Trends, Patterns, Challenges and Types of Archival Research in Sub-Saharan Africa

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Abstract

In a study by Onyancha and Minishi-Majanja (2009), it was reported that throughout the entire period from 1971 to 2007, research in library and information science (LIS) in sub-Saharan Africa (countries south of the Sahara desert) largely focused on topics such as information technology, information resources management, knowledge management, library science, the Internet, and information retrieval. In fact, most of the topics fell within the scope of library science. Archives, including records management, was a less researched area, although the topic featured among the top 30 subject terms between 1981 and 2007. The study also noted that among the LIS schools in sub-Saharan Africa, only a few placed emphasis on the provision of courses/ programmes in archives and records management (ARM), particularly at an undergraduate level. Built on two studies conducted by Onyancha and Minishi-Majanja (2009) and Onyancha and Mokwatlo (2011), this study presents the status of archives and records management education, training and research in sub-Saharan Africa. It aims to help formulate ARM research agendas and university curricula that address grand societal challenges such as a lack of accountability, e-government service delivery and preservation of archival heritage. This study

focuses on informetrics analysis of the nature, patterns and trends of ARM research in sub-Saharan Africa. The informetrics method was chosen as it is unobtrusive and focuses on the products of human activity (reports, books, articles, web pages and so on). Data was extracted from the Library, Information Science and Technology Abstracts (LISTA) database. The search query combined the name of the country in sub-Saharan Africa and the topics 'Archives' and/or 'Records - Management' as subject terms. Data was analysed quantitatively using computerbased analytical technologies and software developed specifically for informetric analyses, namely UCINET for Windows, Bibexcel and Microsoft Excel. The results suggest that ARM research is lagging behind in sub-Saharan Africa. Given the challenges of technological developments, the study surmises that there is a need for change or a paradigm shift in not only the perceptions, but also the research into archives and records management so that the profession can keep up with modern societal needs. It is hoped that the study would establish a baseline in terms of the paucity and scope of ARM research in sub-Saharan Africa, and the inter-related need for more and stronger archival education and research training activities, as well as research collaboration in the region.

Introduction and Background to the Problem

The need for education, training and research in archives and records management cannot be over-emphasised, particularly in this era of technological developments. Indeed, as Katuu (2009) would attest, education, training and research can help to empower archivists and records managers in taking on the challenges of governance in electronic environments.

Research agendas can be formulated to help address grand societal challenges such as a lack of accountability, high rates of litigation, bad audit results, and a lack of or poor service delivery emanating from a breakdown in records systems. For example, a study by Ngoepe (2012) found that records management functions in most governmental bodies in South Africa were teetering on the brink of collapse and were essentially on a life-support machine, as they were unable to contribute positively to the auditing process. Mantla and Khayundi (2013) attributed all these challenges to a lack of capacity and the appointment of unqualified archivists and records managers in governmental bodies. In Botswana, Keorapetse and Keakopa (2012) found that records management systems in the public sector are in a state of disarray. The situation is the same in Kenya, Namibia, Tanzania, Uganda, and Swaziland, to mention just few sub-Saharan countries (Nengomasha, 2013).

As scholars such as Mnjama (1996), Thurston (1996), and Yusof and Chell (1998), Ngoepe (2008), Keakopa (2009), Kemoni (2009), Khayundi (2011) would argue, in many sub-Saharan African countries education, research and training in archives and records management have been given little attention. Unlike the training programmes in librarianship and other areas, structured archival and records management education and training programmes in Africa can be said to be still struggling to establish themselves amid several handicaps (Khayundi, 2011). The problem of a lack of training and research is compounded by the fact that "among the LIS schools in sub-Saharan Africa, few have laid emphasis on the provision of courses/programmes in archives and records management, and more particularly at the undergraduate level" (Onyancha and Minishi-Majanja, 2009). For example, a study commissioned by the Department of Arts and Culture (2010) in South Africa revealed that only nine universities in South Africa offer archives and records management as ancillary courses within the schools of LIS at diploma or certificate level. This is also emphasised by Ngoepe (2011a) when he stressed that in South Africa, archives and records management modules are encapsulated as an insignificant part of degrees and diplomas in information science/studies. As a result, most archivists and records management practitioners have not received any formal training in these fields. Other countries in sub-Saharan Africa can also empathise with the situation in South Africa. A study by Keakopa (2006) revealed that there was a shortage of fully trained archivists and records managers in South Africa, Namibia and Botswana. Botswana has gone as far as sending archivists overseas to study archives and records management before the master's programme was developed at the University of Botswana in the late 1990s. Due to a lack of resources, the situation is worse in other sub-Saharan Africa countries such as Zambia, Tanzania, Uganda, Zimbabwe, Malawi, Lesotho and Mozambique, to mention just a few (Katuu 2009).

