www.wikipedia.org

EY, being one of the world leading professional services organizations, it helps companies across the globe to identify and capitalize on business opportunities. The EY network gathers national offices all over the world (more than 700 offices spread in 140 countries with a total of over 190,000 employees. [2]

Moreover, an important piece of EY's diversity and inclusiveness agenda is related to the advancement of women. EY focus on women emanate from the core strategic thinking that women are source of revenue and growth.

2.2.1 Organizational knowledge management

As far as knowledge management practice of the firm is concerned, EY began integrating formal knowledge management practices into its culture, processes, and infrastructure more than fifteen years ago. Since then, knowledge management has become a key part of the firm's business strategy and service approach.

The Center for Business Knowledge (CBK) has been established as a central department responsible for knowledge management activities. The CBK consists of analysts, researchers and knowledge managers. The knowledge managers are assigned to manage specific knowledge domains and are viewed as the driving force behind the whole knowledge management process. The CBK further supports the knowledge management process by organizing training sessions and sector meetings and encouraging staff to share knowledge.

Moreover, EY's goal is to use knowledge to increase revenue per employee, reduce cost of sales, and increase the value of intellectual capital and client satisfaction on a global level.[3]

The four drivers of the need for world-class Knowledge Management (KM)/Organizational Learning (OL) at EY were (and still are) (Louis Carter, 2000)

1. Growth: EY needed to accelerate the development of new products and services especially in the e-commerce area, to replace "commodity" services and increase organizational growth;

2. Cost and Speed to Market: Both in pursuit of new assignments and in work delivery, EY needed to reduce cost-of-sales and reduce time to prepare deliverables;

[2] www.wikipedia.org
[3] www.factiva.com

3. Customer Satisfaction: EY needed to increase its depth of knowledge about clients and their industries and about its own global competencies and best practices to enhance customer satisfaction and increase "share of client"; and

4. Learning Curve: Due to high turnover in its profession, EY needed to offer its people access to learning materials and knowledge that would make them quickly proficient and productive in new practice areas, whether they were new hires or existing staff moving into new practice disciplines.

As it is sited by (Dave Pollard, 2002) there have been two critical success factors in EY's KM/OL implementation:

1. Making the change evolutionary rather than revolutionary: People can only absorb so much change and new knowledge at one time, and the firm's service lines and people are only prepared to invest in KM/OL to the extent they could see early and continuous successes.

2. Focusing on deliverables: The development of identifiable, valuable knowledge access tools, repositories, and research & analysis "products" has made KM/OL tangible to EY users and hence made it much easier to sell.

As per (Dave Pollard, 2002) EY's knowledge program assessment has focused, since day one, on five types of success measures:

1. Accessibility of the firm's people to KM/OL resources and staff (this measure category was later dropped when penetration reached 100%);

2. Rate of contribution of knowledge to the firm's repositories;

3. Rate of re-use of knowledge from the firm's repositories;

4. User-surveyed quality of knowledge in the firm's repositories and of deliverables of CBK staff;

5. Recognition of EY's KM/OL leadership by three groups: outside awards, EY's own people (unsolicited kudos), and university recruiters (becoming an "Employer of Choice").

In all the above knowledge management practices, EY delivers real value to its clients by anticipating and addressing their challenges; advising and helping clients requires a detailed

knowledge of their industries. In such an effort, EY has a strong commitment to bringing together the right teams for the clients from across the globe. These teams match the clients' needs in terms of knowledge, skills and cultural background and such diverse teams are also proven to stimulate innovation and new ways of problem solving and collaboration.

2.2.2 Technological knowledge management

In the mid 1990's Ernst & Young started its knowledge infrastructure with implementation of Lotus Notes, which is now changed by Microsoft Lync. However, since the 1990's, technology has been further developed to meet organizational needs. While Lotus Notes led to many decentralized sources of information, the need for centralization increased. This led to the development of what is now a worldwide intranet, which is available for all members of Ernst & Young worldwide. Currently the intranet is accessed through a nationwide portal. The worldwide intranet is covered by a global search engine. The search engine has gone through many development phases from very complex and high functionality to currently a very basic interface. In the near future a Google-like filter will be added that enables search limitations for example nationwide, or European-only searches. Besides the intranet and its search engine other tools are implemented to aid the knowledge management process. Communication tools such as Microsoft Lync and e-mail are used for direct communication, and collaboration tools support both internal as well as external collaboration with clients. Various other specific tools have also been implemented for more specific purposes and contexts.

Currently EY's knowledge infrastructure pivots on its award-winning, intranet KnowledgeWeb (KWeb). Home to more than 1,700 databases and +1,500,000 searchable documents, KWeb provides employees with Lotus Notes (now exchange) and web access to internal and external knowledge resources such as business knowledge, intelligence, global news, and information.[3]

As Web and connectivity technologies have improved; the firm has developed a succession of increasingly powerful Web-based navigation tools mentioned below: (Dave Pollard, 2002).

Moreover, every EY employee has unlimited access to third party content delivery tools like Factiva.com from their corporate intranet. EY use it to access international publications such as the Financial Times and The Wall Street Journal, which allows them to keep informed about trends and issues affecting our clients with overseas operations. EY has integrated external content from third party content delivery tools into the KWeb, so employees can search both EY's intellectual capital

and external content, and also subscribe to email news on their clients and topics of interest from within their web-based, knowledge navigation tools - Community Home Spaces (CHS).[3]

E&Y had also made major investments in technology infrastructure that were not undertaken only for purposes of knowledge management, but certainly benefited that cause. Altogether, E&Y was spending 6% of its consulting practice revenues on knowledge management and technology. A key goal was commonality of hardware and software. E&Y had abandoned its support for Apple Macintosh computers and moved to an all-PC standard in 1995. It adopted common operating system, word processing, spreadsheet, and e-mail software at the same time. These standards meant that programs and documents could be exchanged easily around the firm.

As described in scope section of this paper this research focused on projects delivered in Ethiopia by different nationalities .Therefore, a brief introduction of EY (Ethiopia) is given below.

2.2.3 Ernst & Young Ethiopia

As a member firm of the EY global, EY (Ethiopia) share the same value and vision. The EY (Ethiopia) office is established in year 2000. It has now around 28 professional staffs and it is strongly linked to Global EY via the shared values which inspire people worldwide. The subsidiary is committed to do its part in building a better working world for the Ethiopian people and member firms of global EY. Like its parent firm, it has four main service lines namely: assurance, advisory, tax and transaction advisory services. Usually, new ideas and knowledge come from EY global via electronic newsletters and sometimes by organizing meetings. Employees at EY (Ethiopia) office work in teams that help to share knowledge from experienced members towards juniors. EY (Ethiopia) shares all knowledge infrastructure, knowledge strategy and vision of global EY.

As far as incentives and rewards for knowledge sharing is concerned, no incentive and rewards are given to staff for knowledge sharing.

At EY (Ethiopia) every employee has a counsellor and partners. Even the most senior member of the office has a counsellor who conducts evaluation meeting at least once if not twice in a year. If counselee has any question, he/she can get answer from counsellor after discussing the problem. All EY (Ethiopia) staffs in all service lines are eligible to use collaboration tools available in the intranet. In case of some difficulties, while using communication tools, primary support is given by local help desk and secondary level support are available from South Africa.

Chapter Three

Methodology

3.1 Research Methodology

This chapter describes how the research was carried out. The steps of the research methodology are structured below and involve selecting the research method, gathering the data from the sample, choosing the scientific measurements to measure the phenomenon appropriately, as well as compiling and analyzing the data. Aspects of reliability and validity are also discussed.

According to Hussey and Hussey (1997) methodology refers to the overall approach to the research process, from theory to data analysis listing the main issues of methodology as:

- Why you collected certain data
- What data you collected
- How you collected it
- How you will analyse it

The research methodology was selected in such a manner that it helped to answer research questions like weather national cultural differences has an effect on knowledge sharing in multicultural firms and it also address impact of communication for knowledge sharing in multicultural organizations. Furthermore, the research shall provide insight on issues like race, age, gender and nationality towards knowledge sharing in multicultural context. The study also investigates factors that serve as a barrier for knowledge sharing. Given the nature of the research questions as such a case study approach complemented by both quantitative and qualitative research methods were applied.

3.1.1 Case study approach

As pointed out Marshall and Rossman (1999) a case study is appropriate when the main purpose of the research is exploratory. “Cases are bounded by time and activity, and researchers collect information from various data collection methods over a sustained period of time” (Creswell, 2009).

A single case design was chosen for this research .According to yin (1993), single case study is eminently justifiable under certain conditions ', Including:

The case represents (a) a critical test of existing theory, (b) a rare or unique circumstances,(c) a representative or typical case or when the case serves a (d) revelatory or longitudinal purpose'. Therefore, by looking at one particular organization for the research, the researcher is able to explore the research questions in depth.

Yin (2009) states case study research includes both single and multiple case studies. As this research intends to investigate and explore how national culture difference affects knowledge sharing; and also to see employees' preference for collaboration tools. Therefore, the researcher thereby used single case study i.e. E & Y. The detail of the case company is given in chapter two of this document.

3.1.1.1 Research settings

In order to answer the research questions those subsidiaries of EY which involved in delivering a project work with Ethiopians and in Ethiopia have been considered in selecting the research site. In addition, a subsidiary that is accessible for observation is also another factor for selecting the research site.

3.1.1.2 Unit of analysis

Zikmund (2003) stated that the unit of analysis is a crucial aspect of a problem definition. It assists the researcher to focus on the correct level of investigation and ensures the appropriate collection of data. Yin (2003) also stated that the selection of an appropriate unit of analysis should be aligned to the specification of research questions. As this research aimed to explore the evidence of different countries cultural dimensions on knowledge sharing practice and their preference for a particular collaboration tool preference with their usage barrier in particular organization context, the unit of analysis at the individual level is therefore the most fitting.

3.1.2 Research design

Zikmund (2003) described a research design as a "master plan specifying the methods and procedures for collecting and analyzing the needed information". There are two approaches that can be applied to this research study, according to (Cooper & Schindler, 2001). These are qualitative and quantitative methods. In a qualitative approach the idea is to get a greater understanding of a

concept rather than providing specific measurements (Zikmund, 2003). The focus on this type of approach is mainly on words and observations: namely interpretations and meaningful characterizations. Alternatively, data is collected in a quantitative approach to be measured and calculated at a later stage in the research study so that conclusions can be drawn (Cooper & Schindler, 2001). Therefore, it is important to choose the appropriate research design in order to achieve the study objectives. Researchers can use different types of design depending on the type of problem, the knowledge already available about the problem and the resources available for the study.

Researchers often use qualitative and quantitative material to complement each other. Accordingly, in this study researcher used both quantitative and qualitative research design for the reason that results from one method can be extended or triangulated by using another method.

For the quantitative method self-administered questionnaires are used whereas for the qualitative data collection methods such as observation and document analysis were used.

3.1.2.1 Observation

Observation was one of secondary data collection method for this research work. During observation times researcher noted employee's collaboration tools usage at their work place and IT help center which helped the researcher to give explanation as to why low rate of utilization observed for particular collaboration tool. Thus, in this study researcher played the role of participant observers. In participant observers role of researcher is known and researcher can record information as it occurs Creswell (2009).Observation was also served in this research for triangulating data. The events or facts of this study have supported by more than a single source of evidence (Creswell, 2009). Therefore, strength of observation is that it can effectively complement other approaches and thus enhance the quality of evidence available to the researcher.

3.1.2.2 Literature Review

In order to have deep understanding on the problem of the study, it is vital to review several literatures that have been conducted in the field so far. For this reason, related literature such as books, articles, proceeding papers and some other sources that are retrieved from the internet are

consulted so as to understand the domain knowledge and concepts that are important for this research work.

3.1.2.3 Survey questionnaire

The questionnaire is one of the most widely used survey data collection technique (Saunders, Lewis, & Thornhill, 2003).

A self-administered survey questionnaire is chosen as the data collection instrument for this research work. The researcher used closed questions. i.e. the kind of question presented for the respondents with a selection of options from which they made a choice.

The researcher developed a questionnaire based on questions designed to assess knowledge sharing & collaboration according to respondent's opinions and perceptions.

The questionnaire comprised of the following:

a) **Biographical data:** Comprised of age group, nationality, gender information of respondents.
b) **Cultural dimensions:** This section intended to gauge national culture difference of EY subsidiaries. The questions are formulated in such a way to assess attitudes towards knowledge sharing relevant to the five dimensions of culture namely individualism/collectivism, power distance, masculinity/feminity, uncertainty avoidance and long term orientation.
a) **Knowledge sharing constructs:** questions were formulated to assess communication effect towards knowledge sharing and to assess knowledge sharing practice of EY employees.
b) **Collaboration tools usage:** questions were formulated to see usage trend of collaboration tools by making use of Perceived usefulness & perceived ease of use.
c) **Knowledge sharing Barriers:** questions were formulated to identify potential barriers for knowledge sharing in multinational firms like EY.

3.1.3 Research Model

This research makes use of one framework, Hofstede's cultural dimensions, for analyzing national culture difference in multinational context; and a model, Technology Acceptance Model (TAM), to examine usage trend of collaborative tools for knowledge sharing purpose.

3.1.3.1. Hofstede's cultural dimensions

In this study, the researcher adopt Hofstede's framework to explore national culture impact on knowledge sharing by using five Hofstede's cultural dimensions.

The Five Hofstede's cultural dimensions include:

- **Power distance:** The power distance dimension has to do with inequality in a society. The extent to which the less powerful members of organizations accept that power is distributed unequally (Wei et al, 2008).
- **Individualism:** This refers to the degree to which individuals are supposed to look after themselves or remain integrated into groups and family (Wei et al, 2008).
- Uncertainty Avoidance: The extent to which a culture programs makes its members to feel either uncomfortable or comfortable, in unstructured situations. Unstructured situations are novel, unknown, surprising, or different from usual (Wei et al, 2008).
- **Masculinity/Feminity:** The degree to which tough values, such as assertiveness, performance, success, and competition (which are associated with the role of men), prevail over tender values, such as quality of life, maintaining warm personal relationships, service, care for the weak, and solidarity (which are associated with women's roles) (Wei et al, 2008).
- **Long-Term Orientation:** Long-term time orientation, means focusing on the future. It implies a cultural trend towards delaying immediate gratification, by practicing persistence and thriftiness. In contrast, short-term time orientation, means focusing on the past and present, by respecting tradition and through a need to follow spending trends (Wei et al, 2008).

This framework is adopted in this study for the reason that it is the most acknowledged and comprehensive framework about National culture (Michailova & Hutchings, 2006). Sondergaard (1994) noted that Hofstede's work is widely acknowledged, receiving no less than 1063 direct references in journals. Hofstede's (2001) model is acknowledged to be the most comprehensive

(Kogut and Singh, 1988) and cited (Chandy and Williams, 1994) national cultural framework. A number of successive studies have documented a validation of the scores characterizing national cultural differences over time and in various settings (Shane and Venkataraman, 1996; Mouritzen and Svara, 2002).It is also selected for the reason that cultural indexes are available for most of the countries worldwide.

Furthermore, the researcher choice for the framework is in line with different scholars to adopt this framework for similar cross cultural studies. Lucas (2006) uses all Hofstede´s cultural dimensions in his investigation about national culture influence on knowledge transfer: power distance, individualism--collectivism, masculinity--femininity, uncertainty avoidance and short term--long--term orientation.

3.1.3.2 Technology Acceptance model (TAM)

In this research the second model that is used to examine usage trend of collaborative tools for knowledge sharing purpose is Technology Acceptance Model (TAM).

The TAM assumes that people are likely to adopt a new technology to the extent that they believe it would help them to improve performance their work and the degree to which an individual believes that using a new technology would be free of cognitive effort ease of use (Zhang, et.al, 2008).It makes use of considering the relationship between two perceptual variables: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU).

