

Information and Knowledge Management in South African Law firms - A Case Study

by

Alice Mokgadi Ramohlola



Thesis presented in fulfilment of the requirements for the degree of
Master of Philosophy (Information and Knowledge Management)
in the Faculty of Arts and Social Sciences
at Stellenbosch University

Supervisor: Prof. Johann Kinghorn

MARCH 2017

DECLARATION:

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part, submitted it for obtaining any qualification.

Date: March 2017

Copyright © 2017 Stellenbosch University - All rights reserved

OPSOMMING

In hierdie tesis word die inligting- en kennisbestuurstelsels van 'n tipiese groot, suksesgedrewe, Afrika-wye prokureursfirma ondersoek. Die doel van die studie is om prokureurs se interaksie met mekaar en met die inligting- en kennisbestuurstelsels (KBS) te begryp, asook die faktore wat hierdie omgang mag belemmer.

Anders as nasionale organisasies is multi-nasionale organisasies komplekse stelsels met komplekse operasionele dinamika. Laasgenoemde sluit in administratiewe en bestuursdinamika, gekoördineerde inligtingverspreiding- en kennisoordragprosesse, en inligtingstechnologieë en -stelsels. Faktore soos afstand, taal, Internetspoed en kultuur, om net 'n paar te noem, kan dié dinamika beïnvloed. Dit is veral relevant vir prokureursfirmas – veral multi-nasionale prokureursfirmas – wat die onderwerp van hierdie verhandeling is. Inligtingsensitiewe prokureursfirmas se uitsluitlike doel is om regsdienste te lewer gebaseer op kwaliteit inligting en kennis. Dit maak prokureursfirmas kompleks, en dus 'n geskikte onderwerp vir hierdie verhandeling.

In die tesis word die slotsom bereik dat multi-nasionale prokureursfirmas soortgelyke probleme as ander multi-nasionale organisasies ervaar. Hierdie probleme kan doeltreffende en effektiewe kommunikasie, die vloeï van inligting en kennisoordrag belemmer. As hierdie uitdagings nie aangespreek en bestuur word nie, kan dit die prokureursfirma se KBS-inisiatiewe oneffektief laat.

SUMMARY

This thesis investigates and analyse information and knowledge management systems in a typical large high performing law firm with multiple offices across the African continent. The intended outcome is to draw a full understanding of the lawyers' interactions with the Information and Knowledge Management (IKM) systems in place and with each other, and any hindrances that may affect these interactions, information flows, knowledge transfer, and overall firm performance.

Multinational organizations are complex in nature and have complex operational dynamics as opposed to organizations operating in one country. These dynamics range from issues related to administration and management, coordinated information sharing and knowledge transfer, information technologies and information systems, etc. all of which can be affected positively or negatively by a variety of factors such as distance, language, internet speed, culture, to name just a few. This becomes more so for law firms, multinational law firms in particular, which are the focus of this study. Being information intensive organizations by nature whose sole service offering is legal advice based on quality information and knowledge make such law firms more complex, and therefore a suitable subject of study for this thesis.

The thesis concludes that, like all multinational organizations, multinational law firms face similar problems that hinder efficient and effective communication, information flows and knowledge sharing. That if not correctly addressed and managed, these problems can render IKM efforts and initiatives in law firms ineffective.

ACKNOWLEDGEMENTS

It was never easy-going to arrive at this point, a final product. The journey has been rough and tough, but very educational and fulfilling.

The good Lord has never deserted me, and it is mainly because of Him that I persevered to the very end.

I would like to thank my Supervisor Prof. J. Kinghorn for his patience, guidance and encouragement throughout.

My husband Ntlaletjeng Samuel Ramohlola has been very encouraging, supportive and understanding, and was my pillar of strength. He understood when I stayed awake most nights and locked myself up most weekends to do what was necessary.

Special gratitude goes to my late mother Moswete Hellen, who gave me the foundational education against all odds, who dedicated her life to getting my siblings and me through school and university, and taught me that if you want something very badly, you stand up and work very hard to get it. Marumo, I dedicate this accomplishment to you!

TABLE OF CONTENTS

Chapter 1 – The Rationale for the thesis	1
1.1 Introduction and background	1
1.2 The rationale for the thesis	4
1.3 The research question and sub-questions	4
1.4 Methodology	6
1.5 Delimitations	6
1.6 Thesis layout	7
Chapter 2 – Multinational Organizations and knowledge dissemination	9
2.1 Introduction	9
2.2 What is a multinational organization?	10
2.3 Globalisation and multinational organizations	14
2.4 Communication in multinational organizations	16
2.5 Multinational organizations as learning organizations	18
2.6 Hindrances to IKM in MNCs	20
2.6.1 Distance	21
2.6.2 Language	22
2.6.3 Information and communication technologies	23
2.6.4 Culture	24
2.7 Multinational law firms	25
2.8 Law as a knowledge-intensive profession	27
2.9 Information and knowledge sharing in law firms	29
2.9.1 The use of information devices, resources and systems	29
2.9.2 Barriers to information flows and knowledge sharing	31
2.9.3 Information security	33
2.9.4 Lawyers' training needs	34
2.9.5 Lawyers' attitudes to ICTs	35
2.9.6 Management's role in IKM	37
2.10 Conclusion	38
Chapter 3 – The design of the case study	39
3.1 Introduction	39
3.2 The methodology	39
3.3 The sample	41
3.4 Delivering the survey	43
3.5 The questionnaire	43
3.6 Language and vocabulary	44
3.7 Theory and questionnaire correlation	44

3.7.1	The use of devices, resources and systems	45
3.7.2	Barriers to information flows and knowledge sharing	46
3.7.3	Information security	47
3.7.4	Lawyers' training needs	47
3.7.5	Lawyers' attitudes to ICTs	48
3.7.6	Management's role in IKM	49
3.8	The interviews	49
3.9	The process of data collection	49
3.10	Specific problems and limitations encountered	50
3.11	The issue of bias	51
3.11.1	Respondent bias	51
3.11.2	Researcher bias	51
3.12	Conclusion	51
Chapter 4 –	Detailed Results of the Case Study	53
4.1	Introduction	53
4.2	The process of data analysis	53
4.3	Demographic background	54
4.3.1	Analysis of responses by office	55
4.3.2	Analysis of responses by employment position	56
4.3.3	Analysis of responses by age group and experience	57
4.3.4	Analysis of responses on languages	59
4.4	Use of information devices, knowledge resources and systems	60
4.4.1	Use of devices	60
4.4.2	Use of information and knowledge resources	64
4.4.3	Use of information and knowledge systems	75
4.4.3.1	Usage frequency of the firm's intranet	77
4.4.3.2	Usage frequency of the library intranet	79
4.4.3.3	Usage frequency of legal information databases	80
4.4.3.4	Usage frequency of knowledge portal	82
4.5	The barriers to information flows	83
4.5.1	Distance	84
4.5.2	Internet speed and connectivity	85
4.5.3	Office culture variations	87
4.5.4	Time differences	89
4.5.5	Information sharing policies	89
4.5.6	Cross-border information related legislations	90
4.5.7	Organizational structure	90
4.5.8	Language	90
4.6	Information security	91
4.6.1	Present state of electronic policies	92
4.6.2	The level of information security training	93

4.6.3 Lawyers' information and knowledge sharing practices	95
4.6.4 Level of computational systems technical understanding	96
4.6.5 Danger of not keeping up with computational systems	97
4.7 Lawyers' training needs	99
4.8 Lawyers' attitudes to information and information technologies	100
4.9 Management's role in IKM	104
4.10 Conclusion	105
Chapter 5 – Implications of the results for theory and practice	
107	
5.1 Introduction	107
5.2 The use of devices, resources and systems	108
5.3 Barriers to information flows and knowledge sharing	111
5.4 Information security	113
5.5 Lawyers' training needs	114
5.6 Lawyers attitudes to ICTs	115
5.7 Management's role in IKM	116
5.8 Conclusion	117
5.9 Recommendations for future research	118
Bibliography	
120	

LIST OF TABLES

Table	Page Number
4.1 - Survey recipients' geographic office distribution	54
4.2 - Total fee earners/lawyers by geographic office distribution	55
4.3 - Overall analysis of responses on value delivered by knowledge resources	64
4.4 - Analysis of value delivered by the World Wide Web by office	67
4.5 - Analysis of value delivered by primary print resources by office	67
4.6 - Analysis of value delivered by primary print resources by office	67
4.7 - Analysis of value by specialist in-house legal e-resources by office	68
4.8 - Analysis of value delivered by peers/colleagues by office	68
4.9 - Analysis of value delivered by librarians' support by office	69
4.10 - Analysis of value delivered by global electronic resources by office	69
4.11 - CA's/Pupils' responses on value delivered by various resources	69
4.12 - Associates' responses on value delivered by various resources	70
4.13 - Senior Associates' responses on value delivered by various resources	71
4.14 - Directors/Partners' responses on value delivered by various resources	71
4.15 - Counsel/Consultants' on value by various resources	72
4.16 - Responses of value delivered by various resources - age group: 20-30 yrs.	73
4.17 - Responses of value delivered by various resources - age group: 31-45 yrs.	73
4.18 - Responses of value delivered by various resources - age group: 46-55 yrs.	74
4.19 - Responses of value delivered by various resources - age group: 55+ yrs.	75
4.20 - Overall analysis of the responses on the frequency of use of IKM systems	76
4.21 - Analysis of frequency of usage of the intranet by office	78
4.22 - Analysis of frequency of usage of the intranet by position	78
4.23 - Analysis of frequency of usage of the intranet by age	79
4.24 - Analysis of frequency of usage of the library intranet by office	79
4.25 - Analysis of frequency of usage of the library intranet by position	80
4.26 - Analysis of frequency of usage of the library intranet by age	80
4.27 - Analysis of frequency of usage of the legal information systems by office	81
4.28 - Analysis of frequency of usage of legal information systems by position	81
4.29 - Analysis of frequency of usage of legal information systems by age	81
4.30: Analysis of frequency of usage of the knowledge portal by office	82
4.31 - Analysis of frequency of usage of the knowledge portal by position	82
4.32 - Analysis of frequency of usage of the knowledge portal by age	83
4.33 - Factors hindering to information dissemination	83
4.34 - Distance as a hindrance to information dissemination by office	84
4.35 - Distance as a hindrance to information dissemination by position	85
4.36 - Analysis of distance as a hindrance to information dissemination by age	85
4.37 - Analysis of internet speed and connectivity by office	86

4.38 - Analysis of internet speed and connectivity by position	86
4.39 - Analysis of internet speed and connectivity by age	87
4.40 - Analysis of office culture variations as a hindrance by office	88
4.41 - Analysis of culture as a hindrance to information dissemination by position	88
4.42 - Analysis of culture as a hindrance to information dissemination by age	89
4.43 - Factors affecting information security	91
4.44 - Analysis of present state of electronic security policies by office	92
4.45 - Analysis of present state of electronic security policies by position	93
4.46 - Analysis of present state of electronic security policies by age	93
4.47 - Analysis of level of information security training by office	94
4.48 - Analysis of level of information security training by position	94
4.49 - Analysis of level of information security training by age	94
4.50 - Analysis of lawyers' information and knowledge sharing practices by office	95
4.51 - Analysis of lawyers' information and knowledge sharing practices by position	95
4.52 - Analysis of lawyers' information and knowledge sharing practices by age	96
4.53 - Level of technical understanding of computational systems by office	96
4.54 - Level of technical understanding of computational systems by position	97
4.55 - Level of technical understanding of computational systems by age	97
4.56 - Danger of not keeping up with evolving computational systems by office	98
4.57 - Danger of not keeping up with evolving computational systems by position	98
4.58 - Danger of not keeping up with evolving computational systems by age	98
4.59 - Training methods preferences	99
4.60 - Perceptions on the impact of Industry 4.0 in productivity	103
4.61 - Responses on perceptions on inter-office cooperation	104

LIST OF FIGURES

Figure	Page Number
3.1 - Map of law firm's offices	42
4.1 - Analysis of responses by office locations	56
4.2 - Analysis of responses by employment position	57
4.3 - Analysis of responses by age groups	58
4.4 - Analysis of the languages spoken/written apart from English	59
4.5 - Analysis of the number of languages of fluency in the legal field	60

4.6 - Overall analysis of the responses on use of devices	61
4.7 - Analysis on use of devices by office	61
4.8 - Analysis on use of devices by position	62
4.9 - Analysis on use of devices by age	64
4.10 - Overall responses on attitudes towards ICT	100
4.11 - Responses on attitudes towards ICT by position	101
4.12 - Responses on attitudes towards ICT by office	102
4.13 - Responses on attitudes towards ICT by age group	102

LIST OF ABBREVIATIONS

AI	- Artificial Intelligence
BEE	- Black Economic Empowerment
CA	- Candidate Attorneys
CD	- Compact Disk
CoP	- Communities of Practice
DMS	- Document Management System
IKM	- Information and Knowledge Management
IM	- Information Management
KM	- Knowledge Management
IT	- Information Technology
ICT	- Information and Communication Technology
IS	- Information Systems
kbps	- Kilobit per Second
KM	- Knowledge Management
MNC	- Multinational Corporation/Multinational Company
MNO	- Multinational Organization
WWW	- World Wide Web

Chapter 1

The Rationale for the Thesis

1.1 Introduction and background

Law firms have in the past decades, grown in sizes, business focus and operational methods. Simple systems for previously smaller firms do not necessarily work in a large law firm, more so in one with a physical presence in more than one country. Law firms have become information and knowledge intensive businesses, and the sharing and the seamless flow of information and knowledge has thus become a critical aspect that can make or break them. Information and Communication Technology (ICT) developments and cross-border mergers, with all its dynamics, i.e. different languages, laws, culture, technologies, etc., has exaggerated the need for appropriate and relevant information systems that take into account all of the critical issues in a firm, both operational and technical in order to effectively manage information and knowledge assets. Most Information and Knowledge Management (IKM) efforts and initiatives adopted from other forms of businesses are not entirely suitable in today's typical large multi-jurisdictional law firm aiming to remain profitable and competitive.

Mergers have been the practice in law firms for decades, however in the past they were between firms in the same country. Two or more law firms in the same country would merge to become one, and adopt one name. This was done for several reasons, be it for purposes of saving a near bankrupt firm, attracting more combined revenue derived from combined clientele, merging expertise with the result of building a trusted brand, establishing representation country wide and thus extending market coverage, achieving Black Economic Empowerment (BEE) ratings as required by the Broad-Based Black Economic Empowerment Act 53 of 2003, given that most traditional South African (SA) law firms were white owned, and many other different reasons.

As more western Multinational Corporations/Companies (MNCs) opened new businesses across the world around the 1980s and 1990s, so did all other professional service firms,

including law firms.¹ This era marked the beginning of cross-border law firm mergers, the globalization of the legal profession. International law firms merged with African law firms generally and SA law firms specifically, drawn by the country's developing economy and business opportunities. At the same time, South African law firms also moved into Africa to seek partnerships and mergers. The globalization of the legal profession has grown rapidly since the 1980's, and by the year 2000 legal services had firmly joined other professional services in creating organized global service provision using networks of offices in numerous cities, thus bringing the global and local together in the products offered to clients.² Since around 2000, the South African corporate legal sector has seen rapid growth, both organic, increasing outputs and customer base expansion, and as the result of mergers, but mostly because of mergers.³

The multinational law firm brought with it, a set of new Information and Knowledge Management (IKM) problems. As information and knowledge intensive organizations, lawyers and law firms are dependent on the inward and outward flow of information and knowledge transfer to remain central actors in the global economy, and the legal support for other professions as clients. The management of information and knowledge in any law firm should be a key priority. Now having to share and manage these two assets across multiple jurisdictions simply puts the importance of information and knowledge management systems in law firms at a completely new higher level. It is important for any law firm's IKM systems to completely address all its information needs, and take into account the various carrier modes available in today's technological era, more especially when face-to-face contact is not always possible, as is the case in multinational firms. As more and more organizations begin to value their internal and external information and knowledge assets, so do law firms.

Cronin asserts that the term Information Management (IM) is commonly associated with the formal representation or modelling of information resources, events and flows.⁴ The essence of IM is to collect, process, manage, preserve, store and deliver information. According to

¹ John McCannon. 2016. Barron's AP World History, p. 442.

² R. Faulconbridge, Jonathan V. Beaverstock, Daniel Muzio, Peter J. Taylor. 2007-2008. Global Law Firms: Globalization and Organizational Spaces of Cross-Border Legal Work, *Nw. J. Int'l L. & Bus.* 28 (3); 455.

³ Jonathan Klaaren. 2016. African corporate lawyering and globalization, *International Journal of the Legal Profession.* 22(2); p. 226-242.

⁴ R. Faulconbridge, Jonathan V. Beaverstock, Daniel Muzio, Peter J. Taylor. 2007-2008. Global Law Firms: Globalization and Organizational Spaces of Cross-Border Legal Work, *Nw. J. Int'l L. & Bus.* 28 (3); 455.

http://www.steptwo.com.au/papers/kmc_effectiveim (accessed on 10 July 2016), IM is an umbrella term that encompasses all the systems and processes within an organization for the creation and use of corporate information. In today's technologically driven world, one cannot disassociate information management and Information Technology (IT). Information management is defined in terms of information technology, as a collection, storage and delivery mode. Dictionary.com⁵ defines information management as 'the planning, budgeting, control and exploitation of the information resources in an organization. The term encompasses both the information itself and the related aspects such as personnel, finance, marketing, organization and technologies and systems'. Managing information requires staff to design and maintain systems, input the information, and access information from these systems (the end-users). It also requires ongoing funding to keep the systems running, i.e. salaries, maintenance costs, upgrades and new systems and/or equipment acquisition, etc. Promotion and marketing of the available information is key, what use does it serve if the users do not know what is available to them.

The introduction of Knowledge Management (KM) in law firms has seen the introduction of a new profession, Knowledge Manager, with more and more law firms around the world acquiring the skills of these professionals to oversee the management of information and knowledge within their organizations. Information Management in every organization is as important as Knowledge Management (KM). These two cannot be managed separately or at different levels. Information (and) Knowledge Management (IKM) in simple terms means the management of information flows and knowledge transfer processes to improve business operations.

Knowledge acquired and gathered over a lawyer's professional life becomes critical when it comes to practice and reputation. Lawyers need to develop into their roles by gaining insight as they practice, most of which sits in more experienced lawyers. It is this tacit knowledge, the critical knowledge in individuals, that law firms need to capture, manage, store, and share. This, and the vast volumes of internal and external information from numerous and different resources in a multinational law firm cannot be easily managed without the use of IKM technologies and systems that facilitates seamless information flows, knowledge sharing and transfer, and free flowing communication, all of which are key in the effective and

⁵ Dictionary.com - <http://www.dictionary.com/browse/information-management?s=t>. (Assessed 06 July 2017).

efficient running of any organization. They enable interaction, cooperation and collaboration across an organization.

1.2 The rationale for the research

The objective of this research is to understand the information and knowledge sharing dynamics in South African multinational law firms; the impact of the use of various information and knowledge sources and systems on performance, communication, and information and knowledge sharing; and the problems hindering efficient information dissemination within the individual offices and between partner offices.

It is a well-known fact that as much as IKM efforts yield visible and tangible results in terms of performance, coherence of knowledge sharing, and firm growth (clients and revenue) in some organizations, this is not always the case in others. The research seeks to investigate the prevalent problems and hindrances to information flows and knowledge sharing in multinational organizations generally, and in multinational law firms specifically, and whether the various IKM systems coupled with the specific organizational dynamics identified in the survey questionnaire (i.e. age, position, experience, country, attitudes to ICTs, etc.) have any direct or indirect influence on these barriers.

The research will benefit the firm under study to get a better understanding of its lawyers' interactions with the currently available information and knowledge resources and systems, their interactions with each other, and their user behaviours, perceptions, and preferences on issues affecting operations and performance. The study will also inform IKM strategies going forward. In the same way, the study will benefit other law firms and multinational organizations in general. The findings of this study will add to the creation of new academic knowledge, which is crucial for practice and theory. Though there are related studies on information and knowledge management in law firms, none has taken a law firm specific systems analysis approach of this nature, which investigated a multinational law firm environment and provided empirical evidence.

1.3 The research question

The main question that motivated this study was:

What are the main problems and barriers to information flows and knowledge sharing in a multinational law firm, and what role do IKM resources and systems play in addressing such problems and barriers, given that the legal profession is an information service profession where lawyers are solely dependent on information and knowledge assets to provide quality

legal advice? The real issues under investigation are whether the barriers and problems associated with multinational organizations do also play out in a multinational law firm under study or not. If the problems exist, whether they have any impact or bearing on IKM processes or not, and if they do not exist, whether the currently available resources and systems play any role in limiting barriers to information flows and knowledge sharing or not.

This study bases its hypothesis on the assumption that all MNCs including multinational law firms, experience the same or related problems that are associated with the coordinated management of separate jurisdictional offices, and therefore require coordinated approaches to communication, information sharing and knowledge transfer. The lack of such coordination may hinder cooperation and promote office and departmental silos, with possible undesired outputs that might affect internal and external relationships and performance. In order to achieve the desired positive outputs it is therefore critical to have relevant systems and technologies with the least possible disruptions and security threats, that promotes inter-office and inter-departmental communication, information sharing, and knowledge transfer, to ensure that the right information reach the right people at the right time, and that overall firm performance is enhanced.

Law firms are by nature information and knowledge intensive organizations. They capitalize on their information and knowledge assets to maintain a competitive edge in the market place. It is critical that law firms benefit from their IKM initiatives, and extend these to their cross border offices or partners in order to secure representation without jeopardizing on the quality of service to clients. How such IKM initiatives are extended to cross border offices, with seamless coherence and the effectiveness, makes this a topic of interest and benefit not only in South Africa, but also across the world. The results will help other MNCs in general, to develop, review, or even accelerate their IKM initiatives and strategies by learning from its findings. Information and knowledge sharing is core in every law firm's business, a firm's shared intellectual capital is what sets it apart from its competitors. The successful flow of information and knowledge transfer within every organization is dependent on the relevance of the carriers, which are the resources and systems within that organization. This study contributed to the body of knowledge on IKM systems in law firms, and might inform future research in the field of information and knowledge systems. It is possible that the study might identify other unforeseen outcomes that are contrary to the hypothesis, i.e. that information and knowledge sharing is more coherent and effective in law firms, and that some or all the problems experienced by most MNCs are not prevalent in the legal environment.

1.4 The methodology

The empirical research used the quantitative data collecting methods in the form of questionnaires, informal personal interviews, onsite observations and literature review. All these data collection methods were used collaboratively, because the nature of the study dictated for this approach. In order for the researcher to gather all the data that was required for this research, analysis and interpretation, it was important to use all these methods. The online survey/questionnaire was used to establish an understanding of the demographics, and the different systems, resources and technologies available in law firms, and how the various lawyers in different offices use and interact with these and with each other in their daily activities. The follow-up informal personal interviews were used to get clarity on grey areas where cause and effect were not immediately clear to the researcher, and to affirm certain behaviours by way of finding out their regularity of occurrence. The personal interviews also assisted in getting the reasons as to why certain groups of users selected or did not select certain options under certain questions in the survey. Without onsite experience and background knowledge and understanding of operational dynamics in a multinational law firm and the systems in place and resources available, as well as the information flows and interactions, it would have been impossible to compile the questionnaire or interpret its findings in a usable form. The literature review was critical in building an understanding of MNCs and multinational law firms' operational frameworks, and the problems they face that hinder communication, information flows and knowledge transfer, as well as the role that information systems and various ICTs play in eliminating such problems.

1.5 Delimitations

Law firms are known for their rigid and closed structure, which makes them difficult to filter through, worse so if one is not connected to them. It would have been impossible to conduct an in-depth study of this nature in all similar South African law firms, as onsite observations of the information and knowledge systems in place is critical in getting a full understanding of their usage and drilling into the behavioural dynamics of individual lawyers towards these technologies. Some firms would not feel at ease to share their internal practices with an outsider, more so if they are from a competitor law firm. Law firms are by nature very competitive and known to be less likely to share their trade secrets with their competition, which could have been the case if the study was conducted in a different law firm(s). Time and budgetary limitations would also not have allowed for a broader general study, in terms of travel, conducting the survey and interviews, etc.

It was for these reasons that the study had to be limited to one South African (SA) law firm with offices in several other African countries, at which the researcher is an employee and has overall background understanding of the firms' internal operations. Though this is an advantage, it can on the other hand cause bias in respondents. Distance is another limiting factor in the sense that respondents in other offices might opt not to respond merely because they do not know the researcher in person. Being one of the biggest law firms in SA makes it a good representative sample for purposes of this study, but does not necessarily represent all forms of multinational organizations or multinational law firms, which might pose different dynamics. Its operations compares to those of other law firms of similar size in terms of staff, clients and jurisdictional presence. Large law firms in the South African context are those with the number of lawyers ranging between 250 and 600 lawyers,⁶ and the firm under study fits this criterion.

The findings of this research therefore allows for reasonable generalisation in the review and the use of information and knowledge management systems in similar environments. Given the continual advancement in technologies, this research recognises that this study focused at the situation as it was at a specific point in time in this specific project, and therefore does not represent a continual future processes. The research also acknowledges that not everyone is going to benefit from this study, however the majority of people and organizations concerned with and wanting to take corrective measures on their own IKM initiatives and processes will.

1.6 Thesis layout

The structure of the thesis is as follows;

Chapter 1 gives the background and rationale of the thesis including an outline of the methodologies used, and acknowledgement of the delimitations and limitations. The chapter uncovers the core question of this research in detail, giving the reader a clear understanding of the critical issues of the investigation.

Chapter 2 deals with the theoretical context of the study, starting with an overview of multinational organizations and drilling down to multinational law firms in specific, outlining in detail the dynamics in multinationals in relation to operations, and the IKM barriers that are evident.

⁶ Jonathan Klaaren. 2016. African corporate lawyering and globalization, *International Journal of the Legal Profession*. 22(2); p. 226-242.

Chapter 3 outlines the full context of the case study, explaining the survey instruments and how they were developed, as well as the survey questions' correlations to critical issues discussed in Chapter 2. This chapter also outlines the process followed in collecting data, the limitations encountered, and attempts taken by the researcher to eliminate bias.

Chapter 4 gives a detailed report of the research findings based on research instruments discussed in Chapter 3.

Chapter 5 analyses the critical findings in Chapter 4 and discusses their implications for theory and practice, drawing meaningful recommendations on information and knowledge management systems in law firms.

The bibliography lists all the resources consulted and used during this study.

Chapter 2

Literature Review: Information and Knowledge Management in Multinational Organizations

2.1 Introduction

This chapter reviews and analyses the literature on communication, information flows and knowledge sharing and transfer dynamics in multinational organizations. The focus will be on the definition of multinational organizations, how information flows within and between the various structures, the problems that may hinder such flows of information and the transfer of knowledge, and lastly, the possible corrective measures to minimize hindrances to information and knowledge management.

A productive and progressive multinational organization is one that promotes and supports timely communication and ensures that such communication is grasped and understood the same by all across the organization. The sharing and seamless flow of information has become a critical aspect that can break or make an organization in today's business environment which is "characterized by the increased globalization and the need to sustain growth in mature markets."⁷ For a company to stay relevant and on the competitive edge, while striving for visibility in the form of physical appearance or relations within and across its borders, it is also important to ensure standardized brand outputs of the same high quality across all its partner offices or branches. Business is built on trust, and for a multinational company the biggest challenge is to strengthen and maintain customers' trust as a unit and not as separate entities or offices, hence the critical need for effective and efficient information sharing at all levels. It does not look good to the customers to receive first class services in one office, or even department, and receive the worst service in another. One negative encounter can tint all the positive ones and break customer confidence in a brand.

⁷ Waddington, D. 2004. An architected approach to integrated information, p. 3.

Good service has to be consistent if not continually improved at all levels within an organization.

Such consistent good service is dependent on information that is timely, consistent, readily available and easily accessible, however at the same time taking information security into serious consideration, i.e. ensuring that only the right individuals access the right information. As much as hierarchies and bureaucracies may hinder the timely flow of information and result in ineffectiveness or delayed overdue attention that may have negative effects on firm performance, they are also proven effective ways to control information flows and protect clients.⁸ There needs to be a balance between timely information flows and overall information security within any organization. It will be very risky and irresponsible of organizations to simply put the information security responsibility in the hands of employees with the hope and they will be trusted gatekeepers without training and the support of systems security programmes. Guidelines, policies, and access rights have also been put in place to ensure that only the right people have access to the right information at the right time.

The sharing and seamless flows of information in a security sensitive environment cannot be an easy process to implement and manage, given all the dynamics in large multinational organizations, i.e. time zones differences, information systems and broadband capabilities, languages and culture, information carriers and modes, country-specific information regulatory laws, etc. all of which will be reviewed at length in this chapter. Random adhoc communication or information sharing simply does not cut it in today's business, given the high risks associated with information theft that can have negative impacts on the company's competitive advantage and thus its profitability in the long run. An information management strategy/policy that is developed by all, supported by all, and encouraged and enforced by management is critical for any organization's success.

2.2 What is a Multinational Organization?

The online Business Dictionary, Business.com,⁹ defines a multinational organization or corporation as an enterprise operating in several countries but managed from one (home)

⁸ J. S Demski, T. R Lewis , D. Yao, and H. Yildirim. 1999. Practices for Managing Information Flows Within Organization, *The Journal of Law, Economics and Organization*. 15(1); p. 107-13.

⁹ <http://www.businessdictionary.com/definition/multinational-corporation-MNC.html> (Accessed on 17 July 2016).

country. In a layman's language, it is a company with the headquarters or head office based in its country of origin and branches across borders, either regional and/or international. Any company or a group that derives a quarter of its revenue from operations outside its home country is considered a multinational corporation.¹⁰ The Business Dictionary continues to differentiate between 4 categories of multinational corporations, which are:

- (i) a multinational, decentralized corporation with a strong home country presence;
- (ii) a global, centralized corporation that acquires cost advantage through centralized production wherever cheaper resources are available;
- (iii) an international company that builds on the parent corporation's technology and research and development; and
- (iv) a transnational enterprise that combines the 3 above approaches: (i), (ii) and (iii).

The multinational organization is one of the most pervasive types of organizations in the global economy. Pervasive in the sense that it is spread across boundaries (including rich countries in some cases), and thus reap the economic benefits for their presence in those countries.

According to Franklin Root,¹¹ a multinational corporation is a parent company that engages in foreign production through its affiliates located in several countries, exercises direct control over the policies of its affiliates, and implements business strategies in production, marketing, finance and staffing that transcend national boundaries (geocentric). His argument is that multinational corporations exhibit no loyalty to the country in which they are incorporated. It is evident in the literature that economists have different perspectives when it comes to how multinational or transnational corporations should be defined. They simply view multinationals from diverse angles, including ownership, management, strategy and structural, and many others. The Britannica defines a multinational organization as any corporation that is registered and operates in more than one country at a time. Generally the corporation has its headquarters in one country and operates wholly or partially owned subsidiaries in other countries.¹² These subsidiaries (or what we can call branch or partner

¹⁰ <http://www.businessdictionary.com/definition/multinational-corporation-MNC.html>

¹¹ Root, Franklin (7th ed.). 1994. International Trade and Investment.

¹² <http://global.britannica.com/EBchecked/topic/397067/multinational-corporation-MNC> (accessed 17 July 2016).

offices) report to the corporation's central headquarters. Multinational organizations are also referred to as transnational corporations.

In economic terms, a firm's advantages in establishing a multinational corporation include vertical and horizontal economies of scale (i.e. reduced costs as a result of increased levels of output/productivity and a consolidated management) and an increased market share.¹³

According to Guillén¹⁴ vertical expansion occurs when the organization locates assets or employees in a foreign country with the purpose of securing the production of a raw material or input (what is termed backward vertical expansion) or the distribution and sale of a good or service (what is termed forward vertical expansion). The advantages of a vertical expansion relate more to prices or productivities of production factors such as capital, labour or land. Lower factor costs or higher productivity alone should not be the sole basis for an organization to vertically expand. The firm has to first have valid and powerful reasons to undertake the foreign production by itself, rather than to rely on others to do the job. Horizontal expansion occurs when the firm sets up a plant or service delivery facility in a foreign location with the goal of selling in that market, and without abandoning production of the good or service in its home country. Some of the obvious barriers to horizontal expansion include high transportation costs, possible unfavourable currency exchange rates shifts, or requirements for local adaptation that may not be favourable, i.e. peculiarities of local demand that make exporting from the home country unfeasible or unprofitable. Valid reasons for a mother company to set up a proprietary plant or service facility should be based on the company's possession of intangible assets, i.e. brands, technology, know-how, and other firm-specific skills. The mother company should be able to draw benefits of some sort, or else it will not be worth it.

The advantages of becoming a global player in manufacturing are more obvious than for service-based firms. In the case of the former, the value chain can be divided across many locations, i.e. parts of the manufacturing process can be located to low-cost countries to cut on raw material, production, and distribution costs associated with high-cost countries, while research and development can be located in a region with specialized competencies with its

¹³ <https://global.britannica.com/topic/multinational-corporation> (accessed 17 July 2016).

¹⁴ Guillén, Mauro F. 2006. Understanding and managing the multinational firm. *Working Paper*. The Wharton Schools of the University of Pennsylvania.

costs spread across many markets. In the case of service firms, much of the value chain has to be generated locally in the respective subsidiaries/branches. There is little opportunity to centralize activities to low-cost locations. Unlike mass production of vehicles for instance, services (i.e. legal services) have to be tailored for each client, acting within the laws of that country, with the legal expertise of a lawyer who is legally qualified and authorized to represent clients in the courts of that country. There is limited involvement from other lawyers in other countries, except on an advisory level where cross-country expertise can be applied, and therefore the success of the representation depends on the lawyers in that country. However this scenario in itself places an opportunity, a skills sharing opportunity firm-wide, but again only if relevant and interested parties are continuously kept in the loop and involved throughout the process.

Sharing of advanced knowledge in service multinational companies has to be transferred from country to country through learning processes, which has its fair share of hurdles that most companies continually have to deal with. Managing a multinational corporation is very different from managing a purely domestic firm, it requires different conceptual tools. It is important to understand the fundamental economic, strategic, organizational, socio-political, and cultural issues that impact the process of expansion of the firm, first on the linkages between foreign subsidiaries and corporate headquarters in the home country, and secondly on the relationship between the multinational organization and interest groups in the foreign countries, including the government, labour unions, and clients/suppliers. Some of the key common factors that must be taken into consideration if multinational corporations are to succeed in foreign countries include differences in languages, culture, information carries/modes, information management platforms or systems, broadband capabilities, country-specific legal frameworks, and many others, all of which have an impact on communication, and information and knowledge sharing between, among and across offices.

Depending on how all these issues are managed, they can have a positive or negative effect on any multinational organization's success. They may even lead to 'closing shop' in those countries as the ultimate result, if not identified and managed at the very beginning of setting office. On the contrary, multinational organizations have a number of advantages over localized companies in the sense that their size allows them the opportunities to achieve vast economies of scale in terms of manufacturing and product development. Their global presence also exposes them to new ideas and opportunities cross-country wise. Their location in many countries put them on the map in the sense that they become a known brand and

therefore attract more business. However the larger they become, the more the potential liabilities for slowness and bureaucracy, and that may lead to a reduction in outputs based on the extended time required to go through the processes, i.e. having to get a manager's official approval at certain stages of a transaction for instance.

Multinational organizations (MNOs) play an important role in international investment, which in turn contributes to the world economy, the international exchange of good and services expressed in monetary value. It is therefore imperative for governments to recognize that international co-operation can improve the foreign and investment climate, encourage the positive contribution which multinational enterprises can make to their country's economic, social and environmental progress, and thus minimise and resolve difficulties which may arise from their operations.¹⁵

Organizational culture plays a major role in every multinational organization's success. It is influenced by management style to a larger extent. Organizational culture can be explained in terms of the relationship between employees and the organization, the hierarchical structure (relationship between managers and subordinates, managers and managers, and subordinates and subordinates, both intra, inter, and cross departmental and country office), as well as in terms of the general employee views and understanding of the organization's goals and objective, and their individual and collective roles in all of this. A sense of being part of the whole is confirmed and instilled in employees when the organization values cultural diversity, and when there is the absence of prejudice and minimal intergroup conflict. While some multinational organizations may encourage competition, cooperation should be the ultimate goal. Management should rather encourage sharing of skills and knowledge at all levels for the betterment of individual employees, teams, branches/offices, and eventually the organization as a unit at large. For purposes of this study, the terms multinational companies, multinational corporations, multinational organizations will be used interchangeably as they all define a multinational law firm, the focus of this study.