In the area of research, Keakopa (2009), Kemoni (2009) and Challa (2013) contended that very little outputs have been published on archives and records management in the Eastern and Southern African region, especially in the area of electronic records management and digitisation of archives. Indeed, as observed by Thurston (1996) more than a decade ago, the status quo still remains as there is a dearth of professional literature in Africa as a whole. As indicated in this study, little research has been done into archives and records management in sub-Saharan Africa. This is evident from a study by Onyancha and Minishi-Majanja (2009) which found that between 1971 and 2007, research in library and information science in sub-Saharan Africa largely focused on information technology, information resources management, knowledge management, library science, the Internet and information retrieval, as compared to archives and records management. A study by Keakopa (2009) concludes that the limited literature in the region, especially in the area of electronic archiving and records management, may be as a result of the slow pace of automation in the area of archives and records management or a paucity of mainstream journals to publish research output. The African Journal Online¹ website reveals a listing of only three mainstream journals (out of 15 journals on LIS) for archives and records management in sub-Saharan Africa, which are also not always produced on time, i.e. Journal of the Eastern and Southern Regional Branch of the International Council on Archives, Journal of the South African Society of Archivists, and the African Journal of Archives, Library and Information Science. Two of these journals are currently (as at 2015) produced in South Africa, while the third journal is produced in Nigeria. This paucity of research and platform to publish in sub-Saharan Africa has also impacted on the education of archivists and records managers in the region. As a result, unskilled people are employed in the archives and records management field, especially in government, which results in professionals in these fields being relegated to the periphery of public sector administration (Ngoepe, 2012). Without adequate research and training, archives and records management programmes are bound to fail. It should be noted that governmental bodies in sub-Saharan Africa are the major employers of archivists and records managers, followed by institutions of higher learning. However, private sector organisations such as banks, audit firms and non-governmental bodies employ archives and records management professionals. If the current scenario in terms of research and teaching persists, organisations will continue to employ unqualified people as archivists and records managers, who will not have the skills needed to support e-government initiatives and accountability measures (Ngoepe, 2011b). Therefore, training institutions need to follow the example of universities in the global hubs to establish research partnerships with practitioners. For example, academics and practitioners in sub-Saharan Africa can be involved in international projects such as InterPARES. There is also a need to collaborate on research nationally and regionally. In this way, curricula will be based on practical solutions to the problems identified.

In view of the above, this study provides an informetrics analysis of the nature, patterns and trends of archival science research, including records management and training in sub-Saharan Africa. Primary data was extracted from the Library, Information Science and Technology Abstracts (LISTA) database. It is hoped that this study would stimulate academics and archivists in sub-Saharan Africa to develop training programmes and formulate research agendas that can equip professionals in this field to take on the challenges of technological developments such as the preservation of authentic electronic records, especially in national archives repositories. Furthermore, other countries might benefit from learning more about the material and the intellectual realities that archivists and records management practitioners face in sub-Saharan Africa.

Literature Review

There is consensus among scholars such as Mnjama (1996), Ngulube (2001), Katuu (2009) and Khayundi (2011) that the training of archivists and records managers in Africa is still travelling on the long journey without direction as compared to countries from "global hub such as Australia and Canada". While Jimmerson (2001) acknowledged the growth of graduate programmes in archives and records management in European countries, Mnjama (1996) identified a need for training for the vast majority of African records managers and archivists. Khayundi (2011) argued that most of the current practising archivists and records managers in Africa cannot be assumed to have had the necessary archives education and training. This was also confirmed by a study commissioned by the Department of Arts and Culture in South Africa (2010) that found that a number of archivists and records managers have learnt on the job or have attended short courses which barely provided them with the required educational background and competencies. All these affect policy formulation and advocacy, hence the perilous state of archives and records management in sub-Saharan Africa. For example, during the recent ESARBICA conference in Nairobi, Kenya, the ESARBICA Board (2013) noted that countries such as Uganda and Sudan do not have basic archival buildings. This implies that archival heritage of these nations is scattered all over the country, or even abroad, without proper care. Furthermore, of all the countries that were represented at the ESARBICA conference, none had reported that they had an infrastructure to ingest electronic records into archival custody.