PEOU refers to the degree to which an individual expects no physical and mental difficulties in adopting the technology at hand (Davis, 1989).

Perceived usefulness (PU) refers to the degree to which a person believes that using a particular system would enhance his or her job performance"(Davis, 1989).

Davis (1989) empirically tested the model in IBM Canada’s Toronto Development Laboratory and found that perceived usefulness (PU) and perceived ease of use (PEOU) had a statistically significant correlation with self-reported current usage (r=0.63 and r=0.45 respectively). Therefore,

the model is used in this research to understand as to why users accepted new collaboration technologies such as the Internet, E-mail, etc.

The main purpose of using of TAM in this research work is to show the use of technology and knowledge sharing practice of the case company. The idea is supported by scholars like Lin and Lee (2006) he identified a positive relationship between use of technology and knowledge sharing.

This model is adopted in this study for the reason that it is supported by significant empirical evidences by different scholars Adams et al., (1992), Davis et al., (1989), Hendrickson et al. (1993), Segars & Grover (1993), Subramanian (1994), and Szajna (1994) to provide empirical evidence on the relationships that exist between usefulness, ease of use and system use.The model has been used in more than 100 studies to examine technology acceptance in a variety of settings (Chuttur, 2009). Furthermore, TAM has become popular model in predicting system usage since then (920.000 results was found in Google scholar using "technology acceptance model" as keyword).

3.1.4 Sample population

Sekaran (2003) defines a population as "the entire group of people, events, or things of interest that the researcher wishes to investigate". Due to difficulty in researching entire populations, a sample was extracted. The population for this study included all the employees in top and middle management positions at EY. A sample is a subset of the population (Saunders et.al , 2003). Zikmund (2003) describes sampling as "a process of using a small number of items or parts of a larger population to make conclusions about the whole population". Samples give the researcher the opportunity to generalize to the population. Therefore it is essential that the sample chosen is representative of the population it is expected to characterise (Sekaran, 2003).

The sampling technique used in this study is one of the probability sampling methods, destratified sampling technique .Therefore, list of EY employees, project name and subsidiary location is used as sampling frame. Then the researcher adopted and divided EY staffs into two strata using the following inclusion and exclusion criteria.

Inclusion criteria: Employees with in EY and working in all service channels of EY and other EY global members working together with Ethiopians to deliver a project in Ethiopia.

Exclusion criteria: Employees with in EY but not participating in any projects delivered to Ethiopian clients. Based on the above sampling technique the size of the populations is known to be 140

employees. Due to small size of the target population i.e. all 140 employees are taken as sample population.

3.1.5 Pre-Testing and Pilot Study

There are several advantages of conducting a pilot study these include referring to questionnaires, Hussey and Hussey (1997) comment on it being "essential that you pilot or test your questionnaire as fully as possible before distributing it". Thus, the questionnaire was pre-tested by circulating to ten members of one international firm employee to determine the understand ability of the items included in the questionnaire. After receiving the comments all changes were made to produce the final version of the questionnaire.

3.1.6 Data collection procedure

A self-administered survey questionnaire and observation were chosen as the data collection approach. Thus, the survey was conducted online with KwikSurveys. KwikSurveys is a free to use online survey builder, which has been specifically designed so that it is quick, support unlimited question and easy to use for people of all experience levels. The tool also helped the researcher to follow up respondents and export survey result to format useful for analysis.

3.1.7 Data analysis procedure

Analysis is done by combining the theories and the empirical findings. Once the quantitative data is collected, the information is cleaned, coded and fed to SPSS software version 20 analysis tool after that the data was categorized and summarized it then analysed in order to achieve the objective of the study.

Zikmund (2003) showed that, descriptive statistics is to "provide summary measures of data contained in all elements of a sample "For the quantitative (survey) data the presentation of its results were mainly descriptive, using counts, tables, graphs, frequencies, bar charts and percentages. The results also discussed narratively in terms of the five cultural dimensions and the impact that they have on knowledge sharing and two variables, PU & PEOU, impact on the employee choice of collaboration tools.

3.1.8 Validity and Reliability

For the purpose of testing the significant differences between expected and observed distribution of data among categories the chi-square test is widely used .It can be applied to both nominal and ordinal data. This technique involves testing the significant differences between the observed distribution of data among categories and the expected distribution based on the null hypothesis (Cooper & Schindler, 2001). For example in this study chi-square was conducted to assess whether there existed a significant difference between the communication and knowledge sharing.

For measuring central tendency for a given data set researchers use three measures of central tendency: the mean, the median and the mode (Zikmund, 2003).In this research work the mean, median, Std. Error of mean and Std. deviation are used for this purpose. Different sources are used like participants' data and related work that enhances the reliability of this research.

3.1.9 Research Limitations

Due to limited time and resources this study has few limitations:

- Only a single organisation within one industry was used, therefore, the results might not be relevant to other companies or industries.
- The research was conducted among the online community members of single case company.

Chapter Four

Literature Review

4.1 Introduction

This literature search is designed to provide a selective overview of the extant research providing support for the study of the relationship between cultural dimensions and knowledge sharing .In addition it provides insight for collaboration tool preference to knowledge sharing.

This literature search is provided in two major sections

I. Theories of knowledge sharing in multinational environment
II. Researches into knowledge sharing and collaboration in multinational environment

4.2 Theories of Knowledge Sharing in multicultural environment

Multinational companies are important playgrounds for learning (Marquardt et al, 1994) and for cross -border knowledge transfer (Perez-Nordtvedt et al, 2008). They also play critical roles in knowledge sharing, since mergers and acquisitions provide excellent opportunities for both parent and subsidiary to renew their knowledge base and to add new knowledge to it (Johnston et al, 2007 &, Saka-Helmout et al, 2007, Yang et al, 2008). In such an effort, Subsidiaries can play a strategic role both in the creation and diffusion of strategically important knowledge.

In general, knowledge management practices can be affected by cultural differences since culture has the potential to impact on business activities. In order to understand this impact in depth discuss on national culture is given below.

4.2 .1 National Culture

Culture is defined as "the integrated pattern of behavior that includes thought, speech, action, and artifacts, and it depends on man's capacity for learning and transmitting knowledge to succeeding generations" (Adler, 1997). National culture, therefore, reflects national patterns in the core values and beliefs of individuals, which are formed during childhood and reinforced throughout life Shore & Vankatachalam (1996). Hofstede´s framework and his investigation on national culture is one of

most significant and recognized framework among researchers. In this study, the researcher adopt Hofstede's framework to explore national culture impact on knowledge sharing.

4.2.2 Hofstede's Idea of cultural dimensions

According to Hofstede, culture is "the collective programming of the mind that distinguishes the members of one group or category of people from another" (Hofstede 2001). Hofstede developed an empirically-based typology of cultural attributes by analyzing data obtained from surveys conducted among individuals in 53 nations in 1968 and 1972. Hofstede was able to hold constant the influence of industry and corporate culture as all 116,000 respondents were employees of the same firm, IBM. Based on the data obtained, he classified countries along four dimensions: power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity. Hofstede rated each of the 53 countries in his study by these cultural dimensions (Hofstede, 2001). The dimensionalities are, in fact, about values. They are cultural norms that have become embedded in society as well as each individual without conscious design. They have inherently been passed from one generation to another without discussion, thought, or action.

Multinational online retailer, Zappos, has also utilized Hofstede's work during the process of formulating an organizational strategy. Therefore, the detail of Hofstede's dimension helped scholars to use the idea for different purposes.

Hofstede's five dimensions include the following:

Power Distance: The power distance dimension has to do with inequality in a society. The extent to which the less powerful members of organizations accept that power is distributed unequally (Wei et al, 2008). In a high power distance environment there would be greater tolerance for, and expectation of, inequality in prestige, wealth and power. The basic idea about power distance involves how human inequality is handled by different societies. The list below show the key differences between low and high power distance societies (Hofstede, 1997).

Table 4.1 key differences between low and high power distance societies

Low power distance	High power distance
There should be and there is to some extent interdependence between less and more powerful people	Less powerful people should be dependent on the more powerful polarize people
Decentralization is popular	Centralization is popular
Subordinates expect to be consulted	Subordinated expect to be told what to do
The ideal boss is a resourceful democrat	The ideal boss is a benevolent autocrat or good father
Privileges and status symbols are frowned upon	Privileges and status symbols for managers are both expected and popular

Uncertainty Avoidance: The extent to which a culture programs makes its members to feel either uncomfortable or comfortable, in unstructured situations. Unstructured situations are novel, unknown, surprising, or different from usual (Wei et al, 2008). Hofstede focuses on uncertainty at the organizational level looking at the use of rules and strategies to reduce exposure to an unsure future. In high uncertainty avoidance cultures, users have a low tolerance of the unknown and risk. When high uncertainty avoidance users do not avoid ambiguous situations, they will seek easy rules, in order to decrease the ambiguity. Generally, high uncertainty avoidance users are expected to comply with their community beliefs more in adopting technology; the opposite is true for low uncertainty avoidance culture users (Li et al, 2009).The list below show the key differences between weak and strong uncertainty avoidance societies (Hofstede, 1997).

Table 4.2 key differences between weak and strong uncertainty avoidance societies

Weak uncertainty avoidance	Strong uncertainty avoidance
Low stress; subjective feeling of well-being	High stress, subjective feeling of anxiety
Aggression and emotions should not be shown	Aggression and emotions may at proper times and places be ventilated.
What is different, is curious	What is different, is dangerous
Teachers may say "I don't know"	Teachers supposed to have all the answers
There should not be more rules than is strictly necessary	Emotional need for rules, even if these will never work

Individualism and Collectivism: This refers to the degree to which individuals are supposed to look after themselves or remain integrated into groups and family (Wei et al, 2008). This dimension has to do with the relationship the individual has with the group and more generally with society. In high collectivist cultures, users have a tendency to focus more on the community to which they belong. They are more impacted by their peers and superiors, by satisfying their opinions; however, the opposite occurs in individualistic cultures.

The list below shows the key differences between collectivist and individualist societies (Hofstede, 1997).

Table 4.3 key differences between collectivist and individualist societies

Collectivist	Individualist
People are born into extended families or other in groups which continue to protect them in exchange for loyalty	Everyone grows up to look after him/herself and his/her immediate family only
Children learn to think in terms of "we"	Children learn to think in terms of "I"
Trespassing leads to shame and loss of face for self and group	Trespassing leads to guilt and loss of self-respect
Management is management of groups	Management is management of individuals
High-context communication	Low-context communication

Masculinity and Femininity: The degree to which tough values, such as assertiveness, performance, success, and competition (which are associated with the role of men), prevail over tender values, such as quality of life, maintaining warm personal relationships, service, care for the weak, and solidarity (which are associated with women's roles) (Wei et al, 2008). There seem to be two elements to this dimension. One deals with the values held and the other with role expectations. Hofstede (1980) notes that in a work setting, males' value "advancement, earnings, training, up-to-dateness" while females' value "friendly atmosphere, position security, physical conditions and manager cooperation". The second aspect of this dimension has to do with what people in a culture expect of sex roles. In a very masculine culture, sex roles would be differentiated while in a feminine culture sex roles would be more similar. The list below shows the key differences between feminine and masculine societies (Hofstede, 1997).

Table 4.4 key differences between feminine and masculine societies

Feminine	Masculine
People and warm relationships are important	Money and things are important
In the family, both fathers and mothers deal with facts and feelings	In the family, fathers deal with facts and mothers with feelings
Sympathy for the weak	Sympathy for the strong
Failing in school is a minor accident	Failing in school is a disaster
Stress on equality, solidarity and quality of work life	Stress on equity, competition among colleagues, and performance
Resolution of conflict by compromise and negotiation	Resolution of conflict by fighting them out

Long Term Orientation (LTO): Long-term time orientation, means focusing on the future. It implies a cultural trend towards delaying immediate gratification, by practicing persistence and thriftiness. In contrast, short-term time orientation, means focusing on the past and present, by respecting tradition and through a need to follow spending trends (Wei et al, 2008). It describes a longer term, higher level view of life. The list below shows the key differences between short term and long term societies Hofstede (2001).

Table 4.5 key differences between short term and long term societies

Short Term (STO)	Long term (LTO)
Emphasis on persistence	Emphasis on quick results
Relationships ordered by status	Status not a major issue in relationships
Face considerations common but seen as a weakness	Protection of one's face is important
Leisure time not too important	Leisure time important
Save, be thrifty	Spend
Invest in real estate	Invest in mutual funds
Relationships and market position important	Bottom line important
Good or evil depends on circumstances	Belief in absolutes about good and evil

As seen in many situations national cultural differences have significant impact on communications which in turn have significant effect on knowledge sharing practice. Smith (2001) states that the intention with knowledge sharing should be to enhance organizational knowledge and suggests that effective communication and networking channels are essential ingredients. Therefore the communication aspect is further discussed below.

4.2 .3 Cross-Cultural Communication

Inter-cultural communication often refers to people from different cultures and background communication to one another where as Gudykunst et al (1997) define it as "a transactional, symbolic process involving the attribution of meaning between people from different cultures.People live in their own private spaces that are based on their culture, experiences, and values, which could affect message interpretation (Deresky, 2003). So, individuals from different cultures have different behaviors and communication styles (Gudykunst and Ting- Toomey, 1998). But, knowledge transferring between individuals in organizations requires communication (Sveiby, 2000).Thus; knowledge sharing is a form of communication (Van den Hooff & de Ridder, 2004).

On the other hand, it is reasonable to distinguish communication climates as supportive and defensive (Larsen & Folgero, 1993). Supportive communication climate can be characterized by "open exchange of information, accessibility of coworkers, confirming and cooperative interactions

and an overall culture of sharing knowledge" (Van den Hooff& de Ridder, 2004). Supportive communication climate was found necessary for the generation, sharing and continual existence of organizational knowledge Ali et al (2002). Briefly, communication climate is a crucial variable in explaining knowledge sharing. Supportive communication has positive impact on knowledge donating and knowledge collecting. It's a central condition for successful knowledge sharing (Van den Hooff & de Ridder, 2004).

In general, organizations that are operating globally hire their employees from different cultures. Hence, they have to deal with issues arising from difference in cultures and languages. Ingram & Simons (2002) emphasize that international activities for communicating and transferring conceptual and operational knowledge, experiences, and skills in a company can accelerate the process of knowledge sharing.

Although national culture was considered crucial in virtual teams, the impact of national culture on knowledge sharing is often ignored in literature and not well articulated (Mohamad et al., 2011) But, Hofstede (1980) was the first to differentiate that people's behaviors and beliefs are purely dependent upon their national culture and suggest that national cultural dimensions should be understood.

Below briefly explained the dimensions specifically highlighting aspects that are relevant for the setting of Knowledge sharing.

4.2.4 Cultural Impacts on Knowledge Sharing

The researcher would like to look on the connection and influence of national culture on knowledge sharing. Before discussing the relationship between culture and knowledge sharing this review find definitions given for the concept knowledge sharing. Thus, Cummings (2004) described knowledge sharing as "the provision of receipt of task information, know-how, and feedback regarding a product or procedure". It is also defined as "the process of developing trans-specialist understanding through creation of overlapping knowledge fields" (Berggren et al. 2011). Knowledge sharing differs from knowledge transfers, which according to Berggren et al. (2011:24), is "unidirectional flow from unit A to unit B". From different studies, it is confirmed that willingness to converse and share knowledge is influenced by cultural dynamics from the external environment (national culture) and from the internal environment (organizational and professional culture).