2.3 Globalization and Multinational Organizations

Globalisation means different things to different people. The definition of globalisation is explained in the context of various historical periods and/or disciplines by various authors. For the purpose of this study the focus is on business, and therefore globalisation in the

¹⁵ OECD (2011), OECD Guidelines for Multinational Enterprises (<http://dx.doi.org/10.1787/9789264115415-en>)

business context is defined by several authors as “the set of transformations faced by companies as a consequence of the contemporary phenomenon constituted by: (1) the empowerment of transnational organizations; (2) the information technology evolution; (3) the increasing flows of capital, merchandise, and data across national borders; and (4) the tendency of world market homogenization.”¹⁶ Globalization in common lexicon refers to improvement in global trade and deals in an open, incorporated, border-less, international and free economy.

Globalisation has offered multinational companies an opportunity to take their businesses beyond home borders so as to leverage regional and international markets. According to Gooderham, Gooderham and Grøgaard,¹⁷ this opportunity however also put the individual companies under threat because of their size and geographical dispersion, factors that make communication and control problematic. These authors continue to argue that success in individual MNOs is far from guaranteed, as such organizations play away from home, and therefore have the organizational capabilities that enable them to leverage whatever unique strategic capabilities they possess, and that increasingly these capabilities are knowledge-based. It is important to note that multinational organizations use a variety of options through which innovation develops and diffuses across national borders, among which foreign direct investment is only one option.¹⁸ Other modes by which international knowledge flows occur include amongst others, trade, licensing, cross-patenting activities, and international technological and scientific collaborations. Globalization has involved greater openness in the international economy, an integration of markets on a worldwide basis, and a movement toward a borderless world, all of which have led to increases in global flows.¹⁹

Multinational corporations proved to be engines for this whole process of globalisation and economic integration in recent decades, and this is evident in their widespread rate and success. More and more companies have opened shop regionally and/or internationally, and are performing well in those foreign markets. Their continued existence and performance

¹⁶ Azevedo, Guilherme and Bertrand, Helena. From multinational to global companies: identifying the dimensions of the change, p. 2.

¹⁷ P.N. Gooderham, Paul N. Gooderham, Birgitte Grøgaard. 2013. *International Management: Theory and Practice*. Cheltenham, UK: Edward Elgar, p. 19.

¹⁸ Narula, Rajneesh and Zanfei, Antonello. *Globalisation of Innovation: The Role of Multinational Enterprises*, 2003. (*DRUID Working Paper* No 03-15), p.1.

¹⁹ Intriligator, M. D., 2003. *Globalization of the World Economy: Potential Benefits and Costs and a Net Assessment*.

affirms the new ‘flattened’ borderless world of business. As one evaluates the economics of international trade, one can safely say that almost a third of its total revenue now moves completely within these multinational corporations. With the introduction of such international companies, global issues and concerns have, to some extent, shifted from countries to these companies. As the players in the global arena, they are obliged to keep their eyes on global issues as these affect their businesses and dealings on a daily business. They therefore cannot afford to be ignorant of these factors given that they are the driving forces in their playgrounds. Ignorance will be detrimental and it’s not an option in today’s competitive world. Multinational organizations need to evolve with globalization and take advantage of the development opportunities it offers, i.e. increased consumer awareness, new demands and standards, and interdependence amongst others.

2.4 Communication in Multinational Organizations

Communication is critical in any organization, more so in multinational organizations given the various dynamics that prevail in them, i.e. distance between offices, and different management styles, communication systems, and staff behaviours which differ from one country office to another. Irrespective of the existence of such dynamics, in order to remain successful, a multinational organization has to strive for effective communication at all times. Effective communication is the seamless flow of information, in an appropriate medium or channel, style and form, and that is understood the same by all. According to Venardos,²⁰ minimal communication, miscommunication, and no communication are the main factors that stagnate most organizations, large and small, and when all these factors prevail, effective communication loses its influence.

Although technology has eased the difficulty of communication in multinational organizations, some obvious barriers to effective communication such as language, time differences, geographical distance, amongst others, still prevail. Multinational organizations not only face the logistical and time zone related problems, they must learn to deal with cultures wherein concepts of time, relationships and contracts can vary immensely.²¹ Moreover, culture also influences people’s way of thinking and behaving and result in different understandings toward vision and purposes of firms. Culture is the “software of

²⁰ Thomas J. Venardos. The Organizational Life Blood for Law Firm Profitability: Active Coordinated Communication (<http://olmsteadassoc.com/resource-center/active-coordintated-communication.aspx>).

²¹ Alder, Nancy J. (4th ed.), 2002. International dimensions of organizational behavior, p. 16.

mind” that can influence people’s patterns of thinking and behaving.²² Communication is the only approach by which group members can cooperate with each other toward the goal of organization. Especially for multi-culture firms with some subsidiaries in other countries, it is necessary that managers have frequent communication and sufficient understanding for organizational goal. It is also critical for managers working in global environments to be proficient in cross cultural communication.

Such effective communication depends on how good cross cultural dynamics and differences are managed. Hofstede (1997) identified two kinds of cultures, the organizational culture and national culture, which differ when it comes to values and practice. He argues that values come from the experience of life, in other words, from family and school in the early years of a person’s life, and that practices come from social experience, working. National culture provides a principle for employees in organizations to understand how to work, how to approach the goals and how they want others to treat them. At an organizational level, culture differences appear mostly in practice rather than value.²³ Culture difference influences communication between the peoples with different identity, and to a larger extent impacts on management style and staff behaviours. Staff are a crucial asset of an organization, they bring organization with their knowledge, skills, and experiences. An effective management style in such a diverse environment should be one that facilitates communication and informational transmitting. Communication in a workplace is important and is central to an organizations’ success. Failure to communicate properly and effectively often result is distorted messages that can lead to confusion, frustration and conflict, and thus render people and the organizations ineffective.²⁴

Communication in MNOs can take different forms, from face-to-face communication where feasible and possible, however where geographical distance does not allow for face-to-face communication, technology enabled communication using virtual and/or electronic

²² Hofstede, G., 1997. *Cultures and Organizations: Software of the Mind*. New York: McGraw Hil, p. 4.

²³ He, Rufeï and Liu, Jianchao, 2010. *Barriers of Cross Cultural Communication in Multinational Firms: A Case Study of Swedish Company and its Subsidiary in China*, p. 4.

²⁴ Harris, Phillip R., Morgan, Robert T., Moran, Sarah V. 2004. *Managing cultural differences: Global leadership strategies for the 21st century*. 6th ed. Burlington, M.A: Elsevier Butterworth-Heinemann, p. 39.

methods.²⁵ These technology enabled methods include electronic mail, telephone, video-conferencing, online discussion forums, virtual Communities of Practice (CoP), etc. Most companies cannot afford the ongoing travel costs that are associated with cross-border communication, and would opt for these electronic and/or virtual methods, which are cheaper and as effective if utilized properly with care to avoid ambiguity in the messages communicated, while taking into consideration other related factors like verbal language, culture, body language, voice tone, etc., which may result in unintended, unwanted and unnecessary misconceptions, misinterpretations and misunderstandings.

2.5 Multinational Organizations as Learning Organizations

Multinational organizations are an important learning platform and are conducive for cross-border knowledge transfer. 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 continue to innovate and create new knowledge. Subsidiaries can play a strategic role in both the creation and diffusion of strategically important knowledge.²⁶ The changing business environment has made organizational knowledge a critical factor of sustainable competitive advantage. Knowledge transfer plays a critical role in the long-term existence of the organization. According to Marquardt and Reynolds, knowledge transfer takes place at three levels: the individual and group level, the organizational level, and the global level. Each of these levels expands the dimension of the knowledge related characteristics of multinational organizations. On a personal level, learning manifests itself as formal and informal education. Learning and updating skills and expertise provides opportunity for the individual expand support to the organization at an individual level.²⁷

Learning organizations are characterized by a population that continually expands their capacity to create desired results and where new and expansive patterns of thinking are nurtured.²⁸ When groups of individuals change their actions in support of organizational

²⁵ Solomon, Charlene M., Schell, Michael S. 2009. *Managing across culture: The seven keys to doing business with a global mindset*. New York: McGraw Hill, p. 269.

²⁶ Dobrai, K. et al. 2012. Knowledge transfer in multinational companies: evidence from Hungary (*Acta Polytechnica Hungarica*), vol. 9, no. 3, p. 150
(http://www.uni-obuda.hu/journal/Dobrai_Farkas_Karoliny_Poor_35.pdf)

²⁷ Marquardt, M.J. and Reynolds, A. 1994. *The global learning organization*.

²⁸ Senge, Peter, M. 1990. *The fifth discipline: the art and practice of learning organization*. New York: Doubleday/Currency, p. 3.

goals, the organization maintains or enhances its effectiveness. To be successful in a dynamic environment, organizations must acquire and interpret information before using or applying it to a problem or issue. This requires learning at the organizational and individual level. This in itself requires organizations to address learning at both the group and the individual level.²⁹ Focus on the individuals allows learning organizations to support the development of collective aspirations among their participants. This in turn supports individual participant's view of the organization as a whole group or team.

In the learning process of organizations operating internationally, critical factors are location, the distance between the involved units, political issues, the organizational culture of the company, characteristics of the strategy, structures and communication processes, and language and intercultural skills of the leaders.³⁰ Research usually shows a leading role of corporate headquarters in knowledge transfer of multinational organizations, which means that a vertical knowledge transfer is characteristic of these companies. Such research assumes that knowledge is transferred from the corporate headquarters to the subsidiaries, and that the subsidiary basically learns from the parent and therefore no important knowledge flows in the other direction. Recently more and more research has shown the strengthening role of subsidiaries in organizational knowledge transfer. They contribute not only to the vertical but also to the horizontal knowledge transfer if they own knowledge that is useful for both parent and other subsidiaries, and this is what multinational organizations should encourage.

These opportunities to innovate and create new knowledge are seen as the greatest when knowledge is tacit, when learning requires 'doing' (participatory form of learning), and when multinationals' overseas facilities are in the form of propriety distribution channels or research and development (R&D).³¹ They continue to argue that the realization of learning opportunities and the minimization of operating inefficiencies will depend on whether a multinational organization employs corporate-wide incentives that elicit innovations that are likely to be of value to the entire firm, and again on whether it effectively diffuses

²⁹ Smith, Mark K., 2001. Peter Senge and the Learning Organization. Informal Education (Infed.com): <http://www.infed.org/thinkers/senge.htm>.

³⁰ Dobrai, K. et al. 2012. Knowledge Transfer in Multinational Companies – Evidence from Hungary (*Acta Polytechnica Hungarica*). Vol. 9, no. 3, p. 151.

³¹ Lessard, Donald R and Amsden, Alice H. 1996. The multinational enterprise as a learning organization (Working Paper no. 3905), p. 1.
(<http://dspace.mit.edu/bitstream/handle/1721.1/2624/SWP-3905-36506182.pdf>)

innovations to other units within the firm. The learning process is contingent rather than deterministic. It depends not only on opportunities to learn but also on costly investments to exploit such opportunities.

A unique benefit that multinational organizations seek to gain is a richer learning experience about product, processes, and organizing principles due to their multinational reach.³² A major challenge becomes how they structure themselves to learn what is best for all their operating units and to diffuse what is learned in one part of the organization to other parts. As learning organizations, multinationals have to exploit a variety of circumstances in which they operate in order to generate innovations, employ corporate-wide mechanisms to create incentives for innovations that appear to be of greatest value to the firm as a whole, and efficiently diffuse these innovations to units other than those responsible for the innovation.³³

One of the hindrances to ceasing learning opportunities is ineffective management. An ineffective manager may be a prohibiting factor by preventing the multinational organization from perceiving learning opportunities, from specifying the correct site at which to exploit them, and from implementing policies country-wide related to their exploitation. Inter-unit links and networks are an important part of a learning process in which organizational units discover new opportunities and obtain new knowledge through interacting with one another, and responsibility should not only lie with management, but with the affected staff alike.

Organizational units are not identically capable of acquiring knowledge, and are therefore not equally efficient or effective learners. Their differing learning capabilities in turn have a significant impact on their innovation and performance. Learning has become one of the main sources of sustainable competitive advantage. Today's global challenges require the need for evolutionary learning and the empowerment of 'learners' - those individuals competent in generating new knowledge and processes as responses to changing environments. As a result of increased global competition, as well as the substantial amounts of shared information, firms are forced to increase their capacity to learn if they wish to function successfully within today's market.

³² The Economist. 1995

³³ Lessard, Donald R and Amsden, Alice H. 1996. The multinational enterprise as a learning organization (Working Paper no. 3905), p. 2.

2.6 Hindrances to IKM in MNCs

There are a number of known barriers to communication, information flows and knowledge sharing in multinational organizations in general, most of which have been discussed in lengths in the existing literature. For purposes of this study and the limitations it poses, it will not be possible to go through all of them in detail, only a few of the prominent ones have been selected and will be discussed in brief to give the reader an idea of how these hindrances play out in cross-border relationships, which is the focus of this study. These selected hindrances have also been identified in the survey questionnaire so as to get a better understanding of their cause and effect in multinational law firms. They are: distance, language, information technologies, and culture, all of which are discussed individually below.

Knowledge management requires a parallel focus on people, processes and technology.³⁴ O'Dell and Grayson³⁵ believe that though these three elements are critical, technology as a fundamental support element, only makes connection possible but does not make it happen. All elements play critical individual roles in this process, all of which contribute to the achievement of a unified goal, effective communication and seamless information sharing. Having the best technologies which people do not effectively and efficiently interact with, will render those technologies useless, and so is not providing the technology for people to interact and share. The middle ground here is to align the technologies to the people's needs and provide training on their use. Also if processes are not clearly outlined, communicated continuously and get the full buy in of the stakeholders, again the technology alone will not help the situation. Information and knowledge sharing are both coordinated processes, and cannot be implemented without technology. It is said that the bottlenecks in these processes in organizations are usually psychological and organizational (based on organizational factors),³⁶ while Riege refers to the 'triad of knowledge sharing barriers', classified into

³⁴ Tiwana, A. 2002. Knowledge management toolkit: Practical techniques for building a knowledge management system. 2nd ed. Saddle River, New Jersey: Prentice Hall.

³⁵ O'Dell, C.A. and Grayston, C.J. 1998. If only we knew what we knew: The transfer of internal knowledge and best practice: Free Press.

³⁶ Malhorta, Y. 2000. Knowledge management and virtual organizations. Hershey, P.A: IRM Press, p. 245-257.

individual, organizational, and technology barriers.³⁷ Some of these barriers are herewith outlined below:

2.6.1 Distance

Geographical distance is one element that characterizes MNCs, as they spread across geographical borders. Distance always brings barriers on communication, irrespective of the currently available technologies which most assume close the communication gap. Distance communication through the use of technologies can be affected by a number of factors which can result in misunderstands and misconceptions of the messages or information being conveyed. Language differences is one such factor, for instance where the official language of communication differs from one country office to another in an organization. Culture also plays a role in the interpretation of underlying perceived meanings and undertones, even when the virtual technologies are used. In the context of cross cultural management, sometimes a formal communication system can be more time-consuming and inefficient because of distance, i.e. posing difficulties related to time differences and impossible to communication face to face for instance.³⁸

Distance can lead to exclusiveness if not correctly managed. In an organization where there is less interaction between offices and people are left to be, they end up reverting back to usual one-firm ways of operating in silos. When this happens, people lose touch of the organizational goals and objectives. They may in the long run develop resistance to policies, procedures and processes compliance, excluding themselves from the rest and eventually not contributing to firm-wide developments plans. It is important therefore for managers to manage relationships first and foremost, encourage communication and collaboration, and keep all in the loop on individual, departmental, offices, and overall firm activities and directions. According to Bartlett and Ghoshal,³⁹ the extent to which a subsidiary is integrated with the parent company and shares in its overall strategy, goals and values is associated with practices like “extensive travel and transfer of managers between the headquarters and the subsidiary” and “joint-work in teams, task forces, and committees”. Communication has to be kept alive and going.

³⁷ Riege, A. 2005. Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management*. 9 (3), p. 18- 35.

³⁸ Munter, M. 1995. Cross-cultural communication for managers. *Business Horizons*, 36(3), pp. 69-80.

³⁹ Bartlett, C.A.; Ghoshal, S. 1989. *Managing Across Borders: The Transnational Solution*. Boston, MA.: Harvard Business School Press, p. 371.

2.6.2 Language

Language is the greatest mediator that allows people to relate and understand each other. Language allows people to communicate and interact with each other. It can be verbal and non-verbal. Verbal communication is through words, while non-verbal communication is through signals, expressions, and perceptions, whether intended or not. Non-verbal communication can be read through body language, facial expressions, gestures, eye contact, etc. These two types of communication can happen individually or simultaneously, and in the latter with possible confusing and contradictory interpretations. Dowling and Welch⁴⁰ argue that language fluency is important in the improvement of organizational effectiveness and the enhancement of negotiating abilities critical in conducting business. Misinterpretations occur even in situations where a common language is used. ‘Intercultural language’ is ambiguous.⁴¹ This implies one can never be completely certain of the exact message being conveyed by the other person, because language does not fully convey feelings.

De-hua and Hua contended that cross-cultural communication requires more than knowledge of language, but familiarity with non-verbal behavior, cultural practices, and values and customs.⁴² Culture plays a major role in communication, and remains an inherent part of who people are, no matter what language they are speaking at a particular moment. As part of the feasibility study leading to mergers or opening new subsidiaries/offices in other countries, multinational organizations need to gain full understanding of the countries’ cultural dynamics including lifestyles, in order to foresee possible verbal and non-verbal communication difficulties from the beginning, and be able to develop and implement culture sensitizing measures within the organization upfront.

2.6.3 Information and communication technologies

Technology is a fundamental support element for information sharing, a connection enabling element, and a vehicle through which information is collected, stored and shared. Some of the ICT related barriers to information sharing arise as a result of various factors. Lack of integration of systems and processes is one such factor. It is important to ensure that the same systems that speak to each other are used across all offices of an organization. The use of

⁴⁰ Dowling, P., & Welch, D. 2005. *International human resource management: Managing people in an international context*. Mason, OH: South-Western.

⁴¹ Scollon, R., Scollon, S. 2001. *Intercultural Communication: A discourse approach*. Blackwell Publishing.

⁴² De-hua, W., Hui, L. 2007. Nonverbal language in cross-cultural communication. *Sino-US English Teaching*, p. 66-70.

multiple different systems and processes that are not coordinated does not support the seamless flows of information and knowledge sharing, and in fact hinders it. MNCs find themselves having to deal with ICT issues like lack of technical support in the form of timeously response to reported IT problems, lack of maintenance of systems, lack of incompatibility between IT systems and processes, and inadequate or irrelevant IT training.⁴³ It is common to find the parent office well-resourced in terms of systems and ICT support, and the subsidiaries lacking. Sometimes the IT department will be set up at the parent office, with everyone in the other offices having to log calls for assistance to this one central Dept., and await responses, which can too long due to the number of calls in que, misunderstanding resulting from miscommunication or lack of knowledge of the IT jargon on the part of person requesting assistance, and internet connection problems.

There is sometimes an unrealistic assumption that certain systems are easy to work through and therefore users do not require training, an expectation placed by IT professionals on users to self-teach, by going through extensive and sometimes not so easily understandable manuals and online modules that take more of the users' time. Besides sometimes face-to-face training is the preferred effective method for some. Another side of the coin is when the training is offered and users do not avail themselves for such beneficial opportunities, which require persistence on the part of the trainer. Ongoing systems and processes training is important, it drives the maximum and efficient utilization of available technologies while improving individual and organizational performance.

2.6.4 Culture

An analysis of the responses of a study conducted by Hofstede between 1967 and 1973 on 116,00 IBM employees revealed systematic cultural differences across four dimensions, which are power distance, individualism/collectivism, uncertainty avoidance, and masculinity/femininity. Power distance refers to the degree to which a culture accepts and reinforces the fact that power is distributed unevenly in an organization, either in the form of low power or high power. High power distance cultures recognize status and are accepting of superiority, one may even say they respect hierarchy. Low power cultures are less comfortable with organizational rank or social class and are characterized by more participation in decision-making and a frequent disregard of hierarchical level. Individualist cultures display

⁴³ Barriers in information sharing: Factors that contribute to barriers in information sharing from selected literature review (<http://www.ukessays.co.uk/essays/international-business/barriers-in-information-sharing.php>).

preference for the individual in contrast to the group, as opposed to collectivist cultures which value the overall good of and show loyalty to the group. High levels of uncertainty cultures prefer structure with predictable risk levels. This culture is characterized by bureaucratic management styles. Low levels of uncertainty cultures on the other favors risk and innovation, and are acceptable of different views leading to favorable change. Masculine cultures are characterized male associated roles of dominance, i.e. achievement, assertiveness, competition and material success. In contrast, feminine cultures focus on soft values, i.e. personal relationships, compassion, and personal-work life balance.⁴⁴

Undoubtedly culture is one of the factors that can hinder information sharing in all organizations. Intercultural communication presents a new challenge for managers. As Hofstede states, culture is the “software of mind” that can influence people’s patterns of thinking and behaving. In addition to countries’ legislative and regulatory stipulations prohibiting organizations from sharing certain information externally and across borders, i.e. personal data, of which most of the customers’ information is, an organizational culture that is characterized by lack of leadership and managerial direction, lack of transparent rewards and recognition systems for good performance and innovation, unsupportive corporate culture, shortage of appropriate infrastructure, etc. may further exaggerate the impacts on communication and information sharing.

2.7 Multinational Law Firms

A law firm can be understood as a social community specializing in the effective and efficient creation and delivery of legal knowledge in the form of legal services to clients.⁴⁵ This legal knowledge is applied in the form of services to client seeking representation in the courts of law or in litigation and arbitration proceedings, or simply in the form of legal advice. Many corporate law firms represent large corporate enterprises, or organizations, or entrepreneurs with a need for continuous and specialized legal services that can only be supplied by a team of lawyers.⁴⁶ In this case the clients are customers of the firm rather than just the customers of a particular lawyer. Law is a knowledge-based profession and lawyers can therefore be referred to as knowledge workers. They are professionals who have gained

⁴⁴ Hofstede, G., 1997. *Cultures and Organizations: Software of the Mind*. New York, p. 4.

⁴⁵ Barnes, Stuart J. 2002. *Knowledge Management Systems: Theory and Practice*. London: Thomson Learning, p. 85.

⁴⁶ Gottschalk, Petter. 2008. *Knowledge Management in Law Firms*. IGI Global, p. 1818. (<http://www.irma-international.org/viewtitle/25223/>)

knowledge through formal education (explicit) and through learning on the job (tacit). Most professional service firms use partnership form of organization. In a partnership framework, those who are highly effective in using and applying knowledge are eventually rewarded with a partner status, and own shares in the firm.

A law firm is an organization whose key mission is to collect, synthesize and deliver or apply information and knowledge. It is a learning organization in the sense that lawyers are continually learning on the job to update themselves with changes in the law, learn from other experienced lawyers in various specialized areas of law to gain more insight and grow their knowledge base while creating new knowledge, and take on new complicated matters and learn from the experiences so as to best represent the firm's clients. According to Managing Partner,⁴⁷ there are three main recognised operational paradigms that underpin large law firms, and these are transnational, multi-national and firm perspective. Transnational law firms eliminate structural divisions that impose artificial geographical barriers. They expect cross-border or overseas countries to contribute actively to the development of firm-wide capabilities, to develop knowledge and to share it with worldwide locations, and use both centralized and decentralized methods of promoting interdependence and specialization of units. The transnational approach may be the ideal way for a firm to think globally and act locally. This type of firm reflects a geocentric attitude. Multi-domestic/national law firms decentralize management and other decisions to the local country. They do not attempt to replicate domestic successes by managing foreign operations from their home country. Instead, local partners manage the business, and strategies are tailored to the country's unique characteristics. This type of globalization reflects a polycentric attitude. Multi-domestic law firms are large firms that operate predominantly along multi-domestic lines but try to exercise centralized control in all other respects. Management, governance and policy in such firms are relatively centralized.

While in the past it was usually the manufacturing organizations that set offices beyond borders, in recent years this practice began to grow among law firms as well. In South Africa the globalization of law firms gained prominence around 2000.⁴⁸ The purpose was mainly to have representation in various key strategic countries that the firm anticipate favourable

⁴⁷ Managing Partner, April, 2014.

⁴⁸ Jonathan Klaaren. 2016. African corporate lawyering and globalization, *International Journal of the Legal Profession*. 22(2); p. 226-242.

business opportunities. The approach differs from one law firm to another, depending on the company's strategy. In the South African context, there are international/overseas law firms that have merged with local firms, and in this case the local firm becomes a branch or partner office and take up the parent company's name. There are those local firms that opt for independence, and only officially partner with other law firms in the region as the mother firm, but maintain selected international, regional and national working relations, with which they will continuously refer matters to each other. Other firms simply opt to remain localized, and they will have multiple branch offices within the country, with selected international, regional and national working relations. The three approaches above, differently dictates the scope within which a law firm operates. Each context has its benefits and challenges, and it is up to the firm itself to ensure that it capitalizes on the benefits while minimizing the challenges and keep them manageable.

Law firms collect, synthesize and deliver information. They are information intensive organizations in every way. In their daily operations, they deal with primary legal information sources as well as secondary sources. Primary sources are the likes of statutes and law reports, which are the official legal sources by the governments or the courts, in the form of acts, bills, government notices, case law/court decisions, etc. Secondary sources are legal periodicals, commentaries, books, and articles from specialized law publications, etc., which are in essence supportive information on law but are not necessarily law themselves. Other types of documentation in law firms include client files, practice memos and directives, billing information, policies and procedure manuals, training documents, competitor information, job descriptions/task lists, personnel information, client information, company records, matter documentation, etc., all of are transmitted in a variety of information modes such as e-mail, voicemail, faxes, e-calendars, repositories, intranet and internets, word processing (document management) systems, and many other various modes. The kind of information that flows in law firms is usually internal and sometimes sensitive, hence the need to prioritize on information security in all of the firm's information processes. Law firm IKM requires fully integrated systems, with capabilities and built-in security measures for the capturing, storage, retrieval and circulation of its information and knowledge assets.

2.8 Law as a Knowledge-Intensive Profession

The notion that we have entered a new era in economic development where knowledge and information are the primary sources of value creation is widely established in the management literature. Law firms remain one of the most information intensive professional

environments. Without information and information management systems, they simply will cease to exist in today's competitive business world. Information and knowledge are the basis of operations in every law firm. Law firms process large amounts of information, i.e. legislation, case law, client data, billing records, just to name a few. This information is analysed, creating new legal knowledge in the process, which is applied to client's unique problems to provide a solution, or simply shared with stakeholders. The main purpose of new knowledge creation is to apply it and share it, so it can be re-applied in similar situations to give solutions for as long as that knowledge is still relevant and valid, after which it gets updated, modified and recreated in line with new needs.

The growing awareness of knowledge and its value in organizations from the last decade of the 20th century, coupled with the changes in the business environment, has resulted in progressive law firms investigating alternative ways of providing cost-efficient services that may sharpen their competitiveness and broaden their influence within the legal industry and the global economy.⁴⁹ One of the critical skills that lawyers need to possess is legal research. This is a skill that defines lawyers in relation to information. Legal research should not be considered only as information seeking, rather as a combination of a variety of information and knowledge related activities conducted on behalf of and for the benefit of the client. Technology plays a critical role in managing the vast amounts of information that is used, created, shared, modified, reused, etc. in law firms. Today's multinational law firms invest in and employ the best possible information and knowledge management technologies that enhance the storage, security, retrieval, use, and sharing of information and knowledge effectively and efficiently. Information that was traditionally in print format only, is now available in electronic formats as well, prompting lawyers to keep advancing their information searching skills, so as to get just the required information quicker and save valuable time.

The term "knowledge worker" was coined by Peter Drucker⁵⁰ to describe someone who adds value by processing existing information to create new information that could be used to define and solve problems. Lawyers are competent in general legal principles and procedures and in the substantive and procedural aspects of the law, and they have the ability to analyse

⁴⁹ Fombad, M.C., Boon, J.A., Bothma, T.J.A. 2009. Strategies for knowledge management in law firms in Botswana, *South African Journal of Information Management*. vol. 11(2), p. 406.

⁵⁰ Drucker, Peter F., 1999. Knowledge-Worker Productivity: The Biggest Challenge. *California Review Management*, 41(2), p. 78-94.

and provide solutions to legal problems. Lawyers are knowledge workers in the sense that they are professionals who have gained knowledge through formal education (explicit) and through learning on the job (tacit). After completing their formal training and meeting the requirements to be admitted as professional lawyers, they start their careers as associates in law. In this role, they continue to learn and gain significant tacit knowledge through learning by doing.

As the amount of information needed to practice law increases, so is the need for IKM systems. Because lawyers are limited in the amount of information they can process, computers and technology are necessary to survive and continue functioning. Hence, technology has allowed the knowledge worker to evolve and processes a greater amount of information than ever before, helping to address the inevitable disorder and chaos leading to information overload. Lawyers who effectively use knowledge management tools will have a significant edge over those who do not. This will become increasingly important as technology continues to improve, knocking down traditional geographic barriers and creating competition.⁵¹ In almost everything they do on a daily basis, lawyers create and share knowledge, and it is this nature of their job that makes them knowledge workers in an information intensive environment.

2.9 Information and knowledge sharing in law firms

From the literature review above, six thematic issues of critical importance and implication for this study were deducted and will be individually discussed further in the following paragraphs. These themes form the focus of this study, and the structure for the follow up chapters. They are: (i) the use of information devices, resources and systems; (ii) the problems and hindrances to information flows and knowledge sharing; (iii) information security; (iv) lawyers' training needs; (v) lawyers' attitudes to communication and information technologies; and (vi) management's role in information and knowledge management.

2.9.1 The use of information devices, resources and systems

While the technology around the legal world advances at an exponential rate, the technology within the legal world, especially as it relates to lawyering, i.e. providing legal services as opposed to running a law business is much slower. This is due to the fact that lawyers are

⁵¹ Coomer, Jason, Buehler, Willie, and Binder, Bob, 2005. The Attorney as Knowledge Worker. *Texas Bar Journal*, 68 (9), October, p. 795.

generally averse to risk.⁵² Lawyering is a service based profession, that needs to carry some level of assurance and guarantee on the part of the client, that the advice or outcome of the service provided will actually accomplish the intended purpose, and in a manner that will not increase the risk of breaching this important obligation. When it comes to new technological advancements, in the legal profession it is a fact that these will be analysed and reviewed thoroughly before they could be implemented. Lawyers tend to stick to what they know in order to avoid risks. Janis states that it is this professional obligation to not take risks that creates tension between the risk aversion in the legal profession and the ever-changing expectations and demands of legal service consumers, the tension which is measured as the difference in the rate of adoption of new technology by legal service consumers and the rate of adoption of new technology by legal service providers. Lawyers need to enhance their productivity, strategic insight and impact, and to do this they need to be able to perform from anywhere at any time on a range of personal devices currently available and those that could emerge over time.⁵³

With the introduction of Artificial Intelligence (AI), which the Merriam-Webster⁵⁴ defines as ‘an area of computer science that deals with giving machines the ability to seem like they have human intelligence or the power of a machine to copy intelligent human behaviour’, more repetitive tasks and processes in most professions, especially in the industrial environments, have been taken over by machines, i.e. motor vehicle production, packaging, etc. However at this stage of technological development, it may not be possible for machines to successfully replace the lawyer in the provision of professional legal services, which require analytical skills. This does not however mean it is not a possibility looking into the future. Already there are other ways wherein some lower level of AI has been implemented in the legal field, i.e. in the form of prescriptive coding and electronic discovery. This lower level of AI enables the application of intelligent algorithms to find information based on concepts and key words. Janis explains predictive coding as a process whereby a machine

⁵² Janis, Blair. 2014. How Technology Is Changing the Practice of Law. *GP Solo*, 31(3), May/June, p. 10 (http://www.americanbar.org/content/dam/aba/publications/gp_solo_magazine/2014_may_june/gpsolo_may_june_2014_v31n03.authcheckdam.pdf).

⁵³ International Legal Technology Association. 2014. Legal technology future horizons: Strategic imperatives for the law firm of the future. Texas; ILTA, p. 6.

⁵⁴ Merriam-Webster Dictionary - <http://www.merriam-webster.com/dictionary/artificial%20intelligence>. (Accessed on 15 October 2016).

learns from watching human behaviour and then applies what it learns, i.e. the ability of certain websites or search engines to seem to know what the user is looking for, based on previous search behaviours, i.e. Google, Amazon, etc.

According to the Deloitte report,⁵⁵ automation opportunities have grown in the legal sector in the United Kingdom (UK). The report explains that computers are used more for specific and clearly defined legal tasks for the delivery of efficient services, and that some firms are already making use of virtual assistants to help clients and support in-house functions. Lower skilled jobs such as legal secretary are being lost to automation, while high-skilled IT related jobs are being created to develop and manage technologies. The report also states that some law firms are already making use of their large volumes of contract information and data to create value for the businesses using analytics. Whichever way one looks at it, it is evident that all professions are evolving, driven by the evolving needs of their customers. The legal professionals seems to have come to understand the value that technologies can deliver in their work environment, and have begun to embrace and take advantage of the vast possibilities it presents to employers and employees alike.

2.9.2 Barriers to information flows and knowledge sharing

In the literature review in this chapter, a number of barriers to information flows were identified and discussed generally in the context of MNCs. Here, the aim is to look closely at how these barriers and others that might only be applicable in the legal environment, impact on information flows and sharing in law firms specifically. One such barrier which is law firms-specific is the information barriers, traditionally referred to as the ‘Chinese walls’. Information barriers are a means of restricting the flow of information between lawyers within the same firm to deal with the risks of potential duty-duty conflicts, and to protect each client’s confidential information while ensuring compliance with the lawyers’ fiduciary duties.⁵⁶ Dallen further explains that information barriers are commonly applied in Australian law firms in cases where a firm acts for multiple clients in the same or related matter, and where a firm acts against a former client. They preclude the passing of information and the possession of one part of the business to other parts of the business. This need to withhold

⁵⁵ Deloitte. 2016. Developing legal talent: Stepping into the future law firm, p. 4 –

<http://www2.deloitte.com/content/dam/Deloitte/uk/Documents/audit/deloitte-uk-developing-legal-talent-2016.pdf> (Accessed 15 October 2016).

⁵⁶ Dallen, Ian. 2014. The rise of the information barrier: managing legal conflicts within commercial law firms, *Australian Law Journal*. 88:431.

information from peers/teams/offices in the same firm, has the potential to conflicts, mistrust, and may damage internal working relations, albeit it being beneficial to the clients. Where a firm preaches openness and a culture of sharing with and learning from each other, this practice may be seen to be in complete contradiction to this goal.

As decentralized organizations where several individuals are responsible for making decisions and running the business, law firms are prone to the formation of separate units that disintegrated from the whole. If left to be, people in these units tend to build their own identity and culture of reliance only on those within their group, sometimes resulting in the reluctance to seek information or assistance outside of their unit. As hierarchical organizations, status gaps in law firms may cause some people to not be willing to share information or expertise with those holding a different status. A law firm that promotes a culture of self-reliance may instil in its employees, the reluctance to seek information or assistance even when faced with a difficult situation, for fear of being seen as not driven, innovative, or intelligent enough to handle their business.

Competitive environments like law firms can lead employees to keep information to themselves and not share to retain a competitive advantage over their peers, while for others it might be a matter of wanting to retain power and remain valued within the firm. Also where individual achievement is compensated as opposed to team achievement, employees tend to focus on individual targets to get performance recognition at the expense of overall team performance. Sometimes due to work loads, clients demands, and perhaps the added responsibilities that come with overall firm growth all of which leave no time to spare, information sharing may become the least of the lawyers' priority, leading to information flow blockages or information hoarding. Geographic distance in the case of multinational law firms, also pose a barrier to finding information that is not physically housed in one's vicinity. Though the information might still be within the firm in another office perhaps, a number of barriers might deter people from getting to that information, i.e. cultural differences, language, lack of will to or inability to assist from lawyers in the other office, etc.