An analysis by scholars such as Jimmerson (2001), Katuu (2007; 2009) and Duranti (2012) indicated that the traditional education of archivists and records managers worldwide has been associated with history and diplomatics. For the last 25 years or more, archival and records management education at many universities throughout the globe has resorted under Departments of Library and Information Studies. An assumption is that this was as a result of similarities in the function of the two disciplines as they deal with the nature of information phenomena. As LIS schools are fully-fledged, it was appropriate for archives and records management to find a home there. The universities in the global hub have included

studies in all aspects of archives and records management programmes with many emphasising digital records and archives. For example, at the University of British Columbia, archives and records management education encompasses modules such as Records Forensics and Digital Preservation, Classic and Digital Archival Diplomatics, Information Assurance and Administrative Law (Duranti, 2012). According to Duranti (2012):

- Records managers and archivists are called to act as forensics experts, e.g. ensuring the identity and integrity of digital records through time and attesting to it, and acquiring such records, often from obsolete systems or portable media, without altering them in the process.
- Digital forensic experts are called to act as records managers, e.g. identifying what digital materials fall under the definition of business records, and keeping them intact for as long as needed. They are also called to attest to and sometimes provide quality assurance for digital systems that produce and/or contain records, to assess whether spoliation has occurred, to fulfil e-discovery requirements.

Duranti (2012) suggested a number of archives and records management streams to be included in the university's curriculum. This curriculum might be particularly relevant to some institutions in sub-Saharan Africa, especially those that have already embraced training in electronic records management.

In contrast, developments regarding ARM education and training in the 'global periphery' countries such as sub-Saharan Africa have been moving at a snail's pace, if not regressing. Most archivists in sub-Saharan Africa who practised before the mid-1980s either had not received any training or had been trained overseas (Khayundi, 2011). Early training for archivists in sub-Saharan Africa, excluding South Africa, can be attributed mostly to efforts by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the International Council on Archives (ICA). It was under the auspices of UNESCO and the ICA that two centres were established in the early 1970s to train archivists in Africa. The school in Accra, Ghana was to cater for the 'Anglophone' Africa while the one in Dakar, Senegal catered for the 'Francophone'

Africa. However, due to the discontinuation of the UNESCO support, the centres became white elephants. This left most African countries with few options for the training of archivists and records managers. Katuu (2009) called for an overhaul of education and training systems in sub-Saharan Africa so that archivists and records managers could be on par with their European and American counterparts. Currall and Moss (2008) challenged archives and records management educators to align their curriculum with contemporary needs. Perhaps the University of Liverpool, which has been training archivists since 1947 and included records management elements since 1968, could serve as a model for universities in sub-Saharan Africa. To imbue students with a research culture at the start of their career, Westwood (1998) suggested that students should be forced to complete a master's or doctoral dissertation. Courses offered can be tailored to enable students engage in scholarly enquiry of various kinds. The most obvious example is the writing of dissertations and theses. Borrowing from the InterPARES model, students can be given the opportunity to conduct research on a small scale through a supervised research project or a directed study involving in-depth investigation of a specific issue or problem. Students may work closely with academic staff on an ongoing research project through a collaborative research endeavour, or they may work as paid research assistants on research projects (Duranti, 2012). In trying to address the issue of research and education in sub-Saharan Africa, educators in Eastern and Southern Africa tried to convene twice, first at the South African Society of Archivists conference in Pretoria in 2010, and later at the ESARBICA conference in Maputo in 2011, but without success. These attempts failed due to non-attendance of the conference by most LIS educators in the region, as only a few educators from the University of South Africa and the University of Botswana attended.

Ngulube (2001) posited that research is a fundamental underpinning for improving archives and records management in Africa. Yet, there is a paucity of research in archives and records management in most countries in sub-Saharan Africa. For example, Keakopa (2009) argued that research in archives and records management received a lot of attention in developed countries such as Australia, Canada and

the United States as compared to Africa. She cited that the high cost of conference participation was a possible reason for the low numbers of archival and records management articles in the literature. Indeed, research needs resources, which are not always abundant in developing states. As a result, ARM researchers from sub-Saharan Africa publish their works in international journals. It is also difficult to access archival literature from other countries due to high subscription costs to publish journals outside sub-Saharan Africa. This has impacted negatively on research output, as well as on training of archivists and records managers. While other countries are tackling the challenges raised by electronic records, sub-Saharan African countries are still struggling to manage paper-based records.