Gurteen (1999) found four importance values of knowledge sharing:

1. Knowledge is an intangible product which includes ideas; processes and information .These intangible products are taking a growing share of global trade from the traditional, tangible goods of manufacturing economy.
2. Knowledge sharing is important for creating a new knowledge in order to achieve competitive advantage.
3. Knowledge sharing is important because of the increasing turnover of staff. People do not keep the same job for life any more. When someone leaves an organization their knowledge walks out of the door with them. Therefore, sharing has the power to carry on the knowledge.
4. Many organizations have problem of "we don‟ t know what we know". Expertise learnt and applied in one part of the organization is not leveraged in another.

In multinational companies, national cultures mold the degree of openness, capacity for collaboration and exchange of ideas (Siakas and Georgiadou, 2006). Therefore, the knowledge sharing behavior is studied by making use of Hofstede's dimensions. The detail is given as follows.

Hofstede's first dimension, "Power Distance", measures "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally" (Hofstede, 1997). In high "Power Distance" countries, the hierarchical system bases on inequality: subordinates are expected to fill exactly defined jobs and decision-making authority is highly centralized. The exclusive control of key corporate knowledge is often used to establish positions of power.

From literature lower power distance enhance knowledge sharing This finding is confirmed by many researches (Rohitratana, 1998; Dimmock, 1998; Thanasankit, T, 1999).When transferring knowledge between nations with a differing power distance dimension, knowledge rejection could emerge. Knowledge rejection reflects the tendency to selectively ignore information that might cause important structural as well as programmatic changes in the recipient organization, due to the fear of violating the rules of the hierarchy (Bhagat & Kedia, 1988).

The second dimension, "Individualism versus Collectivism", is defined as follows: "Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism as its opposite pertains to

societies in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty" (Hofstede, 1997). Considering that dialogue between individuals is often the basis for the generation of new ideas and knowledge, employee interaction should be facilitated by KMS in a way that relationships, contacts, and perspectives are jointly shared within communities of practice (O'Dell and Grayson, 1998). Both extremes of the dimension "Individualism versus Collectivism" appear challenging for the implementation of KMS. On the one hand, employees in individualistic societies do typically act according to their self-interest whereas KMS-facilitated collaboration is seen as less important. On the other hand, employees in collectivistic societies might prefer in-groups that closely resemble family relationships to communities of practice which are mainly task-oriented.

Many researchers have also stated that collectivist cultures, where members tend to have a strong sense of in-group members and distrust of out-group members, could be a barrier to knowledge sharing (Chow, 2000). However, it seems that, instead of being a barrier, the research indicates that the collectivist culture could facilitate knowledge sharing. Previous research also has documented that high collectivism combined with high power distance results in a very strong propensity to resist change (Kirkman and Shapiro, 1997) and, one may speculate, also a strong propensity to share knowledge.

Hofstede's third dimension contrasts "Masculinity versus Femininity": "Masculinity pertains to societies in which social gender roles are clearly distinct […], femininity pertains to societies where gender roles overlap" (Hofstede, 1997). In masculine societies, the importance of work in everybody's life is emphasized. Masculine managers are aggressive, assertive, and decisive, whereas feminine managers strive for consensus and often make intuitive decisions. Organizations in masculine societies are results driven and fights are believed to be the best way to resolve conflicts. On the contrary, organizations prefer compromise and negotiation for problem solving. A literature review gave no indication that this dimension has impact on the development and implementation of Knowledge Management Systems.

In masculine cultures, the willingness to transfer knowledge is more frequently equated with status, promotion and power than in feminine cultures as cited by (Pauleen, 2007). An intolerance for mistakes and need for help will discourage the transfer of knowledge throughout the organization.

Feminine cultures are more likely to view knowledge transfer as a people-to-people process and value cooperation through interpersonal relationships than masculine cultures, because masculine cultures have a greater tendency to lack personal ties.

Furthermore, as von Krogh et al, 2000 showed due to the competitiveness in masculine cultures, people feel less incentive to share knowledge. In feminine societies, taking care of others and helping them to learn is positively effecting knowledge creation, as female managers have a more cooperative working style (von Krogh et al, 2000).

The fourth dimension, "Uncertainty Avoidance", is "the extent to which the members of a culture feel threatened by uncertain or unknown situations" (Hofstede, 1997).

Hauke (2006) stated that low level of uncertainty avoidance is correlated with a lack of rules and regulations in a company. Hauke (2006) argues that when employees in an organisation are willing to take risk, they feel more accountable for their decisions, which results in better satisfaction of achieved success and a higher self-esteem. In consequence, (Hauke, 2006) mentions "they build informal networks, which enable knowledge sharing across people. On the other hand, A high level of uncertainty avoidance clearly prevents the knowledge sharing process in terms of creativity, pro-activity and attitudes towards innovation (Oltra, 2005).

Therefore, uncertainty avoiding cultures are expected to have more institutionalized rules for transferring knowledge compared to uncertainty embracing cultures because explicit rules have to be created to maintain security and predictability. An associated aspect is the tendency of organizations to focus on explicit instead of tacit knowledge in the knowledge transfer routines.

The fifth dimension is all about Long-term time orientation. Transferring knowledge requires effort and time for documenting expertise and for being involved in social interactions. According to

Pauleen (2007) organizations in long-term oriented cultures are expected to provide more time and meeting places for documenting expertise and being involved in social interactions than short-time oriented cultures since the advantages of knowledge management are acknowledged by their emphasis on thinking ahead. Long-term cultures are also more likely to recognize the future value of new knowledge, thereby assisting the absorption of knowledge.

Members of a long-term oriented culture would be more willing to participate actively in knowledge management processes, which do not usually generate immediate results (Ford and

Chan, 2003). Ojha (2005) also found a relationship between organizational tenure and knowledge sharing. A long organizational tenure had a negative effect on knowledge sharing.

The cultural orientation of a society reflects the complex interaction of values, attitudes and behaviors displayed by its members. They are all part of the cultural learning and give rise to misunderstandings and misinterpretation of intent. In line with this, Zakaria et al. (2004) assert that knowledge is filtered through cultural lenses, whether or not the participants are aware of such ‘‘cultural filters’’. Moreover, Usoro and Kuofie (2006) recommended that management should pay attention to the ‘‘cultural lens’’. This consideration should extend beyond the organizational level to the national level, especially for global teams incorporating a variety of cultural contexts. For example, team members from a culture that has long-term orientation may involve more in knowledge sharing, whereas team members with a culture of short-term orientation tend to be less interested. Members of a long-term culture would be more willing to participate actively in knowledge management processes, which do not usually generate immediate results (Ford and Chan, 2003).

Chow et al., (2000) in their study entitled “The Openness of knowledge sharing within organizations: a comparative study of US and PRC”, showed that members of more collectivist culture are expected to share their knowledge more fully. On the same study, it was observed that members of collectivist cultures would share knowledge more openly with in--group than out--group members.

According to Jawad & Hasan(2011), on their work “Knowledge Sharing in a cross-cultural team: The case of an IT-Based Services Company’’ categorize the impact of cultural dimensions on communication and the process of knowledge sharing, five key areas of cultural dimensions namely: “power distance”, “individualism vs. collectivism”, “uncertainty avoidance”, masculinity vs. femininity” and “long-term vs. short -term orientation”. The impact of the above-mentioned cultural dimension on the process of knowledge sharing and communication was studied through interviews & observation, and the results showed that all of the dimensions have a considerable impact on knowledge sharing, but with a different degree of intensity level. The results of the study also show that the impact of “power distance”, “individualism vs. collectivism” and “communication” have relatively a higher impact on the process of knowledge sharing as compared to the remaining dimensions.

Another similar study Ksenia (2013) explore national culture influence on knowledge transfer practices in MNC, the case study for thesis was an Old Mutual Group – savings, banking, insurance and asset management in MNC. The study findings indicate that national culture has influences on the efficiency of transfer process and also indicate how Old Mutual Group handle it and that activity are done for better practices of knowledge transfer.

In similar context, (Thongprasert et.al, 2008) tried to investigate how the differences in cultural values affect the way Thai students in both Thailand and Australia access and share knowledge in a virtual classroom. According to Hofstede, the national culture between Thais and Australians are different in the degree of power distance, uncertainty avoidance and individualism/collectivism. Thais are likely to have high power distance, high uncertainty avoidance and collectivism while Australians have low power distance, low uncertainty avoidance and individualism.

Other authors also tried to examine cultural and technology acceptance theories which showed importance of measuring national cultural value at an individual level, which they believe as more accurate than measuring at other levels, such as organizational or national. The paper tried to investigate the impact of national culture, by means of video conferencing, on knowledge sharing. (Ayman et al, 2011).

Another paper (Siakas et.al, 2010) explored the way in which EU projects appreciate diverse cultural (national, organizational, and professional) influences on knowledge sharing in project-based collaboration. A special knowledge sharing strategy is needed in order to incorporate culturally diverse values, and to overcome the technical difficulties of dispersion and limited access to informal communication.

On a different scenario, communication plays a vital role in the process of knowledge sharing, as this is the basic tool for dissemination. The more the members of cross-cultural teams communicate with each other, the better this is for the knowledge sharing. The findings of this research suggest that it is more beneficial for organizations to have a better understanding of the culture in which they operate in order to provide a better atmosphere to positively impact knowledge sharing. The research also showed that the cross culture team with individualism suffers more in terms of knowledge sharing as people communicate less with each other, whereas the teams having a collectivism approach communicate with each other more, making the process of information sharing easier and having a positive impact on the knowledge sharing process.

4.2.5 Combining communication, culture dimensions and Knowledge sharing

Communication is an important factor when knowledge sharing is concerned. As such, it is important to note that people having different national cultures tend to have issues while communicating with each other. Knowledge sharing processes require effective communication among team members to produce results. Ybema & Byun (2009) emphasize that culture difference influences communication between the peoples with different identity. In cross-culture teams, members could have communication issues because of their personal language skills and the national culture where they have learned language. (Deresky, 2003) stated, "Our entire repertory of communication behavior is dependent largely on the culture in which we are raised". Deresky (2003) cited culture difference as a major factor that could impact on communication.

Cultural dimensions mentioned by Hofstede (1980) that include: short-term vs. long-term orientation, individualism vs. collectivism, power distance, uncertainty avoidance, and masculinity vs. femininity are the concerns that may affect knowledge sharing. These factors of national culture are used to investigate knowledge sharing in cross-cultural team environments.

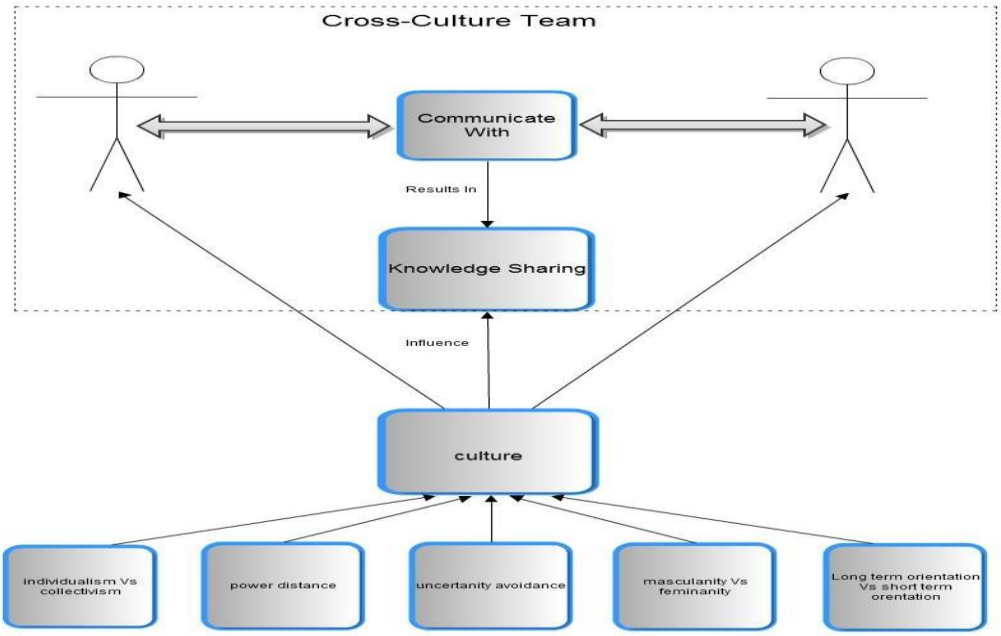

Figure 4.1: Combining communication, culture dimensions and knowledge sharing adopted from Jawad Ul Hasan, 2011.

Bhagat et al. (2002) theoretical model is based on Hofstede´s dimensions, specifically power distance and individualism/collectivism. As Well as, Lucas (2006) Uses Hofstede´s Cultural dimensions in his investigation about national culture influence on knowledge transfer: power distance, individualism--collectivism, masculinity-femininity, avoidance and short term-long-term orientation (Confucian dynamism).In today's world collaboration became a strategic alternative to the monolithic approach to business development and competition. In such an effort, information technology is creating the opportunity to collaborate. So, software tools for knowledge management are briefly reviewed as follows:

4.2.6 Software tools for knowledge sharing

According to Coakes (2006) trans-national organizations have specific issues relating to space and time, and increasingly relating to virtuality in their working practices. Technology in a trans-national will have the effect of mediating the distribution of economic activity and power between the various entities of the organization. Accordingly, many Multinational Companies (MNCs) have inevitably assembled and employed Global Virtual Teams (GVTs) to leverage their work performance. GVTs are considered as an innovative and flexible work structure to achieve competitiveness in the era of globalization.

The emergence of this structure is also due to the heavy reliance on computer-mediated communication technology and, as such, geographical boundaries and time zones are no longer considered as a hindrance to collaboration and communication.

The following are some of advantages that collaboration brings to multinational firms.

- Cost savings through the transfer of best practices;
- Better decision making as a result of advice obtained from colleagues in other subsidiaries;
- Increased revenue through the sharing of expertise and products among subsidiaries;
- Innovation through the combination and cross-pollination of ideas; and
- Enhanced capacity for collective action that involves dispersed units.

Taking the above facts, the amount of information and knowledge that needs to be captured stored and shared; the geographic distribution of sources and consumers; and the dynamic evolution of information make the use of tools not an option, but a necessity.

Fortunately, Software tools provide good support to knowledge management systems and, thus, a variety of knowledge management tools are available today. Due to the fact that the research address usage trends of collaboration tools in a multinational environment; collaboration tools are given special attention and discussed below:

4.2.7 Collaboration Tools

According to Schrage (1990), collaboration is defined as working together to accomplish a task and discussing with each other to solve difficult problems. Collaborative tools help group activities by providing ease of communication and coordination among members of the group. From knowledge management perspective, collaboration tools facilitate the knowledge sharing and retention. It can range from having a blog where people write down problems they have solved, up to specially designed applications with which project templates, problem/solution documents etc. may be shared through a highly indexed system. Explanation of different collaboration tools and their functionality for knowledge sharing is given below.

Table 4.6: Explanation of different collaboration tools for knowledge sharing

Knowledge sharing tool	Explanation
E-mail	Electronic mail: is the transmission of messages over communications networks.
Internet	Internet: is a worldwide system of computer networks.
Intranet	Intranet : a tool to facilitate communication between people or work groups to improve the data sharing capability and overall knowledge base of an organization's employees.
Microsoft LYNC	Microsoft LYNC : is a unified communications (UC) platform that integrates common channels of business communication including instant messaging (IM), VoIP (voice over IP),transfer, Web, voice mail and email.
Yammer	Yammer is an enterprise collaboration network for Employee. Share information across teams, sectors and service lines.