Some legal knowledge is by nature not very easy to transfer, more so where distance is already a barrier on its own. While explicit knowledge is easy to transfer, tacit knowledge is not. The knowledge holder might not have the skills to transfer the knowledge, they might not have to will to share with those they do not know well nor have good working relations with. The quality of relationships can have an impact on the knowledge sharing process. It is most unlikely that there would be seamless information transfer between lawyers in different

country offices of a firm, practising in different jurisdictions and governed by and employing the application different laws in their daily work, coming from different cultural backgrounds, with different beliefs, norms, and values, etc. Where there is this level of differences, there is bound to be communication problems that will hinder sharing.

2.9.3 Information security

The legal profession is based on information, which is the essence and livelihood of the legal business. This places the role of lawyers in safeguarding their own information and the clients' as a prime responsibility. When most of the information in the custody of law firms was mostly in print, the information security risks were much lower then. Looking at the development of information and communication technologies today, it is evident the risks have now intensified vastly and this requires lawyers to be more vigilant in protecting their and their clients' information, in all formats. According to Heyink,⁵⁷ information security aims to protect the confidentiality, integrity and availability of information, ensuring it is accessible only to the authorised, safeguarding its accuracy and completeness, and ensuring that the authorised have access to information systems required to process this information as and when needed.

There are technologies which can be used to enhance information security, the examples of which are anti-virus software, intrusion detection devices and automatic backup applications. Corporate cyber-attack is on the rise and seems to grow every day, and the world's largest law firms are also being confronted by similar threats. Some of the cyber security threats include data volumes and their location, employee errors, third-party vendors, technology glitches, hackers/phishers, etc. As an acceptable practice and an expectation in law firms, anytime-anywhere access which means working from different devices and locations, including mobile phones using the latest technologies to access the firm's systems remotely, creates a security concern, given the high volumes of intellectual property and sensitive data held. Law firms are therefore challenged to protect this data from all forms of malicious behaviour, to avoid reputational damage and lost consumer trust and confidence.

The responsibility to protect and maintain print and electronic information in law firms should be a combined effort from every lawyer and each department within the firm. The ability to manage the new security risks brought by new technologies is paramount to the

⁵⁷ Heyink, Mark. 2011. Information Security Guidelines for Law Firms: LSSA Guidelines. Law Society of South Africa : Version 1.0. p. 5

long-term health of an organization. Huge amounts of information and knowledge in law firms are stored in the Document Management System (DMS), e-mail, practice-specific systems and other repositories, such as file shares. As the volume and diversity of the data increases, it becomes difficult for law firms to manage. The solution could be big data technologies. Big data is defined as high-volume, high-velocity and high-variety information assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision making.⁵⁸ This kind of data becomes difficult to manipulate and mine using traditional approaches and tools, however big data technologies enables characterization and classification of large unstructured data. Classified data reduces information security risks, and allows lawyers to easily search and reliably find relevant information quickly.

2.9.4 Lawyers' training needs

The need for technology competency is critical for lawyers, and it is in the interest of law firms to ensure that their lawyers are more proficient with technology. It has been stressed enough that the legal profession cannot exist without information, which is driven by ICTs. Technology capture, store, and transmit information. Technology enables access. As users of information, lawyers cannot interact with the ICTs without proper, meaningful and intelligent training. Currently what happens in most law firms is that, as lawyers resume work in a new law firm, they go through an intensive and extensive induction programme for a few days, about 3 to 5 days. In this training, they engage with a number of trainers on different aspects. They will go through practice specific training, IT, library, KM, operations, financial, human resources, and many others that relates to their position of employment, and most of which they are not going to apply immediately. Soon after the training they will be under pressure to start billing. There will not be time to attend any further training, nor review what they have been taught during their induction.

Once the real work has started, there is just no way in which trainers can compete with clients for the lawyers' time. Training is not at the top of the lawyers' to-do-lists and trainers need to acknowledge that. Most feel they do not need IT training, while others will only pay lip service to its importance while not acting on their preaching. By focusing on billable time and sacrificing training time, lawyers lose more valuable time by fumbling through unfamiliar resources, systems and new technologies to get information. Lawyers need to leverage

⁵⁸ Gartner - <http://www.gartner.com/it-glossary/big-data/>. (Accessed 15 October.2016)

automation to be efficient and productive, after all the value of technologies in a work environment is measured by increases in the individuals' and the organization's efficiency and productivity. Whenever new technology is introduced in a firm, this should automatically be immediately followed by training, so it can bring the intended rewards and value to the individual employees' work and to the firm alike.

Given the time constraints and the lawyers' attitudes to training, trainers need to employ blended learning delivery methods to attract attendance and to ensure skills transfer and absorption. Training does not have to always be conducted in a training room requiring both the trainer and the trainees to be physically present. Thanks to the various blended learning delivery methods, training can now be delivered in a number of flexible ways like webinars, coaching, on-line learning or e-learning, just-in-time support, personal training, and many others. Trainers need to be creative when they develop training material, with consideration for time constraints and the need for convenience. The shorter and to the point each training session or module is, the more the participation will be. Effective needs based training is the best.

Lawyers have different training preferences. While group training in a training room might not appeal to some, it might appeal to others. In group training, ideas, questions and discussions all add up to a learning process. Others might prefer one-on-one training sessions, where focus can only be on skills they need rather than a training programme to accommodate other attendees. There are options to conduct training, i.e. in person, online, or by telephone, video, WebEx, etc., to which lawyers preferences differ. While going through a manual might appeal to some, others might prefer interactive electronic manuals or modules that give them control to select only what they need. Quick on-demand context specific training might be a preference for others, combining working and learning and saving time.

2.9.5 Lawyers' attitudes to ICTs

According to Carbonell,⁵⁹ lawyers are generally very reluctant to use new technologies. They are rather slow in catching up with technological developments already advanced in other professions. Carbonell attributes this slow pace reaction to the lack of open innovation spirit in the legal profession. Staudt believes that a more objective view of lawyers demonstrates that they will adopt effective technology with enthusiasm when the tools are appropriate for the professional tasks that they face, and that they are rightly reluctant to abandon the

⁵⁹ Carbonell, M. 2011. Letters to a law student. Mexico: Porrúa.

personal working habits and tools that produced their successes.⁶⁰ Staudt continue to illustrate historical evidence where law firms adopted the use of technical tools to improve staff efficiencies and office operations at the same time as other professions, i.e. photocopiers, fax machines, accounting software, etc. Throughout history, lawyers also enthusiastically adopted effective technology such as word processing technologies in the 1980s, and e-mail and internet communications around the 1990s. This shows that lawyers understand the need for efficiency in their work and therefore have been trailing along in the adoption and application of technologies in their day-to-day work.

Law firms are pushed by the demands placed on them by their clients' needs to use more sophisticated online legal information systems to improve their service provision and gain a competitive advantage in their field in order to retain and to attract business. A lawyer's ability to interact with these systems, by way of conducting legal information research and retrieving only the information required for application on the matter at hand with the least possible delays, is what sets lawyers apart. Knowing the what, where, how of legal research is a strength that each lawyer has to master if they are to function efficiently and effectively. Defined loosely, legal information research is a process of accessing and searching information resources (most of which are in electronic format) and systems in order to obtain relevant information for application in the practice of law. The main purpose of conducting legal research is the very essence of the legal profession, to find a solution to a legal problem. Without the technology, this process can take most of a lawyer's time. A number of legal information databases are now available to law firms world-wide to aid in the execution of the lawyers' responsibilities, and law firms have invested financially in these databases, with lawyers embracing and increasingly relying on them for their information needs.

In most cases lawyers have no choice but to adapt to new technologies to aid them in doing their jobs better. The benefits brought by the use of technologies in law firms are immeasurable. Technology saves time. Some tasks such as billing, accounting, documents filling, legal research, communication, etc. would still be taking hours out of a lawyer's core time reserved for legal practice if it was not for the introduction of technologies. Cloud-based data storage capabilities provide a higher level of information governance and protection than most law firms can provide on their own. Technology is cost effective, it frees up time spent

⁶⁰ Staudt, Ronald W. 2003. Perspectives on Knowledge Management In law firms: White Paper. LexisNexis: Miamisburg, OH.

on managing paper related tasks, it provides improved monitoring and oversight of processes and activities, and allows lawyers to focus on important aspects that brings in revenue, providing legal advice. It provides anywhere-anytime access to information, and provides opportunities to automate the routine tasks.

2.9.6 Management's role in IKM

The process of diffusion and acceptance of new ideas about knowledge that is articulated into a new knowledge management programme is far more complex and involves all levels of management in an organization.⁶¹ Driving knowledge management cannot be the responsibility of the KM Manager and the respective lawyers alone. It needs the support of, and strategic direction and endorsement from senior management. Management should provide IKM leadership and strategy. Nonaka and Takeuchi articulate that senior management provides the vision, the frontline looks at reality, and middle management closes the gap between dream and reality.⁶² Usually if IKM initiatives are left to the lawyers to make a choice as to whether to participate or not, or the extent to which they want to get involved, usually there would be a number of reasons why they can't participate, and understandably so, mostly it will be an issue of time. Lack of time as a barrier to participation can be addressed by a clearly articulated IKM strategy, with clear and measurable deliverables, which have been communicated throughout the firm and received the lawyers' support and commitment.

Other ways in which management can play a role in IKM initiatives, could be encouraging participation, by way of introducing incentive systems to motivate participators. Several studies have shown that rewards and incentives have a significant positive impact on knowledge sharing. While some employees will willingly share information and knowledge and get satisfaction from recognition by their peers, some believe in the tangible rewards and incentives such as prizes, bonuses, awards, etc. The ultimate goal is for a firm to cultivate a culture of sharing, which is something that cannot be forced on employees, hence the need for rewards in some instances. With knowledge sharing being a team effort, both individual based and team based rewards should be considered, to motivate both individual and

⁶¹ Kok, J.A. Role of leadership in the management of corporate knowledge, *South African Journal of Information Management*. 5(3) - www.sajim.co.za/index.php/SAJIM/article/download/363/353 (Accessed on 16 October 2016).

⁶² Nonaka, I. and Takeuchi, H. 1995. *The knowledge creating company: how Japanese companies create the dynamics of innovation*. Oxford University Press: New York.

collaborative sharing. Rewards do not have to be only in monetary terms. Money is not always everything in a work environment. Some sort of mention in the company newsletter for example, might just be as motivating. Law firms need to provide a mixture of suitable incentives systems, to incite participation from all levels and age groups. Terret⁶³ believes that a law firm whose incentive structure does not encourage knowledge sharing may lose having a knowledge marketplace for its lawyers to tap in. Fostering a knowledge sharing culture is a long term process. To keep this process alive, law firms need to explore all the available possibilities, from the creation of Communities of Practice to mentorship programmes. Management needs to encourage a culture of dependency within and across departments and offices. It is management's role to lead by example in developing and deploying information and knowledge sharing, not only promote it verbally but also by their behaviours and actions.

2.10 Conclusion

Multinational organizations, including multinational law firms, face diverse and complex operational and organizational problems that are not prevalent in single country organizations. The review of the literature above has brought to light the fact that when it comes to information and knowledge management, it can never be a matter of duplicating what worked elsewhere and applying it in another organization. A one-size fits all approach can never be the correct approach for these dynamic organizations which are in a state of flux and continually re-invent themselves to maintain their relevance in the global economy. As learning organizations, multinational law firms have an obligation to drive, encourage and support open communication, and seamless information and knowledge sharing. They need to put in place relevant policies and processes that support these initiatives, and acquire and maintain systems and technologies that will assist in bridging geographic distances and enable collaboration and the coordination of organizational processes. Hindrances to communication, information sharing and knowledge transfer need to be addressed at every level in an organizations and corrective measures be out in place to do away with separation between units, rigid office cultures that remain closed and unacceptable to growth and change, and the self-sufficiency/dependency attitudes that do not take into account overall firm goals and strategies.

⁶³ Terrett, A. 1998. Knowledge Management and the law firm, *Journal of Knowledge Management*. 2(1): p. 67-76.

Chapter 3

The Design of the Case Study

3.1 Introduction

Following up on the previous chapter which provided the theoretical review, this chapter outlines the methodology used in this study, which is a mixture of qualitative and quantitative data collection methods. These two methods enabled the researcher to collect insightful, in-depth and detailed data about information flows and the knowledge sharing culture within the firm under study, as well as the value and use of different IKM systems in addressing possible barriers in these processes. The research design was built around the rationale of this study as detailed in Chapter 1, and the theoretical literature review discussed in Chapter 2. Chapter 3 explores the methodology used in this study, explains the data collection instruments and the problems and limitations experienced during this study, and concludes with how the issue of bias was addressed in this research.

3.2 Methodology

The ultimate goal of every scientific research is the verification of existing knowledge or the creation of new knowledge. Scientific research is conducted by employing one or both of the research paradigms, namely the quantitative and/or the qualitative paradigm. The quantitative approach is deductive research and its purpose is to test the hypotheses and the theory through observed data, while the qualitative approach is inductive research and its purpose is to generate new hypotheses and grounded theory from empirical data or on the basis of practical application knowledge.⁶⁴ An alternative to quantitative and the qualitative paradigms is the mixed approach which is a combination of the two and is considered to result in complementary strengths and non-overlapping weaknesses, in the sense that it draws the combined good qualities from both methods of research to compliment the bad qualities inherent in each. A combination of quantitative and qualitative approaches provides a better understanding of research problems than either of the approaches will on its own. Creswell and Plano Clark define the mixed method of research as “a methodology which involves

⁶⁴ Bryman, A. 2001. Social research methods. Oxford: Oxford University Press, p. 159-160.

philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative data in a single study or series of studies”⁶⁵.

For this study the researcher used the mixed method of research, using both qualitative and quantitative approaches, firstly in an effort to eliminate possible bias associated with the subjective nature of the qualitative method, and secondly to collect detailed relevant data as a result of the complimentary qualities of both these methods. The choice of method was also guided by the nature of the study itself, which warranted the cross-checking of the findings of the study and quantitative data collected on the IKM sources and systems in use and the hindrances to information flows and sharing with the results of the qualitative research in order to deduct meaningful conclusions on which old knowledge is tested and/or new knowledge is created. The deductive approach was used to analyze the status quo in the law firm under study using the empirical data collected in addition to theory based research to test the hypotheses, and finally analyze the findings to draw conclusions on that which the study has confirmed and/or revealed.

The researcher acknowledges that the use of the mixed approach does completely take away the limitations posed by the qualitative and the quantitative methods, but simply minimize them. For instance with the quantitative approach, the size of the sample for the study is critical as it determines whether the study was representative enough or not, and ultimately whether the results are quantifiable. This approach can be prone to generalized assumptions in findings, especially in instances where the sample is not satisfactorily representative. However this study was conducted with all these possible limitations in mind and every effort was taken to successfully minimize them to an acceptable level that will not jeopardize the quality and the reliability of the research. The sample was satisfactorily representative in terms of numbers, jurisdictions, and employee position, ages, years of employment, etc. The respondents were a good mix of the demographics within this multinational law firm. Observations by the researcher, literature review, survey questionnaires, and selective clarity seeking interviews with specific individuals were all used as investigative tools to gather the breadth and depth of data and information that was needed to conduct and compile this study.

⁶⁵ Creswell, J.W. and Plano Clark, V.L. (2007) *Designing and Conducting Mixed Methods Research*, Sage, Thousand Oaks, California, p. 5.

3.3 The sample

After obtaining the necessary ethical and organizational clearance, the study was conducted in a multinational large law firm with six offices in four African countries. Three of the offices are in South Africa, in Cape Town, Durban and Johannesburg. The rest of the offices are in Kenya, Madagascar and Uganda. At the time of the study, there was an office in Botswana to which the survey was also circulated, however this office later pulled out of the partnership. For purposes of this study, the results of the responses from the Botswana office will be taken into consideration. The sample for this study is all lawyers in all the offices mentioned above, including Botswana.

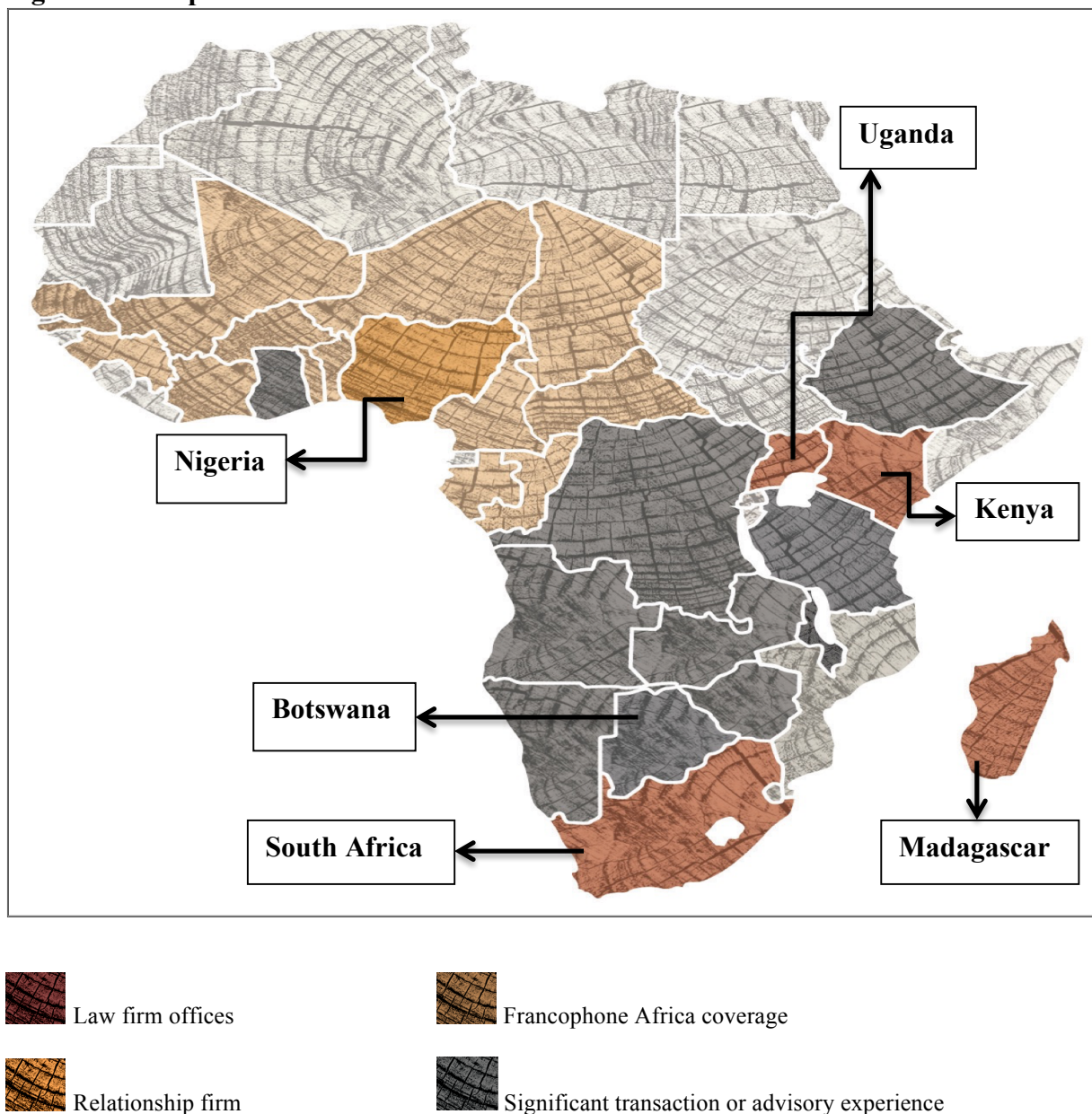
The survey went out to a total of 491 respondents made up of Candidate Attorneys/Pupils, Associates, Senior Associates, Directors/Partners and Counsel/Consultants. Out of the 491, 142 completed the survey, 343 opened the survey but did not complete it, and the remaining 6 did not open it. This is a 29% response rate of the total population. The target sample was 100, however the survey had to be sent to all lawyers in order to get a good sample that represents all groups in all offices, so that the researcher can get a full office-wide overview to interpret and draw conclusions from. The map in *Figure 3.1* below, gives a geographical presence of the firm under study (noting that the Botswana office's partnership status ceased on 01 August 2016), its indirect business coverage across the continent through, and its other business relationships and advisory partnerships. The firm works closely with a leading law firm in Nigeria and has strong relationships with a number of renowned law firms across the rest of Africa.

The firm provides coverage of francophone OHADA (Organisation pour l'Harmonisation en Afrique du Droit des Affaires) jurisdictions across the continent from its Madagascar office, including Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo Republic, Democratic Republic of Congo, Gabon, Guinea, Ivory Coast, Mali, Mauritania, Niger, Rwanda, Senegal and Togo, and is a representative of Lex Mundi, a global association, with more than 160 independent law firms in all the major centers across the globe. This association gives the firm access to the best firms in each jurisdiction represented, for possible collaboration on cross-border matters and clients referrals, enabling the firm to continually build clientele and forge new working relationships. The law firm is one of the biggest in SA, and therefore a perfect sample for this study.

The firm offer legal services to various sectors of business (i.e. infrastructure, mining, oil and gas, pharmaceuticals and healthcare, private equity, etc.) in various areas of law, which

include competition; dispute resolution; employment and benefits; finance; governance, compliance and investigations; intellectual property; mergers and acquisitions; public law; real estate; shipping; and tax. This is an indication of the size of the law firm in terms of its staff and clients and the diverse practice knowledge and expertise that its lawyers possess, and therefore an indication of the vast amounts of information that flows into and out of the firm, as well as the level of knowledge that needs to be managed, all leading to the importance of the systems in place and the value add that this systems provide in capturing, storing, and circulating these intellectual assets to relevant people, with great consideration for information theft as a threat, given the confidential and private nature of the information held in law firms.

Figure 3.1: Map of law firm's offices



3.4 Delivering the survey

The questionnaire was compiled on and distributed from the University of Stellenbosch's Checkbox Survey Software. The pre-survey letter was sent by the researcher to the respondents on 04 July 2016. The letter explained the purpose of the study and addressed the issue of confidentiality of respondents. As one of the conditions on which ethical clearance was granted, the names of the individual respondents and that of the firm are to be kept confidential.

The survey was tested and released on 05 July 2016, with follow up reminders on 15 July and 01 August 2016 and again on 02 August sent to the respondents who did not complete the survey appealing to them to do so. A few technical bugs were reported by the respondents with some of the questions not allowing more than one selection, however these were resolved in the first two days of release of the survey and the responses started coming through without any further glitches.

3.5 The questionnaire

Firstly, a pre-survey analysis of the information and knowledge management resources and systems in the firm was conducted by the researcher. This was done to identifying the resources and systems currently in use, and their levels of use and users so as to establish their value proposition within the firm and the demand for them. A pre-survey assessment was conducted to verify what resources are available to which offices and which are not. An analysis of various existing internal policies and strategy documents were reviewed in the process, and the lack of certain such critical documents identified. The researcher then conducted observations, and talked informally to a few key relevant individuals within the firm to assess perceptions and gather more insight into general firm-wide processes and systems related operations, as well as perceived and possible hindrances to information flows, all of which informed the basis of this study and the construction of the questionnaire.

Each question was thoroughly thought through so as to address critical issues relating to the hypotheses and to test the problems prevalent in IKM processes in multinational organizations and law firms as discussed in Chapter 2. A combination of open-ended and closed questions in the form of drop down lists, matrix, radio buttons, and rankings were used to gather precise relevant information for each question from the respondents. Questionnaires are useful information gathering tools, however if they are used with consideration for their advantages and disadvantages and following the stipulated guidelines for their use as

discussed by various specialist authors in the field of research methodologies, i.e. Bless and Higson-Smin, and Neuman.⁶⁶ According to Dillman, “the goal of writing a survey question is to develop a query that every potential respondent will interpret the same way, be able to respond accurately, and be willing to answer”.⁶⁷ There is nothing as deterring to the respondents as an ambiguous and vague question, that simply deter them from participating. The questionnaire was compiled with that in mind, and aimed to be as simple as possible to complete and yet comprehensive to gather the required data, however ensuring that every question is clear and structured in a way that entice participation.

3.6 Language and vocabulary

Proper language and wording were taken into consideration when compiling the questionnaire, and guidelines on the use of language in surveys by various authors were applied. The vocabulary and the grammar were targeted for lawyers. All ambiguity and vagueness were avoided to eliminate confusion on the part of respondents. The questions for the survey were constructed with the purpose to avoid bias and leading the respondents into answering in a certain way. All efforts were taken to avoid possible false premise and hypothetical questions at all costs.

3.7 Theory and questionnaire correlation

The questionnaire was structured to gather information of the six themes identifies in 2.9, which are: (i) The use of information devices, resources and systems; (ii) the problems and hindrances to information flows and knowledge sharing; (iii) information security; (iv) lawyers’ training needs; (v) lawyers’ attitudes to information and information technologies; and (vi) management’s role in information and knowledge management. The questionnaire was divided into three parts:

(i) The questions in the first part were focused on gathering background data on the demographics of the sample. They were intended to establish the basis of interpretation and data correlation for the entire study, linking back to the six themes above.

⁶⁶ Bless, C., Higson-Smith, C. & Kagee, A. 2006. 4th. ed. *Fundamentals of socialresearch methods. An African perspective*. Cape Town: Juta; and Neuman, W.L. 2003. *Social research methods: qualitative and quantitative approaches*. 5th ed. Boston: Allyn & Bacon.

⁶⁷ Dillman, D. A. (2000). *Mail and internet surveys: The Tailored Design Method*. New York: John Wiley & Sons, Inc., p. 32.

(ii) The second part asked the substantive questions related to information and knowledge management in the firm. The questions in this part of the questionnaire were intended to test the levels of use of the various IKM resources and systems among lawyers as well as their training needs on these resources and systems; establish perceptions on the hindrances to communication, and information and knowledge sharing within firm; as well as gauge perceptions around management's role in IKM.

(iii) The third part focused on existing technologies as tools for collaboration, as well as the lawyers' attitudes towards technology and technological developments as they relate to the working environment.

The questions intended to collect demographic data were question 1 to 4 and 6 to 8. Question 1 required the respondents to select their employment position within the firm, so that the respondents can be classified by position categories when analyzing the results of the survey. Question 2 required the respondents' number of years as an employee of the firm in order to assess if experience has any effect on issues like perception to ICTs. Question 3 was a selection of the age group within which each respondent fall, so see if age play any role in behaviors, attitudes and perceptions. Question 4 required an indication of the respondents' total numbers of years of practice, including previous employment, so as to be able to draw correlations to the use of devices and other issues addressed by the questionnaire. Question 6 was a selection of the country office in which each respondent is based, to see if perceptions and use of devices, resources and systems perhaps differ from office to office. Question 7 and 8 were on the number of spoken and written languages apart from English and on the number of languages in which respondents consider themselves fully proficient to conduct legal business in respectively. Both question 7 and 8 wanted to assess the level of multilingualism and business languages proficiency within the firm, and to establish whether knowledge of more languages has any impact of language as a barrier to communication and language sharing.

Having explained the structure of the questionnaire and the purpose of the questions, below the researcher outline the various questions as they relate to the six focus themes of this thesis.

3.7.1 The use of information devices, resources and systems

Question 9 to 11 of the questionnaire focused the use of devices, information resources and systems. Question 9 listed a number of devices from which the respondents were required to

make a selection of those that the use in executing their duties. The list included office computer, laptop, the data capacity the mobile phone, tablet, memory stick, CD, home Wi-Fi, wearable electronic communication devices (i.e. iWatch), and other. From the selection of devices used by the respondents, it will be the researcher will be able to see which of the devices are prominent among lawyers, and whether specific groups (i.e. age, position, years of experience, county office, etc.) tend to use certain devices and not others, and if such patterns are picked up, follow up to find out what the reasons could be.

Question 10 listed a number of resources currently available in the firm under study. The respondents were required to rate each resource on a scale of 0-9% to 90-100%, where 0-9% is minimum value and 90-100% is maximum value, to express the value it delivers in respect of respondents' knowledge and information needs. The resources included primary print resources (i.e. legislation, case law, reports of commissions, treaties, etc.), secondary print resources (i.e. books, journals, commentary, legal reference works, etc.), electronic legal resources (i.e. access to specialist legal resources held in-house), global legal resources (i.e. access to national/international legal repositories), the World Wide Web (i.e. general use of Google and other search tools), peers/colleagues (i.e. formal meetings or informal 'word of mouth' communication), and librarian support. From the responses the researcher will be able determine which of these resources are used the most, by whom and why. This question aims to find out whether certain groups prefer the use of specific resources over others, and which are the most and least preferred. Based on the selections, the reasons behind the preferences will be drawn.

Question 11 focused on the IKM systems currently available in the firm, and required the respondents to indicate the frequency of use of these systems, either as most of the day, once or twice a day, one a week, once a month, occasionally, randomly, and almost never. The systems included the internet, intranet, financial management system, Document Management System, e-mail, legal information research databases (i.e. LexisNexis, Practical Law, Sabinet, etc.), learning portal, case/matter management system, client relationship management system, time keeping system and knowledge portal. A road map of the use of these systems will assist in assessing their relevance and value add to the lawyers.

3.7.2 Barriers to information flows and knowledge sharing

A number of hindrances associated with MNCs and multinational law firms were discussed at length in chapter 2. Question 13 of the questionnaire intended to test if these hindrances and

problems are also experienced in the law firm under study, and if they do, how low or high is their impact on efficient information dissemination within and across country offices. The hindrances listed under question 13 were distance from head office, speed and reliability of internet connectivity, office culture variations between regional offices, time zone differences, differing office information sharing policies, differing regional cross-border information related legislations, internal/external IT related issues, organizational structure, and language differences. Respondents were required to rank these hindrances on a scale of 0-9% (no hindrance) and 90-100% (total hindrance). The intention here is to see if perceptions on these hindrances differ from office to office, or perhaps by position level, where for instance directors and junior lawyers or different country offices might have different views on some or all of these hindrances.

3.7.3 Information security

The literature review in chapter 2 has indicated that information governance and security should be a high priority concern for law firms given the sensitivity of the type of information they hold. Question 14 looked at various information security risks, with the intention to gauge first, whether the respondents are aware of these risks, and secondly to get their perceptions on the impact that these factors can have on the firm. They were required to rank each factor on a scale of 0-9% and 90-100% where 0-9% is low and 90-100% is high impact. These information security risk factors included the present state of electronic security policies in the firm, the present use of cloud storage services on personal devices for official business, the level of information security training in the firm, staff members' information and knowledge sharing practices, the present level of information security governance, the level of technical understanding of conceptual systems that can be expected from people in the legal profession, and the danger of not keeping up with evolving computational systems in a world of information and paper overload.

3.7.4 Lawyers' training needs

To access the training needs of lawyers, question 12 the listed the same IKM systems listed in question 11 (i.e. internet, intranet, financial management system, Document Management System, e-mail, legal information research databases (i.e. LexisNexis, Practical Law, Sabinet, etc.), learning portal, case/matter management system, client relationship management system, time keeping system and knowledge portal), required the respondents to select the method of training they would prefer for each of these systems. The selection of training

methods included person-to-person, telephone, video, online and training manuals. From the responses, it will be possible to see which methods are mostly preferred and for which systems. It will also be possible to see if there are any correlations between specific training methods and age group or position.

3.7.5 Lawyers' attitudes to information and information technologies

Question 5 and 16 looked at the lawyers' attitudes towards computer and information technologies in general, and looking into the future, whether they think some of the functions of computational analytics, artificial intelligence, and the internet of things (the 'fourth industrial revolution') will result in an increase on personal productivity if these systems were a full reality today. In question 5 the respondents were required to make one selection between the following: use it as little as possible; suffer it, one can't escape it anymore; use the word processing functions, but not more; can see the benefits of automation and process optimizing, but only in industrial environments; positively inclined towards computer usage and coding in all organizations; and in favor of developing Artificial Intelligence (AI) functions in all organizations

In question 16, the functions of the Industry 4.0 systems to be weight included the ability of such systems to search any legal text in any language for any word, automated translation in real time, (verbally and written) of any legal text in part of as a whole, search any legal text in any language for semantic purposes, automated semantic queries in real time across different legal dispensations, analytics of the progress and outcomes of legal processes across multiple geographies in real time, work at home or on the road, reduction of office attendance to maybe 2 days a week, and semantic as well as conceptual (automated) searchability or oral records (i.e. court proceedings). These weighting options for the functions were: no change, some change, a great improvement, and it will revolutionize my work. These questions wanted to assess if lawyers as keen on new technological advancements in the area of work, and what they see as the possible benefits if they were to adopt such technologies. The arguments in chapter 2 showed that lawyers are reluctant to venture into unfamiliar territories when it comes to adopting new technologies, while other authors argue that they will adopt new technologies if relevant and beneficial to them. These questions seek to evaluate the extent of truth of these two opposing arguments in this specific study.

3.7.6 Management's role in information and knowledge management

Question 15 required responses to a number of statements related to IKM, collaboration opportunities, and role of management through a selection of either strongly agree, agree, disagree, disagree strongly, and not sure/no comments. These statements were: the firm supports collaboration and information sharing at all levels, the firm encourages the creation of virtual CoPs (i.e. online forum, chat rooms, e-mail lists, etc.), peer to peer learning happen naturally in my daily work, I am fully informed about each team and office's areas of specialization, inter-office information sharing and communication is still a challenge for the firm, and we are one firm and therefore fully share business information as should be.

The question intends to assess the level of involvement of management in IKM in the firm, and the lawyers' perception of the situation. From the responses it should be clear if any the lawyers have the same understanding of IKM initiatives and processes within the firm, which will translate into a number of other factors, i.e. whether communication is forth coming and everyone is aware of where the firm is and where it is heading, or whether there is no communication on these issues and people assume there is management's involvement.

3.8 The interviews

Follow up targeted clarity seeking interviews were conducted with a few individuals within the firm. These interviews were not as structured and formal as the questionnaire itself, and included some individuals who were not respondents to the questionnaire, i.e. the IT professionals, Secretaries, Human Resources professionals, Business Development Department, Information professionals, etc. The interview questions were directed to the areas requiring clarity, and would be no more than 2 questions at most. For instance, where the survey revealed non-existent usage of certain resources and/or systems, specific questions relating to that issue was directed to a lawyer in that office to get confirmation, and the situation was verified with the IT department.

3.9 The process of data collection

As the study was conducted in the place of work of the researcher, though it included offices in other regions in Africa, the researcher has met personally with some lawyers in other offices through previous visits and telephonically, and communicates occasionally with all lawyers by electronic mail on other work related issues including current awareness, new developments, information systems upgrades, resources budgets, etc. The researcher's name is well known, and with the available technologies at the firm, employees' photos are

accessible on the firm's intranet page, linking to MS Outlook contacts list, and thus displaying the employees' photos in the sender and recipients fields. In cases where face-to-face interaction is not possible, it is always easy to link a name to a face in this way or from the intranet pages.

Through all the continuous interactions, the researcher has built a good rapport within the firm. It was therefore fairly easy to communicate with the respondents. Though the survey itself was generated and released from the University's portal, the researcher still had to internally lobby for responses and send e-mail reminders in addition to those generated by the University from Checkbox. The pre-survey letter was detailed in explaining the study being conducted, and therefore it was easy to follow up the responses with targeted personal and telephonic interview to the few individuals who availed themselves for these.

3.10 Specific problems and limitations encountered

The first limitation to this study was the fact that one office had to be excluded as it was not yet fully incorporated as a partner office of the firm, and this was an office in Tanzania. This in itself reduced the possible number of respondents and the possible varying data that the researcher could have obtained from the respondents in this particular office to draw conclusions from a bigger and more varied sample. The circulation of the survey to one multinational law firm was a limitation as well, based on time and monetary means of the part of the researcher. If the survey was circulated to more multinational law firms, the results could have indicated different dynamics in different firms perhaps, and provided a broader scale for results analysis, with possible different findings. The researcher being attached to the firm under study might have deterred some people from responding (and encouraged others) perhaps based on the perception that the study is not conducted by a lawyer and therefore could not be of critical importance to lawyers.