Objectives of the Study

The general purpose of this study was to investigate the nature, patterns and trends of ARM in sub-Saharan Africa in the period 1910 – 2012. The study also attempted to answer the question: "Is ARM marginalised in sub-Saharan Africa?" The specific objectives were to:

- (i) trace the trends of archives and records management research in sub-Saharan Africa.
- (ii) identify the number of articles indexed in the LISTA database on archives and records management.
- (iii) investigate contributions by countries in sub-Saharan Africa to research into archives and records management.
- (iv) identify the authors and the institutions in sub-Saharan Africa that are involved in research in archives and records management.
- (v) determine the content of archives and records management research in sub-Saharan African countries.
- (vi) identify sources publishing sub-Saharan African archives and records management research.

Scope and Research Methodology

The study adopted an informetrics approach to explore archival and records management research in sub-Saharan Africa from 1910 to 2012.

Informetrics is a quantitative analysis of patterns that show up not only in publications, but also in many aspects of life, as long as the pattern deals with information (Diodato, 1994). Informetrics methods can be grouped into two broad categories, namely descriptive (publications count) and evaluative (citations analysis based). This study adopted the publications count and analysis technique, wherein publications were used as the indicator of research output in sub-Saharan Africa (De Bellis, 2009).

The choice of informetrics as a research method to conduct the current study was based on the fact that, in informetrics, there is no need to control the experimenter, the interactional investigator or other similar effects arising from the influences of researchers and human subjects on each other (Beck and Manuel, 2008). Furthermore, informetrics data sources pre-existed in the study, and they were usually readily accessible as was the case with the current study. This is data that has been generated for purposes other than those for which the researcher was using them (Singleton and Bruce Straits, 2010). Available data research often avoids reactive measurement error because the data are used without the knowledge or the participation of those who produced them. Prominent among such data sources would be written records, letters, diaries and reports. All of these factors make informetrics one of the more straightforward ways to get started in research.

The study covered all records published and indexed in the LISTA database from 1910 to 2012. The search query combined the name of the country in sub-Saharan Africa and the topics 'Archives' OR 'Records - Management' as subject terms. For example, documents published by South Africans were searched as follows: (AF "South Africa" AND ("Archiv* OR Records - Management"). The Boolean operator OR was used to combine searches for different countries. A total of 2 814 articles published in sub-Saharan Africa since 1966 were obtained. The data extracted from the LISTA database was analysed using Bibexcel, UCINET for Windows and Excel Computer Applications in order to demonstrate the level of archival and records management research in sub-Saharan Africa.

Research Findings

The results of this study are presented as per the objectives indicated.

Trends of Archives and Records Management Research in Sub-Saharan Africa

The findings of this study revealed that the world total of 44 280 archival and records management publications listed in LISTA database were published between 1910 and 2012. As indicated in figure 1

and table 1, the African LIS publications, totalling 2 814, and as indexed in the same database, were published between 1966 and 2012 while the ARM publications totalled 124. Worldwide, the first ARM article was published in 1910 while the first ARM article in sub-Saharan Africa was published in 1986.

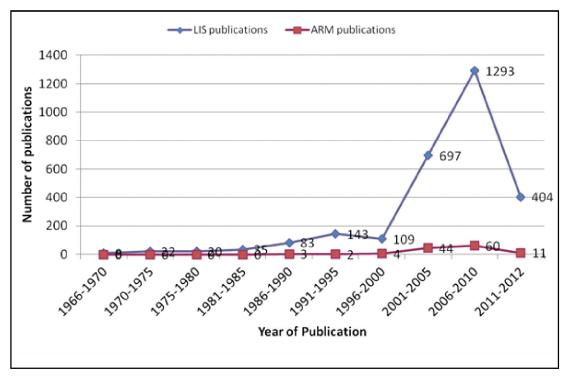


Figure 1: Trends in Archives and Records Management Research

The trend analysis of the publications in figure 1 shows that although the number of LIS publications has increased steadily since 1970, ARM publications remained below 10 until 2000. The publications on ARM increased from just four in 1996–2000 to 44 in 2001–2005, a percentage growth of 1 100%. Thereafter, the ARM publications increased to 60. There was a decline from 60 publications in 2006–2010 to 11 in 2011–2012. This pattern is typical in any discipline because the indexing time lag is normally between 3 and 5 years in social sciences (Onyancha, 2008).