4.2.8 Preference for collaboration tools

Technology invested in a knowledge sharing can only prove successful if it is properly utilized by the staff. That is why it is important to understand the underlying factors that contribute to the degree to which a technology is used. Much literature surrounding customer attitude to adopt a particular technology has been derived from the Technology Acceptance Model (TAM). The TAM

assumes that people are likely to adopt a new technology to the extent that they believe it would help them to improve performance their work and the degree to which an individual believes that using a new technology would be free of cognitive effort ease of use (Zhang, et al, 2008).The development of TAM is examined by considering the relationship between two perceptual variables: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). PEOU refers to the degree to which an individual expects no physical and mental difficulties in adopting the technology at hand (Davis, 1989). On the hand, Perceived usefulness (PU) refers to the degree to which a person believes that using a particular system would enhance his or her job performance"(Davis, 1989).This indicates that the easier a technology is to use, the more useful an individual perceives it to be. However, the more time that a person has to use and familiarize him or herself with the technology the more likely it is that PEU will become less important in determining PU (Szajna, 1996).

Recent studies showed (Stella et.al, 2014) Perceived ease of use of collaborative tools positively influences the perceived usefulness of collaborative tools. Their observation in academic environment shown that Perceived ease of use & Perceived usefulness of collaborative tools positively influences students' intention to use collaborative tools in doing group's assignment.

PU and PEOU influence a person's intention to use the technology and the actual usage of the technology. Davis, F. (1989).

Davis (1989) empirically tested the model in IBM Canada's Toronto Development Laboratory and found that perceived usefulness (PU) and perceived ease of use (PEOU) had a statistically significant correlation with self-reported current usage (r=0.63 and r=0.45 respectively). Therefore, the model is used in this research to understand as to why users accepted new collaboration technologies such as the Internet, E-mail, etc.

4.2.9 Knowledge sharing and collaboration

Knowledge is an asset for an organization that is necessary for its survival and success (Drucker, 1992). Different disciplines describe knowledge in its own context, like knowledge in the context of information systems is different in terms than that of human resources. The most common notion of knowledge in the current KM literature is Tacit and Explicit Knowledge (Nonaka, 1994). Polanyi (1967) sees knowledge as a continuum, where he distinguishes it into two types: tacit and explicit knowledge. Tacit knowledge is knowledge that cannot be easily transferred to others, where explicit

knowledge is such a knowledge that can easily transfer to the others. Knowledge sharing is a spiraling process between explicit and tacit knowledge (Nonaka, 1994).

Collaboration tools assist the process of knowledge sharing, converting knowledge from its various modes. The phases in the knowledge sharing cycle are internalization, externalization and objectification. Accordingly, the knowledge conversions that take place in collaboration tools are mainly tacit-to-tacit, which occur, for example, when two or more users communicate using a chat tool or an instant messenger. One can also argue that since the conversation is in an electronic form, a form of tacit-to-explicit conversion also takes place. Some tools make an effort to capture this conversation so that it can be published and used for other users, and even analyzed in order to create new knowledge, which strengthens the argument for a tacit-to-explicit knowledge creation. Sharing knowledge has become a critical part of inter-enterprise collaboration.

The importance of knowledge sharing for collaborative work has already been established in past studies (e.g. Hendriks, 1999; Goodman & Darr, 1998). Storck (2000), for example, claims that sharing knowledge is important to building trust and improving the effectiveness of group work.

4.3 Researches into knowledge sharing and collaboration in multinational environment

From locally studied papers researcher had selected few papers based on their relatedness to this research work. Therefore, researcher reviewed knowledge management practice of commercial banks in Ethiopia, (Habte Reji, 2014). The study tried to analyzed data that have been gathered through both primary and secondary sources. From the findings and analysis of data collected from different banks the researcher concluded that the banks do not have any formal way of managing knowledge and the banks don’t have full-fledged computerized system for managing knowledge. In addition, Majority of the KM practices are not done in a centralized manner.

The other paper that the researcher picked as related literature is that of collaboration for knowledge sharing among A.A TVET colleges by (Biruk Fantaye, 2014). The paper tried to access and evaluates the existing knowledge sharing practice among TVET colleges in Addis Ababa, Ethiopia. In the research, perception, opinions and attitudes towards knowledge sharing is explored and special attention was given for knowledge sharing trust, individual's willingness, solving problems and administrative influence on knowledge sharing.

Another closer article reviewed was knowledge sharing among employees of Mesfin industrial engineering (Aareya G/Selassie, 2011) which is locally conducted knowledge management practice study. The study addressed knowledge sharing within an organization, knowledge sharing mechanisms among employees and factors affecting knowledge sharing by addressing impact of leadership, organizational culture, organizational structure, social structure and Information technology infrastructures.

But none of the above mentioned literatures address multinational firms with multinational culture and their knowledge sharing practice. Therefore, the researcher focus went out abroad.

Therefore, one of related article reviewed in line with this is that of "Influences of Culture on Inter-Unit Knowledge Transfer Processes within Multinational Corporations "(Lin, 2006).The paper explores the influence of culture on inter-unit knowledge flows in multinational corporations. Based on literature review; the knowledge transfer process is categorized by the extent of exact copying of knowledge and the utilization of information technology. Individualism/collectivism dimension is chosen as the cultural factor. In addition, characteristics of knowledge are also taken into consideration in the paper, which consist of applicability and transferability. It is found that culture and knowledge characteristics have significant influences on inter-unit knowledge transfer processes within multinational companies.

Several other studies on knowledge sharing in the corporate and business sector addressed various cultural aspects and issues related to the impact of interactions between groups and individuals in organizations (Lichtenstein and Brain, 2006; King et al., 2007; Issa and Hadad, 2008). For instance, the study of King et al., (2007), based in South Africa, found that cultural issues, such as language proficiency, age, work experience, gender bias, education and political power, have both a direct and indirect influence on the inclination of individuals to share knowledge in the organization.

One another study, regarding challenges in knowledge sharing was done recently by Sebastian (Lobner, 2013) in his thesis work,"Knowledge-Transfer within multi organizational networks chances and challenges" The paper addresses the cultural differences issue to accept and know each other's cultures will be a future task for global multinationals organizations. In the paper the writer clearly put it as correlated ties and syndromes, like "not invented-here" or "free rider" need to be considered in the early stages of cooperation and it can be overcome within the network, if the individual employee understands the need of knowledge sharing and transfer.

In order to address relationship between use of technology and knowledge sharing some literatures shown their justifications using technology acceptance model .The TAM suggests that the user's perception of the technology's ease of use impacts his/her attitude toward use of the technology and his/her perception of its usefulness. Perceived usefulness, in turn, impacts the attitude toward use. In line with this, numerous studies have replicated Davis's (1985) study providing significant empirical evidence for the model (Adams et al, 1992; Davis, 1989; Grover & Sengars, 1993; Massey et al. 1993). The model has been used in more than 100 studies to examine technology acceptance in a variety of settings (Chuttur, 2009).

Some previous research that discuss about the relationship between actual use of technology and group's performance is Majumdar & Krishna (2012) that stated about rapid growth of web 2.0 technology capabilities which positively impacted the interaction in a group. There was also a result from research by Elie-Dit-Cosaque & Pallud (2012) that showed the use of collaboration system positively impacted the performance of collaboration.

Accordingly, McDermott and O'Dell (2001), Bock and Kim (2002) identified a positive relationship between the level of information technology usage by the individual and his or her knowledge sharing behavior. Indeed, most of the research evidenced a positive relationship between the use of technology and knowledge sharing intentions. Similar studies by Lin and Lee (2006) also identified a positive relationship between use of technology and knowledge sharing.

As to knowledge sharing barriers, a wide variety of studies were cited in the literature (Riege, 2005; Sun & Scott, 2005). Barriers included: lack of time, fear of lost job security, lack of social network, education, fear of loss of ownership, among others. Barriers can generally be grouped into two major categories: cultural barriers and organizational barriers.

On another study done by Lam and Chua (2005) they studied the mismanagement of knowledge management and found the key factors to be technological ignorance, technical over-complexity, lack of technical infrastructure scalability (i.e., unable to support the required volume of users) and techno-bias (i.e., believing that technology solved all problems). On another study, (Abdullah, et al ,2006) extensively evaluated the role of knowledge-based systems in knowledge management and asserted that they had fallen out of favor due to organizational and managerial issues. However, they recommended that it was time to reevaluate the contribution of these systems to knowledge management.

Another research on similar subject is Knowledge sharing in a multicultural environment: challenges and opportunities (Luyanda Dube & Patrick Ngulube, 2012) the findings revealed that knowledge sharing in the department was limited due to a number of systemic reasons, such as the absence of a knowledge sharing policy, the unsatisfactory reward system used by the department, the spirit of the labour laws, a lack of trust and the underutilization of information and communication technologies.

Riege (2005) considered 36 knowledge sharing barriers based on an extensive literature review. He categorized these barriers into three dimensions: a) individual, b) organizational and c) technological. Reige's (2005) findings were reinforced by the extensive survey by Sveiby and Simons (2002) of 1,180 staff members in the Australian Transport Union (ATU). They determined that the ATU culture was not conducive to knowledge sharing for a variety of reasons, including: a) no support systems, b) lack of training, c) job security, d) employee competition, e) organizational culture and f) lack of recognition. Many of the barriers Reige (2005) described were exhibited in the results of the ATU survey with organizational culture scoring lowest. Some companies might be tempted to reward knowledge sharing behavior as a spur to successful collaboration and teaming. However, Albert and Picq (2004) asserted that most companies do not provide individual rewards based solely on the ability to learn or to share knowledge. Hutchings and Michailova (2006) recommended that the group, rather than the individual, be rewarded. On the other hand, organizational culture is the shared values, beliefs and practices of people in an organization. Beyond the mission statement and stated values of the organization lies a deeper level of culture. This was embedded in the way people acted, what they expected of each other and how they made sense of each other's actions (McDermott, & O'Dell, 2001). Culture is rooted in core values and assumptions and is taken for granted, and is therefore often hard to articulate. Essentially, some aspects of organizational culture are confusing or even invisible to organization members.

Sun and Scott (2005) categorized organizational culture-related barriers as follows: organizational relationships, organizational climate, organizational structuring and organizational imperative. Organizational culture influences knowledge-related behaviors in four ways: a) culture, particularly sub-cultures, heavily influences what is perceived as useful, important or valid knowledge in an organization; b) culture mediates -the relationship between levels of knowledge, i.e., it dictates what belongs to the organization and what knowledge remains in control of the individual employee,

determining who is expected to control specific knowledge as well as who must share it and who can hoard it; c) culture creates a subtext for social interaction in that it represents the rules and practices that determine the environment within which people communicate, i.e., the cultural ground rules; and d) culture shapes the creation and adoption of new knowledge (DeLong, & Fahey, 2004). Thus, organizational culture (and its related sub-cultures) affects the level of collaboration within an organization and it is collaboration that is the key to successful knowledge sharing.

Chapter Five

Findings and Discussions

5.1 Introduction

This thesis through theoretical and empirical survey records original goal of finding collaboration & Knowledge Sharing Practice for multicultural firms. The sub-level research questions all get fulfilling answers from integrating theoretical and empirical research result. The empirical survey conclusion can serve as a complement for the existing theory.

5.2 Demographic distributions of respondents

The demographic and background variables used in this study are nationality, gender, and age group. EY has been referred to as the "rainbow firm", a title which epitomizes the firm's racial, cultural, ethnic and national diversity. The 93 respondents were distributed in to thirteen countries and with regards to gender, 60 of them were males and 33 females. The age of the respondents varied in range from 23 to 50 years and above, which is interesting as employees are from different generations. The summary is presented in a table 4.1below.

Table 5.1 Demographic profile

Profile	Classification	Frequency	Percentage
Gender	Male	60	64.52%
	Female	33	35.48%
Age group	Less than 23	0	0%
	23-30 years	33	35.87%
	31-40 years	44	47.83%
	41-50 years	12	13.04%
	Above 50	3	3.26%
Nationality	Ethiopian	25	26.88%
	American	8	8.60%
	Kenyan	15	16.12%
	British	2	2.15%
	French	2	2.15%
	Nepalese	1	1.075%
	Indian	21	22.58%
	Italian	4	4.30%
	Pakistani	1	1.07%
	Spanish	2	2.15%
	Swedish	3	3.22%
	Ugandan	4	4.30%
	Zimbabwean	5	5.37%
Total		93	100%

5.3 National culture of Ernst & Young subsidiaries

The researcher gathered information about countries where Ernst and young has subsidiaries to observe the cultural distance i.e. difference in values and beliefs shared between global and subsidiary countries. Since the aim is to get a deeper understanding of cultural distance and its impact on knowledge sharing. The examinations of cultural dimensions of these thirteen countries are given as follows.

Table: 5.2 summaries of the cultural dimensions of countries

	Dimensions				
Country (Nationality)	**Power distance (PDI)**	**Individual (IDV)**	**Masculinity (MAS)**	**Uncertainty avoidance (UAI)**	**Long term orientation (LTO)**
Hofstead cultural dimensions	Hierarchy in workplace reflecting the existence of inequality between higher-ups and lower down.(social strata).Sub-ordinates expect to be told what to do, as communicatio n is through the chain of command when high in PD.	People act either as individuals or as members of a team. Performance is measured individually or collectively. There is team spirit at work, regarding achievement as either a co-operative performance or that of an individual when high in collectivism, the reverse i.e. individualistic when low.	Managers are decisive and assertive. There is autocratic management when high in masculinity, the reverse when low.	Clear written or unwritten rules on how people should behave imposed by tradition, when high in UA, the reverse when low.	Behaving in certain acceptable ways just to maintain the norm of an organization, fulfilling social obligation when high. Doing the reverse when low.
Ethiopia	High	Low	Medium	Medium	Low
USA	Low	High	High	Low	Low
Kenya	High	Medium	Medium	Medium	Low
UK	Low	High	High	Medium	Medium
France	High	High	Low	High	Medium
Nepal	High	Medium	Medium	Medium	Medium
India	High	Low	Medium	Low	Low
Italia	Medium	High	High	High	High
Pakistan	Medium	Medium	Medium	Medium	Medium
Spain	High	Medium	Low	High	Low
Sweden	Low	High	Low	Low	High
Uganda	High	Low	High	Medium	Low
Zimbabwe	High	High	High	High	Low

5.3.1 Power distance influence on knowledge sharing

Respondents were asked different questions so as to identify their country's cultural distance in terms of power distance. As shown in the table 4.2 the power distance (PDI) of Zimbabwe, Uganda, Spain, India, Nepal, France, Kenya and Ethiopia are high indicating a higher level of inequality of power and wealth in the mentioned countries. Moreover, in all mentioned countries' subordinates are unlikely to approach and contradict their supervisor in a direct way, while Sweden, UK, USA subordinates will do so more likely. Thus, they are low in power distance (PDI).

From the survey result it is also learned that most high power distance countries like, Zimbabwe, Kenyan, Indian and Ethiopian participants either strongly agreed or agreed to the statement "Managers seldom ask for the opinions of employees." On the other hand, Swedish and British participants either strongly disagree or disagree with the statement. So, the previous have a habit of consulting their manager much more often than the latter counterparts during the development of the project. In addition, high power distance countries respondents clearly indicated that their managers make most decisions without consulting subordinates which is a sign of low knowledge sharing.

On the other hand, team members of those identified in the table 4.1 as low power distance countries like Swedish and British are quite comfortable in discussing and sharing knowledge with their manager and also feel free to consult higher managers whenever needed. From different literatures it is known that lower power distance enhances knowledge sharing. This finding is confirmed by many researches (Rohitratana, 1998; Dimmock, 1998; Thanasankit, T, 1999; Hofstede, 2001).

5.3.2 Individualism/collectivism influence on knowledge sharing

Most respondents 56% of Ethiopia, 71% India and 100% Uganda either strongly agreed or agreed to the statement "Group welfare is more important than individual rewards." On the other hand, 75 % Zimbabweans and 100 % of French, British, Italian, America and Sweden respondents either strongly disagree or disagreed to the statement "Employees should pursue their goals after considering the welfare of the group." The rest of the countries remained neutral for both statements. This indicated that, the individualistic (IDV) scores are considerably higher in countries like USA, UK, France, Sweden, Zimbabwe and Italia than in, Ethiopia, Uganda and India, meaning that the previous are oriented towards individualism and the latter are oriented towards collectivism.