Time was a limitation as well, both from the researcher and the respondents' sides. The respondents, being lawyers especially, might have seen completing a survey as not critical and therefore ignored it, again the researcher could not lobby for responses for far too long, as deadlines were set and adhered to for the study to progress, and did not have the means and time to conduct a much broader study. With the survey having been sent to respondents out of the researcher's office and country, most of whom the researcher has never met personally, it is expected that this could be the reason for the low responses from some of the offices.

3.11 The issue of bias

The researcher recognizes that there are several kinds of bias that are prevalent in all empirical studies, and acknowledges that this study was no exception, however confirms that all corrective measures were taken into cognizance throughout the data collection process to attempt to reduce all forms of bias as much as possible, from the survey sample, the questions design, and the selection of interviewees, to ensure representation and responses that are without distortions and biased. These include both the respondent and researcher bias which are detailed herewith below.

3.11.1 Respondent bias

It is a fact that the researcher's friendliness can lead respondents to answer questions in a way they think will sit well with the researcher, usually agreeing or being positive in their responses. This usually leads to quick and not thought through answers or careful weighing on the part of the respondents. Also some respondents may try to be consistent in answering questions, To overcome this, the researcher avoided the yes/no answer seeking questions, thus prompting the respondents to give answers and select from a number of options requiring their careful consideration, and the sequence of the questions was well thought so the prior does not have obvious implications on the next question.

3.11.2 Researcher bias

Leading questions are one form of researcher bias. They prompt the respondent to answer in certain expected ways and put words in the respondent's mouth. Such questions were avoided in this study, and each question was structured to be as neutral as possible. The survey was sent to all the lawyers to avoid sample bias, and the interviews were conducted only with key individuals in the areas of specialization to get clarity on certain responses and findings only. With the survey having been run from the University of Stellenbosch's server, there was no room for reporting bias in this study. The responses were analyses as received on the system, with no selective exclusions.

3.12 Conclusion

The extent to which the research instruments are free of error and yield consistent results is referred to as reliability, and the ability of the measuring instruments to measure what is intended to be measured is referred as validity.⁶⁸ The questionnaire and the interviews were informed by the literature analysis, and the questions were critically reviewed by the research

⁶⁸ Gupta, S. L. 2011. Marketing Research. Excel Book, p. 132 - 133.

supervisor before testing and distribution of the survey. The data from the questionnaire was easily quantifiable and thus not open to subjective interpretation. The researcher believes that if the same study was to be conducted at this point in time, applying the same research instruments, it would arrive at the same conclusion. The research sample was representative of the general population in numbers, country offices, and professional position, and therefore the findings of this study may be generalized in a wider context. The data collection instruments and the data collected provided particular perspectives to the research question. The combination of the quantitative and qualitative methods resulted in a composite picture of information flows and knowledge sharing in multinational law firms.

As an ethical consideration, personal information was not asked. The clarity seeking personal interviews were conducted with the assurance for anonymity. The respondents were briefed about the study and what it intends to achieve, and participation was voluntary. The questionnaire was delivered and submitted through a secure online survey platform administered by the University of Stellenbosch to ensure confidentiality. Ethical clearance was applied for and granted by the organization under study, with all the conditions of the approval adhered to.

Chapter 4

Detailed Results of the Case Study

4.1 Introduction

This chapter presents the findings and the analysis of the online survey. The survey was circulated to 491 respondents, who are all lawyers in the seven offices of the firm under study, and a total of 142 responses were received. It was never expected that all the 491 responses will be completed however the target was to get at least a 100 responses that are representative of all the offices, and that was achieved. The completed 142 responses constitute a 29% of the total lawyers, but a 142% of the anticipated 100 responses. Of the 491 responses, 349 which constitute 71%, either exited the survey before completing it or simply have not attempted to answer any of the questions. The responses have been analyzed using the University of Stellenbosch's Checkbox Survey, and presented using charts, graphs, figures and tables.

Linking to the research questions in Chapter 2, here the initial assumptions on problems related to information and communication flows in multinational organizations were tested against the survey results to verify if the same (or different) problems are prevalent in this study and possibly in other multinational law firms in general.

4.2 The process of data analysis

The Business Dictionary (<http://www.businessdictionary.com/definition/data-analysis.html>) defines data analysis as “the process of evaluating data using analytical and logical reasoning to examine each component of the data provided”. The purpose of analysis is to draw informed findings that contribute to new knowledge. Data from various sources is gathered, reviewed, and then analyzed to form some sort of finding or conclusion. Some of the prominent data analysis methods include data mining, text analytics, business intelligence, and data visualizations. Various analytic procedures “provide a way of drawing inductive inferences from data and distinguishing the signal (the phenomenon of interest) from the noise (statistical fluctuations) present in the data”.⁶⁹

⁶⁹ Shamo, A.E., Resnik, B.R. 2003. Responsible Conduct of Research. Oxford University Press.

The data captured through the questionnaires, with follow up clarity seeking interviews, was analyzed for relationships and thematic issues, and patterns and trends were identified. Following on Mouton's⁷⁰ argument, the findings of the study were compared with the theoretical framework in Chapter 2, to verify if the results arrived at the same or different interpretation. The responses to the questionnaire will be analysed in this section of the research, starting with a presentation of the demographic background data, followed by an analysis of the findings and their correlations to the demographic variables, presented under the six thematic focus issues of this study as carried over from Chapter 2. A summary to conceptualize what the findings tell us will conclude this chapter.

4.3 Demographic background

The main purpose of including questions to gather the demographic data in the survey was so as to be able to describe the demographic variables of the sample and assess if these variables have any impact on the research findings. The demographic data in this study relates to office of employment, employment position, and age. The survey was circulated to 491 respondents in 7 offices of the firm under study, namely Botswana, Cape Town, Durban, Johannesburg Kenya, Madagascar and Uganda, in the breakdown given in *Table 4.1* below.

Table 4.1: Survey recipients' geographic office distribution

OFFICE	NUMBER OF SURVEY RECIPIENTS
Botswana	11
Cape Town	83
Durban	11
Johannesburg	272
Kenya	82
Madagascar	16
Uganda	16
TOTAL	491

The total number of lawyers in these respective offices, SA offices (Cape Town, Durban and Johannesburg) combined, as at 01 July 2016 is herewith reflected below in *Table 4.2*.

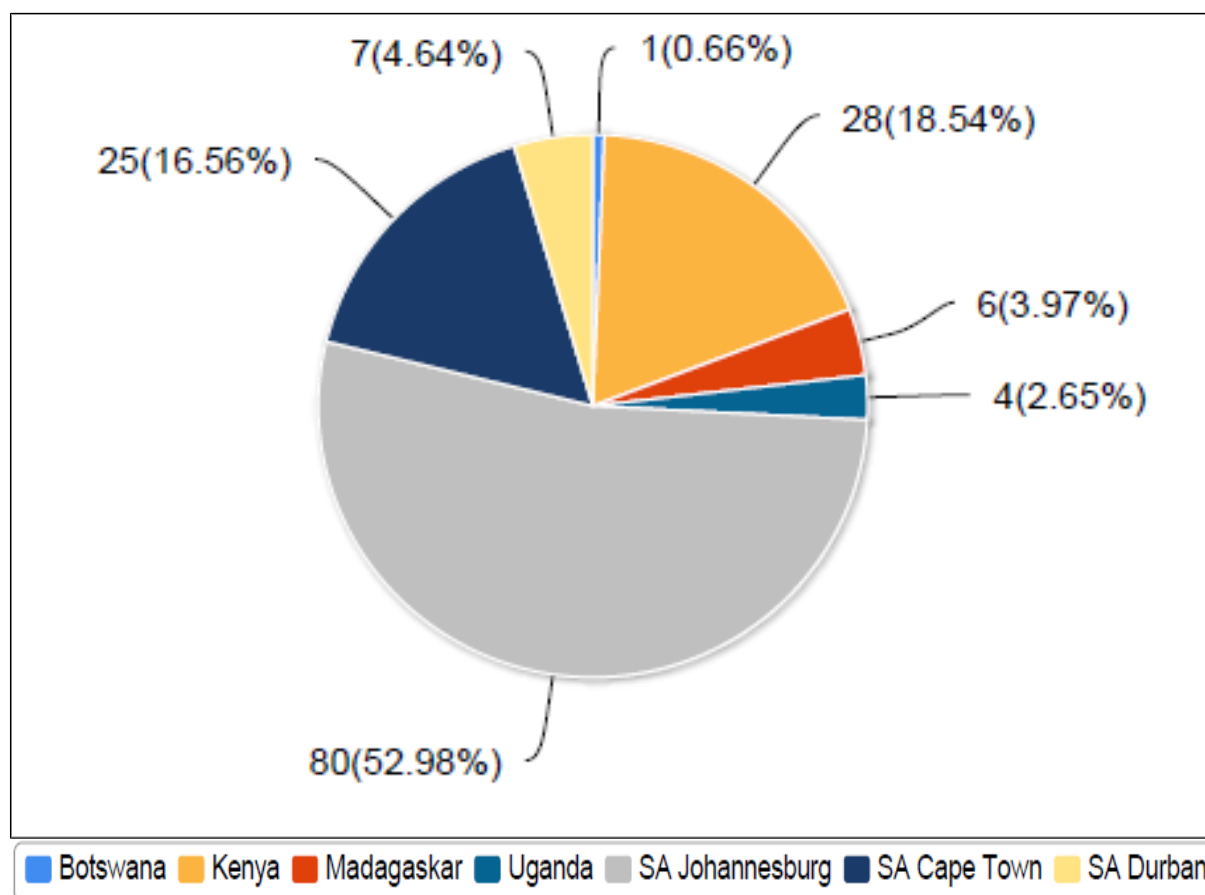
⁷⁰ Mouton, J. 1996. Understanding social research. Pretoria: Van Schaick, p. 109.

Table 4.2: Total lawyers by geographic office distribution

	Group	SA	Kenya	Botswana	Uganda	Madagascar
Total no. of lawyers	438	333	57	11	16	16
Total no. of Partners	148	118	16	1	5	3
Total no. of Senior Associates	90	70	6	3	7	4
Total no. of Associates	101	70	19	3	4	5
Total no. of Candidate Attorneys	99	75	16	4	0	4

4.3.1 Analysis of responses by office

Based on *Tables 4.1 and 4.2* above, of the 142 respondents who completed the survey, 9 duplicated their selection in Question 6, resulting in 151 responses instead of 142. These duplicate selections were made by 3 respondents in Kenya (selecting option 2 twice), 4 in SA, Johannesburg (selecting 5 twice), and 1 respondent on SA, Cape Town (selecting 6 twice). These duplicate responses added the numbers in the below chart (*Figure 4.1*), which in reality should be 25 responses for Kenya, 75 for Johannesburg, and 1 for Botswana. It is clear that the Johannesburg, Kenya and Cape Town offices responded in high numbers respectively. These 3 offices are also larger in terms of lawyers' numbers, see *Table 4.2 above*. The least responses were received from the Botswana office with only 1 responded, and this is a smallest office of the 7. During the survey, the firm was undergoing a rebranding process, after which the Botswana office pulled out of the partnership. It is assumed that this situation might have had a negative influence on the respondents' interest to participate in the study.

Figure 4.1: Analysis of responses by office locations

4.3.2 Analysis of responses by employment position

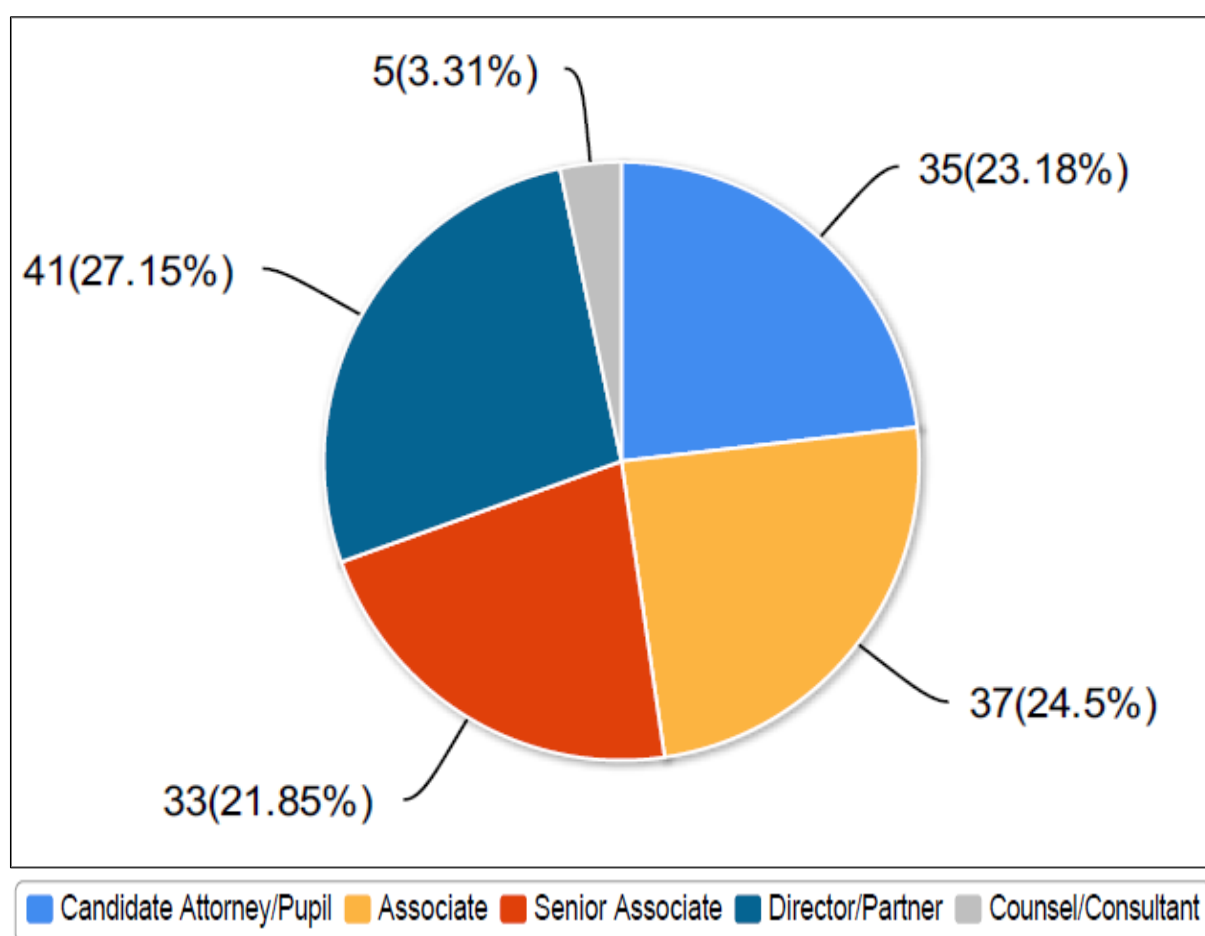
Of the 142 completed responses, 32 were Candidate Attorneys (CAs) or Pupils as referred to in other offices, 35 Associates, 31 Senior Associates, 39 Directors/Partners, and 5 Counsel/Consultants. Again, 9 respondents duplicated their selection in Question 1, resulting in 151 responses. The duplicate selections were made by 3 Candidate Attorneys (CAs)/Pupils (selecting option 1 twice), 3 Associates (selecting 2 twice), 2 Senior Associates (selecting 3 twice) and 1 Director/Partner (selecting 4 twice). The responses numbers in *Figure 4.2* below should be 32 CAs, 35 Associates, 31 Senior Associates, 39 Directors/Partners, and 5 Counsel/Consultants.

By office distribution, of the 32 CAs/Pupils, 19 are from the Johannesburg office, 10 from Kenya, 5 Cape Town, and 1 Madagascar. None of the CAs from Botswana, Uganda (this office does not have CAs as shown in *Table 4.2*) and Durban responded. With the Associates, none from Botswana responded. Of the 37 Associates, 13 are from Johannesburg, 11 Kenya, 4 Madagascar, 3 Uganda, 3 Cape Town and 3 Durban. Of the 33 Senior Associates, 23 are

from Johannesburg, 6 Cape Town, 2 Durban, 1 Kenya, and 1 Madagascar, none from Botswana. Of the 39 directors, 24 were from Johannesburg, 9 Cape Town, 5 Kenya, 2 Durban and 1 Botswana. Of the 5 Counsel/Consultants, 2 were from Cape Town, 1 each from Johannesburg, Kenya and Uganda.

From *Figure 4.2* below, it is clear that the responses from the Directors/Partners were the highest, followed by Associates, CAs, Senior Associates and Counsel/Consultants in that sequence, which is the same sequence when one looks at the total numbers of lawyers in *Table 4.2*.

Figure 4.2: Analysis of responses by employment position



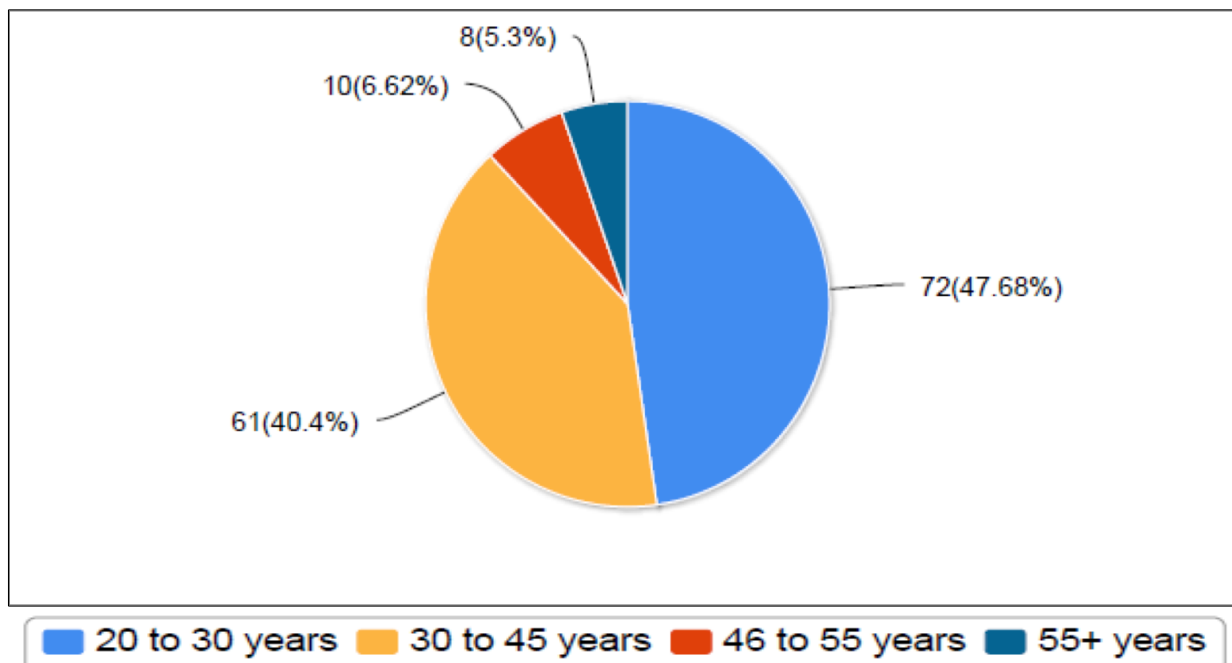
4.3.3 Analysis of responses by age group and experience

The age groups of the respondents range from 20 to 55+ years. It was evident in the responses that most lawyers in junior positions are younger and therefore recently qualified. 91.43% of the CAs are between 20 and 30 years, while 8.57% are between 30 and 45 years old. Their years of experience in the firm range from 5 months to 6 years. 72.97% of Associates are between 20 and 30 years, while 27.03% are between 30 and 45 years old, with

the majority (72.97%) have been in employment for between 2 and 5 years. Senior Associates' age range is between 20 and 55 years, with 39.39% being between 20 and 30 years, 57.58% between 30 and 45, and 3.03% between 46 and 55 years old, their years of employment averages between 4 and 10 years.

Directors/Partners occupy senior positions in the firm, and most have shares in the company. They drive revenues and therefore have a special level of commitment and vested interest in the financial wellbeing of the firm. These are mostly people who have been in the profession longer and have earned their 'belts'. 63.41% of the Directors are between 30 and 45 years old, 19.51% between 46 and 55, and 17.07% are over 55 years, and it is not surprising that their years of experience averages between 8 to 40 years. Counsel and Consultants serve a specific purpose in the firm. As experts in their areas of specialization, they provide internal expert advice, or see through the completion of specifically identified projects, either on a contract or full-time basis. Out of these 5 Counsel/Consultants who responded, 3 are between 30 and 45 years old, 1 between 46 and 55, and 1 over 55, with their years of experience ranging from 9 to 44 years. *Figure 4.3* below gives an overview of the age ranges for all respondents.

Figure 4.3: Analysis of responses by age groups



4.3.4 Analysis of responses on languages

The two questions in the survey on language were aimed at establishing (i) whether the respondents can speak or write any other language apart from English, and (ii) how many languages in the legal field they fully proficient in. These questions were aimed at assessing the issue of language as a barrier to communication and information sharing in the firm. The results in *Figure 4.4* indicate that 48.34% can speak and write in English and one other language, 19.87% can only do so in English alone. 21.85% can write and speak in English and 2 more languages, 7.28% in 3 more languages and 2.65% in more than three apart from English. The high level of multilingualism in the firm is evident. Apart from English only speaking people, other nationalities in Africa speak English as an official language of communication and their mother tongue.

Figure 4.4: Analysis of the languages spoken/written apart from English

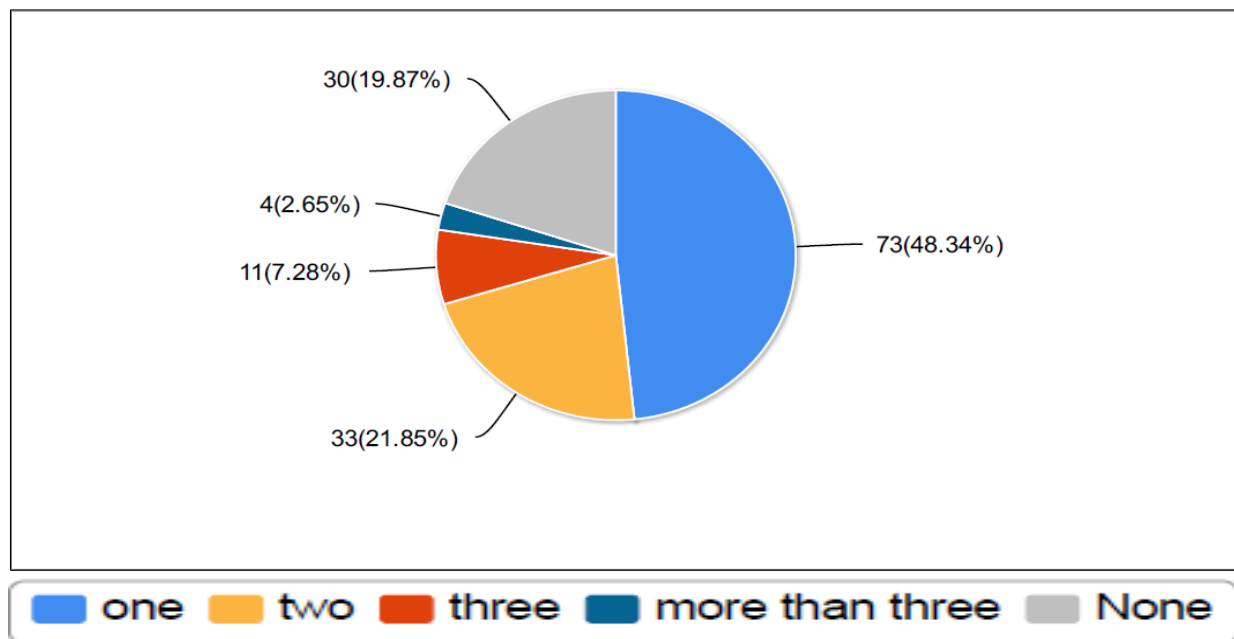


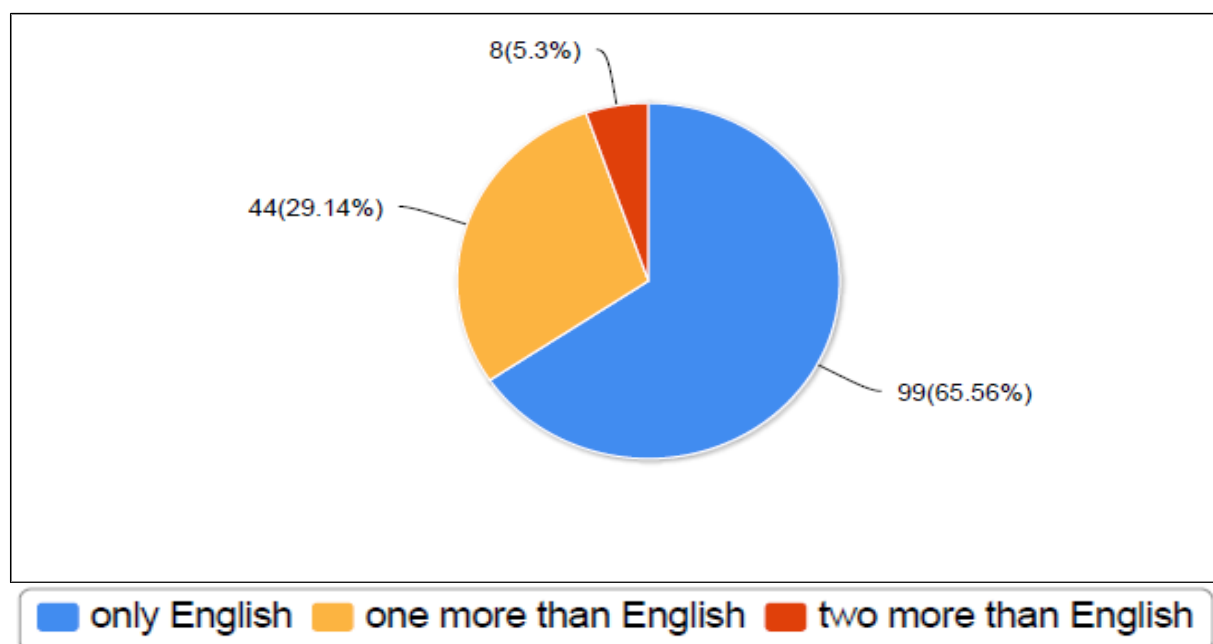
Figure 4.5: Analysis of the number of languages of fluency in the legal field

Figure 4.5 above reflects that as much as most respondents are multilingual, a vast majority (65.56%) can proficiently conduct the legal business only in English. 29.14% can do so in English and one more language, while only 5.3% can do so in English and two more languages.

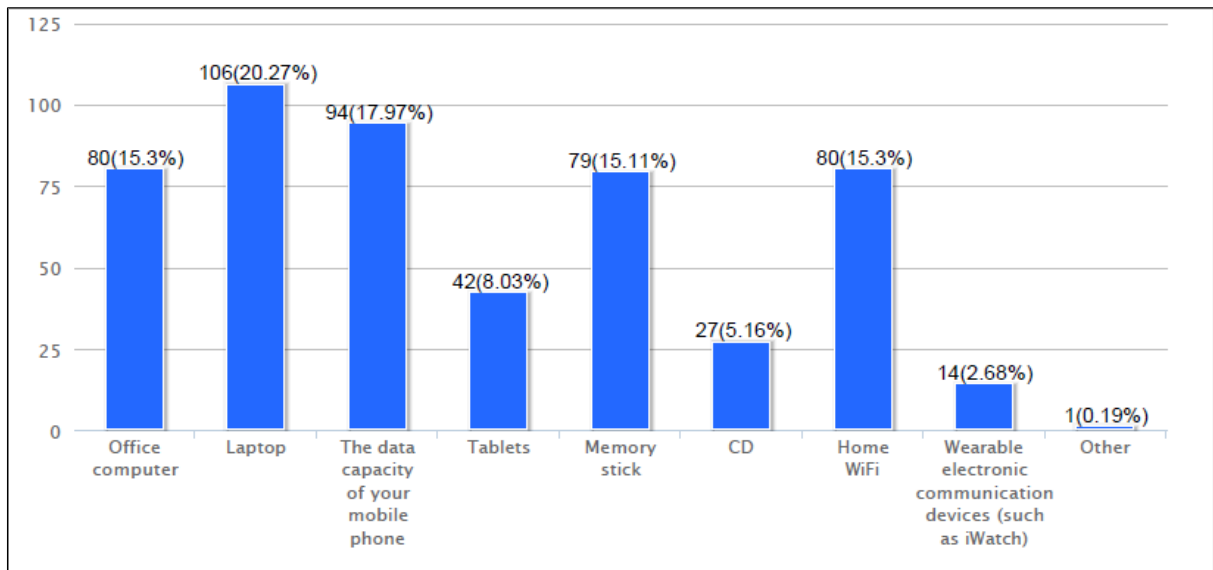
4.4 The use of information devices, knowledge resources and systems

Firstly the respondents were required to select as many devices as they use in the course of their work in the firm, so it can be established if there are correlations between the choices and the demographic variables, i.e. office, position and age. Secondly to rate the value delivered by the various resources in respect of their knowledge and information needs. Thirdly to indicate the frequency with which they use the various systems available to them. It is important for this study to establish the lawyers' preferences on these three aspects in order to draw meaningful conclusions from the findings.

4.4.1 The use of devices

From Figure 4.6 below it is clear that the use of laptops amongst lawyers in all offices tops the list at 20.27%, followed by mobile phones data at 17.97%. The use of office computers and home Wi-Fi are on par at 15.3%, followed by memory sticks at 15.11%. Tablets, CDs, and wearable devices are respectively the least used. The one lawyer who indicated the use of 'other' devices clarified the researcher in the follow-up interview that they use a home computer.

Figure 4.6 Overall analysis of the responses on the use of devices



The below figures (*Figure 4.7, Figure 4.8 and Figure 4.9*) give a presentation of the responses on use of devices by office, employment position, and age, respectively.

Figure 4.7: Analysis on use of devices by office

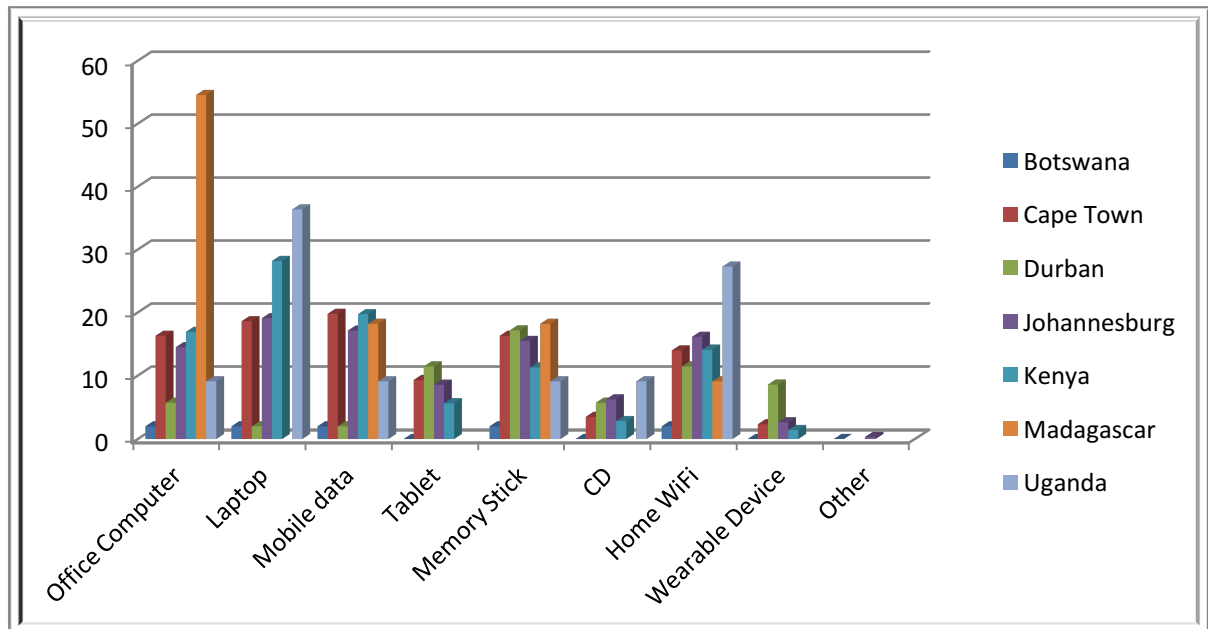
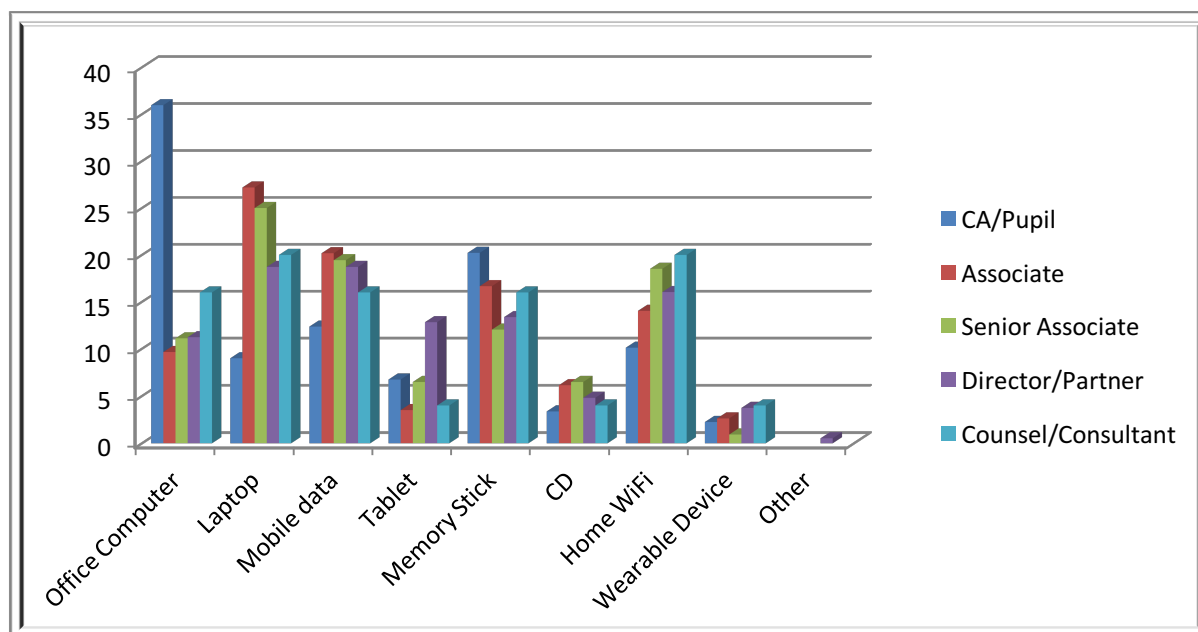


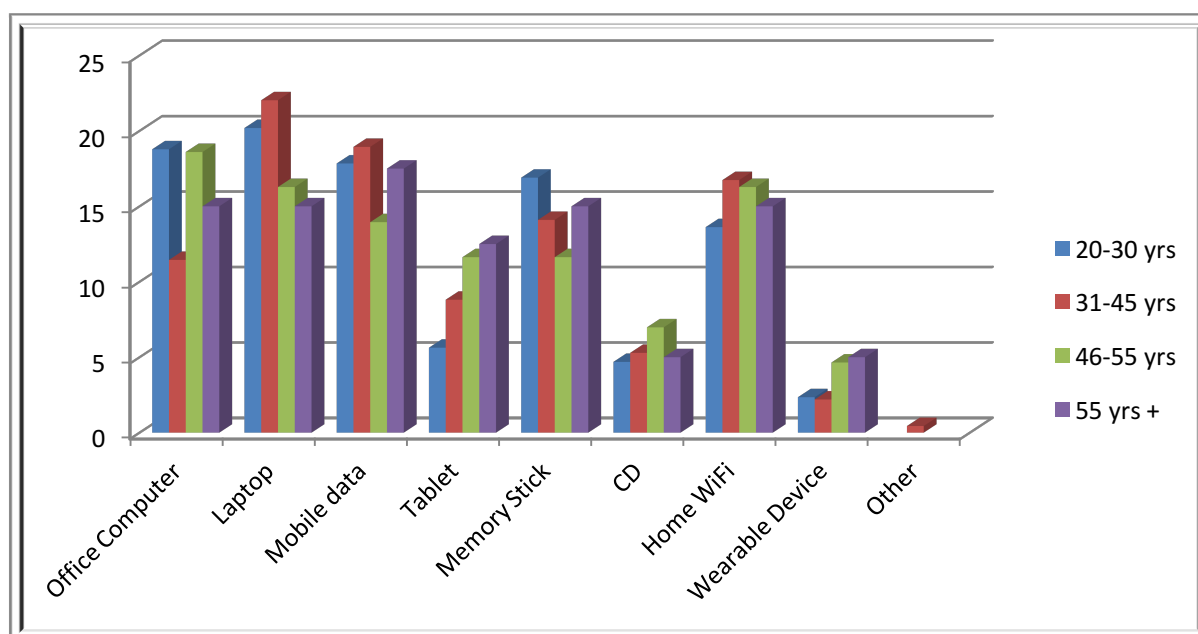
Figure 4.7 above shows that in Madagascar reliance on office computers is high with over 50% responses, while in Kenya and Uganda the use of laptops is high.