Table 1 shows the contribution of ARM research to LIS research in sub-Saharan Africa between 1966 and 2012. The table indicates that ARM research contributed zero publications to LIS

research between 1966 and 1985. Whereas LIS research output stood at 83 publications in 1986-1990, ARM's total publications were only eight, accounting for a mere 3.61% of the total publications in LIS research. In 1991-1995, the total number of ARM publications dropped to two while that of LIS increased from 83 in the previous period to 143 in 1991-1995. In general terms, ARM's research contribution to LIS research output in sub-Saharan Africa is low, accounting for a maximum of 6.31% in a period of five years. Overall, the percentage contribution is 4.41% for the entire period of study.

Table 1: ARM versus LIS Articles in sub-Saharan Africa, 1966– 2012

	LIS	ARM	Percentage
	publications	publications	
1966-1970	8	0	0,00
1970-1975	22	0	0,00
1975-1980	20	0	0,00
1981-1985	35	0	0,00
1986-1990	83	3	3,61
1991-1995	143	2	1,40
1996-2000	109	4	3,67
2001-2005	697	44	6,31
2006-2010	1 293	60	4,64
2011-2012	404	11	2,72
TOTAL	2 814	124	4,41

ARM Publications Output in Sub-Saharan Africa according to Contributing Countries

An analysis of the number of publications according to the country of the author's affiliation produced the results reflected in table 2. The table provides the publication output of the countries in descending order of publications count. The most productive country was South Africa, which produced a total of 52 publications on ARM, accounting for 4.21% of the total number of LIS publications published by authors affiliated to institutions in the country. The second most productive country was Botswana, which yielded a total of 21 ARM publications, which contributed 11.29% of the total LIS publications in Botswana. Out of the 838 LIS publications produced by Nigeria, 17 were published on ARM while Kenya's 94 LIS publications included 12 ARM publications, thereby the latter contributed 12.77% of Kenya's total LIS publications. The highest percentage contribution of ARM to a given country's LIS research was witnessed in Namibia wherein ARM's six publications accounted for 21.43% of the country's total LIS publications. The percentage contribution of ARM to LIS publications output, in the other countries of the authors' institutional affiliation, in descending order, was as follows: Zimbabwe (15.38%), Kenya (12.77%) and Cameroon (15.50%).

Table 2: ARM's Contribution to LIS Research by Country

	LIS	ARM	Percentage
	records	records	
South Africa	1234	52	4,21
Botswana	186	21	11,29
Nigeria	838	17	2,03
Kenya	94	12	12,77
Ghana	123	8	6,50
Zimbabwe	39	6	15,38
Namibia	28	6	21,43
Uganda	84	2	2,38
Tanzania	52	2	3,85
Zambia	40	1	2,50
Cameroon	8	1	12,50
Benin	28	0	0,00
Niger	20	0	0,00
Burkina	6	0	0,00
Faso			
Cape Verde	2	0	0,00
Angola	1	0	0,00

Distribution of Publications by Authors

There were a total of 126 individuals who authored at least one article on archives and records management between 1966 and 2012. Table 3 reveals the 20 most productive authors in ARM research in sub-Saharan Africa. Topping the list was P. Ngulube who produced a total of 13 papers, which constituted 10.48% of the total number of publications produced in sub-Saharan Africa (i.e. 124). In the second position was N. Mnjama with eight (6.45%) publications, followed by H. N. Kemoni (six --4.84%), P. J. Lor (five – 4.03%) and V. Harris (four -3.23%), to name just the top five authors. In another study by Ngoepe, Maluleka and Onyancha (2014), in which a different database was used, Ngulube also topped the list as the most productive researcher, followed by Kemoni. It was not surprising to find out that apart from P. J. Lor, all the top five authors' subject specialisation is archives and records management. A number of authors whose subject specialisation or focus is in other sub-fields of library and information science and not in archival science featured prominently among the leading authors. These include P. J. Lor, S. Mutula, A. S. A. Du Toit, and I. Fourie. These authors' presence can be attributed to this study's focus on 'records management' as one of the topics investigated. It has been observed that records management is becoming increasingly multi-disciplinary (Onyancha and Mokwatlo ,2011) and, hence, the presence of researchers from other disciplines in table 3.