Ford and Chen (2003) argue that on the individualism / collectivism (IC) dimension, a high level of individualism is likely to negatively impact the knowledge sharing process. Bhagat, et al. (2002) also indicated similar conclusion that individualism/collectivism affects the way an individual thinks as well as the way an individual processes, interprets, and perhaps even share knowledge. In addition, Sarker, et al. (2005) argue that there is a positive causal link between the level of cultural collectivism of an individual, and the amount of knowledge transferred by that individual to his or her remote members.

5.3.3 Uncertainty avoidance influence on knowledge sharing

As to whether job requirements and instructions spelled out in detail contribute for employee's knowledge of what they are expected to do; 100% Zimbabwean, Spanish, Italian and 85.7 % either strongly agree or agree to the idea and 62.5 % of American respondents strongly disagree or disagree to the statement but all others remained neutral. Therefore, the scores in the UAI are higher in Italia, Spain and Zimbabwe and Indian than in USA ,UK, Nepal, Sweden, and India. But, in this case since EY as an organization followed codification as their underlying organizational knowledge management strategy, employees are used to have an environment in which they have less uncertain and ambiguous situation. Then, the organization has experience of cross-cultural teams working together so their rules are relatively mature, which makes the environment easy to work in and allows for fewer problems to be faced by the team members. Therefore, in context of this research, uncertainty seems to be having a limited influence on the knowledge sharing process.

5.3.4 LTO/STO Influence on knowledge sharing

In response to the perception "Employee relationship with the company is dependent upon employee's level of satisfaction in the company." 80.9 % of Indians, 92% Ethiopians, 100% of Americans, 80% of Kenyan, 60% Zimbabwean, 100% of Spanish participants either strongly agree or agreed to the statement as opposed to 100% Swedish and Italian either strongly disagree or disagreed to the statement and all others remained neutral. The result suggested that their relationship with the company is dependent upon the level of satisfaction and that has an impact on their behavior towards knowledge sharing.

The study also came up with interesting result for the 56% of Ethiopians, 62.5% of Americans, 61.9% of Indians, 86.6% of Kenyans 100% of Ugandans and Spanish and 80% Zimbabwean respondents which either strongly disagrees or disagrees to the statement "Staying with one

company is the best way to go on with your career. On the other hand 75% of Italians and 66.6 % of Swedish participants strongly agreed or agreed to the statement.

Therefore, from the above analysis Italia, Sweden have the higher LTO score than countries like Ethiopia, Kenya, USA, Spain, Uganda, India and Zimbabwe which ranked with a low LTO score. Hence, culture based differences between previous and later in the concept of time are expected.

Different Literature survey also confirmed that long-term orientation thinking affects employees' behavior, which facilitates them in developing strong social bonds and helps in the sharing of knowledge. Members of a long-term oriented culture would be more willing to participate actively in knowledge management processes, which do not usually generate immediate results (Ford and Chan, 2003).

5.3.5 Masculinity/Femininity Influence on knowledge sharing

According to the finding 100 % Swedish, French and Spanish, respondents strongly disagree or disagree to the statement "Meetings are usually run more effectively when they are chaired by a man." and 75% of Ugandans and 60% Zimbabweans agreed to the statement.

In response to the perception "Dominant values in society are material success and progress rather than caring for others and preservation." Survey result indicated that; 100% Italian 62.5 % Americans, 100% of British participants either strongly or agree to the statement and 100% of French and 66.6 % of Swedish strongly disagreed or disagreed to the statement. All others remained neutral.

No significant differences were indicated in the responses in terms of nationality as the alpha level was more than 0.05 ($x2=16.333$, $df =48$, $p=0.999$).

Therefore, the study result showed that Sweden, France and Spain are low in masculinity and Uganda, USA, UK & Zimbabwe are high in masculinity. Ethiopia, Kenya, India, Nepal and Pakistan are medium in masculinity. Siakas and Georgiadou (2006) conclude that a masculinity dimension presents little trust and knowledge is hoarded or hidden because of competition whereas femininity dimension perceives knowledge sharing as a basic value to all

The following figure show consolidated view of knowledge sharing comparison of different nationalities based on hofstead dimensions.

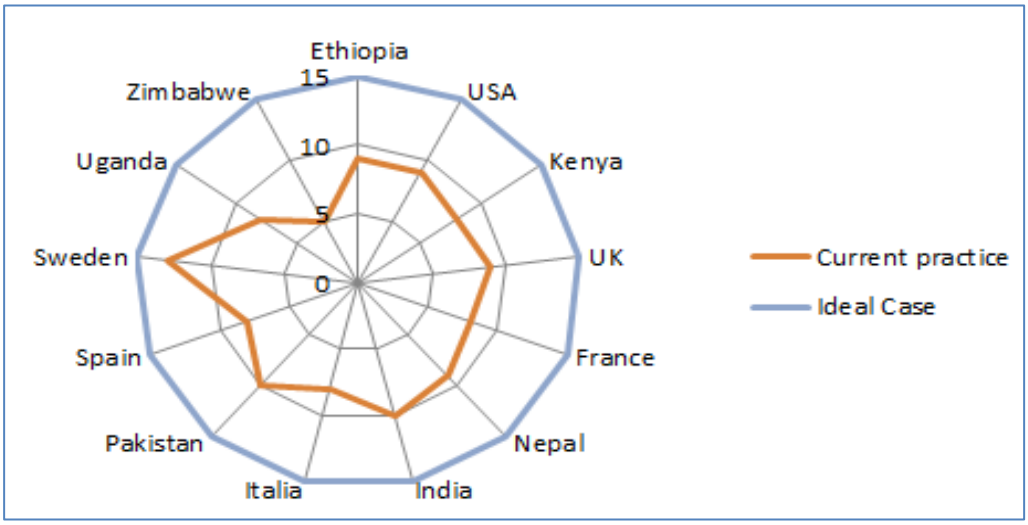

Figure 5.1 Knowledge sharing practice comparison of different national cultures.

From the figure 5.1 it is clearly shown that Sweden has an ideal knowledge sharing environment with respect to Hofstead cultural dimensions being low in masculinity, higher long term orientation and lower power distance. In contrast, Zimbabwe has the least conducive environment for knowledge sharing due to their orientation towards higher in masculinity, lower in long term orientation and higher power distance.

5.5 cultural difference influences on communication

Communication between staff members is critical in knowledge sharing given that knowledge is bound to people and social structures and expressed through language. As Ybema & Byun (2009) emphasized cultural difference influences communication between the peoples with different identity. Accordingly, Organizations use communication systems to link people together and make them work toward organizational goals. To this end, the questions about the frequency of rate of communication locally and abroad were structured with the response scale from 1 (no use) to 7 (daily use).

Respondents (93%) of EY people communicate 1-23 peoples in their day today work more locally than abroad (90%). This finding is in line with (Nonaka,1994) who noted that personal interaction and shared experiences are especially important for tacit knowledge sharing, as they enable people comprehend each other's' thinking processes.

From the result it is confirmed that knowledge sharing supportive communication climate was observed at EY which can be characterized by "open exchange of information, accessibility of coworkers, confirming and cooperative interactions.

Similarly, analysis was done for EY staffs reflection whether cultural differences do inhibit the way staffs communicate with their team members or not. In this regard, 47% of the respondents either agreed or strongly agreed that they believed that cultural differences do inhibit the way they communicate with the team members and 27% of them either disagreed or strongly disagreed for the same concept (19%) of the sample population expressed their neutrality on the idea. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=5.16$, $df=2$, $p=0.925$).

This result pointed out that it's not surprising that people from different cultural, linguistic backgrounds, behavior cultural differences and stereotype face communication barriers.

Furthermore, in firms like EY people from different nationalities do differed in their mother language. Therefore, research result revealed that almost 81% of the participants either agreed or strongly agreed that they can communicate effectively with team members in a standard language other than their national language while working in a cross-cultural team. A considerable percentage (11%) expressed neutrality on this topic. The other respondents 9% either disagreed or strongly disagreed. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=3.20$, $df =2$, $p=0.201$).

Combining this result with the other study outcome identified in this research i.e. second top individual barrier. But the research cannot confirm whether language is a barrier while communicating with team members working together at EY.On the other hand, regarding staffs perception for the idea weather communication increases chances of working together in cross-cultural team or not. Staffs individual perceptions were analyzed and the result indicated that (86%) agreed or strongly agreed with the statement and (4%) disagreed or strongly disagreed, while (4%) remained neutral. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=1.093$, $df =2$, $p=0.578$).Similarly, the study response confirmed that people's position (hierarchy) and seniority influences communication.63 % either agreed or strongly agreed with the concept and 17% remained neutral but 19% either disagreed or strongly disagreed. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=1.373$, $df =2$, $p=0.503$).

Therefore, in flatter organizations, where superiors and employees are almost considered equally, the flow of knowledge and information will be smoother and stimulates the communication process Finally, in order to observe the relationship between communication and knowledge sharing the survey results were compiled and the majority of respondents, 82%, either agreed or strongly agreed to the statement "communication increase knowledge sharing" but only 9% of the respondents disagreed or strongly disagreed and 10% were neutral with the statement. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=1.980$, $df =2$, $p=0.628$).

The study also found out that around 90% of the respondents believed that smooth communication is necessary to avoid conflict/confusion while working in a cross-cultural team and only 2% either disagree or strongly disagree. The rest remained neutral. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=0.309$, $df =2$, $p=0.143$).Similar research result was noted by Riege (2005) i.e. the ability of individuals to share their knowledge depends heavily on their communication skills. For effective knowledge sharing, effective verbal and written communications are necessary.

From the above result, it is observed that smooth communication is a key for cross-cultural team because a large class of knowledge is tacit and is hard to formalize, express, classify, and transfer, i.e. to solve a problem, workers need to discuss, clarify, and verify the information encompassed in the problem to be solved. Therefore, if EY managers and knowledge fail to understand communication practice of countries they may face range of communication problem from slowness of knowledge flow to decrease the quality of knowledge that was communicated between different sites.

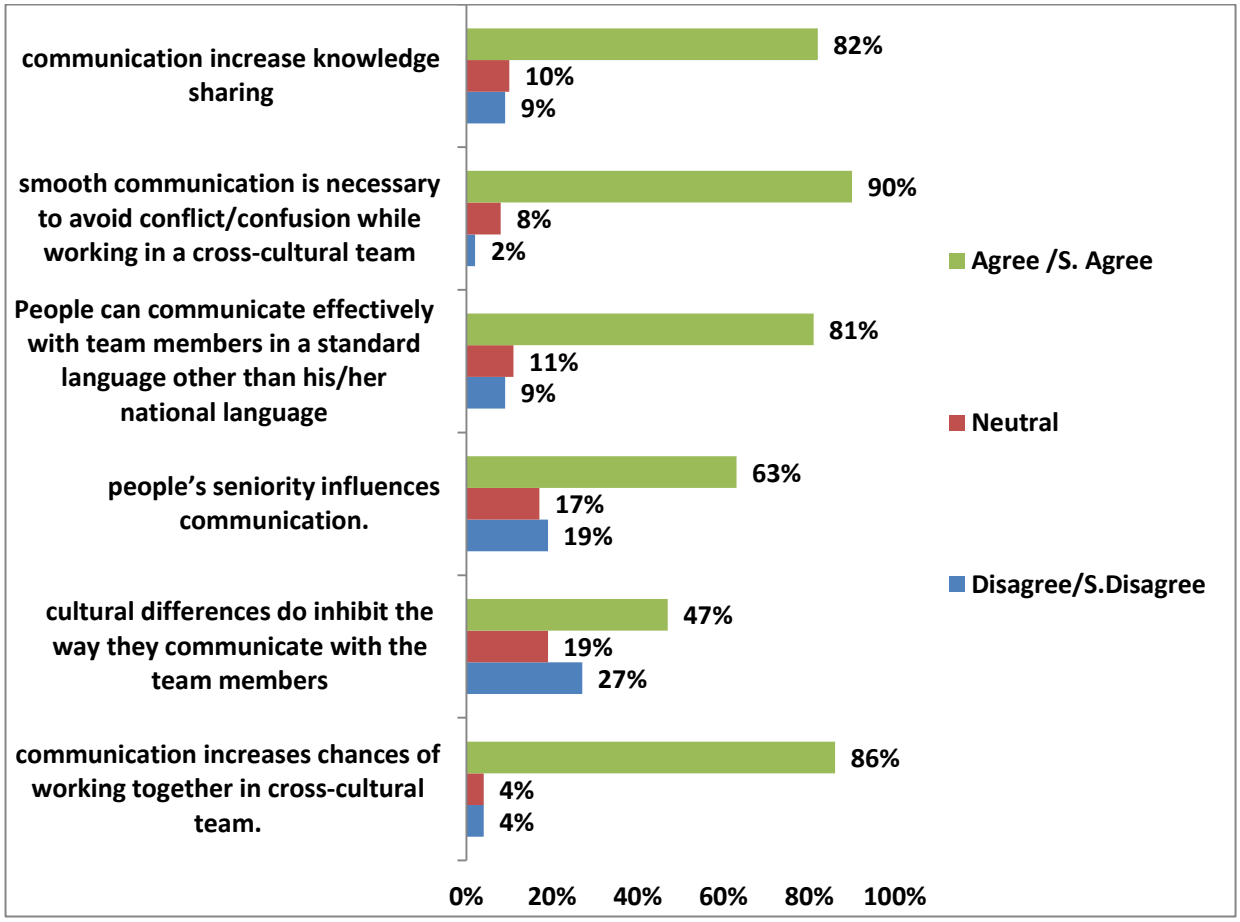

Figure 5.2 Consolidated views of intercultural communication & knowledge sharing

5.6 Collaboration tools preference and usage

Collaboration and communication become problems when people work in an environment that is distributed in time and space like EY. So, modern collaboration tools can really improve collaboration level of staffs by making communication faster and safer. Especially, for long-distance cooperation, collaboration tools can fix the different time zone issue, keep communication continue. The following table

Table 5.3 depicts the descriptive profile of the research variables. The mean score of the collaboration tool usage behavior variable is above the mid-value and this implies that the employee's daily usage of all listed collaborative tools except Yammer is good. Yammer scored the lowest mean value, hence indicating it is least preferred and used among the collaborative tools

Table: 5.3 Descriptive Statistics for the preference of collaboration tools.

Statement	Mean	Median	Std. Error of Mean	Std. Deviation
E-mail	6.96=Daily	7=Daily	0.0322	0.311
Internet	6.96=Daily	7=Daily	0.0322	0.311
Intranet	6.54=Daily	7=Daily	0.0898	0.866
Microsoft LYNC	6.69=Daily	7=Daily	0.1023	0.986
Yammer	3.94=Daily	5=Daily	0.203	1.958

EY staffs were asked to rate their preferred collaboration tools for knowledge sharing to help set a suitable strategy or system that would enhance the knowledge sharing in all subsidiaries of EY. The survey result is summarized and given below.