Figure 4.8: Analysis on use of devices by position

Looking further at whether lawyers in certain positions use certain devices more than others, it was realized that the patterns differ. *Figure 4.8* above shows that 35.96% of CAs use office computers the most, followed by memory sticks (20.22%), mobile phones (12.36%), home Wi-Fi (10.11%), and laptops (8.99%). Tablets, CDs and wearable devices are used the least by 6.74%, 3.37% and 2.25% of the CAs respectively. For Associates, laptops are the most used by 27 (19%) respondents in this group, followed by mobile phones (20.18%), memory sticks (16.67%), home Wi-Fi (14.04%), and office computers (9.65%). CDs, tablets and wearable devices are the 3 least used devices at 6.14%, 3.51%, and 2.63% respectively. In the case of Senior Associates, laptops are the most used by 25% of the respondents, followed by mobile phones (19.44%), home Wi-Fi (18.52%), memory sticks (12.04%), and office computers by 11.11% of the respondents. The use of CDs and tables are on par by 6.48%, with wearable devices the least used by 0.93% respondents. Out of the 41 Directors/Partners who responded, 18.72% use laptops and mobile phones, followed by 16.04% for home Wi-Fi, memory sticks (13.37%), tablets (12.83%), and office computers (11.23%). CDs, wearable devices and 'other' devices are the least used by 4.81%, 3.74% and 0.53% respectively. The use of laptops and home Wi-Fi among Counsel/Consultants ranks top by 20%. 16% of the respondents in this group use office computers, mobile phones and memory sticks. Tablets, CDs and wearable devices are used by 4%. See the graph presentation above.

A pattern that is evident from these results is that the devices that are used less by respondents across all positions are tablets, CDs, wearable devices and 'other'. While the office computers rank high for CAs, the use of laptops and mobile phones rank high from Associate level through to all the senior positions. CAs work from the office most of the time, given the nature of the ground research work that they conduct coupled with the fact that as they are not yet admitted as Attorneys and don't represent clients in courts as yet (,unless only to observe proceedings in a matter their team is involved in), they mostly work from the office. This group of employees do not get company laptops like senior lawyers, but can request one for use at a specific time as and when needed. Associates through to Counsel are entitled to company or sponsored laptops and mobile phones, hence the use for these resources is higher among these groups of lawyers. Again, they are admitted Attorneys and work out of the office most of the time for a variety of reasons, i.e. representing clients in court, official travel (sometimes from office to office or offsite clients meeting), working from home to avoid possible disruptions at the office, arranged flexible working hours, etc. It is also evident from the results that memory sticks are gradually replacing CDs. The results represent similar patterns of use of devices across offices as much as it does across positions.

When asked during the interviews why a tablet is least used, 6 out of 10 said they do not own one. When asked why they do not own one, they generally said they do not have a need for it since a smart phone has the same and more capabilities. One said 'it is an unnecessary additional device that takes up space and not easy to carry along'. 2 of the 10 said they have tablets but leave them at home as they do not have use for them in the office, "it's more useful for personal stuff like storing photos" one said. The other 2 indicated that they use their tablets very rarely, as it is usually for the same functions they would use their laptops and smart phones, which are their preferred devices as opposed to tablets. With the introduction of smart phones, most people see tablets as no longer a 'must have' device, but rather a 'nice to have'.

Figure 4.9: Analysis on use of devices by age

The responses presentation in *Figure 4.9* above does not show any outstanding preferences in terms of age, however reflect the use of most of the devices among all age groups. One might conclude that age does not play a role in the choice of device, but it is more a matter of convenience, flexibility and accessibility than anything else. The office computer, laptop, mobile data, memory stick, and home Wi-Fi are the most used across all age groups. The tablet, CD, and wearable device remain the least used devices.

4.4.2 The use of information and knowledge resources

Furthermore, a list of the categories of information and knowledge resources were identified in the questionnaire and the respondents were required to rate these from 0-9% to 90-100% (0-9% being not critical and 90-100% being critical) with respect of the value that these resources deliver to the individual lawyers' position needs. *Table 4.3* below gives an overview of the responses across all offices.

Table 4.3: Overall analysis of responses on value delivered by knowledge resources

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources (i.e. legislation, case law, reports of commissions, treaties, etc.)	14 (10,45%)	13 (9,70%)	6 (4,48%)	10 (7,46%)	4 (2,99%)	5 (3,73%)	8 (5,97%)	15 (11,19%)	17 (12,69%)	42 (31,34%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Secondary print resources (i.e. loose-leaf publications, journals, books, legal reference works, etc.)	17 (12,32%)	13 (9,42%)	10 (7,25%)	10 (7,25%)	8 (5,80%)	12 (8,70%)	10 (7,25%)	19 (13,77%)	20 (14,49%)	19 (13,77%)
Electronic legal resources (i.e. access to specialist legal resources held in-house)	9 (6,77%)	15 (11,28%)	8 (6,02%)	10 (7,52%)	9 (6,77%)	8 (6,02%)	10 (7,52%)	21 (15,79%)	24 (18,05%)	19 (14,29%)
Global electronic legal resources (i.e. access to national/international legal repositories)	14 (10,37%)	11 (8,15%)	17 (12,59%)	8 (5,93%)	11 (8,15%)	14 (10,37%)	19 (14,07%)	18 (13,33%)	14 (10,37%)	9 (6,67%)
The World Wide Web (i.e. general use of Google and other search tools)	1 (0,75%)	7 (5,26%)	6 (4,51%)	9 (6,77%)	8 (6,02%)	7 (5,26%)	14 (10,53%)	14 (10,53%)	21 (15,79%)	46 (34,59%)
Peers/colleagues (i.e. formal meetings or informal "word of mouth" communication)	3 (2,24%)	9 (6,72%)	10 (7,46%)	4 (2,99%)	4 (2,99%)	10 (7,46%)	19 (14,18%)	24 (17,91%)	32 (23,88%)	19 (14,18%)
Librarian support services	23 (17,29%)	17 (12,78%)	9 (6,77%)	5 (3,76%)	5 (3,76%)	11 (8,27%)	14 (10,53%)	18 (13,53%)	18 (13,53%)	13 (9,77%)

From the responses above, it is evident that the World Wide Web search tools and primary print resources are regarded as critical across the firm. Secondary print resources, specialist internal electronic legal resources, and peer/colleagues follow these two. However, with secondary electronic resources, there is almost a balance between the number of respondents who regard them as critical and those who see them as not critical in their position. Secondary print resources are mostly used when one needs to interpret the law to get clarity on the underlying meaning and application. For anyone doing legal research, it is expected that they would want to consult these secondary resources. The researcher followed up this interesting finding with selective interviews to understand what brings up this almost 50/40 split, and two reasons were identified:

(i) That now that most of the print resources (including secondary legal resources) are available electronically through the various subscription databases, some lawyers would rather quickly check these online rather than go through different large volumes of separate documents in the library.

(ii) That most senior lawyers do not necessarily do the groundwork research, but sort the help of their juniors and therefore would not consult these resources themselves.

The same scenario was evident with the librarians' support, where also there is a nearly 50/50 split between those who see them as not being a critical resource and those who see them as critical. A few respondents were contacted, made up of those who contact the library regularly, those who never do and the occasional library users. The interviews revealed that:

(i) Some respondents in other country offices do not have libraries/librarians and thus do research themselves from the various resources available to them, and that their information needs are country specific and could not be satisfied from the librarians in other countries. Only the Johannesburg, Cape Town, and Kenya offices have libraries;

(ii) Some lawyers are familiar with the resources that they interact with in their daily duties and therefore simply conduct research themselves even with the availability of librarians, a few said it's quicker if they know what they need and where to get it;

(iii) Some senior lawyers gave the reason that their juniors would contact the library as they are the ones who do most of the research, while others mentioned that the firm through the libraries, supply them with personal and/or team copies of most of the critical key commentaries relevant to their practice areas and therefore the information is readily available at their disposal; and

(iv) From those who see the librarians as a critical resource, their reason was that it is quicker and saves them time, as the librarians usually know the resources better and have better researching skills and would 'cover all areas' of the topic being researched.

Reviewing the responses on the use of resources from an office perspective, represented an almost similar outcome as by position, with differences on the use of certain resources. Out of the 72 respondents in Johannesburg and 24 in Cape Town, primary print legal resources, WWW search tools, peers/colleagues support, in-house specialist electronic legal resources and librarians' support were ranked as critical. Global repositories were ranked as not critical. Durban and Kenya responses (7 and 24 respectively) do not show any striking differences, the responses lingered more towards critical for most resources. For the 1 respondent in Botswana all the responses were ranked below 40% therefore not critical. Responses from Uganda and Madagascar also showed no striking differences, except on the librarians' support being not critical since there are no libraries in those offices. The below *Tables 4.4* to

4.10 give a presentation of the responses by office distribution, on the value that the individual resources deliver.

Table 4.4: Analysis of value delivered by the World Wide Web by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	0 (0,00%)	3 (12,50%)	0 (0,00%)	4 (16,67%)	2 (8,33%)	0 (0,00%)	2 (8,33%)	1 (4,17%)	4 (16,67%)	8 (33,33%)
Durban	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	1 (20,00%)	2 (40,00%)
Johannesburg	1 (1,45%)	1 (1,45%)	6 (8,70%)	4 (5,80%)	4 (5,80%)	7 (10,14%)	5 (7,25%)	7 (10,14%)	11 (15,94%)	23 (33,33%)
Kenya	0 (0,00%)	2 (8,33%)	0 (0,00%)	0 (0,00%)	2 (8,33%)	0 (0,00%)	5 (20,83%)	5 (20,83%)	3 (12,50%)	7 (29,17%)
Madagascar	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	5 (83,33%)
Uganda	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	2 (50,00%)	1 (25,00%)

Table 4.5: Analysis of value delivered by primary print resources by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	3 (12,50%)	1 (4,17%)	2 (8,33%)	2 (8,33%)	1 (4,17%)	0 (0,00%)	3 (12,50%)	5 (20,83%)	2 (8,33%)	5 (20,83%)
Durban	2 (28,57%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	2 (28,57%)
Johannesburg	8 (11,43%)	7 (10,00%)	2 (2,86%)	5 (7,14%)	0 (0,00%)	3 (4,29%)	0 (0,00%)	8 (11,43%)	13 (18,57%)	24 (34,29%)
Kenya	1 (4,55%)	1 (4,55%)	1 (4,55%)	2 (9,09%)	2 (9,09%)	1 (4,55%)	4 (18,18%)	2 (9,09%)	1 (4,55%)	7 (31,82%)
Madagascar	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	5 (83,33%)
Uganda	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	2 (50,00%)

Table 4.6: Analysis of value delivered by secondary print resources by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	4 (16,67%)	2 (8,33%)	3 (12,50%)	1 (4,17%)	2 (8,33%)	0 (0,00%)	3 (12,50%)	1 (4,17%)	5 (20,83%)	3 (12,50%)
Durban	1 (14,29%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	2 (28,57%)
Johannesburg	7 (9,72%)	7 (9,72%)	5 (6,94%)	3 (4,17%)	3 (4,17%)	7 (9,72%)	4 (5,56%)	12 (16,67%)	14 (19,44%)	10 (13,89%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Kenya	3 (12,50%)	2 (8,33%)	2 (8,33%)	2 (8,33%)	2 (8,33%)	1 (4,17%)	2 (8,33%)	6 (25,00%)	1 (4,17%)	3 (12,50%)
Madagascar	1 (16,67%)	1 (16,67%)	0 (0,00%)	2 (33,33%)	0 (0,00%)	2 (33,33%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Uganda	1 (25,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)

Table 4.7: Analysis of value delivered by specialist in-house legal e-resources by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	4 (16,67%)	2 (8,33%)	3 (12,50%)	1 (4,17%)	2 (8,33%)	0 (0,00%)	3 (12,50%)	1 (4,17%)	5 (20,83%)	3 (12,50%)
Durban	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	2 (40,00%)	3 (60,00%)
Johannesburg	3 (4,29%)	7 (10,00%)	3 (4,29%)	4 (5,71%)	5 (7,14%)	5 (7,14%)	8 (11,43%)	8 (11,43%)	15 (21,43%)	12 (17,14%)
Kenya	1 (4,35%)	1 (4,35%)	2 (8,70%)	3 (13,04%)	3 (13,04%)	3 (13,04%)	1 (4,35%)	4 (17,39%)	4 (17,39%)	1 (4,35%)
Madagascar	3 (50,00%)	1 (16,67%)	1 (16,67%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Uganda	0 (0,00%)	1 (25,00%)	2 (50,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

Table 4.8: Analysis of value delivered by peers/colleagues by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	0 (0,00%)	1 (4,17%)	5 (20,83%)	0 (0,00%)	1 (4,17%)	2 (8,33%)	2 (8,33%)	3 (12,50%)	8 (33,33%)	2 (8,33%)
Durban	0 (0,00%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	3 (42,86%)	1 (14,29%)	0 (0,00%)	0 (0,00%)
Johannesburg	3 (4,29%)	4 (5,71%)	3 (4,29%)	3 (4,29%)	2 (2,86%)	3 (4,29%)	10 (14,29%)	12 (17,14%)	17 (24,29%)	13 (18,57%)
Kenya	0 (0,00%)	3 (13,04%)	1 (4,35%)	0 (0,00%)	0 (0,00%)	2 (8,70%)	4 (17,39%)	5 (21,74%)	5 (21,74%)	3 (13,04%)
Madagascar	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	1 (20,00%)	1 (20,00%)	1 (20,00%)
Uganda	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	2 (50,00%)	1 (25,00%)	0 (0,00%)

Table 4.9: Analysis of value delivered by librarians' support by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	2 (8,33%)	8 (33,33%)	3 (12,50%)	0 (0,00%)	0 (0,00%)	2 (8,33%)	0 (0,00%)	1 (4,17%)	7 (29,17%)	1 (4,17%)
Durban	0 (0,00%)	1 (16,67%)	0 (0,00%)	2 (33,33%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	0 (0,00%)
Johannesburg	12 (17,39%)	4 (5,80%)	4 (5,80%)	1 (1,45%)	2 (2,90%)	3 (4,35%)	11 (15,94%)	15 (21,74%)	8 (11,59%)	9 (13,04%)
Kenya	3 (13,04%)	1 (4,35%)	1 (4,35%)	1 (4,35%)	2 (8,70%)	6 (26,09%)	2 (8,70%)	2 (8,70%)	2 (8,70%)	3 (13,04%)
Madagascar	3 (50,00%)	3 (50,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Uganda	2 (50,00%)	0 (0,00%)	1 (25,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

Table 4.10: Analysis of value delivered by global electronic legal resources by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	4 (16,67%)	1 (4,17%)	6 (25,00%)	1 (4,17%)	2 (8,33%)	3 (12,50%)	0 (0,00%)	5 (20,83%)	2 (8,33%)	0 (0,00%)
Durban	0 (0,00%)	1 (16,67%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	2 (33,33%)	1 (16,67%)	0 (0,00%)	1 (16,67%)
Johannesburg	8 (11,43%)	8 (11,43%)	7 (10,00%)	5 (7,14%)	6 (8,57%)	8 (11,43%)	10 (14,29%)	6 (8,57%)	7 (10,00%)	5 (7,14%)
Kenya	0 (0,00%)	0 (0,00%)	2 (8,33%)	1 (4,17%)	2 (8,33%)	2 (8,33%)	5 (20,83%)	6 (25,00%)	3 (12,50%)	3 (12,50%)
Madagascar	2 (33,33%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (16,67%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	0 (0,00%)
Uganda	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	1 (25,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)

Coupled with the need to look at the office by office responses, was the need to verify if the responses by position reflect different dynamics. The tabulations herewith below in *Tables* 4.11 to 4.15 give representations of responses by position on the rankings of the value delivered by different resources.

Table 4.11: CA's/Pupils' responses on value delivered by various resources

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources	1 (3,23%)	1 (3,23%)	0 (0,00%)	1 (3,23%)	0 (0,00%)	1 (3,23%)	2 (6,45%)	3 (9,68%)	8 (25,81%)	14 (45,16%)
Secondary print resources	1 (3,23%)	0 (0,00%)	1 (3,23%)	1 (3,23%)	1 (3,23%)	5 (16,13%)	3 (9,68%)	8 (25,81%)	6 (19,35%)	5 (16,13%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Specialist in-house legal e-resources	2 (6,45%)	0 (0,00%)	2 (6,45%)	2 (6,45%)	0 (0,00%)	4 (12,90%)	4 (12,90%)	4 (12,90%)	7 (22,58%)	6 (19,35%)
Global electronic legal resources	3 (9,68%)	1 (3,23%)	2 (6,45%)	2 (6,45%)	2 (6,45%)	3 (9,68%)	4 (12,90%)	6 (19,35%)	4 (12,90%)	4 (12,90%)
World Wide Web	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (3,33%)	1 (3,33%)	1 (3,33%)	2 (6,67%)	4 (13,33%)	7 (23,33%)	14 (46,67%)
Peers/Colleagues	0 (0,00%)	1 (3,23%)	1 (3,23%)	0 (0,00%)	0 (0,00%)	1 (3,23%)	3 (9,68%)	8 (25,81%)	11 (35,48%)	6 (19,35%)
Librarians' support	2 (6,45%)	1 (3,23%)	1 (3,23%)	0 (0,00%)	0 (0,00%)	2 (6,45%)	3 (9,68%)	5 (16,13%)	8 (25,81%)	9 (29,03%)

31 responses were received from CAs/Pupils for this question, and the responses show a lot of reliance on all the available resources, from print and electronic resources (more so the World Wide Web) to support from peers and librarians. This is mainly because CAs are new in the profession, and are still gaining experience and insight into the legal practice. Again it is because they do most of the ground research for senior lawyers.

Table 4.12: Associates' responses on value delivered by various resources

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources	5 (14,29%)	3 (8,57%)	1 (2,86%)	4 (11,43%)	1 (2,86%)	2 (5,71%)	4 (11,43%)	4 (11,43%)	2 (5,71%)	9 (25,71%)
Secondary print resources	7 (20,00%)	2 (5,71%)	3 (8,57%)	5 (14,29%)	2 (5,71%)	4 (11,43%)	3 (8,57%)	1 (2,86%)	3 (8,57%)	5 (14,29%)
Specialist in-house legal e-resources	3 (8,82%)	3 (8,82%)	3 (8,82%)	4 (11,76%)	1 (2,94%)	3 (8,82%)	2 (5,88%)	4 (11,76%)	6 (17,65%)	5 (14,71%)
Global electronic legal resources	3 (8,82%)	2 (5,88%)	2 (5,88%)	1 (2,94%)	2 (5,88%)	3 (8,82%)	8 (23,53%)	6 (17,65%)	4 (11,76%)	3 (8,82%)
World Wide Web	0 (0,00%)	0 (0,00%)	2 (5,88%)	1 (2,94%)	2 (5,88%)	1 (2,94%)	4 (11,76%)	5 (14,71%)	7 (20,59%)	12 (35,29%)
Peers/Colleagues	1 (2,94%)	4 (11,76%)	2 (5,88%)	0 (0,00%)	1 (2,94%)	4 (11,76%)	3 (8,82%)	7 (20,59%)	7 (20,59%)	5 (14,71%)
Librarians' support	8 (23,53%)	5 (14,71%)	2 (5,88%)	2 (5,88%)	0 (0,00%)	5 (14,71%)	4 (11,76%)	4 (11,76%)	4 (11,76%)	0 (0,00%)

Table 4.12 above represents the 35 responses from Associates. Again the primary print resources, specialist in-house electronic resources, the WWW and peers/colleagues are

reflected as valued for Associates, while it's evident that the librarians' support is of critical value to some and of less value to others, with 17 responses below 50% and 17 above. Associates are admitted attorneys with a minimum of 2 years working experience. They have done the research for senior lawyers in their years as CAs, and therefore know the various resources and able to do research on their own and are not relying a lot on the librarians' support for basic information searches. They would have been trained several times on the use of various resources.

Table 4.13: Senior Associates' responses on value delivered by various resources

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources	3 (10,34%)	3 (10,34%)	1 (3,45%)	2 (6,90%)	1 (3,45%)	2 (6,90%)	1 (3,45%)	2 (6,90%)	3 (10,34%)	11 (37,93%)
Secondary print resources	3 (10,00%)	4 (13,33%)	2 (6,67%)	2 (6,67%)	2 (6,67%)	2 (6,67%)	1 (3,33%)	4 (13,33%)	8 (26,67%)	2 (6,67%)
Specialist in-house legal e-resources	0 (0,00%)	2 (6,67%)	2 (6,67%)	1 (3,33%)	2 (6,67%)	0 (0,00%)	4 (13,33%)	4 (13,33%)	8 (26,67%)	7 (23,33%)
Global electronic legal resources	1 (3,33%)	3 (10,00%)	4 (13,33%)	3 (10,00%)	1 (3,33%)	4 (13,33%)	4 (13,33%)	3 (10,00%)	5 (16,67%)	2 (6,67%)
World Wide Web	0 (0,00%)	0 (0,00%)	1 (3,45%)	1 (3,45%)	5 (17,24%)	2 (6,90%)	2 (6,90%)	3 (10,34%)	1 (3,45%)	14 (48,28%)
Peers/Colleagues	0 (0,00%)	1 (3,45%)	3 (10,34%)	0 (0,00%)	0 (0,00%)	2 (6,90%)	6 (20,69%)	3 (10,34%)	11 (37,93%)	3 (10,34%)
Librarians' support	1 (3,45%)	6 (20,69%)	2 (6,90%)	1 (3,45%)	2 (6,90%)	2 (6,90%)	6 (20,69%)	4 (13,79%)	3 (10,34%)	2 (6,90%)

Table 4.14: Directors/Partners' responses on value delivered by various resources

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources	4 (11,43%)	5 (14,29%)	3 (8,57%)	3 (8,57%)	2 (5,71%)	0 (0,00%)	1 (2,86%)	6 (17,14%)	3 (8,57%)	8 (22,86%)
Secondary print resources	4 (10,81%)	7 (18,92%)	4 (10,81%)	2 (5,41%)	3 (8,11%)	1 (2,70%)	1 (2,70%)	5 (13,51%)	3 (8,11%)	7 (18,92%)
Specialist in-house legal e-resources	4 (12,12%)	7 (21,21%)	0 (0,00%)	3 (9,09%)	6 (18,18%)	1 (3,03%)	0 (0,00%)	8 (24,24%)	3 (9,09%)	1 (3,03%)
Global electronic legal Resources	6 (17,14%)	4 (11,43%)	8 (22,86%)	2 (5,71%)	5 (14,29%)	4 (11,43%)	3 (8,57%)	2 (5,71%)	1 (2,86%)	0 (0,00%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
World Wide Web	1 (2,86%)	7 (20,00%)	3 (8,57%)	5 (14,29%)	0 (0,00%)	3 (8,57%)	3 (8,57%)	2 (5,71%)	5 (14,29%)	6 (17,14%)
Peers/Colleagues	2 (5,56%)	3 (8,33%)	3 (8,33%)	4 (11,11%)	2 (5,56%)	2 (5,56%)	7 (19,44%)	6 (16,67%)	3 (8,33%)	4 (11,11%)
Librarians' support	10 (29,41%)	5 (14,71%)	4 (11,76%)	2 (5,88%)	2 (5,88%)	2 (5,88%)	1 (2,94%)	4 (11,76%)	2 (5,88%)	2 (5,88%)

Table 4.15: Counsel/Consultants' responses on value delivered by various resources

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources	1 (25,00%)	1 (25,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)
Secondary print resources	2 (40,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	2 (40,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)
Specialist in-house legal e-resources	0 (0,00%)	3 (60,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)
Global electronic legal resources	1 (20,00%)	1 (20,00%)	1 (20,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)
World Wide Web	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	3 (60,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)
Peers/Colleagues	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	1 (25,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)
Librarians' support	2 (40,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	1 (20,00%)	0 (0,00%)

30 responses were received from Senior Associates for this question and 37 from Directors/Partners. The results presentations in *Table 4.13* and *4.14* above indicate these two groups both value the primary and secondary print resources. The WWW and peers/colleagues are also valuable resources for these groups of senior lawyers. Global electronic legal resources are not highly valued by both groups. While there is a balance between the Senior Associates who see the librarians' support as valuable and those who do not, for Directors it is clear that the librarians' support is not of critical value, probably for the same reasons mentioned above, i.e. level of experience and that they are knowledgeable in the use of the various resources and they rely on junior lawyers for information research. The presentation of Counsel/Consultants responses in *Table 4.15* above show balanced results on those resources that are regarded as critically valuable and those that are not. This group only uses certain resources for specific projects that they are working on or matters they are

advising on as their role would dictate. They would also use the assistance of junior lawyers for research.

The same comparison had to be drawn to determine if there are different views on the value of the various resources by various age groups, and the below tables (*Table 4.16 – 4.18*) give the presentations.

Table 4.16: Responses on value delivered by various resources - age group: 20-30 yrs.

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources	7 (10,94%)	4 (6,25%)	2 (3,13%)	5 (7,81%)	1 (1,56%)	3 (4,69%)	4 (6,25%)	6 (9,38%)	9 (14,06%)	23 (35,94%)
Secondary print resources	8 (12,50%)	3 (4,69%)	5 (7,81%)	3 (4,69%)	3 (4,69%)	8 (12,50%)	5 (7,81%)	9 (14,06%)	10 (15,63%)	10 (15,63%)
Specialist in-house legal e-resources	4 (6,25%)	1 (1,56%)	6 (9,38%)	4 (6,25%)	1 (1,56%)	7 (10,94%)	7 (10,94%)	9 (14,06%)	13 (20,31%)	12 (18,75%)
Global electronic legal resources	6 (9,38%)	4 (6,25%)	5 (7,81%)	3 (4,69%)	3 (4,69%)	8 (12,50%)	10 (15,63%)	10 (15,63%)	9 (14,06%)	6 (9,38%)
World Wide Web	0 (0,00%)	0 (0,00%)	2 (3,13%)	1 (1,56%)	4 (6,25%)	2 (3,13%)	5 (7,81%)	10 (15,63%)	11 (17,19%)	29 (45,31%)
Peers/Colleagues	1 (1,56%)	4 (6,25%)	4 (6,25%)	0 (0,00%)	1 (1,56%)	5 (7,81%)	8 (12,50%)	12 (18,75%)	19 (29,69%)	10 (15,63%)
Librarians' support	9 (14,06%)	4 (6,25%)	3 (4,69%)	1 (1,56%)	1 (1,56%)	8 (12,50%)	6 (9,38%)	9 (14,06%)	13 (20,31%)	10 (15,63%)

It shows in *Table 4.16* that the 64 lawyers aged 20-30 who responded value primary and secondary print resources. However, their reliance on the WWW, specialist in-house e-resources, peers and the librarians' support is also high. These are young lawyers in the junior positions of CAs and Associates who have not been in the profession for too long and are still finding their feet and establishing themselves. They do most of the basic legal research for their seniors.

Table 4.17: Responses on value delivered by various resources - age group: 31-45 yrs.

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources	5 (9,09%)	7 (12,73%)	3 (5,45%)	4 (7,27%)	2 (3,64%)	2 (3,64%)	2 (3,64%)	5 (9,09%)	7 (12,73%)	18 (32,73%)
Secondary print resources	8 (13,79%)	8 (13,79%)	4 (6,90%)	4 (6,90%)	3 (5,17%)	4 (6,90%)	5 (8,62%)	6 (10,34%)	9 (15,52%)	7 (12,07%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Specialist in-house legal e-resources	1 (1,82%)	11 (20,00%)	2 (3,64%)	6 (10,91%)	5 (9,09%)	1 (1,82%)	3 (5,45%)	9 (16,36%)	10 (18,18%)	7 (12,73%)
Global electronic legal resources	3 (5,45%)	5 (9,09%)	9 (16,36%)	4 (7,27%)	6 (10,91%)	4 (7,27%)	8 (14,55%)	8 (14,55%)	5 (9,09%)	3 (5,45%)
World Wide Web	1 (1,82%)	4 (7,27%)	3 (5,45%)	7 (12,73%)	3 (5,45%)	5 (9,09%)	6 (10,91%)	4 (7,27%)	6 (10,91%)	16 (29,09%)
Peers/Colleagues	2 (3,64%)	4 (7,27%)	3 (5,45%)	3 (5,45%)	2 (3,64%)	3 (5,45%)	9 (16,36%)	9 (16,36%)	12 (21,82%)	8 (14,55%)
Librarians' support	10 (18,52%)	10 (18,52%)	4 (7,41%)	4 (7,41%)	3 (5,56%)	1 (1,85%)	8 (14,81%)	8 (14,81%)	4 (7,41%)	2 (3,70%)

Of the 58 responses on the resources that are valued higher between the 31-45 year old lawyers are the primary and secondary print resources, the WWW, and peers/colleagues. Interestingly for this group, unlike the 20-30 years old, they see less value in the librarians' support. As it was mentioned throughout the research, it is only the Cape Town, Johannesburg and Kenya offices which have the librarians' support onsite. Also this group is made up of mostly Senior Associates with a mix of a few Associates and Directors. They have the support of the junior lawyers for research assistance. It is clear that as lawyers progress and advance both in age and position, they tend to use resources that are niche focused to their areas of professional specialization, as opposed to the generic easily accessible resources which the junior lawyers can get information easily from.

Table 4.18: Responses on value delivered by various resources - age group: 46-55 yrs.

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources	1 (14,29%)	1 (14,29%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	1 (14,29%)
Secondary print resources	1 (12,50%)	0 (0,00%)	1 (12,50%)	2 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	3 (37,50%)	0 (0,00%)	1 (12,50%)
Specialist in-house legal e-resources	2 (28,57%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	2 (28,57%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	0 (0,00%)
Global electronic legal resources	2 (25,00%)	1 (12,50%)	2 (25,00%)	0 (0,00%)	2 (25,00%)	1 (12,50%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
World Wide Web	0 (0,00%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	2 (28,57%)	0 (0,00%)	2 (28,57%)	1 (14,29%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Peers/Colleagues	0 (0,00%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	2 (28,57%)	0 (0,00%)	2 (28,57%)	0 (0,00%)	1 (14,29%)
Librarians' support	2 (25,00%)	1 (12,50%)	2 (25,00%)	0 (0,00%)	0 (0,00%)	1 (12,50%)	0 (0,00%)	1 (12,50%)	0 (0,00%)	1 (12,50%)

Table 4.19: Responses on value delivered by various resources - age group: 55+ yrs.

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Primary print resources	1 (12,50%)	1 (12,50%)	1 (12,50%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (12,50%)	3 (37,50%)	1 (12,50%)	0 (0,00%)
Secondary print resources	0 (0,00%)	2 (25,00%)	0 (0,00%)	1 (12,50%)	2 (25,00%)	0 (0,00%)	0 (0,00%)	1 (12,50%)	1 (12,50%)	1 (12,50%)
Specialist in-house legal e-resources	2 (28,57%)	2 (28,57%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	2 (28,57%)	0 (0,00%)	0 (0,00%)
Global electronic legal resources	3 (37,50%)	1 (12,50%)	1 (12,50%)	1 (12,50%)	0 (0,00%)	1 (12,50%)	1 (12,50%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
World Wide Web	0 (0,00%)	3 (42,86%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	2 (28,57%)	0 (0,00%)
Peers/Colleagues	0 (0,00%)	0 (0,00%)	2 (25,00%)	1 (12,50%)	1 (12,50%)	0 (0,00%)	2 (25,00%)	1 (12,50%)	1 (12,50%)	0 (0,00%)
Librarians' support	2 (28,57%)	2 (28,57%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	0 (0,00%)

8 responses each were received from the 46-55 and the 55+ years old lawyers as presented in *Table 4.18* and *Table 4.19*. Overall there is a balance in terms of the resources of critical value and those which are not, for both age groups. While 5 out of 8 responses from the 46-55 years old ranked the value delivered by the WWW above 50% and the librarians' support below 50%, in the case of the 55+ years olds it is primary print resources that are ranked above 50% by 5 out of 8 respondents and the librarians' support ranked below 50% by 5. One can say is a matter of preference based on personal systems knowledge and experience.

4.4.3 Use of information and knowledge systems

Lastly the respondents were required to indicate the frequency with which they use the various IKM systems. From the 142 responses received, it became clear that the e-mail system, DMS, timekeeping system and internet are used most often than other systems. The second group of most used systems includes the financial management system, intranet, legal

information research databases, knowledge portal, and the library intranet. The less frequently used systems are the client relationship management, case/matter management system, and the learning portal. Through the interviews with relevant parties in the various offices, it was found that these systems are new in certain offices while they are yet to be introduced in others. In addition, in the offices where these systems are operational, some are mostly used by secretaries and/or officials in other business services/support departments, not always the lawyers. The lawyers may use or refer to the systems occasionally to verify inputs of book training sessions as and when needed. *Table 4.20* below gives a presentation of the overall responses.

Table 4.20: Overall analysis of the responses on the frequency of use of IKM systems

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
Internet	90 (63,38%)	23 (16,20%)	10 (7,04%)	1 (0,70%)	6 (4,23%)	3 (2,11%)	9 (6,34%)
Intranet	30 (22,56%)	44 (33,08%)	25 (18,80%)	6 (4,51%)	14 (10,53%)	7 (5,26%)	7 (5,26%)
Library intranet	18 (13,14%)	35 (25,55%)	26 (18,98%)	7 (5,11%)	20 (14,60%)	8 (5,84%)	23 (16,79%)
Financial management system (i.e. Elite 3E)	62 (43,36%)	41 (28,67%)	20 (13,99%)	5 (3,50%)	5 (3,50%)	3 (2,10%)	7 (4,90%)
Document Management System (i.e. FileSite)	102 (71,33%)	14 (9,79%)	8 (5,59%)	0 (0,00%)	6 (4,20%)	2 (1,40%)	11 (7,69%)
E-mail	135 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Legal information research databases (i.e. LexisNexis, PLC, Sabinet, etc.)	38 (26,57%)	31 (21,68%)	31 (21,68%)	9 (6,29%)	21 (14,69%)	6 (4,20%)	7 (4,90%)
Learning portal	6 (4,32%)	17 (12,23%)	36 (25,90%)	13 (9,35%)	34 (24,46%)	12 (8,63%)	21 (15,11%)
Case/matter management system	18 (12,86%)	14 (10,00%)	13 (9,29%)	6 (4,29%)	23 (16,43%)	15 (10,71%)	51 (36,43%)
Client relationship management system	4 (2,82%)	7 (4,93%)	8 (5,63%)	12 (8,45%)	21 (14,79%)	18 (12,68%)	72 (50,70%)
Timekeeping system	96 (67,61%)	22 (15,49%)	4 (2,82%)	3 (2,11%)	5 (3,52%)	1 (0,70%)	11 (7,75%)
Knowledge portal	19 (13,19%)	41 (28,47%)	35 (24,31%)	8 (5,56%)	25 (17,36%)	8 (5,56%)	8 (5,56%)

The various offices' responses do not reflect a different picture from the overall firm responses as reflected in *Table 4.20* above, i.e. Cape Town, Durban, Johannesburg, and Kenya. Uganda differs in their rankings, with the client relationship management, DMS, KM portal and the library intranet all ranked as the frequently used, and Madagascar has e-mail, timekeeping and financial management systems as the most frequently used. The 1 respondent in the Botswana office listed the timekeeping system, financial management system, the internet, and case/matter management system as used most of the day.