Institutions behind ARM Research in sub-Saharan Africa

Institutional affiliations of authors were analysed in order to find out what the institutions are contributing to ARM research in sub-Saharan Africa. It was found that a total number of 65 institutions contributed to research in ARM in sub-Saharan Africa during

the period under study. Leading among these institutions was the University of Botswana, Botswana which produced 20 publications, followed by the University of KwaZulu-Natal, South Africa (15), University of South Africa, South Africa (10), University of Pretoria, South Africa (9), University of Ghana, Ghana (8), Moi University, Kenya (7), National Archives of Zimbabwe, Zimbabwe (6) and the University of Johannesburg, South Africa (6), to name just the institutions with more than five publications each. It was noted that majority of the leading institutions are situated in South Africa. Table 4 also shows that most institutions contributing to ARM research are universities. There were nevertheless some non-academic institutions which featured among the top 20 institutions that contribute to ARM research in sub-Saharan Africa, namely the National Archives of Zimbabwe and the World Health Organisation.

Table 3: Archives and Records Management Researchers in sub-Saharan Africa (N=124)

No.	Author	Publications	Percentage
1	Ngulube, Patrick	13	10,48
2	Mnjama, Nathan	8	6,45
3	Kemoni, Henry N	6	4,84
4	Lor, Peter Johan	5	4,03
5	Harris, Verne	4	3,23
6	Adjei, Emmanuel	3	2,42
7	Akussah, Harry	3	2,42
8	Garaba, Francis	3	2,42
9	Mutula, Stephen M.	3	2,42
10	Namhila, Ellen Ndeshi	3	2,42
11	Nengomasha, Cathrine T.	3	2,42
12	Ngoepe, Mpho	3	2,42
13	Wamukoya, Justus M.	3	2,42
14	Ayernor, Edwin Tetteh	2	1,61
15	Du Toit, A. S. A.	2	1,61
16	Fourie, Ina	2	1,61
17	Kgosiemang, Rose Tiny	2	1,61
18	Kufa, J. C.	2	1,61
19	Olatokun, Wole Michael	2	1,61
20	Onyeji, Christian	2	1,61

Table 4: Institutions behind ARM Research in sub-Saharan Africa

No.	Institutions	Publications
1	University of Botswana	20
2	University of KwaZulu- Natal	15
3	University of South Africa	10
4	University of Pretoria	9
5	University of Ghana	8
6	Moi University	7
7	National Archives of Zimbabwe	6
8	University of Johannesburg	6
9	University of Ibadan	6
10	University of Namibia	4
11	University of Nigeria	4
12	University of Cape Town	3
13	University of the Witwatersrand	3
14	World Health Organization	2
15	University of Zululand	2
16	Delta State University	2
17	Canterbury Christ Church University College	2
18	IFLA	2
19	Regenstrief Institute	2

Subject Areas of Research on ARM in sub-Saharan Africa

In order to determine the subject areas in ARM that researchers focus on in sub-Saharan Africa, an analysis of both the author-supplied keywords and database-supplied subject terms was conducted. Table 5 provides the author-supplied keywords that featured prominently in the literature while table 6

reveals the top to subject terms under which ARM research in sub-Saharan Africa is indexed in the LISTA database. It was found that the most researched area according to the author-supplied keywords was records management, which yielded 13 publications, followed by Nigeria (5), preservation (5), e-government (4), South Africa (4) and academic libraries (4). Strangely, the keyword "archives" did not feature among the top 20 keywords supplied by authors, although the 'national archives' was listed number 14 as shown in table 5.

The EBSCO thesaurus, which provides a controlled vocabulary for purposes of indexing the literature in the company's databases, yielded a total of 353 subject terms which were used to index publications on ARM in sub-Saharan Africa. Unlike table 5 which revealed 'records management' as the highest ranking term under which ARM literature in sub-Saharan Africa is indexed, table 6 places 'records management' in position two with 34 publications after 'archives' which yielded 40 publications. In the third position is 'electronic records' which posted 22 publications, followed by 'information resources management' (18), 'information science' (14) and 'information technology' (11). 'Archival resources' and 'documentation' yielded nine publications each. Although it was not possible to determine the geographic scope of investigation of some of the papers, it can be deduced that the majority of the papers focused on archival and records management research in sub-Saharan African countries. For instance, the presence of Nigeria, South Africa, Botswana, Kenya, Namibia, Southern Africa and East Africa is indicative of the countries investigated in the researches.