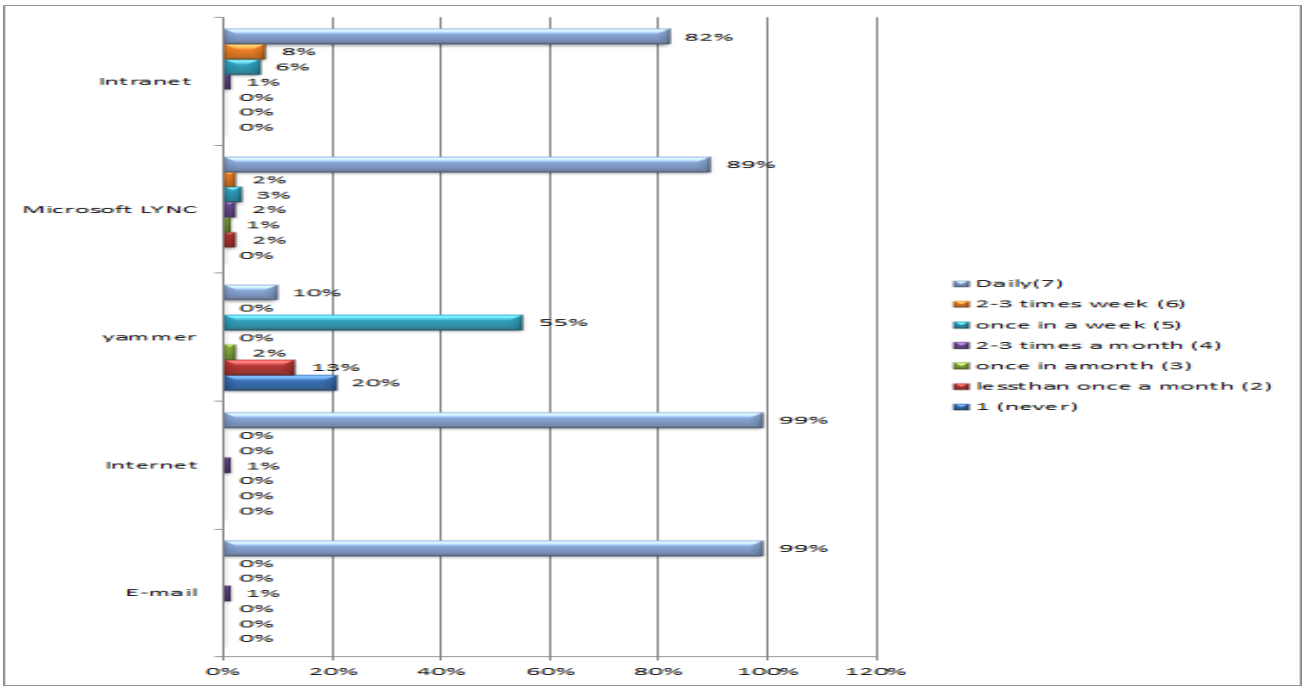

Figure 5.3 Index of using collaboration tool

From the above figure 5.3, it is clearly shown that collaboration tools such as email, internet, and Microsoft LYNC are the most preferred tools, next highest tool is intranet. The least daily used collaboration tool is yammer only 10 % of respondents used this tool.

From the figure 5.3, one can see that at least yammer is not popular in EY's daily work now .But observations done at the IT department revealed that the tool is introduced recently. But, it is hard to say yammar is not effective at this stage. The research result clearly shown that, no special tool can be seen as the most effective one, all of the tools can be chosen depending on situations.

In order to describe an individual's collaboration tool preference the researcher used technology acceptance model (TAM).i.e. the intention to use the technology and the actual usage of the technology is studied based on perceived usefulness (PU) and Perceived ease of use (PEOU).

According to Holmes et al. (2005), the relationship between PEOU and PU is considered high. Therefore, this study examined these factors as follows.

5.6 .1 Perceived usefulness (PU) of collaboration tools

In order to explore perceived usefulness of collaboration tools at EY almost 90.3 % of the participants either agreed or strongly agreed to the statement "Usage of collaboration tools to share knowledge improves the quality of work one can do." A small percentage around (9%) expressed neutrality on this topic. None of participants either disagreed or strongly disagreed to the statement.

As far as the usage of collaboration tools to share knowledge concerned, 83.8% of respondents perceived to be advantageous in their job and a substantial amount of the respondents 87% indicated that usage of collaboration tools to share knowledge will make their job easier. Around 73% respondents found using collaboration communication tools personally satisfying and feel proud of using them. With regard to usage of collaboration tools to sharing knowledge, 87% of the respondents stated that it enables them to accomplish tasks more quickly. Therefore, from the above analysis most of EY staffs in many countries perceived collaboration tools usefulness very helpful to their job performance. The following table shows Perceived usefulness result.

Table 5.4 Perceived usefulness (PU) of collaboration tools.

Statement	Very low / strongly disagree	low/ disagree	Medium /Neutral	High /Agree	Very High /Strongly Agree
Usage of collaboration tools to share knowledge improves the quality of work one can do.	0(0%)	0(0%)	9(9.7%)	49(52.7)	35(37.6%)
Using the collaboration tools to share knowledge is advantageous in one's job.	4(4.3%)	0(0)	11(11.8%)	51(54.8%)	27(29%)
Usage of collaboration tools to share knowledge will make easier one's job.	0(0%)	0(0%)	12(12.9%)	45(48.3%)	36(38.7%)
Using of collaboration tools personally satisfying.	4(4.3%)	2(2.1%)	19(20.4%)	41(44%)	27(29%)
Usage of collaboration tools to sharing knowledge enables to accomplish tasks more quickly.	0(0%)	0(0%)	12(12.9%)	43(46.2%)	38(40.8%)

5.6 .2 Perceived Ease of Use (PEOU)

To examine the effort required to use and learn the collaboration tools the researcher forwarded a couple of questions and respondents replay was summarized as follows.

Almost 82.7% of respondents either strongly agree or agreed to the statement "staffs interaction with the collaboration tools is clear and understandable". 15% of the respondents showed their neutrality to the statement. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=1.382$, $df=2$, $p=0.501$).

As far as the easiness of using the collaboration tools concerned, 80.6% of respondents perceived that they can do what they want to do with the tools and 3.2 % of respondents either strongly disagree or disagree to the statement; all remained remain neutral. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 (x2=0.699, df=2, p=0.705).

In line with this 64.4% respondents perceive learning to operate the collaboration tool is easy for them and 3.2% of respondents shown their disagreement. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 (x2= 8.624, df =2, p=0.986).

Table 5.5 Perceived ease of use

Statement	Very low / Strongly disagree	low/ disagree	Medium/ Neutral	High/Agree	Very High /Strongly Agree
Interaction with the collaboration tools is clear and understandable.	0(0%)	2(2.1%)	14(15%)	38(40.8%)	39(41.9%)
It is easy to get to use the collaboration tools to do what one wants to do.	1(1.1%)	2(2.1%)	16(17.2 %)	35(37.6%)	40(43%)
Learning to operate the communication/collaboration tool is easy.	0(0%)	3(3.2%)	30(32%)	31(33.3%)	29(31.1%)

The analysis result revealed that most respondents agreed that use and learning of collaboration tools is not requiring much effort which resulted in frequent use of collaboration tools. Therefore, PU and PEOU influence a person's intention to use the technology and the actual usage of the technology (Png, et. al., 2001).

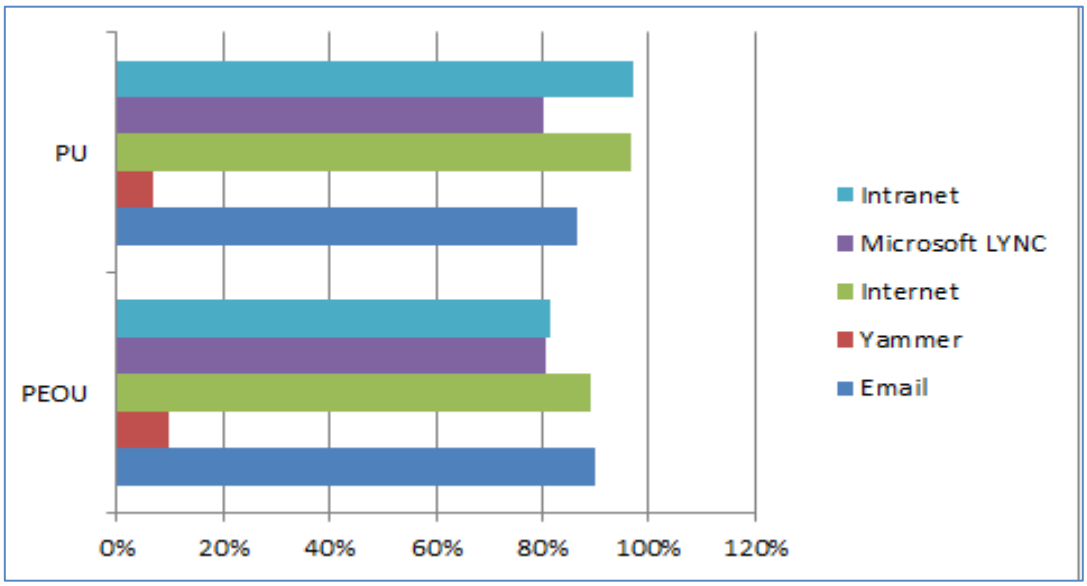

Figure 5.4 Consolidated view of employee's preference of collaboration tools based on PU & PEOU

Similar observation was done in this case study. So, due to perceived usefulness (PU) and Perceived ease of use (PEOU) email, internet, and Microsoft LYNC are the most preferred tools for knowledge sharing by EY employees.

Therefore, the similar observation was done in this case study. So, due to perceived usefulness (PU) and Perceived ease of use (PEOU) email, internet, and Microsoft LYNC are the most preferred tools for knowledge sharing by EY employees. From the above figure it is shown that Yammer has low actual usage at EY due to low PEOU & PU.

This study also tried to explore the geographical distribution of usage of collaboration tools. Therefore, the figure presents many tools types which are used daily by different nationalities. Below respondents preference for each collaboration tools is given as follows.

5.6.3 E-mail Communications

The study of respondents' replies disclosed that 98% of them preferred e-mail-communication.71% rated it as the most preferred method of communication for knowledge sharing while only 2% of the respondents rated e-mail communication as the least preferred method and they used email once in a week. Thus, Email has been identified as the "killer app" for EY users for interaction and collaboration. It is thus preferred and integrated into the user's workflow due to its relatively high

PEOU & PU. In this regard, all countries showed similar result but the Ethiopian case is a bit lower than the rest of nationalities under investigation and further analysis was done whether this observation was based on either PEOU or PU or combination. Therefore, from the analysis it is observed that the research result is not related either to perceived ease of use or perceived usefulness of e- mail as a collaboration tool rather the email can only be accessible with in the intranet only. The figure below shows the daily usage of e-mail for different nationalities.

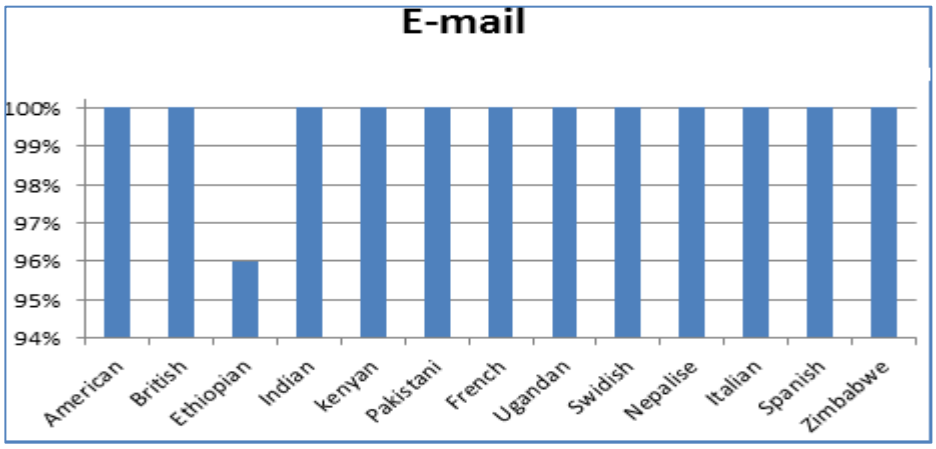

Figure 5.5 E-mail usages for different nationalities on daily basis.

5.6 .4 Internet

The survey result revealed how much of EY staffs used internet on daily basis. Significant number of respondents 99% rated it as the most preferred method of communication for knowledge sharing while only 1% of the respondents rated internet as the least preferred method. The study result clearly shown that internet has excellent PEOU & PU. Relatively, Ethiopians rate of utilization of Internet on daily basis is at lower rate than other nationalities under the study. Like the e-mail case this has nothing to do with PEOU & PU of collaboration tool but requires further investigation. The preference of internet as a collaboration tool for different nationalities on daily basis is shown below.

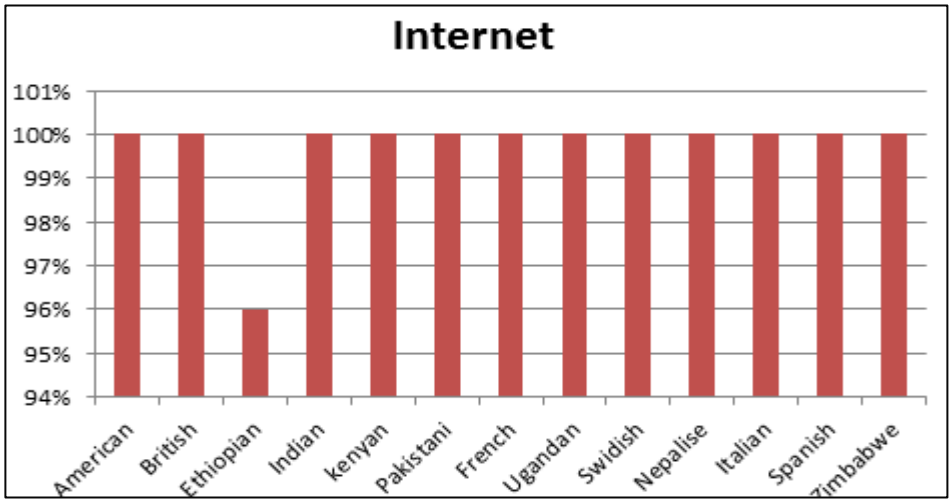

Figure 5.6 Internet usages for different nationalities on daily basis.

5.6 .5 Yammer

For staffs preference for a fully mobile collaborative tool which one can access the combined brainpower of EY colleagues to share information and work collaboratively 10% respondents preferred to use yammer for knowledge sharing on daily basis while only 20% of the respondents rated yammer as the least preferred .As it is seen on the Figure 5.7 the low rate of utilization of yammer is due to low PEOU & PU of the tool. The low rate of usage is also justified due to its recent introduction of the tool to the staff. Relatively, Americans, British, Pakistani, French and Swedish nationalities show better rate of utilization as compare to Ethiopians, Indians, Kenyans, Ugandans, Nepalese, Italians, Spanish and Zimbabwe nationalities.

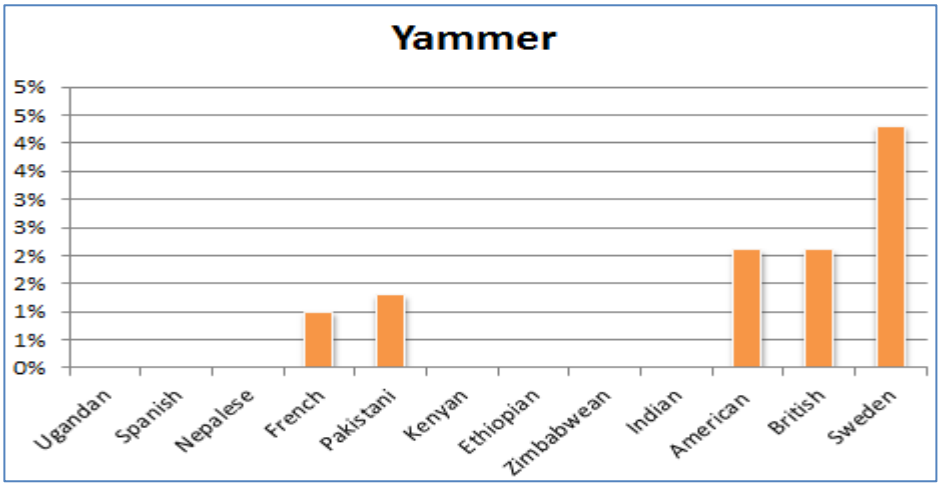

Figure 5.7 Yammer usages for different nationalities on daily basis.