Only an analysis of the IKM systems whose usage is not so clear-cut will be presented to determine whether there are differences in usage by office, position and age. These systems are the firm's intranet, library intranet, legal research information systems, and knowledge portal. It is clear from the research results that the internet, financial management system, document management systems, e-mail, and time keeping are used regularly across all respondents in all offices to conduct business in the form of communicating, sharing information, daily time keeping, financial management, etc. The learning portal is used for e-learning, and searching and booking scheduled training, and understandably usage will be based on the need at a specific point in time. The case/matter management and the client relationship management systems were not yet rolled out in other offices and therefore not used at all in those offices, hence the high indications of non-use.

The analysis below is presented by office, position and age for each of the 4 systems identified for analysis above, which are the firm's intranet, library intranet, legal information resources, and the knowledge portal.

4.4.3.1 Usage frequency of the firm's intranet

The below tables, *Table 4.21* to *4.23* present the frequency of usage of the intranet based on 3 variables, office, position and age. The office presentation in *Table 4.21* indicates that the firm's intranet is used frequently by 3 offices, Cape Town, Johannesburg and Kenya. Most of the information on the intranet is input by the business services departments in Cape Town and Johannesburg as the original offices of the firm. Kenya is one office apart from these two which has a library, and its library intranet page is hosted on the firm's intranet. The lawyers in Kenya have said they got accustomed to using the intranet by word of mouth from their lawyers who got seconded to the SA offices and informed them of the vast information resources accessible on this system, and also as a result of them linking to their library intranet and the knowledge portal for information searches. The minimal use by other offices

is an indication of the lack of marketing and promotion, and perhaps a need for a balanced inclusion of more information relevant and applicable to all offices.

Table 4.21: Analysis of frequency of usage of the intranet by office

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
Botswana	0 (0,00%)	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	5 (20,83%)	8 (33,33%)	8 (33,33%)	1 (4,17%)	2 (8,33%)	0 (0,00%)	0 (0,00%)
Durban	1 (16,67%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	3 (50,00%)	0 (0,00%)
Johannesburg	24 (33,80%)	32 (45,07%)	9 (12,68%)	1 (1,41%)	2 (2,82%)	2 (2,82%)	1 (1,41%)
Kenya	0 (0,00%)	3 (13,64%)	6 (27,27%)	2 (9,09%)	8 (36,36%)	1 (4,55%)	2 (9,09%)
Madagascar	0 (0,00%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	3 (50,00%)
Uganda	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (33,33%)	1 (33,33%)	0 (0,00%)	1 (33,33%)

Table 4.22: Analysis of frequency of usage of the intranet by position

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
CA/Pupils	11 (36,67%)	10 (33,33%)	1 (3,33%)	1 (3,33%)	4 (13,33%)	1 (3,33%)	2 (6,67%)
Associates	6 (17,65%)	9 (26,47%)	6 (17,65%)	3 (8,82%)	5 (14,71%)	3 (8,82%)	2 (5,88%)
Senior Associates	6 (20,00%)	12 (40,00%)	6 (20,00%)	0 (0,00%)	3 (10,00%)	1 (3,33%)	2 (6,67%)
	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
Directors/Partners	7 (20,59%)	11 (32,35%)	11 (32,35%)	1 (2,94%)	2 (5,88%)	2 (5,88%)	0 (0,00%)
Counsel/Consultants	0 (0,00%)	2 (40,00%)	1 (20,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)

It is evident from *Table 4.22* above that all lawyers in different positions use the intranet regularly, between most of the day and once a week. Only a few have indicated that they randomly or almost never use it. The same usage dynamic as by position, is reflected in the usage by age in *Table 4.23* below.

Table 4.23: Analysis of frequency of usage of the intranet by age

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
20- 0 yrs.	14 (22,95%)	23 (37,70%)	6 (9,84%)	2 (3,28%)	9 (14,75%)	5 (8,20%)	2 (3,28%)
31-45 yrs.	11 (18,97%)	19 (32,76%)	14 (24,14%)	3 (5,17%)	5 (8,62%)	2 (3,45%)	4 (6,90%)
46-55 yrs.	3 (42,86%)	1 (14,29%)	2 (28,57%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (14,29%)
55+ yrs.	2 (28,57%)	1 (14,29%)	3 (42,86%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	0

4.4.3.2 Usage frequency of the library intranet

Table 4.24: Analysis of frequency of usage of the library intranet by office

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
Botswana	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (100,00%)
Cape Town	4 (17,39%)	4 (17,39%)	6 (26,09%)	1 (4,35%)	5 (21,74%)	1 (4,35%)	2 (8,70%)
Durban	0 (0,00%)	3 (42,86%)	3 (42,86%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Johannesburg	14 (18,92%)	23 (31,08%)	14 (18,92%)	4 (5,41%)	11 (14,86%)	3 (4,05%)	5 (6,76%)
Kenya	0 (0,00%)	5 (21,74%)	2 (8,70%)	1 (4,35%)	3 (13,04%)	4 (17,39%)	8 (34,78%)
Madagascar	0 (0,00%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	5 (83,33%)
Uganda	3 (50,00%)	0 (0,00%)	2 (33,33%)	1 (16,67%)	0 (0,00%)	3 (50,00%)	0 (0,00%)

The Johannesburg office show frequent usage of the intranet compared to other offices as reflected in *Table 4.24* above. Cape Town, Kenya, Durban and Uganda have indications of frequent usage as well. Botswana and Madagascar responses reflect that they least use this system. The SA library intranet is currently a partially closed resource, which is only fully accessible to the SA offices. The reason for this is that there is information, including login details for licensed databases whose use is restricted only to these offices on this system. The Kenya library intranet was recently developed and it is being populated, and thus have limited resources compared to the SA's. Each country office library's intranet page feature information and resources relevant to their respective offices, and therefore benefits its office residence more. Perhaps to achieve an inclusive one-firm information and resources sharing goal, there is a need to look at firm-wide licences for resources relevant to some or all offices,

and have a shared open library intranet (excluding specific office licensed resources) with information input from all the offices.

Table 4.25: Analysis of frequency of usage of the library intranet by position

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
CA/Pupils	8 (25,81%)	15 (48,39%)	3 (9,68%)	0 (0,00%)	1 (3,23%)	1 (3,23%)	3 (9,68%)
Associates	2 (6,06%)	9 (27,27%)	5 (15,15%)	0 (0,00%)	6 (18,18%)	2 (6,06%)	9 (27,27%)
Senior Associates	5 (16,67%)	8 (26,67%)	9 (30,00%)	2 (6,67%)	3 (10,00%)	2 (6,67%)	1 (3,33%)
Directors/Partners	3 (7,89%)	3 (7,89%)	7 (18,42%)	5 (13,16%)	9 (23,68%)	3 (7,89%)	8 (21,05%)
Counsel/Consultants	0 (0,00%)	0 (0,00%)	2 (40,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	2 (40,00%)

Usage by position in *Table 4.25* above indicates frequent usage through all positions with the exception of Counsel/Consultants, whereas usage by age in *Table 4.26* below indicates frequent usage by the 20-30 and the 31-35 years old. Usage is very sparse among the 45-55 and the 55+ years old.

Table 4.26: Analysis of frequency of usage of the library intranet by age

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
20-30 yrs.	10 (15,87%)	24 (38,10%)	9 (14,29%)	0 (0,00%)	8 (12,70%)	5 (7,94%)	7 (11,11%)
31-45 yrs.	8 (14,04%)	10 (17,54%)	13 (22,81%)	7 (12,28%)	7 (12,28%)	2 (3,51%)	10 (17,54%)
46-55 yrs.	4 (66,67%)	0 (0,00%)	0 (0,00%)	2 (33,33%)	0 (0,00%)	4 (66,67%)	0 (0,00%)
55+ yrs.	0 (0,00%)	1 (12,50%)	1 (12,50%)	0 (0,00%)	2 (25,00%)	1 (12,50%)	3 (37,50%)

4.4.3.3 Usage frequency of legal information research systems

The use of legal information research systems is evidently more frequent in Johannesburg, Cape Town and Kenya as presented in *Table 4.27* below. Obviously, the usage levels are also dependent on the availability of such legal information research resources in the various offices. While most offices will restrict subscriptions to mostly local research resources, the SA offices subscribes to both local and international. Kenya has also recently started to extend their subscriptions to international resources. Also in some instances, it is an issue of the systems not being relevant to the countries' legal practice systems. The usage by position

in Table 4.28 and by age in Table 4.29 below indicate a more spread out distribution with the exception of Counsel/Consultant who have indicated frequency of use as once a week, occasionally, and almost never.

Table 4.27: Analysis of frequency of usage of the legal information systems by office

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
Botswana	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	6 (25,00%)	5 (20,83%)	5 (20,83%)	2 (8,33%)	3 (12,50%)	3 (12,50%)	0 (0,00%)
Durban	1 (14,29%)	1 (14,29%)	4 (57,14%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	0 (0,00%)
Johannesburg	22 (29,33%)	19 (25,33%)	16 (21,33%)	5 (6,67%)	10 (13,33%)	0 (0,00%)	3 (4,00%)
Kenya	6 (25,00%)	4 (16,67%)	5 (20,83%)	2 (8,33%)	5 (20,83%)	1 (4,17%)	1 (4,17%)
Madagascar	3 (42,86%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	2 (28,57%)
Uganda	3 (37,50%)	0 (0,00%)	2 (25,00%)	1 (12,50%)	2 (25,00%)	3 (37,50%)	0 (0,00%)

Table 4.28: Analysis of frequency of usage of legal information systems by position

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
CA/Pupils	14 (43,75%)	11 (34,38%)	3 (9,38%)	0 (0,00%)	2 (6,25%)	0 (0,00%)	2 (6,25%)
Associates	13 (35,14%)	5 (13,51%)	9 (24,32%)	3 (8,11%)	4 (10,81%)	3 (8,11%)	0 (0,00%)
Senior Associates	8 (25,81%)	9 (29,03%)	8 (25,81%)	2 (6,45%)	3 (9,68%)	0 (0,00%)	1 (3,23%)
Directors/Partners	3 (7,89%)	6 (15,79%)	9 (23,68%)	4 (10,53%)	10 (26,32%)	3 (7,89%)	3 (7,89%)
Counsel/Consultants	0 (0,00%)	0 (0,00%)	2 (40,00%)	0 (0,00%)	2 (40,00%)	0 (0,00%)	1 (20,00%)

Table 4.29: Analysis of frequency of usage of legal information systems by age

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
20-30 yrs.	24 (35,82%)	17 (25,37%)	14 (20,90%)	3 (4,48%)	6 (8,96%)	1 (1,49%)	2 (2,99%)
31-45 yrs.	14 (23,73%)	10 (16,95%)	14 (23,73%)	6 (10,17%)	10 (16,95%)	3 (5,08%)	2 (3,39%)
46-55 yrs.	5 (71,43%)	0 (0,00%)	2 (28,57%)	0 (0,00%)	0 (0,00%)	5 (71,43%)	0 (0,00%)
55+ yrs.	0 (0,00%)	3 (37,50%)	1 (12,50%)	0 (0,00%)	2 (25,00%)	2 (25,00%)	0 (0,00%)

4.4.3.4 Usage frequency of the knowledge portal

Table 4.30 below indicates that the frequency of use of the knowledge portal is fairly distributed across the offices, with the SA offices indicating frequent use and again this is due to the origin of and the relevance of most of the content on this portal. In terms of age distribution it is the 20-30 and the 31-45 years old who frequent the knowledge portal (See: Table 4.31), and in terms of position it is the junior lawyers who frequently use this system as reflected in Table 4.32 below.

Table 4.30: Analysis of frequency of usage of the knowledge portal by office

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
Botswana	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	4 (16,00%)	7 (28,00%)	8 (32,00%)	0 (0,00%)	3 (12,00%)	1 (4,00%)	2 (8,00%)
Durban	0 (0,00%)	3 (42,86%)	2 (28,57%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	0 (0,00%)
Johannesburg	13 (17,11%)	23 (30,26%)	20 (26,32%)	5 (6,58%)	10 (13,16%)	3 (3,95%)	2 (2,63%)
Kenya	2 (8,00%)	6 (24,00%)	4 (16,00%)	2 (8,00%)	7 (28,00%)	2 (8,00%)	2 (8,00%)
Madagascar	0 (0,00%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	2 (33,33%)	1 (16,67%)	2 (33,33%)
Uganda	4 (50,00%)	0 (0,00%)	1 (12,50%)	1 (12,50%)	2 (25,00%)	4 (50,00%)	0 (0,00%)

Table 4.31: Analysis of frequency of usage of the knowledge portal by position

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
CA/Pupils	11 (33,33%)	11 (33,33%)	3 (9,09%)	1 (3,03%)	2 (6,06%)	2 (6,06%)	3 (9,09%)
Associates	2 (5,41%)	10 (27,03%)	12 (32,43%)	3 (8,11%)	5 (13,51%)	2 (5,41%)	3 (8,11%)
Senior Associates	3 (9,68%)	12 (38,71%)	11 (35,48%)	0 (0,00%)	4 (12,90%)	1 (3,23%)	0 (0,00%)
Directors/Partners	2 (5,26%)	7 (18,42%)	9 (23,68%)	4 (10,53%)	11 (28,95%)	3 (7,89%)	2 (5,26%)
Counsel/Consultants	1 (20,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	3 (60,00%)	0 (0,00%)	0 (0,00%)

Table 4.32: Analysis of frequency of usage of the knowledge portal by age

	Most of the day	Once or twice a day	Once a week	Once a month	Occasionally	Randomly	Almost never
20-30 yrs.	13 (19,12%)	19 (27,94%)	18 (26,47%)	4 (5,88%)	7 (10,29%)	2 (2,94%)	5 (7,35%)
31-45 yrs.	6 (10,17%)	20 (33,90%)	11 (18,64%)	3 (5,08%)	13 (22,03%)	5 (8,47%)	1 (1,69%)
46-55 yrs.	4 (66,67%)	0 (0,00%)	0 (0,00%)	2 (33,33%)	0 (0,00%)	4 (66,67%)	0 (0,00%)
55+ yrs.	0 (0,00%)	2 (25,00%)	1 (12,50%)	1 (12,50%)	2 (25,00%)	1 (12,50%)	1 (12,50%)

4.5 The barriers to information flows and knowledge sharing

The literature review in Chapter 2 discussed a number of hindrances to communication flows that are experienced in MNCs in general. The questionnaire included these hindrances to see if they are perceived by lawyers in the law firm under study to have any adverse effects on efficient information dissemination. These hindrances are distance, speed and reliability of internet connection, office culture, time difference, differing information sharing policies, differing regional information related legislations, internal and external IT related issues, organizational structure and language differences. The responses on each of these factors will be discussed individually in the next paragraphs. The respondents were required to rate these factors on a scale of 0-9% (no hindrance) to 90-100% (total hindrance). 138 responses were received for this question, and the overall results are represented in *Table 4.33* below.

Table 4.33: Factors hindering to information dissemination

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Distance from Head Office	83 (61,94%)	10 (7,46%)	7 (5,22%)	2 (1,49%)	2 (1,49%)	8 (5,97%)	4 (2,99%)	3 (2,24%)	8 (5,97%)	7 (5,22%)
Speed and reliability of Internet connectivity	51 (37,78%)	21 (15,56%)	9 (6,67%)	5 (3,70%)	5 (3,70%)	8 (5,93%)	3 (2,22%)	6 (4,44%)	12 (8,89%)	15 (11,11%)
Office culture variations between regions	51 (38,35%)	19 (14,29%)	18 (13,53%)	14 (10,53%)	8 (6,02%)	11 (8,27%)	3 (2,26%)	3 (2,26%)	5 (3,76%)	1 (0,75%)
Time differences	73 (54,48%)	18 (13,43%)	14 (10,45%)	9 (6,72%)	3 (2,24%)	9 (6,72%)	3 (2,24%)	0 (0,00%)	4 (2,99%)	1 (0,75%)
Differing office information sharing policies	47 (34,31%)	15 (10,95%)	19 (13,87%)	17 (12,41%)	3 (2,19%)	12 (8,76%)	6 (4,38%)	4 (2,92%)	9 (6,57%)	5 (3,65%)
Differing regional cross-border information related legislations	38 (28,57%)	14 (10,53%)	18 (13,53%)	10 (7,52%)	11 (8,27%)	14 (10,53%)	7 (5,26%)	9 (6,77%)	8 (6,02%)	4 (3,01%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Internal/external IT related issues	29 (21,48%)	19 (14,07%)	19 (14,07%)	15 (11,11%)	11 (8,15%)	10 (7,41%)	7 (5,19%)	5 (3,70%)	13 (9,63%)	7 (5,19%)
Organizational structure	55 (40,15%)	22 (16,06%)	12 (8,76%)	9 (6,57%)	11 (8,03%)	10 (7,30%)	8 (5,84%)	4 (2,92%)	3 (2,19%)	3 (2,19%)
Language differences	76 (56,72%)	24 (17,91%)	10 (7,46%)	7 (5,22%)	3 (2,24%)	5 (3,73%)	4 (2,99%)	1 (0,75%)	1 (0,75%)	3 (2,24%)

4.5.1 Distance

From the results in *Table 4.33* above, 61,94% which is 83 of the 138 responses, see distance as not at all hindering information flows, only 5.22% (7 responses) see it as a total hindrance. Only 21 of the respondents rank this factor between 10-19% and 40-49%, which indicates that it is not seen as a too much of a hindrance. On the other hand 23 responses ranked distance between 50-59% and 80-89%, which imply it is somewhat of a hindrance. The in between rankings are almost on par on distance being not really a hindrance to being somewhat to a hindrance. However, the extreme rankings indicate clearly that this factor is not seen as a hindrance by most. The responses from Botswana, Cape Town, Durban, Johannesburg and Kenya clearly indicate that distance is not a hindrance to efficient information flows in their offices. Uganda is split 50/50 with 2 responses raking it as no hindrance (0-9%) and 2 raking it more towards total hindrance, between 70-79% and 80-89%. Madagascar indicated that it is a total hindrance. The indications in *Table 4.33* ae also evident in the office, position and age analysis presentations in *Table 4.34*, *Table 435*, and *Table 436* (respectively) below.

Table 4.34: Analysis of distance as a hindrance to information dissemination by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	15 (62,50%)	1 (4,17%)	4 (16,67%)	0 (0,00%)	1 (4,17%)	2 (8,33%)	0 (0,00%)	1 (4,17%)	0 (0,00%)	0 (0,00%)
Durban	6 (85,71%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Johannesburg	51 (73,91%)	4 (5,80%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	6 (8,70%)	0 (0,00%)	0 (0,00%)	5 (7,25%)	3 (4,35%)
	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Kenya	7 (30,43%)	4 (17,39%)	3 (13,04%)	1 (4,35%)	1 (4,35%)	0 (0,00%)	4 (17,39%)	0 (0,00%)	1 (4,35%)	2 (8,70%)
Madagascar	1 (16,67%)	0 (0,00%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (16,67%)	1 (16,67%)	2 (33,33%)
Uganda	2 (50,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	1 (25,00%)	0 (0,00%)

Table 4.35: Analysis of distance as a hindrance to information dissemination by position

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
CA/Pupils	18 (60,00%)	2 (6,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (3,33%)	2 (6,67%)	0 (0,00%)	3 (10,00%)	4 (13,33%)
Associates	18 (54,55%)	3 (9,09%)	3 (9,09%)	1 (3,03%)	0 (0,00%)	1 (3,03%)	1 (3,03%)	1 (3,03%)	3 (9,09%)	2 (6,06%)
Senior Associates	18 (62,07%)	1 (3,45%)	0 (0,00%)	1 (3,45%)	1 (3,45%)	4 (13,79%)	0 (0,00%)	2 (6,90%)	2 (6,90%)	0 (0,00%)
Director/Partners	26 (70,27%)	4 (10,81%)	3 (8,11%)	0 (0,00%)	1 (2,70%)	2 (5,41%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (2,70%)
Counsel/Consultants	3 (60,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

Table 4.36: Analysis of distance as a hindrance to information dissemination by age

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
20-30 years	38 (61,29%)	5 (8,06%)	2 (3,23%)	2 (3,23%)	0 (0,00%)	3 (4,84%)	3 (4,84%)	2 (3,23%)	4 (6,45%)	3 (4,84%)
31-45 years	6 (66,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (11,11%)	2 (22,22%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
46-55 years	6 (66,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (11,11%)	2 (22,22%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
55+	5 (62,50%)	2 (25,00%)	1 (12,50%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

The few respondents who indicated that distance is a hindrance, mentioned during the interviews that not being able to meet in person as regularly as possible, continue to widen the communication and information sharing gaps, and that this does not aid the possible collaboration efforts related to matters and projects of common interest. Not personally knowing each other because of being in distant offices create less unification and more pockets of associations within the individual offices.

4.5.2 Internet speed and connectivity

Africa is still unfortunately the continent with the slowest internet average connection speeds, ranging between 1000kbps and 2000kbps for most of its countries. There is a need for improvement given that the continent is targeted at by most MNCs for its vast business opportunities in the construction and mining sectors, which also pulls other support professions, i.e. legal and accounting companies. However, when one looks at the country

offices of the firm under study, the internet connection speed is much better, with the exception of Botswana and Uganda: Kenya (7689kbps), SA (5610kbps), Madagascar (3275kbps), Botswana (1915kbps), and Uganda (1604kbps).⁷¹

The majority of the responses (37.78%) indicated that internet speed and connection is not a hindrance, while 11.11% think it is a complete hindrance. The country office specific responses in *Table 4.37* below revealed that Cape Town, Durban, Botswana, Kenya and Uganda do not see internet speed and connectivity as a hindrance. Johannesburg and Madagascar's responses indicate a good mix of respondents who think it is not a hindrance and those who think it is a total hindrance. The few respondents who were contacted for further clarity on what the issues are for rating this factor a total hindrance, their answers ranged from messages sent via e-mail not reaching recipients in other countries timeously, slow internet responses onsite, and occasional unexplained connection downtimes. *Tables 4.37, 4.38 and 4.39* below give a presentation of the responses by office, position and age.

Table 4.37: Analysis of internet speed and connectivity by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	11 (47,83%)	2 (8,70%)	3 (13,04%)	0 (0,00%)	1 (4,35%)	2 (8,70%)	0 (0,00%)	2 (8,70%)	1 (4,35%)	1 (4,35%)
Durban	2 (28,57%)	1 (14,29%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (14,29%)
Johannesburg	24 (33,80%)	14 (19,72%)	1 (1,41%)	3 (4,23%)	2 (2,82%)	3 (4,23%)	3 (4,23%)	2 (2,82%)	8 (11,27%)	11 (15,49%)
Kenya	8 (34,78%)	4 (17,39%)	3 (13,04%)	1 (4,35%)	1 (4,35%)	1 (4,35%)	0 (0,00%)	1 (4,35%)	2 (8,70%)	2 (8,70%)
Madagascar	2 (33,33%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	1 (16,67%)	0 (0,00%)
Uganda	3 (75,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

Table 4.38: Analysis of internet speed and connectivity by position

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
CA/Pupils	13 (41,94%)	5 (16,13%)	0 (0,00%)	1 (3,23%)	0 (0,00%)	0 (0,00%)	1 (3,23%)	0 (0,00%)	3 (9,68%)	8 (25,81%)
Associates	13 (39,39%)	5 (15,15%)	4 (12,12%)	1 (3,03%)	2 (6,06%)	2 (6,06%)	1 (3,03%)	2 (6,06%)	3 (9,09%)	0 (0,00%)

⁷¹ Source: <https://www.akamai.com/uk/en/our-thinking/state-of-the-internet-report/state-of-the-internet-connectivity-visualization.jsp> - accessed 07 October 2016).

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Senior Associates	8 (26,67%)	5 (16,67%)	3 (10,00%)	1 (3,33%)	2 (6,67%)	2 (6,67%)	0 (0,00%)	2 (6,67%)	2 (6,67%)	5 (16,67%)
	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Director/Partners	15 (40,54%)	4 (10,81%)	2 (5,41%)	2 (5,41%)	1 (2,70%)	4 (10,81%)	1 (2,70%)	2 (5,41%)	4 (10,81%)	2 (5,41%)
Counsel/Consultants	2 (50,00%)	2 (50,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

While Counsel/Consultants are clear that internet connectivity and speed are not a hindrance to communication and information flows as represented in *Table 4.37* above, some Directors/Partners, Associates and Senior Associates indicated that it is for the reasons provided above. *Table 4.39* below which gives a presentation of the responses by age shows that more respondents in all age groups believe it is not a hindrance, while a few believe it is.

Table 4.39: Analysis of internet speed and connectivity by age

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
20-30 years	26 (41,27%)	10 (15,87%)	3 (4,76%)	3 (4,76%)	2 (3,17%)	2 (3,17%)	2 (3,17%)	1 (1,59%)	5 (7,94%)	9 (14,29%)
31-45 years	16 (29,09%)	10 (18,18%)	6 (10,91%)	2 (3,64%)	2 (3,64%)	4 (7,27%)	1 (1,82%)	5 (9,09%)	5 (9,09%)	4 (7,27%)
46-55 years	5 (55,56%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (11,11%)	1 (11,11%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	2 (22,22%)
55+	4 (50,00%)	1 (12,50%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (12,50%)	0 (0,00%)	0 (0,00%)	2 (25,00%)	0 (0,00%)

4.5.3 Office culture variations

Office culture is seen not as a hindrance to information dissemination from respondents in all offices generally as indicated in *Table 4.33*, and from the individual offices. From Johannesburg and Kenya, a few responses lingered towards culture being somewhat of a hindrance. When these responses were followed up with interviews, the interviewees mentioned that:

- (i) There is not much personal inter-office interaction taking place at their levels, that communication is mostly to groups of people and it is non-verbal, they feel they do not know their counterparts in other offices.

(ii) That some people are ‘nice’ when you talk to them over the phone and would make promises to do certain things on their end and get back to you, but never bother to fulfil their promises nor advise on any causes to their delays in responding. One interviewee mentioned that ‘it is like they do not take you seriously’.

(iii) That some offices have a relaxed attitude while others are always hectic. They do things ‘in their own time’ and this causes delays and frustrations when working on matters that cut across practice areas and/or jurisdictions.

(iv) That they feel inter-office cooperation is not encouraged enough at all levels, practically.

Table 4.40 – 4.42 below give a presentation of the analysis by office, position and age respectively.

Table 4.40: Analysis of office culture variations as a hindrance by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	11 (47,83%)	6 (26,09%)	4 (17,39%)	0 (0,00%)	1 (4,35%)	1 (4,35%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Durban	4 (57,14%)	0 (0,00%)	1 (14,29%)	2 (28,57%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Johannesburg	23 (32,86%)	10 (14,29%)	10 (14,29%)	9 (12,86%)	4 (5,71%)	6 (8,57%)	1 (1,43%)	2 (2,86%)	5 (7,14%)	0 (0,00%)
Kenya	8 (36,36%)	2 (9,09%)	2 (9,09%)	3 (13,64%)	2 (9,09%)	4 (18,18%)	1 (4,55%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Madagascar	3 (50,00%)	1 (16,67%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Uganda	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	1 (25,00%)	0 (0,00%)	1 (25,00%)

Table 4.41: Analysis of culture as a hindrance to information dissemination by position

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
CA/Pupils	11 (37,93%)	4 (13,79%)	4 (13,79%)	4 (13,79%)	1 (3,45%)	1 (3,45%)	1 (3,45%)	0 (0,00%)	3 (10,34%)	0 (0,00%)
Associates	15 (44,12%)	2 (5,88%)	3 (8,82%)	2 (5,88%)	4 (11,76%)	3 (8,82%)	1 (2,94%)	1 (2,94%)	2 (5,88%)	1 (2,94%)
Senior Associates	10 (34,48%)	5 (17,24%)	6 (20,69%)	4 (13,79%)	0 (0,00%)	3 (10,34%)	0 (0,00%)	1 (3,45%)	0 (0,00%)	0 (0,00%)
Director/Partners	13 (35,14%)	8 (21,62%)	4 (10,81%)	4 (10,81%)	2 (5,41%)	4 (10,81%)	1 (2,70%)	1 (2,70%)	0 (0,00%)	0 (0,00%)
	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Counsel/Consultants	2 (50,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

Table 4.42: Analysis of culture as a hindrance to information dissemination by age

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
20-30 years	25 (40,32%)	5 (8,06%)	9 (14,52%)	5 (8,06%)	5 (8,06%)	4 (6,45%)	1 (1,61%)	2 (3,23%)	5 (8,06%)	1 (1,61%)
31-45 years	16 (29,63%)	10 (18,52%)	9 (16,67%)	7 (12,96%)	3 (5,56%)	6 (11,11%)	2 (3,70%)	1 (1,85%)	0 (0,00%)	0 (0,00%)
46-55 years	5 (55,56%)	2 (22,22%)	0 (0,00%)	1 (11,11%)	0 (0,00%)	1 (11,11%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
55+	5 (62,50%)	2 (25,00%)	0 (0,00%)	1 (12,50%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

4.5.4 Time differences

Botswana and South Africa are on the same time zone, and so is Kenya, Madagascar and Uganda. There is however, a 1-hour time difference between these two groups of country offices. The overall responses indicated that 54.58% see time differences as not a hindrance, while only 0.75% see it as a total hindrance. Unlike most professions, anyone who works or have worked in a private law firm would attest to the fact that lawyers work beyond the normal working hours. The nature of their work is driven by clients and profit demands, it is therefore not surprising that time difference (especially as little as 1 hour) is seen as no hindrance to information flows. Most of the respondents have said that they would avail themselves for cross-office meetings, training and briefing sessions, etc., even if they are scheduled outside their working hours.

4.5.5 Information sharing policies

Information sharing policies in the firm govern the type of information that can and cannot be shared, by and to whom, how, and under what conditions. Each office adheres to their internal policies and practices. Talking to the lawyers, it was evident that though office specific, these individual policies and practices are all in essence speaking to the same issues, more to internal sensitive information relating to policies, strategies, billing information, and client/matter related confidential information, etc., all of which cannot be discussed or shared externally. These individual policies and practices do not affect the internal firm-wide

processes. The responses generally indicated that these different policies are not a hindrance to information dissemination within and across offices. Lawyers receive in-depth detailed induction training on the firm's processes and policies, and from the first day know the sort of professional conduct that is expected from them, and therefore share and communicate responsibly as required by their position.

4.5.6 Cross-border information related legislations

The responses from the different offices indicate that the different country laws that govern the sharing of information are not a hindrance to sharing. The sort of information covered by such legislation is related more to personal data. Through the informal interviews, it was established that clients who approach a specific office of the firm for service would be serviced from that office and any personal data relating to the clients will be held in that country office. No legislation was found in any of the country offices that prohibits the sharing of knowledge, skills and business information among partner organizations or subsidiaries.

4.5.7 Organizational structure

The responses from all offices indicated that in general (40.15%) organizational structure is not a hindrance to information dissemination, while 2.24% indicated that it is a total hindrance. The merger did not change the individual offices' structures, but the Partnership Board and Management Board were reconstituted to be as representative of all stakeholders as possible. Practice Group Heads were appointed among the existing practice specialists partners to lead the various practice areas across offices.

4.5.8 Language

56.72% of the 138 responses received indicated that language is not a hindrance to information flows, while only 2.24% said it is a complete hindrance. Question 1.8 and 1.9 of the survey asked the respondents how many languages they speak apart from English, and how many languages do they consider themselves fluent in in the legal field respectively. The results are in support of the above finding, showing also that only 19.87% are able to converse in English alone, the rest can do so in 2 to more than 3 languages. 65% of the respondents indicated that they are fluent in English alone, with the rest able to conduct business in other languages as well. The questions took into account both verbal and written communication.

4.6 Information security

The question required the respondents to assess by ranking between 0-9% (low) and 90-100% (very high), the various information security risk factors in *Table 4.43* below. 137 responded, and from the below results, it shows that the majority see all the factors as low security risks for the firm, with fewer lingering around the middle of the scale, more around 40-49% and 60-69%, an indication that some factors are viewed as possible medium risk factors that need attention. The main reason that was identified by the researcher on the general low concerns on information security was that most have left this responsibility to their IT departments. Some did not want to give clarity on these factors, saying their answers were based on the fact that in their ‘long time at the firm’ they have never heard of any security breach incident, this perceptions was realized across most of the offices. The IT personnel reiterated that information security is their prime priority and that ‘hi-tech sophisticated security measures’ have been put in place to protect the servers and all company owned devices from any possible threats.

Table 4.43: Factors affecting information security

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Present state of electronic security policies	39 (29,10%)	19 (14,18%)	10 (7,46%)	7 (5,22%)	8 (5,97%)	10 (7,46%)	11 (8,21%)	12 (8,96%)	9 (6,72%)	9 (6,72%)
The present use of cloud storage services on personal devices for official business	37 (27,61%)	22 (16,42%)	7 (5,22%)	12 (8,96%)	7 (5,22%)	18 (13,43%)	10 (7,46%)	7 (5,22%)	4 (2,99%)	10 (7,46%)
The level of information security training	31 (22,96%)	13 (9,63%)	9 (6,67%)	11 (8,15%)	9 (6,67%)	17 (12,59%)	11 (8,15%)	16 (11,85%)	10 (7,41%)	8 (5,93%)
Staff members' information and knowledge sharing practices	25 (18,52%)	9 (6,67%)	18 (13,33%)	12 (8,89%)	12 (8,89%)	20 (14,81%)	14 (10,37%)	15 (11,11%)	7 (5,19%)	3 (2,22%)
The present level of information security governance	24 (18,46%)	12 (9,23%)	15 (11,54%)	15 (11,54%)	14 (10,77%)	20 (15,38%)	10 (7,69%)	10 (7,69%)	4 (3,08%)	6 (4,62%)
The level of technical understanding of computational systems that can be expected from people in the legal profession	16 (11,94%)	9 (6,72%)	11 (8,21%)	21 (15,67%)	12 (8,96%)	15 (11,19%)	16 (11,94%)	19 (14,18%)	7 (5,22%)	8 (5,97%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
The danger of not keeping up with the evolving computational systems in a world of information and paper overload	13 (9,56%)	7 (5,15%)	10 (7,35%)	12 (8,82%)	9 (6,62%)	11 (8,09%)	19 (13,97%)	12 (8,82%)	22 (16,18%)	21 (15,44%)

From the responses in *Table 4.43*, there are evident information security concerns on a number of factors which have been ranked above 60% by more than 40 respondents, which will be analyzed below by office, position and age distributions. The factors that will be analyzed are: the present state of electronic security policies, the level of information security training, the level of technical understanding of computational systems that can be expected from people in the legal profession, and the danger of not keeping up with the evolving computational systems in a world of information and paper overload.

4.6.1 Present state of electronic policies

The question required respondents to assess and rank the level of information security risk posed by the present state of electronic policies on a scale of 0-9% (low) to 90-100% (very high). *Table 4.44*, *4.45* and *4.46* below present the responses by office distribution, employment position and age. The responses in *Table 4.44* indicate the concerns on the present state of electronic policies as a high risk coming from more respondents in the Johannesburg office where over 20 respondents ranked it at 60% and above. Looking at the ranking by employment position in *Table 4.45*, this factor is ranked higher by a substantive number of respondents in all position levels, with the exception of Counsel/Consultants. These groups of employees are employed in an advisory capacity or only focus on specific projects, they consider information security related issues as the responsibility the various offices' IT departments'. Like with responses by age in *Table 4.56* below, they show high numbers in the lower rankings, below 50%, indicating that this factor is seen as a low security risk.