5.6 .7 Microsoft LYNC

Survey result for employees preference for the enterprise platform including online meetings, instant messaging, audio and video calls, and sharing capabilities indicated that 89% respondents preferred to use Microsoft Lync for knowledge sharing on daily basis but none of the respondents rated Microsoft LYNC as the least preferred method. These studies also show that the tool has high PEOU & PU as shown in the Figure 5.8.

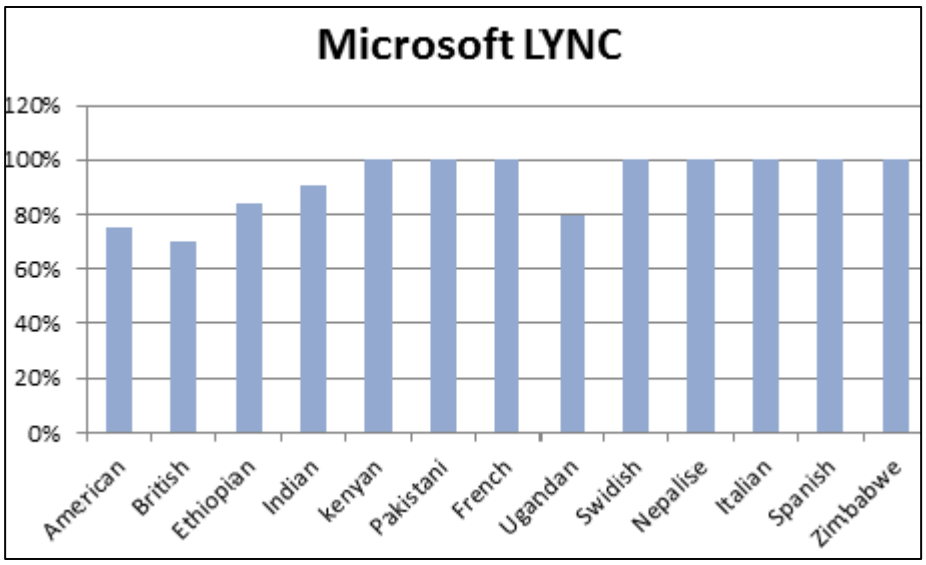

Figure 5.8 Microsoft LYNC usages for different nationalities on daily basis.

5.6 .12 Intranet

In the study, researcher found that only 82% of EY employees actively looked at their intranets at least once in a day and another 6% at least weekly. None of employees either never looked at their company intranet or accessed it less than monthly. From the study it is learned that PEOU & PU of the tool play a great role to use the tool for knowledge sharing on daily basis. (Lehmuskallio,2006) who carried out a similar survey within multinational companies in Finland, found that estimated two thirds of the employees used the company intranet at least daily and the rest of them at least weekly.

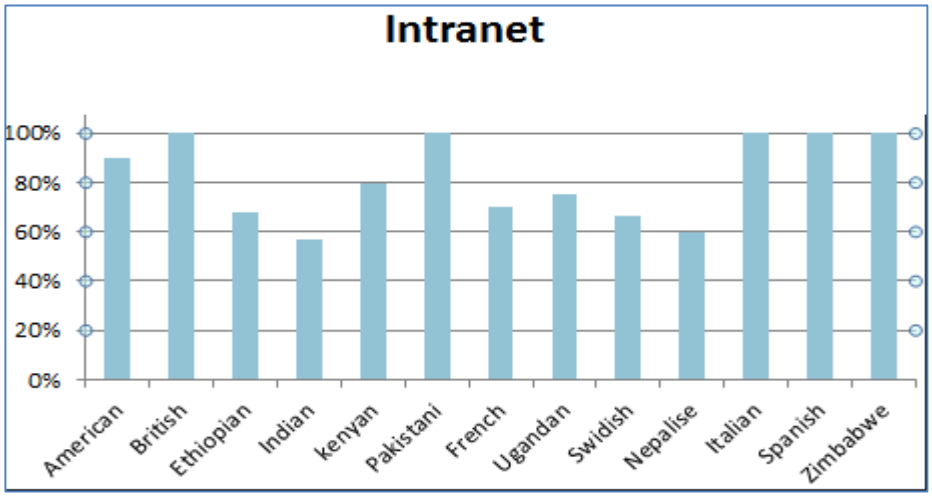

Figure 5.9 Intranet usages for different nationalities on daily basis

Relatively Ethiopians and Indians use the intranet at lower rate than the rest of nationalities under investigation. Generally, past evidence suggested that effectively utilization of collaborative tools is a universal technology practice that fosters knowledge sharing. We caution, however, that just because a collaborative tool is installed, it does not necessarily mean that extensive knowledge sharing will result. Tools can be misused, under used, or used in organizational silos so that broad knowledge sharing will not occur.

5.7 Knowledge sharing barriers

5.7.1 Knowledge sharing in multicultural firms (Cultural factors)

Age, education, ethnicity, and gender within EY were examined to determine if these factors affected the sharing of knowledge. Therefore, the study uncovered that there is no definite relationship between age and knowledge sharing and ethnicity and knowledge sharing. The participants felt that there was no a divide between older and younger workers, with the younger workers less willing to share with older workers or vice versa. Similarly the result pointed out that more than 50 % of respondents perceived ethnicity difference do not affect knowledge sharing.

However, one quarter of the respondents believed that Ethnicity affects knowledge sharing at EY offices. Therefore, ethnicity seems not a factor in knowledge sharing at EY but to conclude further research is required. The research also demonstrated that education difference did not somewhat impact knowledge sharing. On the other hand, significant number of survey respondents 47% either strongly disagree or disagree to the idea that gender difference affect knowledge sharing and equal

number of respondents of male and female 5% believed that gender difference affects knowledge sharing. The chi-square test showed that there was a statistically significant difference between gender type and effect of gender difference towards knowledge sharing. (X2=6.360, df=2, p=0.041).

The result clearly depicted that EY Diversity & inclusiveness effort work effectively by closing the gender gap. The findings from the survey were summarized in the Tables 5.6 below.

Table 5.6 Descriptive Statistics for Knowledge sharing cultural factors

Statement	**Very low / Strongly disagree**	**Low/ Disagree**	**Medium /Neutral**	**High/ Agree**	**Very High /Strongly Agree**
Ethnicity affects knowledge sharing	32 (34%)	16(17%)	20(21%)	19(20%)	6(6%)
Nationality difference affects knowledge sharing.	10(23%)	21(23%)	19(20%)	36(39%)	7(8%)
Gender difference affects knowledge sharing.	26(28%)	18(19%)	34(36%)	10(11%)	5(5%)
Age difference affects knowledge sharing.	12(13%)	22(24%)	33(35%)	18(19%)	8(9%)
Education difference affects knowledge sharing.	24(26%)	13(14%)	23(25%)	23(25%)	10(11%)

5.7.2 Knowledge sharing barriers in multicultural firms (organizational factors)

There are a variety of organizational factors that either support or impede effective knowledge sharing within an organization. These include: a) job security b) office politics, c) organizational management issues.

Survey respondents gave a clue as to whether an organizational factor like job security has an impact for knowledge sharing. Thus, 57% of the participants indicated either by agreeing or strongly agreeing to the statement “job security affects the knowledge sharing behavior of employees” and 15% either strongly disagree or disagree all the others remained neutral.

No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 (x2=0.394, df =2, p=0.179).

As to the office politics, 75% of the participants either strongly agreed or agreed to the statement "office politics affects the knowledge sharing behavior of employees. " and 15 % of respondents either strongly disagree or disagree to the statement but all remained keep their neutrality. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 (x2=0.436, df =2, p=0.196).Such factor could have a corrosive effect, particularly if management spearheaded the political problem or overlooked it.

Similar result also revealed for relationship between management issues and knowledge sharing, i.e., 65% of the participants stressed that management issues affects the knowledge sharing behavior of employees which shows that many of those in charge of management positions did not effectively promote knowledge sharing and also 6% of respondents showed their disagreement to the issue .No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 (x2=0.371, df =2, p=0.169).

A variety of factors affected the willingness to share knowledge in the sample population. Workers first needed to feel secure in their jobs. They needed to know that the act of sharing knowledge with their co-workers would not diminish their job in any way. Perhaps, more importantly, office politics had the potential to become a barrier for effective collaboration and knowledge sharing, diminishing any eagerness toward knowledge sharing. Due to this fear, respondents tied in lack of openness and willingness to share information as well as lack of trust, as a result of employee insecurity of potential job loss.

Moreover, as shown on the Table 5.6 the nationality difference affects knowledge sharing which received the highest score of all the cultural factors among ethnicity, education, age, and gender.

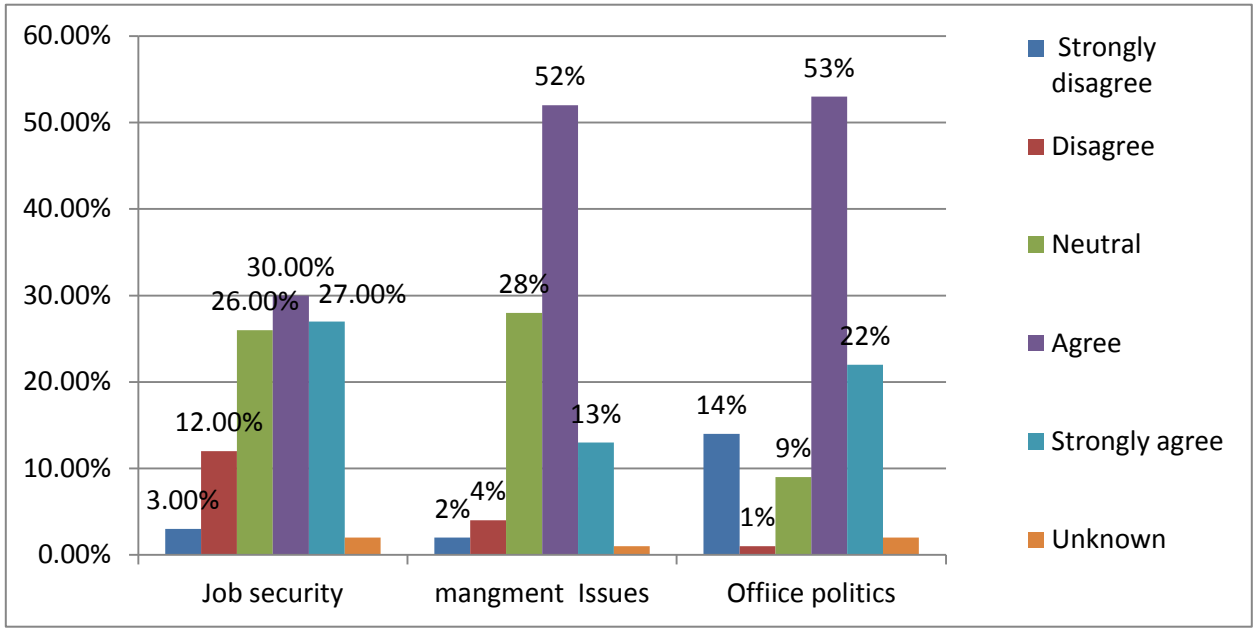

Figure 5.10 Consolidated views of responses for organizational barriers.

4.7.3 Knowledge sharing barriers in multicultural firms (technological factors)

As shown in Figure 5.11, 86% of respondents either strongly agree or agreed that lack of It support hinder knowledge sharing and 3% of respondents did not perceive lack of IT support as such as barrier while 11% keep their neutrality for the barrier. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=0.950$, $df=2$, $p=0.378$).

Thus, IT support was seen as critical to effective knowledge sharing. So, IT help is required to solve a mismatch between the technology and the needs or requirements of staffs; unrealistic expectations of the technology; lack of technical support for immediate maintenance; a lack of training to ensure familiarity with a new collaboration tools.

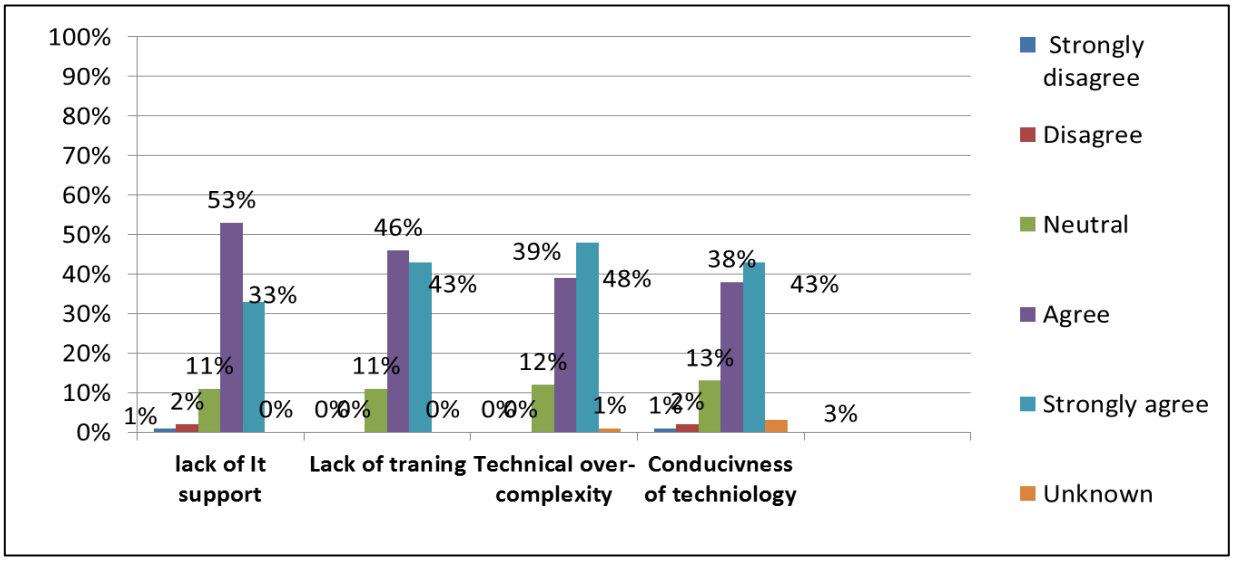

Figure 5.11 Consolidated views of responses for individual barriers.

In line with this, the vast majority of the respondents as seen in Figure 5.11, 89%, strongly agreed or agreed on the statement "Lack of training in use of the collaboration tools affects the knowledge sharing behavior of employees." none has disagreed but only 11% of the sample respondents remained neutral for the statement. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=1.324$, df =2, $p=0.750$).

Moreover, EY staffs also showed a strong positive attitude towards the idea that "Technical over-complexity affects the knowledge sharing behavior of employees ". Majority of respondents, 87%, agreed or strongly agreed .But, none disagreed or strongly disagreed and 12% were neutral.

No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 ($x2=0.109$, df =1, $p=0.258$).The result indicated that tools shall be simple to use by all.

5.7.4 Knowledge sharing barriers in multicultural firms (Individual Barriers)

In an attempt to explore the main challenges for the knowledge sharing in EY, survey respondents were asked to identify important barriers/challenges at individual level. Multiple answer questions that each respondent could choose more than one answer were provided to explore barriers for knowledge sharing at individual level. The most important challenges mentioned by the staffs were summarized in the table below.

Table 5.7 Frequencies and Percentages of Perceived Barriers to knowledge sharing Sorted by Highest Frequency (N=93).	Responses	Percentage
Lack of time	48	18.97%
Language difference	39	15.41%
A belief that my knowledge is limited as compared with other members of the team	31	12.25%
Focus on your own country	29	11.46%
Lack of resources	23	9.09%
Fear and Uncertainty	21	8.30%
Lack of perceived benefits	19	7.50%
Preference for face-to-face communication	17	6.71%
Competition	11	4.34%
Lack of monetary benefits for myself	11	4.34%
Mistrust	4	1.58%

From Table 5.7, the lacks of time and language difference were identified as the most significant barrier. Other major barriers identified were language difference and a belief that one's knowledge is limited as compared with other members of the team. More than 50% of the participants indicated that they simply did not have sufficient time to share knowledge; they were too busy getting their base-level work completed. From the survey, it is learned that they felt that it was difficult to find the information they needed so that they could effectively collaborate and share knowledge.