Table 4.44: Analysis of present state of electronic security policies by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	10 (47,62%)	5 (23,81%)	1 (4,76%)	1 (4,76%)	0 (0,00%)	1 (4,76%)	1 (4,76%)	1 (4,76%)	1 (4,76%)	0 (0,00%)
Durban	3 (42,86%)	0 (0,00%)	2 (28,57%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Johannesburg	18 (25,00%)	9 (12,50%)	6 (8,33%)	2 (2,78%)	4 (5,56%)	8 (11,11%)	6 (8,33%)	7 (9,72%)	6 (8,33%)	6 (8,33%)
Kenya	4 (17,39%)	3 (13,04%)	1 (4,35%)	2 (8,70%)	2 (8,70%)	1 (4,35%)	2 (8,70%)	3 (13,04%)	2 (8,70%)	3 (13,04%)
Madagascar	2 (33,33%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	1 (16,67%)	0 (0,00%)	0 (0,00%)
Uganda	2 (50,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

Table 4.45: Analysis of present state of electronic security policies by position

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
CA/Pupils	7 (22,58%)	4 (12,90%)	2 (6,45%)	1 (3,23%)	0 (0,00%)	1 (3,23%)	2 (6,45%)	2 (6,45%)	6 (19,35%)	6 (19,35%)
Associates	15 (44,12%)	4 (11,76%)	3 (8,82%)	1 (2,94%)	2 (5,88%)	1 (2,94%)	1 (2,94%)	5 (14,71%)	1 (2,94%)	1 (2,94%)
Senior Associates	9 (31,03%)	3 (10,34%)	2 (6,90%)	0 (0,00%)	4 (13,79%)	5 (17,24%)	3 (10,34%)	2 (6,90%)	1 (3,45%)	0 (0,00%)
	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Directors/Partners	7 (20,00%)	7 (20,00%)	2 (5,71%)	5 (14,29%)	2 (5,71%)	3 (8,57%)	3 (8,57%)	3 (8,57%)	1 (2,86%)	2 (5,71%)
Counsel/Consultant	1 (20,00%)	1 (20,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	2 (40,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

Table 4.46: Analysis of present state of electronic security policies by age

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
20-30 years	25 (40,32%)	5 (8,06%)	9 (14,52%)	5 (8,06%)	5 (8,06%)	4 (6,45%)	1 (1,61%)	2 (3,23%)	5 (8,06%)	1 (1,61%)
31-45 years	12 (22,64%)	11 (20,75%)	2 (3,77%)	1 (1,89%)	6 (11,32%)	5 (9,43%)	7 (13,21%)	4 (7,55%)	3 (5,66%)	2 (3,77%)
46-55 years	1 (11,11%)	2 (22,22%)	1 (11,11%)	2 (22,22%)	0 (0,00%)	1 (11,11%)	1 (11,11%)	0 (0,00%)	0 (0,00%)	1 (11,11%)
55+	1 (12,50%)	1 (12,50%)	2 (25,00%)	2 (25,00%)	0 (0,00%)	0 (0,00%)	1 (12,50%)	0 (0,00%)	1 (12,50%)	0 (0,00%)

4.6.2 The level of information security training

While the responses in *Tables 4.47 to 4.49* show information security training ranked as a high security risk by most respondents in the Johannesburg office, there are also a few respondents in other offices who have the same view. The responses generally across offices, positions and age groups, indicate that this factor is a low risk. This is supported by previous indications of intense induction training session that lawyers in the firm undergo upon

employment, so they among other things, the sort of information that can and cannot be shared.

Table 4.47: Analysis of level of information security training by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	3 (14,29%)	5 (23,81%)	1 (4,76%)	3 (14,29%)	2 (9,52%)	2 (9,52%)	2 (9,52%)	1 (4,76%)	1 (4,76%)	1 (4,76%)
Durban	1 (14,29%)	2 (28,57%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	1 (14,29%)	0 (0,00%)
Johannesburg	17 (23,61%)	2 (2,78%)	7 (9,72%)	5 (6,94%)	5 (6,94%)	10 (13,89%)	7 (9,72%)	9 (12,50%)	6 (8,33%)	4 (5,56%)
Kenya	5 (20,83%)	4 (16,67%)	0 (0,00%)	2 (8,33%)	0 (0,00%)	4 (16,67%)	1 (4,17%)	3 (12,50%)	2 (8,33%)	3 (12,50%)
Madagascar	3 (50,00%)	0 (0,00%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	0 (0,00%)
Uganda	2 (50,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)

Table 4.48: Analysis of level of information security training by position

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
CA/Pupils	4 (12,90%)	4 (12,90%)	1 (3,23%)	3 (9,68%)	1 (3,23%)	8 (25,81%)	0 (0,00%)	2 (6,45%)	5 (16,13%)	3 (9,68%)
Associates	13 (38,24%)	4 (11,76%)	4 (11,76%)	2 (5,88%)	0 (0,00%)	3 (8,82%)	2 (5,88%)	4 (11,76%)	2 (5,88%)	0 (0,00%)
Senior Associates	6 (20,69%)	2 (6,90%)	2 (6,90%)	2 (6,90%)	3 (10,34%)	3 (10,34%)	5 (17,24%)	3 (10,34%)	2 (6,90%)	1 (3,45%)
Directors/Partners	7 (19,44%)	3 (8,33%)	2 (5,56%)	3 (8,33%)	5 (13,89%)	3 (8,33%)	4 (11,11%)	4 (11,11%)	1 (2,78%)	4 (11,11%)
Counsel/Consultant	1 (20,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	3 (60,00%)	0 (0,00%)	0 (0,00%)

Table 4.49: Analysis of level of information security training by age

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
20-30 years	16 (25,00%)	8 (12,50%)	4 (6,25%)	4 (6,25%)	2 (3,13%)	11 (17,19%)	3 (4,69%)	7 (10,94%)	6 (9,38%)	3 (4,69%)
31-45 years	12 (22,22%)	1 (1,85%)	4 (7,41%)	7 (12,96%)	5 (9,26%)	5 (9,26%)	7 (12,96%)	6 (11,11%)	3 (5,56%)	4 (7,41%)
46-55 years	2 (22,22%)	2 (22,22%)	1 (11,11%)	0 (0,00%)	1 (11,11%)	0 (0,00%)	0 (0,00%)	1 (11,11%)	1 (11,11%)	1 (11,11%)
55+	1 (12,50%)	2 (25,00%)	0 (0,00%)	0 (0,00%)	1 (12,50%)	1 (12,50%)	1 (12,50%)	2 (25,00%)	0 (0,00%)	0 (0,00%)

4.6.3 Lawyers' information and knowledge sharing practices

Though indications in *Table 4.50* through to *Table 4.53* below are that of lawyers' information and knowledge sharing practices are a low security risk in the firm across offices, positions, age groups, there are however some fewer respondents who indicated that this factor is a high security risk. The Johannesburg and Kenya offices indicated an almost balance on both these opposite sides. The reasons gathered for the high risk rating from some of the respondents were that relevant policies on sharing information and knowledge are not freely available on the company intranet and people tend to forget or take lightly their responsibilities to secure the firm's assets if such policies are not pushed through to them at every opportunity and platform available, and some said they have not seen these policies but they just know from their induction training and professional experience that they need to take precautionary measures to secure the firm's electronic information assets at all times. One respondent mentioned the need for 'updated policies that take into account the current day sophisticated information security threats'. Those who rated this factor as a low risk mentioned that it is common professional behavior to do the right thing and that lawyers know what precautions to take, irrespective of whether there are policies or not.

Table 4.50: Analysis of lawyers' information and knowledge sharing practices by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	4 (18,18%)	2 (9,09%)	5 (22,73%)	2 (9,09%)	1 (4,55%)	4 (18,18%)	0 (0,00%)	2 (9,09%)	1 (4,55%)	1 (4,55%)
Durban	3 (42,86%)	1 (14,29%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	1 (14,29%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Johannesburg	13 (18,06%)	2 (2,78%)	9 (12,50%)	7 (9,72%)	6 (8,33%)	13 (18,06%)	8 (11,11%)	7 (9,72%)	5 (6,94%)	2 (2,78%)
Kenya	3 (13,04%)	2 (8,70%)	2 (8,70%)	1 (4,35%)	3 (13,04%)	3 (13,04%)	3 (13,04%)	5 (21,74%)	1 (4,35%)	0 (0,00%)
Madagascar	0 (0,00%)	2 (33,33%)	2 (33,33%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Uganda	2 (50,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)

Table 4.51: Analysis of lawyers' information and knowledge sharing practices by position

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
CA/Pupils	4 (12,90%)	1 (3,23%)	4 (12,90%)	2 (6,45%)	4 (12,90%)	5 (16,13%)	2 (6,45%)	4 (12,90%)	4 (12,90%)	1 (3,23%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Associates	12 (35,29%)	4 (11,76%)	4 (11,76%)	4 (11,76%)	1 (2,94%)	2 (5,88%)	2 (5,88%)	4 (11,76%)	0 (0,00%)	1 (2,94%)
Senior Associates	3 (10,00%)	1 (3,33%)	5 (16,67%)	4 (13,33%)	6 (20,00%)	5 (16,67%)	2 (6,67%)	2 (6,67%)	1 (3,33%)	1 (3,33%)
Directors/Partners	6 (17,14%)	3 (8,57%)	4 (11,43%)	1 (2,86%)	1 (2,86%)	8 (22,86%)	8 (22,86%)	2 (5,71%)	2 (5,71%)	0 (0,00%)
Counsel/Consultant	0 (0,00%)	0 (0,00%)	1 (20,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	3 (60,00%)	0 (0,00%)	0 (0,00%)

Table 4.52: Analysis of lawyers' information and knowledge sharing practices by age

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
20-30 years	17 (26,15%)	2 (3,08%)	7 (10,77%)	6 (9,23%)	6 (9,23%)	10 (15,38%)	4 (6,15%)	7 (10,77%)	3 (4,62%)	3 (4,62%)
31-45 years	6 (11,32%)	6 (11,32%)	7 (13,21%)	6 (11,32%)	6 (11,32%)	7 (13,21%)	7 (13,21%)	6 (11,32%)	2 (3,77%)	0 (0,00%)
46-55 years	1 (11,11%)	1 (11,11%)	2 (22,22%)	0 (0,00%)	0 (0,00%)	2 (22,22%)	1 (11,11%)	1 (11,11%)	1 (11,11%)	0 (0,00%)
55+	1 (12,50%)	0 (0,00%)	2 (25,00%)	0 (0,00%)	0 (0,00%)	1 (12,50%)	2 (25,00%)	1 (12,50%)	1 (12,50%)	0 (0,00%)

4.6.4 Level of computational systems technical understanding

Lawyers are not IT specialists, however in today's technological age, there is a need for every professional in any profession to have basic to moderate understanding of computational systems in order to function effectively. From *Table 4.53* below, 37 respondents from the Johannesburg office have ranked this factor as a high security risk at over 50%. For Kenya the ranking was 15 respondents ranking this factor over 50% and 8 respondents below 50%. The responses across offices, positions and age groups are all almost equally distributed across all ranking scales, indicating that this a low security risk for most as much as it is a high security risk for others. *Table 4.54* and *Table 4.55* below give the responses presentation by position and by age.

Table 4.53: Level of technical understanding of computational systems by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (100,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Cape Town	2 (9,52%)	3 (14,29%)	3 (14,29%)	2 (9,52%)	2 (9,52%)	4 (19,05%)	0 (0,00%)	2 (9,52%)	0 (0,00%)	3 (14,29%)
Durban	1 (14,29%)	2 (28,57%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	1 (14,29%)	1 (14,29%)	0 (0,00%)	0 (0,00%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Johannesburg	5 (6,94%)	3 (4,17%)	6 (8,33%)	14 (19,44%)	6 (8,33%)	5 (6,94%)	13 (18,06%)	11 (15,28%)	5 (6,94%)	4 (5,56%)
Kenya	4 (17,39%)	0 (0,00%)	1 (4,35%)	1 (4,35%)	2 (8,70%)	5 (21,74%)	2 (8,70%)	5 (21,74%)	2 (8,70%)	1 (4,35%)
Madagascar	2 (33,33%)	0 (0,00%)	1 (16,67%)	2 (33,33%)	1 (16,67%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)
Uganda	2 (50,00%)	1 (25,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)

Table 4.54: Level of technical understanding of computational systems by position

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
CA/Pupils	2 (6,45%)	2 (6,45%)	0 (0,00%)	3 (9,68%)	2 (6,45%)	4 (12,90%)	7 (22,58%)	6 (19,35%)	4 (12,90%)	1 (3,23%)
Associates	9 (26,47%)	1 (2,94%)	3 (8,82%)	7 (20,59%)	3 (8,82%)	5 (14,71%)	2 (5,88%)	2 (5,88%)	1 (2,94%)	1 (2,94%)
Senior Associates	2 (6,90%)	3 (10,34%)	1 (3,45%)	7 (24,14%)	4 (13,79%)	2 (6,90%)	1 (3,45%)	6 (20,69%)	1 (3,45%)	2 (6,90%)
Directors/Partners	3 (8,57%)	2 (5,71%)	6 (17,14%)	4 (11,43%)	3 (8,57%)	3 (8,57%)	5 (14,29%)	4 (11,43%)	1 (2,86%)	4 (11,43%)
Counsel/Consultant	0 (0,00%)	1 (20,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	1 (20,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)

Table 4.55: Level of technical understanding of computational systems by age

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
20-30 years	11 (17,19%)	5 (7,81%)	2 (3,13%)	11 (17,19%)	5 (7,81%)	11 (17,19%)	8 (12,50%)	5 (7,81%)	4 (6,25%)	2 (3,13%)
	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
31-45 years	5 (9,43%)	1 (1,89%)	7 (13,21%)	9 (16,98%)	5 (9,43%)	3 (5,66%)	7 (13,21%)	11 (20,75%)	2 (3,77%)	3 (5,66%)
46-55 years	0 (0,00%)	3 (33,33%)	0 (0,00%)	0 (0,00%)	1 (11,11%)	0 (0,00%)	1 (11,11%)	1 (11,11%)	1 (11,11%)	2 (22,22%)
55+	0 (0,00%)	0 (0,00%)	2 (25,00%)	1 (12,50%)	1 (12,50%)	1 (12,50%)	0 (0,00%)	2 (25,00%)	0 (0,00%)	1 (12,50%)

4.6.5 The danger of not keeping up with evolving computational systems

It is a well-known fact that if computational systems are not kept secure and up to date, they become vulnerable to all information security threats. From *Table 4.56* to *Table 4.57*, one can draw conclusions from the presentations of the responses that this factor is regarded as a high

security risk by most of the respondents across offices, positions and age groups, with such obvious indications from the Johannesburg and Kenya offices. The same indications are also evident in the presentations of responses by position and age group in *Table 4.57* and *4.58* below.

Table 4.56: Danger of not keeping up with evolving computational systems by office

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
Botswana	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (100,00%)	0 (0,00%)
Cape Town	2 (9,09%)	2 (9,09%)	3 (13,64%)	2 (9,09%)	1 (4,55%)	3 (13,64%)	2 (9,09%)	0 (0,00%)	4 (18,18%)	3 (13,64%)
Durban	1 (14,29%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (14,29%)	2 (28,57%)	2 (28,57%)	1 (14,29%)
Johannesburg	6 (8,33%)	4 (5,56%)	6 (8,33%)	6 (8,33%)	2 (2,78%)	7 (9,72%)	10 (13,89%)	7 (9,72%)	10 (13,89%)	14 (19,44%)
Kenya	2 (8,33%)	0 (0,00%)	0 (0,00%)	2 (8,33%)	5 (20,83%)	1 (4,17%)	5 (20,83%)	3 (12,50%)	4 (16,67%)	2 (8,33%)
Madagascar	1 (16,67%)	1 (16,67%)	1 (16,67%)	2 (33,33%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (16,67%)	0 (0,00%)
Uganda	1 (25,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	1 (25,00%)	0 (0,00%)	0 (0,00%)	1 (25,00%)

Table 4.57: Danger of not keeping up with evolving computational systems by position

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
CA/Pupils	1 (3,23%)	2 (6,45%)	1 (3,23%)	2 (6,45%)	2 (6,45%)	3 (9,68%)	6 (19,35%)	3 (9,68%)	3 (9,68%)	8 (25,81%)
Associates	6 (17,65%)	2 (5,88%)	2 (5,88%)	4 (11,76%)	2 (5,88%)	1 (2,94%)	6 (17,65%)	2 (5,88%)	4 (11,76%)	5 (14,71%)
Senior Associates	4 (13,79%)	1 (3,45%)	2 (6,90%)	3 (10,34%)	1 (3,45%)	4 (13,79%)	1 (3,45%)	4 (13,79%)	6 (20,69%)	3 (10,34%)
Directors/Partners	2 (5,41%)	2 (5,41%)	4 (10,81%)	3 (8,11%)	4 (10,81%)	3 (8,11%)	5 (13,51%)	2 (5,41%)	7 (18,92%)	5 (13,51%)
Counsel/Consultant	0 (0,00%)	0 (0,00%)	1 (20,00%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	1 (20,00%)	1 (20,00%)	2 (40,00%)	0 (0,00%)

Table 4.58: Danger of not keeping up with evolving computational systems by age

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
20-30 years	7 (10,94%)	4 (6,25%)	4 (6,25%)	6 (9,38%)	2 (3,13%)	5 (7,81%)	13 (20,31%)	5 (7,81%)	7 (10,94%)	11 (17,19%)
31-45 years	5 (9,09%)	3 (5,45%)	4 (7,27%)	6 (10,91%)	7 (12,73%)	4 (7,27%)	2 (3,64%)	7 (12,73%)	10 (18,18%)	7 (12,73%)
46-55 years	1 (11,11%)	0 (0,00%)	1 (11,11%)	0 (0,00%)	0 (0,00%)	2 (22,22%)	2 (22,22%)	0 (0,00%)	2 (22,22%)	1 (11,11%)

	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90-100%
55+	0 (0,00%)	0 (0,00%)	1 (12,50%)	0 (0,00%)	0 (0,00%)	0 (0,00%)	2 (25,00%)	0 (0,00%)	3 (37,50%)	2 (25,00%)

4.7 Lawyers' training needs

128 responses were received on the question relating to preferred methods of training required on each of the information and knowledge systems in *Table 4.59* below. The choices were between person-to-person, telephone, video, online and training manuals. The firm-wide responses showed a preference of person-to-person, followed by online training and training manuals respectively on all systems. Video and telephone were the least preferred methods of training on all the systems. Johannesburg, Kenya and Madagascar's respondents showed a similar preference as the office-wide responses. Botswana preferred person-to-person only, while in Cape Town person-to-person, online and video were the most preferred, with training manuals being the least preferred and telephone not preferred at all. Contrary to other offices, Durban indicated some preference for telephone and video training, and Uganda preferred video training and not telephone training for certain systems. Below is a presentation of the various offices' training preferences on individuals systems.

Table 4.59: Training methods preferences

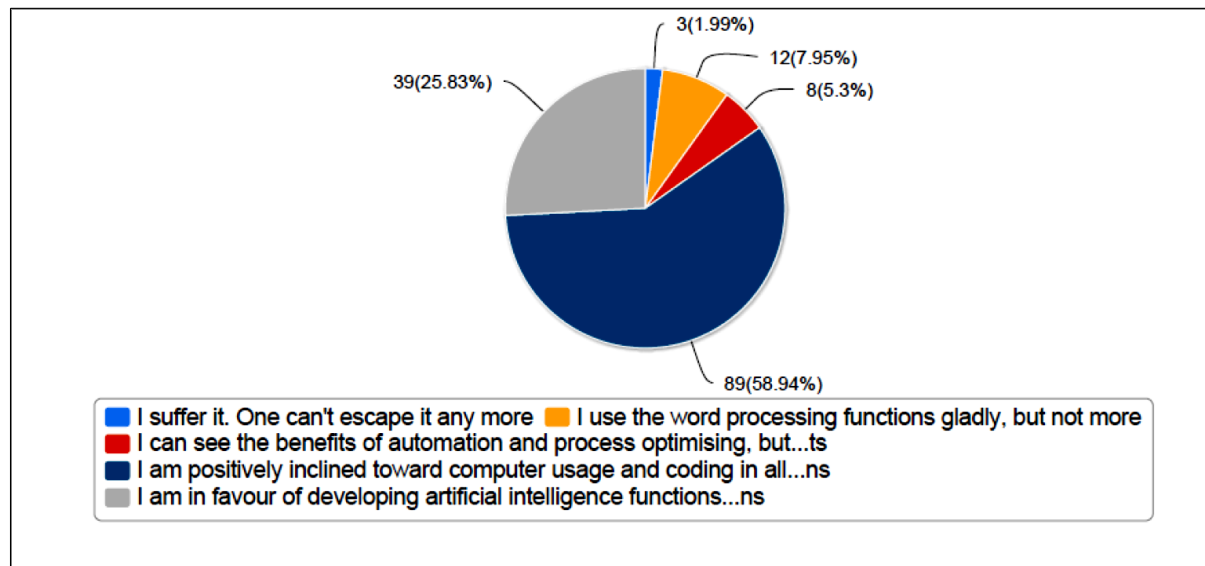
	Person to person	Telephone	Video	Online	Training manuals
Internet	26 (50,00%)	0 (0,00%)	3 (5,77%)	18 (34,62%)	5 (9,62%)
Intranet	31 (50,82%)	0 (0,00%)	6 (9,84%)	18 (29,51%)	6 (9,84%)
Library intranet	45 (60,00%)	1 (1,33%)	4 (5,33%)	20 (26,67%)	5 (6,67%)
Financial management System (i.e. Elite 3E)	51 (65,38%)	3 (3,85%)	3 (3,85%)	12 (15,38%)	9 (11,54%)
Document Management System (i.e. FileSite)	54 (71,05%)	2 (2,63%)	3 (3,95%)	9 (11,84%)	8 (10,53%)
E-mail	29 (53,70%)	2 (3,70%)	2 (3,70%)	12 (22,22%)	9 (16,67%)
Legal information research databases (i.e. LexisNexis, PLC, Sabinet, etc.)	51 (53,68%)	1 (1,05%)	10 (10,53%)	20 (21,05%)	13 (13,68%)
Learning portal	52 (58,43%)	3 (3,37%)	6 (6,74%)	19 (21,35%)	9 (10,11%)
Case/matter management system	57 (59,38%)	2 (2,08%)	8 (8,33%)	15 (15,63%)	14 (14,58%)

	Person to person	Telephone	Video	Online	Training manuals
Client relationship management system	60 (58,25%)	5 (4,85%)	7 (6,80%)	20 (19,42%)	11 (10,68%)
Timekeeping system	41 (59,42%)	5 (7,25%)	5 (7,25%)	11 (15,94%)	7 (10,14%)
Knowledge portal	48 (51,61%)	6 (6,45%)	6 (6,45%)	22 (23,66%)	11 (11,83%)

4.8 Lawyers' attitudes to information and information technologies

The first question relating to perceptions to ICTs required the respondents to describe their attitudes to information and computer technology by indicating whether they use it as little as possible, whether they suffer it and can't escape it any more, whether they are only happy to use the word processing functions, whether they see the benefits of automation and process optimization as only applicable in industrial environments, whether they are positively inclined toward computer usage and coding in all organizations, and lastly whether they are in favor of developing AI functions in all organizations. *Figure 4.10* below presents general responses across offices, positions and age groups.

Figure 4.10: Overall responses on attitudes towards ICT



From the responses above, 58%.94 indicated that they are positively inclined toward computer usage and coding in all organizations. Across all positions and age groups this is the selection by most of the respondents. 25.83% indicated they are in favor of developing AI functions in all organizations, and again the second selection by most across all offices and age groups. 7.95% of the respondents indicated that they happily use it for word processing functions only. 2 respondents between the ages of 31-45 and 1 aged 55 + indicated that they

suffer it and just cannot escape it anymore. These 3 are in the Director (2) and Associate (1) levels, perhaps an indication that age is not a factor here, but it is simply a matter of attitude. 7.95% of the respondents see the benefits of automation and process optimizing only as relevant for the industrial environments.

Figure 4.11 below indicate clearly that there is a positive inclination to the usage of computers and coding, and an interest in developing AI functions in all organizations among respondents in all positions in the firm. For Counsel/Consultants the answers were clear, a 60/40 percentage split between these two in favor of positive inclination towards the use of computers and coding. In terms of office distribution, *Figure 4.12* shows the 1 respondent in Botswana only selecting that they are in favor of developing AI functions. Responses from Durban indicate 85.71% of the respondents positively inclined towards computer usage (which is 65% for Johannesburg and 48% for Cape Town) and coding, and 14.29% in favor of developing AI functions. 25% of respondents in Uganda selected the use of word processing functions and 75% indicated they are in favor of developing AI functions.

Figure 4.11: Responses on attitudes towards ICT by position

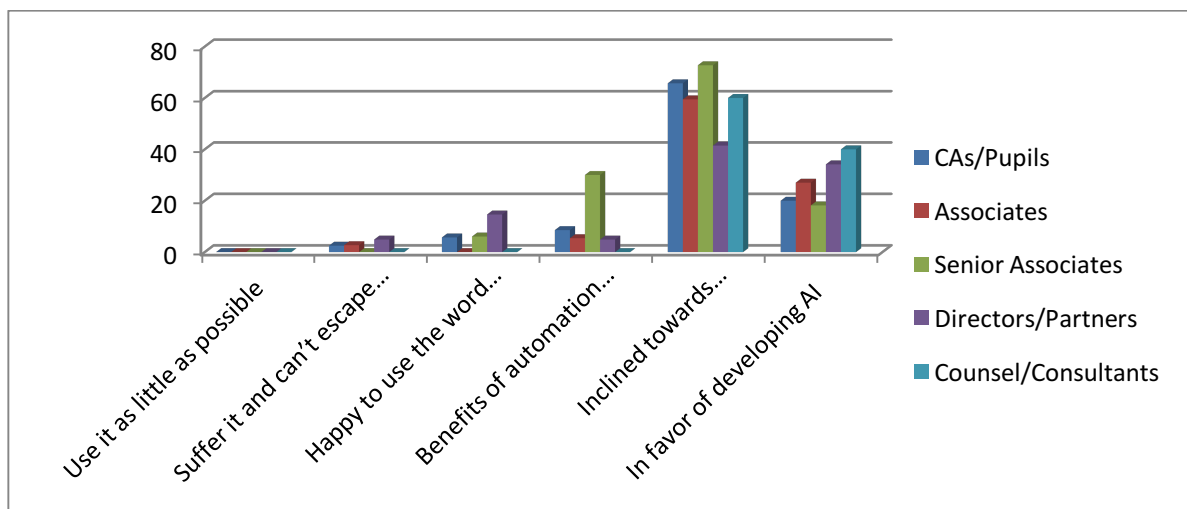


Figure 4.12: Responses on attitudes towards ICT by office

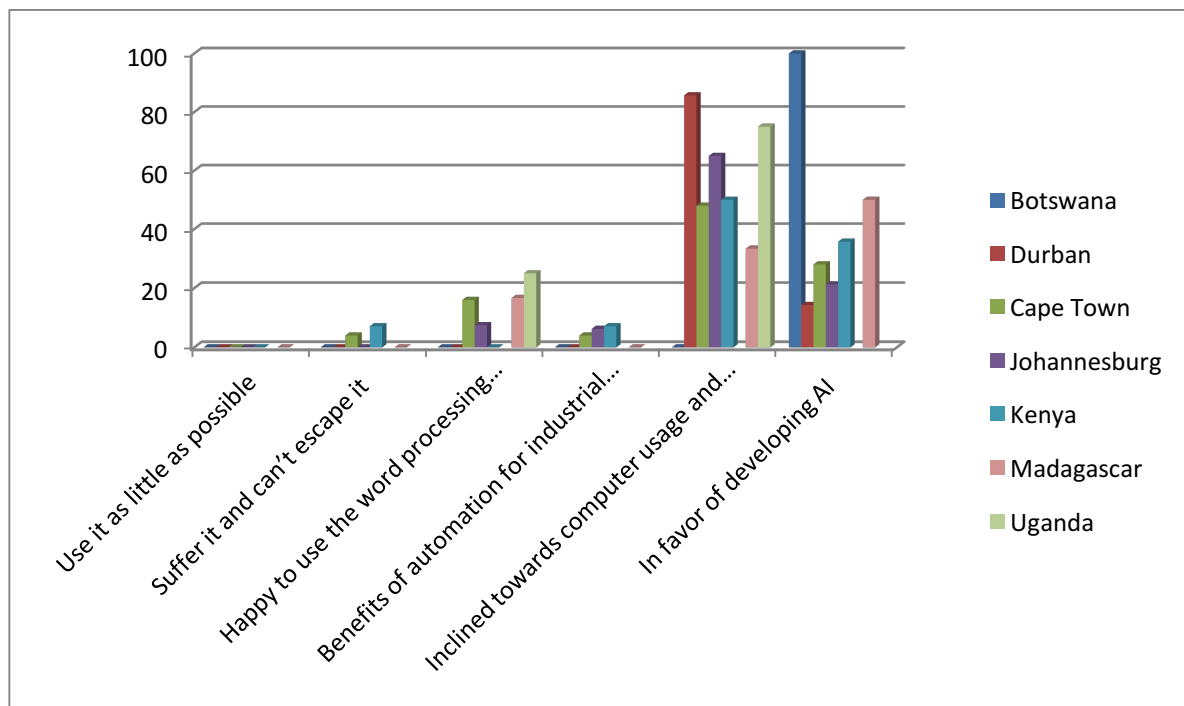
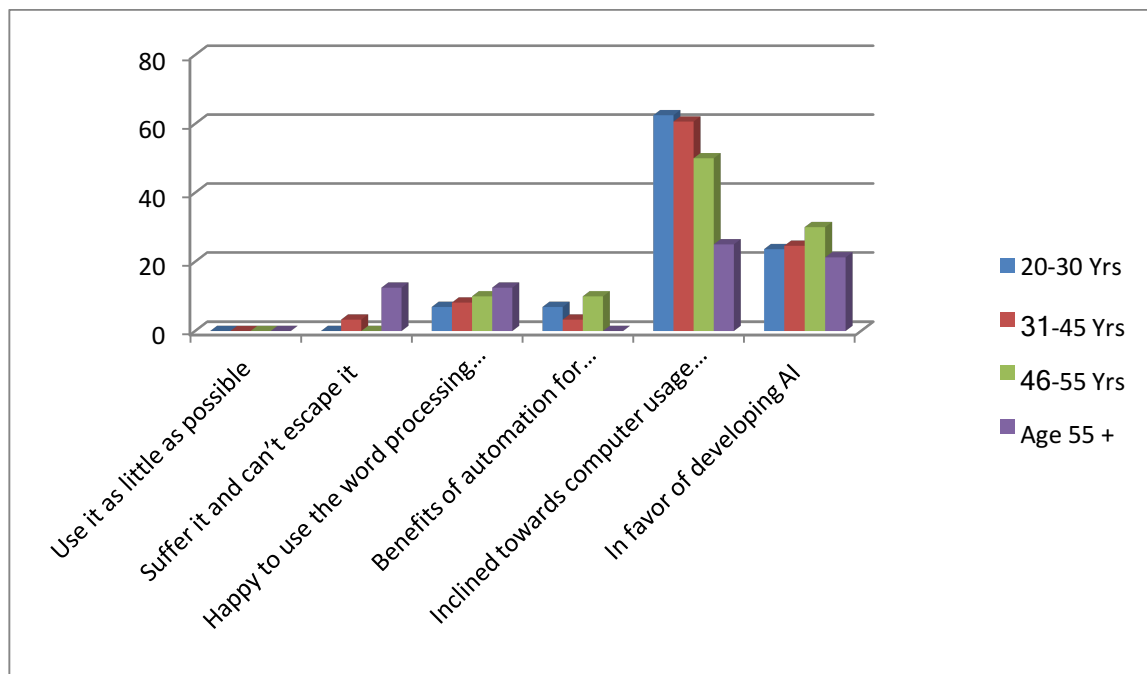


Figure 4.13: Responses on attitudes towards ICT by age group



According to *Figure 4.13* above, it is evident that all age groups have positive attitudes to ICTs, more so the advanced and complex functions that can simplify their work.

The second question relating to perceptions to ICTs required respondents to indicate the level of change to personal productivity that the ‘fourth industrial revolution’ (Industry 4.0) systems capabilities would bring. The choices were between no change, some change, a great improvement, and it will revolutionize my work. See *Table 4.60* below for the responses.

Table 4.60: Perceptions on the impact of Industry 4.0 in productivity

	No change	Some change	A great improvement	It will revolutionize my work
Search any legal text in any language for any word (no indexing any more)	12 (8,57%)	44 (31,43%)	59 (42,14%)	25 (17,86%)
Automated translation in real time (verbally and written) of any legal text in part or as a whole	16 (11,51%)	43 (30,94%)	62 (44,60%)	18 (12,95%)
Search any legal text in any language for semantic purposes	21 (15,22%)	61 (44,20%)	41 (29,71%)	15 (10,87%)
Automated semantic queries in real time across different legal dispensations	14 (10,14%)	61 (44,20%)	46 (33,33%)	17 (12,32%)
Analytics of the progress and outcomes of legal processes across multiple geographies in real time	7 (5,04%)	48 (34,53%)	57 (41,01%)	27 (19,42%)
"Work at home or on the road" thanks to an encrypted cloud based organizational architecture	6 (4,29%)	20 (14,29%)	51 (36,43%)	63 (45,00%)
Reduction of office attendance to (say) 2 days a week, thanks to the encrypted cloud based organizational architecture	10 (7,14%)	21 (15,00%)	37 (26,43%)	72 (51,43%)
Semantic as well as conceptual (automated) searchability of oral records (proceedings)	14 (10,07%)	34 (24,46%)	52 (37,41%)	39 (28,06%)

From the above responses it is evident that the majority of the respondents (52.43%), believe that the possible encrypted cloud based organizational architecture that could cut office attendance by 2 days would revolutionize their work. 15% and 26.43% see some change and a great improvement respectively, while 7.14% do not foresee any change that this possibility would bring to their work. 45% think working from home or on the road would revolutionize their work, while 36.43% think it will be a possible great improvement. The possibility to search for legal text in any language for any word, the automated legal text translation in real time, and all the other information searching possibilities brought by semantic and analytic web technologies are seen as having the potential to bring some change, great improvement or revolutionize the work of lawyers at different levels. There is no clear cut deduction that can be made from the results that these technologies would not bring any change, indications across the board is that they all would in some way.

4.9 Management's role in information and knowledge management

Of the 142 responses received, 76 agree that the firm supports collaboration and information sharing at all levels, and 46 strongly agree. Only 12 disagree with this statement while 3 strongly disagree. 75 agree that the firm encourages the creation of CoPs, while 26 strongly agree. 28 disagree. 77 agree that peer-to-peer learning happen naturally, and 51 strongly agree and 12 disagree. One striking finding was of the 63 who disagree and the 6 who strongly disagree with the statement that they are fully informed about other teams and offices' areas of specialization against the 49 who agree and the 12 who strongly agree. 73 respondents agree that inter-office information sharing is still a challenge and 24 strongly agree. 27 believe it is not a challenge. The one firm concept is still a grey area. 40 respondents believe the firm has achieved this goal, with 20 strongly agreeing. While on the other hand 52 disagree that the one firm goal has been realized, 10 strongly disagree. Table 4.61 below details the responses.