On the other hand, the view of knowledge mistrust and lack of monetary benefits received the lowest ratings, followed by competition, preference for face-to-face communication, and lack of

perceived benefits. In general, given the diversity of the modern organization, one of the most important factors that seemed to affect willingness to share knowledge was the level of comfort in dealing with others. If there were a language or cultural barrier, that level of comfort did not effectively exist, thereby, diminishing the level of effective knowledge sharing.

Similar conclusion were done by Hew and Hara's (2007) qualitative study of three online professional communities examining the perceived costs that might inhibit knowledge sharing found lack of time one of the most frequently cited reasons for not sharing knowledge.

Though Lack of monetary benefits ranked almost last but this case study confirmed as one of the recognized barriers for effective knowledge sharing. This contradicts Bock and Kim (2002) who found no relationship between the use of rewards and knowledge sharing.

Some of the findings (perception of not being adequately recognized and rewarded for a knowledge sharing action) confirmed that the same result was identified by Bartol and Srivastava (2002).

Chapter Six

Conclusions and Recommendations

6.1 Conclusions

This section concludes the findings of this research and answers the research questions established at the beginning of this research document. This research showed the significance of understanding the knowledge sharing & collaboration in multicultural teams. The study was conducted based on the impact of cultural dimensions on communication and the process of knowledge sharing. In order to give the cross-cultural teams a better opportunity to communicate effectively and contribute positively in the process of knowledge sharing it is vital for firms to have a clear understanding & management of Geert Hofstede (2001) dimension. There is a high positive relationship between societal culture dimensions and knowledge sharing. Abel (2006).Similar conclusion was done by (Xi Zhang, 2011) i.e. national culture significantly influence on participants' attitude to sharing knowledge in IT-enabled virtual teams. Accordingly, it is concluded by this study that high collectivism, low power distance and low masculinity, low uncertainty and high long term oriented cultures are favorable for knowledge sharing.

The more the members of cross-cultural teams communicate with each other, the better this is for the knowledge sharing & collaboration. Therefore, knowledge sharing supportive communication climate was observed at EY.

In relation to how staffs share knowledge across race, age, gender and nationality within EY, the result concluded that nationality difference affects knowledge sharing which received the highest score of all the cultural factors among ethnicity, education, age, and gender. The study also uncovered that there is no definite relationship between age and knowledge sharing and ethnicity and knowledge sharing. There was no divide between older and younger workers, with the younger workers less willing to share with older workers or vice versa. Similarly, at EY education difference among staff did not somewhat impact knowledge sharing.

Furthermore, one of the research objectives was to examine employee preference of collaboration tools for knowledge sharing & collaboration purpose. Then, the study result concluded that PU and PEOU influence an employees' intention to use the technology and the actual usage of the technology.

The extensive list of knowledge sharing barriers provides a helpful starting point and guideline for senior managers auditing their existing practices with a view to identifying any bottle-necks and improving on the overall effectiveness of knowledge-sharing activities. Therefore, in this research, a number of common knowledge sharing issues were explored in the multi-cultural setting as viewed by employees of EY. So, the study concluded that lack of IT support and training were identified as the major technological barriers. As far as organizational factors concerned office politics is identified as a potential barrier for effective collaboration and knowledge sharing. Lack of time & language barrier were the most significant barrier for knowledge sharing on individual basis. Furthermore, nationality difference is one of the cultural barriers observed at EY.

6.2 Recommendations

The following recommendations are forwarded based on the results of the study.

- It is vital for EY management to have a clear understanding of the cultural dimensions in order to give the cross-cultural teams a better opportunity to communicate effectively and contribute positively in the process of knowledge sharing.
- In general the national cultural differences, technological, individual and many others factors appear as a hurdle to easy knowledge sharing among subsidiaries. This research helped managers and concerned personnel to understand the critical factors and find organization wide solution to address the problem. Thus, leaders of businesses can use the findings of this study to develop new processes and procedures for overcoming resistance to knowledge sharing, which might translate to increased innovation, productivity and competitive advantage.
- EY diversity & inclusiveness effort work effectively by closing the gender and ethnicity gap. Hence, it should be continued in future.
- People's position (hierarchy) and seniority influences communication therefore EY has to work in future to narrow the communication gap this may cause.
- It is also recommended that one should offer communication and collaborative work tools suitable to the cultural preferences of the users. Thus, unique findings of this study can be used as a guideline for managers at EY in order to upgrade or implement a new technology based on corporate culture and staffs preference.
- At EY since the company uses bunch of collaboration tools; IT help is not only required but should be a priority to solve a mismatch between the technology and the needs or requirements of staffs; unrealistic expectations of the technology; lack of technical support for immediate maintenance; a lack of training to ensure familiarity with a new collaboration tools.
- As the Intranet usage is excellent; EY shall definitively continue to use the intranet not only as an "electronic pin-board" or information archive but also as a forum for collaboration and knowledge sharing in every day work in the future.

- Authors recommend that more work has to be done on recently introduced and never used collaboration tools which help to increase best use of the tools.

6.3 Further Research

As the current research revolves around a single-case study, further studies by addressing different corporate cultures across multiple industries would be needed to obtain more generalizable results. In addition, further research will be needed to see its relationship among communication, trust and national culture difference towards knowledge sharing.

In addition to the above, further research will be need to confirm this finding; although useful, a more extensive collection of data is needed to improve the generalizability of the findings.

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Annex

Annex I Self-Administered Questionnaire

Introduction

Dear Staff Members,

I would like to thank you for your collaboration. I am doing my master's degree in Information Science (IS) from Addis Ababa University and I am working on a thesis project about knowledge sharing & collaboration problems within a multi-national firms. I guarantee you the information collected through this survey only will be used for education and research endings; moreover, all the answers will be covered by anonymity. To analyse the information collected in this survey, a classification of the data is required. Your personal data will remain confidential and used for categorization purposes only. The survey will take approx. 35 minutes.

Objective of the research

This research aims to study the knowledge sharing practice within multi-national firms and the outcome of this research is believed to help better understand the cultural differences that exist among subsidiaries working to deliver a project and the study outcome also leads to a better management of these differences to promote knowledge sharing.

Part 1: Personal Profile

Please indicate your response to each question by putting "X" or "√" in the appropriate column.

Nationality				
☐ Ethiopia ☐ India ☐ Kenya ☐ Other If other, please specify				
Your gender?				
☐ Male	☐ Female			
Your age group?				
☐ Less than 23 years	☐ 23-30 years	☐ 31-40 years	☐ 41-50 years	☐ Above 50

Part 2: Cultural dimensions

Key: 1=Very Low/Strongly Disagree 2=Low/Disagree 3=Medium/Neutral 4=High/Agree 5=Very High/Strongly agree NA=Not Applicable/Don't Know

Please indicate your response to each question by putting "X" or "√" in the appropriate column.

To what extent do you agree or disagree with the following statements:

Cultural Dimension -Collectivist / Individualist	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
Group welfare is more important than individual rewards.	☐	☐	☐	☐	☐	☐
Group success is more important than individual success.	☐	☐	☐	☐	☐	☐
Bing accepted by the members of your workgroup is very important.	☐	☐	☐	☐	☐	☐
Employees should pursue their goals after considering the welfare of the group.	☐	☐	☐	☐	☐	☐

Cultural Dimension -Long-term vs. short-term	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
The more an employee stayed in a company the more he/she shares knowledge.	☐	☐	☐	☐	☐	☐
Staying with one company is the best way to go on with your career.	☐	☐	☐	☐	☐	☐
Employee relationship with the company is dependent upon employee's level of satisfaction in the company.	☐	☐	☐	☐	☐	☐
to use authority and power when dealing with subordinates.	☐	☐	☐	☐	☐	☐
Managers seldom ask for the opinions of employees.	☐	☐	☐	☐	☐	☐
Employees should not disagree with management decisions	☐	☐	☐	☐	☐	☐

Cultural Dimension -Uncertainty Avoidance	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
It is important to have job requirements and instructions spelled out in detail so that employees always know what they are expected to do.	☐	☐	☐	☐	☐	☐
Managers expect workers to closely follow instructions and procedures.	☐	☐	☐	☐	☐	☐
Rules and regularities are important because they inform workers what the organization expects of them.	☐	☐	☐	☐	☐	☐
Standard operating procedures are helpful to employees on the job.	☐	☐	☐	☐	☐	☐
Instructions for operations are important for employees on the job.	☐	☐	☐	☐	☐	☐

Cultural Dimension -Feminine / Masculine	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
Women resolve conflicts by compromise and negotiation rather than fighting them out.	☐	☐	☐	☐	☐	☐
Live in order to work not the reverse	☐	☐	☐	☐	☐	☐
Dominant values in society are material success and progress rather than caring for others and preservation.	☐	☐	☐	☐	☐	☐
Meetings are usually run more effectively when they are chaired by a man.	☐	☐	☐	☐	☐	☐
Solving organizational problems usually requires an active, forcible approach which is typical of men.	☐	☐	☐	☐	☐	☐

Cultural Dimension-Power Distance	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
Managers make most decisions without consulting subordinates.	☐	☐	☐	☐	☐	☐
It is frequently necessary for a manager to use authority and power when dealing with subordinates.	☐	☐	☐	☐	☐	☐
Managers seldom ask for the opinions of employees.	☐	☐	☐	☐	☐	☐
Employees should not disagree with management decisions	☐	☐	☐	☐	☐	☐

Part 3: Knowledge sharing constructs

Please indicate your response to each question by putting "X" or "√" in the appropriate column.

To what extent do you agree or disagree with the following statements:

Communication contribution to knowledge sharing	Not at all	0-8 people	9-12 people	13-17 people	18-23 people	24+
How many people in the organization in your home country do you regularly communicate with for work?	☐	☐	☐	☐	☐	☐
How many people in the organization out of your home country do you regularly communicate with for work?	☐	☐	☐	☐	☐	☐

Communication contribution to Knowledge sharing	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
I can communicate effectively with team members in a standard language other than my national language while working in a cross-cultural team.	☐	☐	☐	☐	☐	☐
I believe that cultural differences do inhibit the way we communicate with the team members.	☐	☐	☐	☐	☐	☐
I believe that while working in a team; If I can't communicate well enough; I can't share my idea to do my job in a team.	☐	☐	☐	☐	☐	☐
I believe that smooth communication is necessary to avoid conflict/confusion while working in a cross-cultural team.	☐	☐	☐	☐	☐	☐
Communication increases chances of working together in cross-cultural team.	☐	☐	☐	☐	☐	☐
In my work environment the people's position (hierarchy) and seniority influences communication.	☐	☐	☐	☐	☐	☐

Knowledge Sharing Practice	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
I received knowledge from colleagues in my country for my work	☐	☐	☐	☐	☐	☐
I used knowledge from colleagues in my country to do my job	☐	☐	☐	☐	☐	☐
I received knowledge from colleagues in other countries to do my job	☐	☐	☐	☐	☐	☐
I used knowledge from colleagues in other countries to do my job	☐	☐	☐	☐	☐	☐

Part 4: Collaboration Tools Usage

Please indicate your response to each question by putting "X" or "√" in the appropriate column.

How often do you use the following communication tools to share knowledge in your day to day activity?

Collaboration Tools Usage	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
E-mail	☐	☐	☐	☐	☐	☐	☐
Internet	☐	☐	☐	☐	☐	☐	☐
Intranet / Portal	☐	☐	☐	☐	☐	☐	☐
Microsoft LYNC	☐	☐	☐	☐	☐	☐	☐
Yammer	☐	☐	☐	☐	☐	☐	☐

Please indicate your response to each question by putting "X" or "√" in the appropriate column.

How often do you receive knowledge in your country through the following collaboration Tools?

Collaboration Tools Usage	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
E-mail	☐	☐	☐	☐	☐	☐	☐
Internet	☐	☐	☐	☐	☐	☐	☐
Intranet/ Portal	☐	☐	☐	☐	☐	☐	☐
Microsoft LYNC	☐	☐	☐	☐	☐	☐	☐
Yammer	☐	☐	☐	☐	☐	☐	☐

Ease of Use of tools	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
My interaction with the collaboration tools is clear and understandable.	☐	☐	☐	☐	☐	☐
I find it easy to get to use the collaboration tools to do what I want to do.	☐	☐	☐	☐	☐	☐
Learning to operate the collaboration tool is easy for me.	☐	☐	☐	☐	☐	☐

Knowledge Sharing tools relative advantage/ PEOU (Perceived Ease of use)	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
Usage of collaboration tools to sharing knowledge enables me to accomplish tasks more quickly.	☐	☐	☐	☐	☐	☐
Usage of collaboration tools to share knowledge improves the quality of work I do.	☐	☐	☐	☐	☐	☐
Usage of collaboration tools to share knowledge will make it easier to do my job.	☐	☐	☐	☐	☐	☐
I find using the collaboration tools to share knowledge to be advantageous in my job.	☐	☐	☐	☐	☐	☐
I use the collaboration tools to share knowledge within my organization for a variety of purposes (maintaining relationships, doing tasks, decision making, reports, discussions, obtaining information.	☐	☐	☐	☐	☐	☐
I find using collaboration tools personally satisfying and feel proud of myself.	☐	☐	☐	☐	☐	☐

Part 5: Knowledge sharing Barriers

Please indicate your response to each question by putting "X" or "√" in the appropriate column.

To what extent do you agree or disagree with the following statements:

knowledge sharing barriers: Cultural Factors	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
Nationality difference affects knowledge sharing	☐	☐	☐	☐	☐	☐
Ethnicity affects knowledge sharing	☐	☐	☐	☐	☐	☐
Education difference affects knowledge sharing	☐	☐	☐	☐	☐	☐
Age difference affects knowledge sharing	☐	☐	☐	☐	☐	☐
Gender difference affects knowledge sharing	☐	☐	☐	☐	☐	☐

knowledge sharing barrier: Organizational Factors	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
Job security affects the knowledge sharing behaviour of employees	☐	☐	☐	☐	☐	☐
Office politics affects the knowledge sharing behaviour of employees	☐	☐	☐	☐	☐	☐
Management issues affects the knowledge sharing behaviour of employees	☐	☐	☐	☐	☐	☐

Knowledge sharing barrier: Technological Factors	Very low/ Strongly disagreed	Low /Disagree	Medium/ Neutral	High /Agree	Very High /Strongly agree	Don't Know
Lack of IT support affects the knowledge sharing behaviour of employees	☐	☐	☐	☐	☐	☐
Conduciveness of technology affects the knowledge sharing behaviour of employees	☐	☐	☐	☐	☐	☐
Technical over-complexity affects the knowledge sharing behaviour of employees	☐	☐	☐	☐	☐	☐
Lack of training in use of the collaboration tools affects the knowledge sharing behaviour of employees	☐	☐	☐	☐	☐	☐

Knowledge sharing barrier: individual Factors

Please indicate your response to each question by putting "X" or "√" in the appropriate Place.

From the following what are the reasons that you think you do not want to share knowledge with other countries? You can choose more than one.

☐ Lack of time ☐ Lack of resources ☐ Competition ☐ Mistrust

☐ Focus on your own country ☐ Lack of perceived benefits

☐ Lack of monetary benefits for myself ☐ Fear and Uncertainty

☐ A belief that my knowledge is limited as compared with other members of the team

☐ Preference for face-to-face communication

☐ Others, Please specify_____

Other comments

_____

_____

Thank you for your time