Table 4.61: Responses on perceptions on inter-office cooperation

	Strongly agree	Agree	Disagree	Disagree strongly	Not sure/No comments
The firm supports collaboration and information sharing at all levels	46 (32,39%)	76 (53,52%)	12 (8,45%)	3 (2,11%)	5 (3,52%)
The firm encourages the creation of virtual communities of	26 (18,06%)	75 (52,08%)	28 (19,44%)	5 (3,47%)	10 (6,94%)

	Strongly agree	Agree	Disagree	Disagree strongly	Not sure/No comments
practice, i.e. online forums, chat rooms, e-mail lists, etc.					
Peer to peer learning happen naturally in my daily work	51 (35,42%)	77 (53,47%)	12 (8,33%)	1 (0,69%)	3 (2,08%)
I am fully informed about each team and office's areas of specialization	12 (8,57%)	49 (35,00%)	63 (45,00%)	6 (4,29%)	10 (7,14%)
Inter-office information sharing and communication is still a challenge for the firm	24 (16,90%)	73 (51,41%)	27 (19,01%)	2 (1,41%)	16 (11,27%)
We are one firm and therefore fully share business information as should be	20 (14,18%)	40 (28,37%)	52 (36,88%)	10 (7,09%)	19 (13,48%)

4.10 Conclusion

The study has revealed some expected and unexpected results. At the beginning of the research, there were assumptions, some popularly known, that:

- (i) Law firms as information intensive and knowledge based organizations are experiencing far more complex communications and operational problems than one would find in most multinational organizations.
- (ii) That as a paper-based profession traditionally, most lawyers, especially the older ones, are still stuck in the world of paper and are intimidated by technologies.
- (iii) That hierarchy is a big deal and that relationships and communication between juniors and seniors are top-down relationships and authoritative, to the detriment of cooperation, information flows and knowledge sharing
- (iv) That due the stiff competitive nature of the profession and clients demands, that lawyers do not care about issues surrounding them, they are simply focused on the goal and nothing else, the attitude that 'if it is not billable it is not important'.

These assumptions are just a few, more have been highlighted throughout the study. Looking at the findings, it is clear that there are some pockets of truths and misconceptions to

some of these assumptions, more of which will be detailed in the next chapter. Contrary to popular belief, the information needs of the lawyers and their need for advanced technological support is not a matter of choice, but is dictated by the nature of their work.

Chapter 5

Implications of the results

5.1 Introduction

The objective of this study was to understand the information and knowledge sharing dynamics in South African multinational law firms; the impact of the use of various information and knowledge sources and systems on performance, communication, and information and knowledge sharing; and the problems hindering efficient information dissemination across partner offices. The law firm under study was one of the large law firms in South Africa, which has partner offices and working relations across the region and internationally, and as a multinational organization, the law firm made for suitable representation of a typical large multinational law firm, and thus a perfect sample choice.

In order to achieve the objective of this study, the process of literature review was conducted to get a bigger picture understanding of the operational dynamics in multinational organizations, their critical need to cooperate and collaborate as unified organizations, and the problems they face in communicating and sharing information across borders. The review also focused on multinational law firms as the focus of this study, more especially in the South African context, to provide background understanding of their operational environment. Following the literature review, the existing information and knowledge sources and systems across the firm under study were studied through observations and interactions with specific specialists in various areas, to get insight that assisted in designing the questions for the survey. The survey was followed with informal clarity seeking interviews to specific identified individuals, to address answers or patterns in the findings that needed further information in order to get a full understanding.

Based on the data collected through literature review, observations, the survey and interviews, and the interpretation thereof, this last chapter outlines the conclusions of this study, and close by presenting the implications of the findings of the study for both theory in the form of academic research, and practice in the form of application in the review and/or improvement of IKM practices in multinational organizations and/or multinational law firms.

It is clear from the results of this study that like all multinational organizations, multinational law firms are not immune to the problems associated with information and knowledge sharing. It is evident that the business of law firms is based on information hence they have been labelled as information intensive organizations throughout the previous chapters. It is for this reason that their management of information and knowledge as assets rank high as priorities. A number of law firms in South Africa have in the recent past, introduced knowledge management departments, in an attempt to facilitate sharing of, and management of knowledge assets in law firms. The conclusions are discussed under six broad topics, which are: the use of information devices, resources and systems; hindrances to information flows and knowledge sharing; information security; lawyers training needs; lawyers' attitudes to ICTs; and management's role in IKM.

5.2 The use of information devices, resources and systems

Lawyers have preferences when it comes to the use of information devices, resources and systems, and their preferences are informed by the level of position, which comes with more responsibility and accountability as one move up the ranks. The senior positions bring about pressure, in the sense that as billing lawyers they need to bring in revenue, and therefore a need to work harder which usually extends beyond normal working hours, more often working away from the office. In order to be able to do this, they need flexible devices that they can easily move around with. The use of laptops and smart technology mobile phones are the most preferred. Most law firms are providing these devices to senior professionals to aid them in doing their jobs wherever they are. The fact that most lawyers work even while out of the office is supported by the high reliance on home Wi-Fi, which compares to the use of office computers, an indication that they work at home as much as they work in the office.

Though from a one-sided view, this could be a costly exercise for a multinational law firm of the size of the one studied, these mobile devices provides the needed flexibility for lawyers and improves performance with added revenue returns and quality standard service to clients, all of which cannot be attained during official working hours alone. The need to communicate and share information across countries with different time zones warrants the need for mobile devices. Compact, modern and easy to carry is the way to go. Law firms like all organization need to move with times and embrace relevant technologies. The proof for this is the need for memory sticks over the traditional CDs. For a firm to provide or sponsor these needed devices to its staff allows for easier information security controls in its favor. Relevant information security programs can be pre-installed and maintained on a continuous

basis to prevent hacking or breaching of company information, unlike if the devices were the individuals' own. It is very important that law firm policies take into account the changing needs of employees as influenced by the ever-changing technological advancements, in order to achieve organizational goals.

It is an undeniable fact that the World Wide Web has taken over the world. Its search tools, Google for one, are the first point of departure for any information searching for most people generally, and this is not different with lawyers. Amidst all the information resources in law firms, internet search tools are still favored, in fact as much as the primary print legal resources (according to the findings of this study) which are consulted on a regular basis. The search engines are preferred for their ease of use and their quick reference to more reliable and legitimate sources. The use of electronic in-house specialist legal resources is also prominent among lawyers, which supports the fact that lawyers will use technology or resources available to them, as long as it helps answer their information needs. This is a normal human behavior, and exactly what everyone in any profession would do.

There is a clear preference for electronic resources over print where such are available. It must be noted that not all the offices or even organizations in general, have all the electronic resources (or even print resources) they require. Budgetary constraints do not allow for that, and in most cases the print and electronic resources will supplement each other. The clear preference of electronic over print resources is proof that it is easier and quicker for lawyers to get information from the internet and other electronic resources than to take a walk to the library, and go through numerous print pages to get to the information they need, unless if there is no other option. This trend cuts across all position levels and offices. Contrary to the belief that the information on the internet is not always reliable, more and more people prefer the internet regardless, either they counter-verify the information before use or application or use information from known reliable websites or use search engines to get a lead to reliable sources and information, the fact is they prefer the World Wide Web.

Perhaps it is time for information professionals to acknowledge this trend and channel their efforts to teaching internet information searching and information analysis/verification skills. Libraries are no longer valued for the information they host within their wall, there has been a shift from the books to the skills of the information professionals within those libraries, their creative ways of making the information easily and timeously accessible in a well packaged format, and for the value add services that save lawyers time and simplify the information searching processes in organizations, i.e. extensive specialist information researching, current

awareness services, training on and curation of electronic resources, information and knowledge management, information and knowledge auditing, creating and managing information and knowledge repositories, creating taxonomies, and many other unconventional library services. This shift from libraries to information professionals warrants a need to acquire new additional skills in order to provide a meaningful multifaceted service that is demanded by the lawyers. An information professional in the information age is expected to possess not only information management skills and expertise, but also technological, financial, marketing, project management, negotiation, training, and many other skills that will add value to their roles as they reinvent their professions to remain relevant.

It is natural for lawyers (or anyone for the matter) to frequently use the systems that are required to perform their daily duties than those that do not. It is therefore expected for lawyers to use e-mail more frequently for daily communication and information sharing. The Document Management System is the central repository for tracking, managing and storing documents, and expectedly one of the frequently used systems in any organization. With the firm's offices being in different countries, its website and intranet serve to inform and communicate useful information to lawyers. On these systems, one can find all the lawyers names, practice area and contact information. This makes it easy for lawyers in a big multinational firm, to know each other even if they have never met personally, and be able easily open lines of communication should they need to. There are also opinions and analysis pieces by different specialists to update each other and the clients, the brochures, etc. These are valuable internal and external resources that some might take for granted, if they are not properly and adequately promoted within the firm. Amongst the responses in Chapter 4, there was an indication that not all lawyers are aware of other teams' areas of specialization, an indication the resources and systems available are not sufficiently marketing within the firm.

Apart from their storage capabilities, systems should aid in the speedy capturing and retrieval of information. Systems that speed up repetitive processes like timekeeping, billing and client or case data capturing, are important in improving services. It is no longer feasible to go through rows of files on the document storeroom shelves like it was some 20 years ago. The volumes and the complexities of information that comes in and out of large multinational law firms need effective management, managing these manually is no longer feasible. Again, for a multinational firm, it is important that the right systems are available in all the offices for optimum efficiency and overall firm benefit, that training is provided, and that these systems

are marketed to encourage continual increased use. There is no value in having all the right systems, and the wrong users. Users need to be equipped with the right to be able to draw value from the use of the systems.

5.3 Barriers to information flows and knowledge sharing

It is expected in any large multinational organization, let alone in a law firm where information and knowledge are commodities, that there will always be hindrances to information flows and knowledge sharing. Distance between the various offices, more so across borders, does not make it easy to communicate and share as it would be the case in a one office organization. Technology to a larger certain extent enables communication and information sharing, but the messages are not always received the same as personal interaction. Unfortunately that is the nature of business in today's high technological world. Offices are no longer constricted by the walls surrounding them or by their physical addresses. There is a whole new business world on the internet, with some companies even conducting business online only. Today people do not need to physically go to books shops or libraries to buy or read books, they can buy or 'loan' them out online, and get them electronically on their devices in just a few clicks. The visits to the banks and shops are no longer necessary. All this is an indication of the vast possibilities and opportunities brought by technology.

The findings of this study have revealed that most lawyers do not see distance as a hindrance in their interactions at all, while others believe it is somewhat of a hindrance. It is understandable that communicating with someone you have never personally met or know for instance, will always bring about some underlying perceptions of the sender and interpretations of their message on the part of the recipient. Sometimes even perceptions on hierarchy can be drawn, for instance those in other offices might view those in head office as more privileged than the rest in terms of access to resources and systems that are not available in their own offices, like they are being 'favored' and them being left out. Though distance is seen not as a hindrance to communication and information sharing, the extent to which it may be a hindrance could be a result of the impact of other related factors, internet connected speed for instance. It has been mentioned in the previous chapters that some of the firm's offices (Botswana and Uganda) have an average connection speed of below 2000kbps. Tough internet connectivity speed is not seen as a hindrance by respondents in other offices, even by respondents in Botswana and Uganda, this can be a problem in future with the introduction of new systems and upgrades. Communication is a two way process, and

therefore involve both the sender and the recipient. If there are delays on either side, either as a result of internet speed and connectivity or occasional internet downtimes, these can cause information flow blockages or have dire consequences on decision making processes.

Though not a big issue for most in the law firm under study, there was an indication from a few that it is somewhat of a hindrance and does affect the way the lawyers interact with each other. Culture differences or even better, a naïve attitude to cultural differences, can create a breeding environment for selective interaction and collaboration, where people only interact and collaborate ‘with their own’, in the process creating pockets of unfair favoritism and exclusivity practices. Cultural differences will remain a part of every organization, multinational or not, however it is the responsibility of management to educate and sensitize its staff to embrace diversity in all its forms. Interaction should be encouraged so that eventually employees understand each other and be able to forge a good working relationship amidst their different cultural backgrounds. Professional courtesy and respect for each other should be the norm, irrespective of hierarchical position. Organizational culture should supersede individuals’ culture.

Time zone differences between the law firm’s office being just 1 hour for SA and Botswana to the rest, and given that lawyers are accustomed to working longer hours that extend beyond the normal office hours, in terms of inter-office communication this factor is not a hindrance according to the findings. It would if the firm had offices in countries where perhaps the time difference was far apart that the lawyers are never in the office at the same time to communicate in real time. By acknowledging the time zone difference between the country offices, lawyers have indicated in the interviews that they have learned to accommodate each other and ensure that they avail themselves should they be need to after their normal office hours, which happens rarely as meeting as scheduled at times where all involved would be in the office, unless if it is not possible for certain reasons to do so.

The legal profession is competitive in nature. Lawyers and law firms compete for clients. They also deal with sensitive personal information, mostly clients’ data, fee structures and billing policies, internal company documents, etc., the security of which should be a priority for the firm. The sharing of personal and sensitive information is in most cases regulated by the countries’ laws (i.e. the Protection of Personal Information Act 4 of 2013, in the South Africa context for instance (See: http://www.saflii.org/za/legis/consol_act/popia2013380/)).

With clear information related policies in any firm, comes the individual lawyers' responsibility to guard against irresponsible and illegal dissemination. Law firms have always prioritized on information security policies, Even though various offices of a law firm would follow their individual information policies, similar or related as they may be, it is critical for the firm to align and integrate these and have all lawyers in all offices to refer to the same documents, however taking into account of course, the different country laws and legal practice requirements to address areas of variation that cannot be aligned. Such policies should be made known to everyone and be easily accessible to lawyers of all levels. Apart from the fact that the clients of a specific office receive services in that office, service levels should be consistent across offices, hence the need for alignment of practices, processes and policies wherever feasible.

The fact that some lawyers can conduct business in multiple languages is a benefit for the firm, an internal resource. Whenever there is a need to liaise in any of those non-English languages, there will be internal translators or interpreters for this purpose. Some countries in Africa have Portuguese as their official language of business. A firm would be restricted in its business dealings if it does not have representatives within it who can easily and successfully tap into African Portuguese speaking markets, without being hindered by language. Clients get a sense of comfort and confidence if they deal with someone who they can easily converse with without a need for an interpreter, who can distort the messages in the process. The lawyer-client confidentiality is also guaranteed if the communication is direct.

5.4 Information security

There is no denying the fact that as much as technology plays a huge role in information and knowledge life cycles, it also poses major information risks that can destroy a company's reputations in a matter of a few clicks. A recent major information security breach that confirms this fact was the "Panama Papers" scandal, the background of which can be read in The Guardian: <https://www.theguardian.com/news/2016/apr/08/mossack-fonseca-law-firm-hide-money-panama-papers> - accessed 07 October 2016. An article published in Law Practice Today⁷² explains in response to the "Panama Papers" scandal that it is critical for all law firms of all sizes "to conduct regular audits of their information security systems and

⁷² Gaffney, Nicholas. 2016. Law firm data hack attack, Part I. Law Practice Today.

(<http://www.lawpracticetoday.org/article/law-firm-hack-part-i/>) – Accessed on 07 October 2016.

protocols, and to be more proactive in their efforts to prevent data breaches that could potentially have significant ramifications, both for their clients and the firm's livelihood''.

It is against the backdrop of this, and many other past information security breach attempts that law firms have to prioritize on information security without leaving any chance for possible hacking, and to extensively train employees and instill in them the values of responsible sharing. Information security is a responsibility for everyone in the firm, the threat does not always come from outside, sometimes it is internal. The findings of this study showed that most lawyers are less concerned about information security issues, but mainly because they have put the information security responsibility in the hands of their ICT departments. As much as information security is an organizational responsibility, it is also a personal responsibility. Lawyers need to be sensitized about it in its broader context, so they can take personal responsibility, keep an eye out of possible and suspected threats and take proper actions soonest before any damage is done. The fact that an organization has never experienced any major information security threats in the past does not mean that this will never happen. Hackers are out to attack and would do just that if an opportunity presents itself. The IT personnel need to continue to prioritize their information security efforts, including regular maintenance of systems, and educating employees on risks and prevention.

5.5 Lawyers' training needs

This study revealed an interesting dynamic on the lawyers' training preferences, that person-to-person training is the most preferred method. One would expect that given their hectic schedules, lawyers would prefer other electronic methods of training, which they can go through in their own free time, but that is not a number one preference for lawyers. Further investigations into this dynamic through talking to the respondents that they would rather commit to a specific time, sit through the training and engage with the trainer, and get out of the training equipped with the required skills, which will save them time to revisit the online manuals or electronic training modules on their own. They have indicated that they would rather do so as a follow up to the one-on-one training and not as the initial training method. Apart from time, some mentioned reasons of reluctance to try something they do not know for the first time on their own, while assistance from the experts in those fields is available to them, more so if the training is of a technical nature rather than a legal practice related training.

Sometimes trainers assume that, in the busy and hectic legal environment, the lawyers do not have time to attend training sessions in person, where alternative methods like training manuals become the default. This assumption is partly based on experiences where the lawyers would accept an invitation for training but fail to show up. What the trainers sometimes fail to realize is that the lawyers' commitment to clients surpass internal commitments that can always be re-scheduled. For the lawyers there is no urgency in training compared to servicing clients. Person-to-person training can be individual or group. If a few lawyers miss the group training sessions, the individual sessions can always be arranged at a conducive time to both the trainer and the trainee. Assuming that the manuals are available somewhere online and that lawyers will go through them in their own time, is ignoring the obvious facts on the part of the trainers. If the lawyers do not have time to attend a scheduled training, it cannot be expected that they will go through the manuals in their own time.

It is also obvious from the findings that online training and training manuals are not to replace person-to-person training, but supplement it if so required. These two training are to serve as reference points should there be a need to revisit a specific part of a module they had person-to-person training on. Clearly, telephone training is the least preferred method of training for lawyers. Perhaps these methods of training can be used for 'on the spot' training where the trainer needs to quickly answer a telephone query and at the same time use the opportunity to show the trainee how to go about it, by taking them through a few quick steps. Going through the entire module over the phone will be ineffective for this group of professionals, rather video training instead.

5.6 Lawyers attitudes to ICTs

As an information intensive profession, the practice of law used to be paper based, because the majority of the information was in print format. Traditionally lawyers would go to courts with stacks of reference material relevant to the cases they are arguing, from the statutes, to law reports, client files, etc. With the introduction of new technologies, that has changed gradually over the years, and the profession has evolved. For lawyers technology is not a matter of choice but a must. It improves, enhances and simplifies the way they conduct business, and most fully embrace it, from junior to senior positions. The indications are clear from the findings that lawyers are inclined towards computer usage and coding and are in favor of developing artificial intelligence functions in all organizations, they see the benefits of ICTs beyond just word processing. They don't just see the benefits for automation and

processes optimization in industrial environments only, but also in the legal environment for efficient information and knowledge management.

Interestingly, we are faced with the ‘fourth industrial revolution’, the computational analytics, artificial intelligence and the internet of things. Industry 4.0 as it is known in short will revolutionize the world as we see it today and change most jobs. Some of the benefits that will be brought by this revolution and which most lawyers believe will bring about great improvement to their personal productivity and in some instances even revolutionize their work include the possibilities for semantic searching, automated translations and searching by any language and any word, analytics of the progress and outcomes of legal processes in multiple geographies in real time, being able to work from home due to the encrypted cloud architecture capabilities, and all the other information searching possibilities brought by semantic and analytic web technologies. The findings of this study prove that lawyers appreciate that ICTs are here, and gave no hint of being threatened or sorting to escape the technological evolution. The enthusiasm is there amongst lawyers, and it is for the ICT departments and other information and knowledge professionals to do the ground work investigations and impact assessment studies in preparation for the revolution ahead of time.

5.7 Management’s role in IKM

Any IKM initiative in any organization cannot get off the ground without the full support of management and the buy in of participants, who are the employees. Technology can only do so much. Sharing is a two-way process, and a culture of sharing should not only be encouraged, but facilitated and supported by management. Most IKM efforts in most organizations are failing, or have failed or are stagnant because of lack of management oversight and support. Policies and strategies in paper do not make IKM in law firms effective. These policies and strategies should be put into practice. The findings of this study showed that in the firm under study undoubtedly supports collaboration and information sharing at all levels, and that it encourages the creation of virtual CoPs to aid collaboration.

There is still more that needs to be done on management’s part, to bring the teams and the offices together into a unified organization, hence there were indications from some respondents that the firm is not yet at a level where it is unified and information sharing happens as it should. The findings indicated that a huge number of respondents in all the offices of the firm see inter-office information sharing and communication as still a problem that needs attention. This overwhelming response is an indication of the extent of this

concern. The end result of not sharing and not communicating as often as necessary may lead to lack of or no alignment of individual offices goals to the firm goals. It may also lead to some lawyers not buying into the brand and therefore to not represent or promote it as they should. Every employee in an organization is an ambassador for that organization. The way they conduct business, their professional behavior, their insightful contribution to their professions, all of these ultimately reflect on the organization as a brand, whether in a good way or bad way, that is determined by the conducts of these individuals who form a unified organization. Lack of sharing and communication might also lead to offices gradually disintegration from the mother organization, being excluded from the whole and that can affect staff morale and individual and firm performance in a big way.

There is no way that the full benefits of IKM initiatives can be realized in any multinational organization if only implemented in some offices and not in others, which is the case with the firm under study. IKM initiatives need to be completely inclusive so that all employees can grow into a culture of open communication and information and knowledge sharing, and be at the same level so as to all reap the benefits from such initiatives. The role of management in all this is facilitate the flow, get lawyers in different offices to know each other by way of more and more personal interactions (i.e. lawyers being seconded to other offices for a short period of time, getting the teams to hold departmental inter-office meetings, facilitating the creation of special interest groups or CoPs as platforms for sharing and collaboration, etc. and encourage these groups to be active.

IKM only becomes an enhancement when managed properly by the right qualified, experienced and knowledgeable people in legal information and knowledge management fields, and with the buy in of all constituencies. When the departments are run on a 'learn as we go' basis, sort of trial and error with no clear purpose and information and knowledge policies and strategies that are aligned to organizational needs and goals, then IKM becomes a hindrance to information flows and knowledge sharing itself. If management is not at the fore-front of IKM, all efforts are bound to remain stagnant, or remain in theory but not in practice, which deem them useless.

5.8 Conclusion

IKM is an important and integral part of multinational law firms. Without it the legal profession will be left behind. Looking at the rate at which companies grow, and the internal resources that they manage, one cannot see any other alternative. Growth is inevitable for law

firms alike. Growth not only in terms of staff numbers and physical presence, but also in terms of volumes of data, revenue, resources, systems and new technologies to manage these resources. The hindrances to information flows and sharing will remain and cannot be ignored. Companies need to introduce open communication policies, and manage from behind, playing more of a supporting role by allowing younger staff members to build a new all-inclusive organizational culture, a culture they will feel a part of and will own. Without an open and all-inclusive organizational culture, innovation will be halted, communication, cooperation and collaboration will be jeopardized, and real growth will suffer.

From the findings in Chapter 4, the following implications are drawn:

- (i) That no multinational organization of any type or size is immune to the information and knowledge sharing hindrances that are prevalent in these kinds of organizations;
- (ii) That these hindrances need attention and addressing, so they can be controlled, and their impact on organizational processes and performance minimized;
- (iii) That information and knowledge sharing in multinational organizations is an ongoing and yet an important process that has implications on performance and productivity;
- (iv) That information systems alone do not guarantee successes in IKM processes in multinational organizations, but that people are as much of a critical piece to the puzzle;
- (v) That a profitable multinational organization is one that breaks all communication barriers, address differences and encourage cooperation; and
- (vi) That as important assets in any multinational organization, information and knowledge drives the world economy and brings revenues to organizations.

In conclusion, the result of this study will assist all types of multinational organizations and law firms to take into account every aspect of the dynamics in multinational organizations in general, in developing and reviewing their IKM initiatives and strategies. The study also adds to new academic knowledge on IKM systems in law firms, and can be used as the basis for future research in this field of study.

5.9 Recommendations for future research

This study has reviewed and analyzed the information flows and knowledge sharing dynamics in a multinational law firm, and the role played by currently available resources and systems in reducing and/or eliminating the identified hindrances to these flows and sharing practices. It must however be noted that this study is only based on the current status

quo in this one specific multinational law firm. Firstly the focus group is limited and secondly technologies will continue to advance, and new systems and resources that may better address some of the hindrances will become available in future. Based on this, it is therefore recommended that future research in this field focus more generally on a broader target group, more than one multinational law firm. Doing so may reveal the same, different, or even new dynamics from other law firms. Also, as this study only looked into the currently available resources and systems in the firm under study, it is a recommendation that a broader future study make a comparison of the resources and systems in different law firms and the technological developments at that point, to see if such has different improved impacts on the information flows in law firms and knowledge sharing amongst lawyers.

More time and budget need to be invested in a future broader study, to allow the researcher to personally visit the firms under study, to observe and conduct interviews. Personal interactions are sometimes the best in getting respondents' to give full attention and consideration to the questions posed. The survey yielded numerous variables, some of which were not fully explored in this study. These variables can be explored further in future research, i.e. that which informs the preference of certain information resources and systems over others; the knowledge sharing behaviors prevalent in the legal environment; and whether the law firms' KM initiatives and approaches are reaping any rewards that directly influence the firms' performance among other issues. This study forms the basis of future research and can be built upon.

BIBLIOGRAPHY

- AKAMAI. Internet connection speeds and adoption rates by geography. Source:
<https://www.akamai.com/uk/en/our-thinking/state-of-the-internet-report/state-of-the-internet-connectivity-visualization.jsp> [Accessed on 07 October 2016]
- ALDER, NANCY J. 2002. *International Dimensions of Organizational Behavior*. 4th ed. South Western: McGill University
- BARTLETT, C.A. and GHOSHAL, S. 1989. *Managing Across Borders: The Transnational Solution*. Boston, MA: Harvard Business School Press
- BARNES, STUART J. 2002. *Knowledge Management Systems: Theory and Practice*. London: Thomson Learning
- BLESS, C., HIGSON-SMITH, C. and KAGEE, A. 2006. *Fundamentals of social research methods: an African perspective*. 4th ed. Cape Town: Juta
- BRYMAN A. 2001. *Social Research Methods*. Oxford: Oxford University Press
- CARBONELL, M. 2011. *Letters to a law student*. Mexico: Porrúa.
- COOMER, J., BUEHLER, W. and BINDER, B. 2005. The Attorney as Knowledge Worker. *Texas Bar Journal*. 68 (9): 795-795
- CRESWELL, J.W. and PLANO CLARK, V.L. 2007. *Designing and conducting mixed methods research*. Thousand Oaks, California: SAGE
- DALLEN, IAN. 2014. The rise of the information barrier: managing legal conflicts within commercial law firms, *Australian Law Journal*. 88: 431
- DE-HUA, W. and HUI, L. 2007. *Nonverbal Language in Cross-Cultural communication*. *Sino-US English Teaching*: 66-70
- DELOITTE. 2016. Developing legal talent: Stepping into the future law firm, p. 4 - <http://www2.deloitte.com/content/dam/Deloitte/uk/Documents/audit/deloitte-uk-developing-legal-talent-2016.pdf> [Accessed 15 October 2016]
- DEMSKI, J.S., LEWIS, T.R., YAO, D., YILDIRIM, H. 1999. Practices for managing Information Flows within Organizations, *The Journal of Law, Economics and Organization*. 15(1): 107-131

- DICTIONARY.COM. <http://www.dictionary.com/browse/information-management?s=t>
[Accessed 06 July 2016]
- DILLMAN D.A. 2000. *Mail and Internet Surveys: The Tailored Design Method*. New York:
John Wiley & Sons Inc.
- DOBRAI, K. ... et al. 2012. Knowledge Transfer in Multinational Companies: Evidence
from Hungary. *Acta Polytechnica Hungarica*. 9(3). Available:
www.uni-obuda.hu/journal/Dobrai_Farkas_Karoliny_Poor_35.pdf
[Accessed on 11 August 2016]
- DOWLING, P., & WELCH, D. 2005. *International human resource management: Managing
people in an international context*. Mason, OH: South-Western
- DRUCKER, PETER F. 1999. Knowledge-Worker Productivity: The Biggest Challenge.
California Review Management. 41(2): 78-94. Available:
[http://www.forschungsnetzwerk.at/downloadpub/knowledge_workers_th
e_biggest_challenge.pdf](http://www.forschungsnetzwerk.at/downloadpub/knowledge_workers_the_biggest_challenge.pdf) [Accessed on 22 August 2016]
- ENCYCLOPAEDIA BRITANNICA – Available:
[http://global.britannica.com/EBchecked/topic/397067/
multinational-corporation-MNC](http://global.britannica.com/EBchecked/topic/397067/multinational-corporation-MNC) [Accessed on 17 July 2016]
- <https://global.britannica.com/topic/multinational-corporation> [Accessed on 17 July 2016]
- FOMBAD, M.C., BOON, J.A. and BOTHMA, T.J.A. 2009. Strategies for Knowledge
Management in Law Firms in Botswana. *South African Journal of
Information Management*. 11(2): 406
- GAFFNEY, NICHOLAS. 2016. Law firm data hack attack, Part I. *Law Practice Today*.
Available: [http://www.lawpracticetoday.org/article/law-firm-hack-part-
i/](http://www.lawpracticetoday.org/article/law-firm-hack-part-i/) [Accessed on 07 October 2016]
- GARTNER - <http://www.gartner.com/it-glossary/big-data/> [Accessed 15 October.2016]
- GOODERHAM, P.N., GOODERHAM, PAUL N. and GRØGAARD BIRGITTE. 2013.
International Management: Theory and Practice. Cheltenham, UK:
Edward Elgar
- THE GUARDIAN Mossack Fonseca: inside the firm that helps the super-rich hide their
money. Available:

<https://www.theguardian.com/news/2016/apr/08/mossack-fonseca-law-firm-hide-money-panama-papers> [Accessed on 07 October 2016]

GUILLÉN, MAURO F. 2006. Understanding and Managing the Multinational firm. *Working Paper*. The Wharton School of the University of Pennsylvania

GUPTA, S. L. 2011. Marketing Research. New Delhi: Excel Books.

HARRIS, PHILLIP R., MORGAN, ROBERT T. and MORAN, SARAH V. 2004. *Managing Cultural Differences: Global Leadership Strategies for the 21st century*. 6th ed. Burlington, MA: Elsevier Butterworth-Heinemann: 39

HE, RUFUI and LIU, JIANCHAO (2010) *Barriers of Cross Cultural Communication in Multinational Firms: a Case Study of Swedish company and its Subsidiary in China*: 4

HEYINK, MARK. 2011. *Information Security Guidelines for Law Firms: LSSA Guidelines*. Law Society of South Africa: Version 1.0: 5

HOFSTEDE, G. (1997) *Cultures and organizations: software of the mind*. New York: McGraw Hill

INTERNATIONAL LEGAL TECHNOLOGY ASSOCIATION. 2014. *Legal technology future horizons: Strategic imperatives for the law firm of the future*. Austin, Texas: ILTA: 6

INTRILIGATOR, M. D. 2003. *Globalization of the World Economy: Potential Benefits and Costs and a Net Assessment*

JAMES R. FAULCONBRIDGE ... et al. 2007-2008. Global Law Firms: Globalization and Organizational Spaces of Cross-Border Legal Work. *Nw. J. Int'l L. & Bus.* 28: 455

JANIS, BLAIR. 2014. How Technology Is Changing the Practice of Law. *GP Solo*, 31(3), May/June: 10. Available:
http://www.americanbar.org/content/dam/aba/publications/gp_solo_magazine/2014_may_june/gpsolo_may_june_2014_v31n03.authcheckdam.pdf [Accessed on 15 October 2016]

JONATHAN V. BEAVERSTOCK, DANIEL MUZIO, and PETER J. TAYLOR. 2007-2008. Global Law Firms: Globalization and Organizational spaces of cross-border legal work. *Nw. J. Int'l L. & Bus.* 28: 455

- KLAAREN, JONATHAN. 2016. African Corporate Lawyering and Globalization. *International Journal of the Legal Profession*. 22(2): 226-242
- KOK, J.A. Role of leadership in the management of corporate knowledge, *South African Journal of Information Management*. 5(3).
www.sajim.co.za/index.php/SAJIM/article/download/363/353 [Accessed on 16 October 2016]
- LESSARD, DONALD R and AMSDEN, ALICE H. 1996. The multinational enterprise as a learning organization, *Working Paper no. 3905*: 1. Available:
<http://dspace.mit.edu/bitstream/handle/1721.1/2624/SWP-3905-36506182.pdf> [Accessed on August 2016]
- MALHORTA, Y. (2000) *Knowledge Management and Virtual Organizations*. Hershey, P.A : IRM Press: 245-257
- MARQUARDT, M.J. and REYNOLDS, A. 1994. *The global learning organization*.
- MCCANNON, JOHN. 2016. *Barron's AP World History*. 6th ed. Hauppauge, NY: Barrons Educational Series Inc.: 442
- MERRIAM-WEBSTER DICTIONARY. <http://www.merriam-webster.com/dictionary/artificial%20intelligence> [Accessed on 15 October 2016]
- MOUTON, J. 1996. *Understanding social research*. Pretoria: Van Schaick
- MUNTER, M. 1993. Cross-cultural communication for managers. *Business Horizons*. 36(3): 69-80
- NAHAPIET, J. and GHOSHAL, S. 1998. Social Capital, Intellectual Capital, and the Organizational Advantage. *Academy of Management Review*. 23(2): 242-266
- NARULA, RAJNEESH AND ZANFEI, ANTONELLO. 2003. Globalisation of Innovation: The Role of Multinational Enterprises. *DRUID Working Paper*, no. 03-15: 1. Available:
http://www2.druid.dk/conferences/working_papers/NEW/20030015.pdf [Accessed on 21 July 2016]
- NEUMAN, W.L. 2003. *Social Research Methods: Qualitative and Quantitative Approaches*. 5th ed. Boston: Allyn & Bacon

- NONAKA, I. and TAKEUCHI, H. 1995. *The knowledge creating company: how Japanese companies create the dynamics of innovation*. New York: Oxford University Press
- O'DELL, C.A. and GRAYSTON, C.J. 1998. *If only we knew what we knew: The transfer of internal knowledge and best practice*. Free Press
- OECD. *Guidelines for Multinational Enterprises*. 2011. OECD Publishing Available: <http://dx.doi.org/10.1787/9789264115415-en> [Accessed on 10 April 2016]
- ONLINE BUSINESS DICTIONARY. Available: <http://www.businessdictionary.com/definition/multinational-corporation-MNC.htm> [Accessed on 17 July 2016]
- RIEGE, A. 2005. Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management*. 9 (3): 18-35
- ROBERTSON JAMES. *10 principles of effective information management*. Available: http://www.steptwo.com.au/papers/kmc_effectiveim [Accessed on 10 July 2016]
- ROOT, FRANKLIN. 1994. *International Trade and Investment*, 7th ed. Cincinnati, Ohio: South-Western Pub. Co.
- SCOLLON, R., SCOLLON, S. 2001. *Intercultural Communication: A Discourse Approach*. Walden, Massachusetts: Blackwell Publishing
- SENGE, PETER, M. (1990) *The Fifth Discipline: The Art and Practice of Learning Organizations*. New York: Doubleday/Currency
- SHAMOO, A.E., RESNIK, B.R. 2003. *Responsible Conduct of Research*. Oxford University Press
- SMITH, MARK K. 2001. *Peter Senge and the Learning Organization*. Available: <http://www.infed.org/thinkers/senge.htm>. [Accessed on 14 September 2016]
- SOLOMON, CHARLENE M., SCHELL, MICHAEL S. 2009. *Managing Across Culture: The Seven Keys to Doing Business with a Global Mindset*. New York: McGraw Hill

- STAUDT, RONALD W. 2003. *Perspectives on Knowledge Management In law firms: White Paper*. Miamisburg, OH: LexisNexis
- SYNOTT, W.R. 1987. *The Information Weapon: Winning Customers and Markets with Technology*. Australia: Wiley
- SYNOTT, W.R. AND GRUBER, W.H. 1981. *Information Resource Management: Opportunities and Strategies for the 1980s*. Australia: Wiley
- TERRETT, A. 1998. Knowledge Management and the law firm, *Journal of Knowledge Management*. 2(1): 67-76
- TIWANA, A. 2002. *Knowledge Management Toolkit: Practical Techniques for Building a Knowledge Management System*, 2nd ed. Saddle River, New Jersey: Prentice Hall
- VENARDOS, THOMAS J. *The Organizational Life Blood for Law Firm Profitability: Active Coordinated Communication*. Available: <http://olmsteadassoc.com/resource-center/active-coordintated-communication.aspx> [Accessed on 28 July 2016]
- WADDINGTON, D. 2004. *An Architected Approach to Integrated Information*. Available: www.kalido.com [Accessed on 12 April 2016]
- WILSON, T.D. (edited by JOHN FEATHER and PAUL STURGES). 2002. *Information Management' in the International Encyclopaedia of Information and Library Science*, 2nd ed. London: Routledge