Table 5: Content of ARM research - Author Supplied Keywords

No.	Author-supplied Keyword	Publications	Percentage
1	Records management	13	10.48
2	Nigeria	5	4.03
3	preservation	5	4.03
4	e-government	4	3.23
5	South Africa	4	3.23
6	Academic libraries	4	3.23
7	electronic records	3	2.42
8	Botswana	3	2.42
9	Kenya	3	2.42
10	University libraries	3	2.42
11	Namibia	2	1.61
12	Public Service Delivery	2	1.61
13	United Nations	2	1.61
14	National Archives	2	1.61
15	Southern Africa	2	1.61
16	Conservation	2	1.61
17	Deconstruction	2	1.61
18	electronic document delivery	2	1.61
19	East Africa	2	1.61
20	E-records	2	1.61

Table 6: Content of ARM Research - Database Supplied Key Terms

No.	Subject terms	Publications	Percentage
1	Archives	40	32,26
2	Records Management	34	27,42
3	Electronic Records	22	17,74
4	Information Resources Management	18	14,52
5	Information Science	14	11,29
6	Information Technology	11	8,87
7	Archival Resources	9	7,26
8	Documentation	9	7,26
9	National Archives	8	6,45
10	Archival Materials – Conservation and Restoration	7	5,65
11	Public Records	7	5,65
12	Library Science	7	5,65
13	Information Services	7	5,65
14	Archivists	7	5,65
15	Management	7	5,65
16	Universities and Colleges	7	5,65
17	Academic Libraries	7	5,65
18	Freedom of Information	6	4,84
19	Archives – Collection Management	6	4,84
20	Government Information	6	4,84

Sources Publishing sub-Saharan African ARM Research

The question on where ARM researchers in sub-Saharan Africa publish their research was addressed through an analysis of the sources in which the researchers publish their papers. ARM researchers in sub-Saharan Africa published their research in 43 journals between 1986 and 2012. Topping the list was the *African Journal of Library, Archives and Information Science* which published a total of 21 papers, accounting for 16.94% of the 124 ARM papers published by researchers in sub-Saharan Africa between 1986 and 2012. The other journals that featured among the top sources included *Information Development* (12), *IFLA Conference*

Proceedings (7), Mousaion (7), South African Journal of Information Management (7), SA Archives Journal (6), Archival Science (5), Electronic Library (5), and the South African Journal of Library and Information Science (4). Table 7 reveals that most of the top-ranking journals focused on the broad discipline of library and information science. However, it is worth noting that the ESARBICA Journal, where most ARM research conducted in sub-Saharan Africa is published, is not indexed in LISTA; hence its absence from the list of journals in table 7. Therefore, the overview given in this study has some limitations as it has not taken into account journals not covered by the LISTA database. Future research needs to use databases that cover such journals.

Table 7: Sources Publishing sub-Saharan African Research on ARM

No.	Journal	Publications	%
1	African Journal of Library, Archives and Information Science	21	16.94
2	Information Development	12	9.68
3	IFLA Conference Proceedings	7	5.65
4	Mousaion	7	5.65
5	South African Journal of Information Management	7	5.65
6	S. A. Archives Journal	6	4.84
7	Archival Science	5	4.03
8	Electronic Library	5	4.03
9	South African Journal of Library and Information Science	4	3.23
10	Innovation	3	2.42
11	Journal of the American Medical Informatics Association	3	2.42
12	Journal of the Society of Archivists	3	2.42
13	African Research and Documentation	2	1.61
14	Alexandria	2	1.61
15	Archives	2	1.61
16	Fontes Artis Musicae	2	1.61
17	IASA Journal	2	1.61
18	IFLA Journal	2	1.61
19	International Journal of Information Management	2	1.61
20	International Preservation News	2	1.61
21	Library and Archival Security	2	1.61
22	Library Philosophy and Practice	2	1.61
23	Annals of Library and Information Studies	1	0.81
24	Archives and Manuscripts	1	0.81
25	Bottom Line: Managing Library Finances	1	0.81

Discussion of Results

The findings of this study concur with several authors' findings such as Katuu (2009), Keakopa (2009), Kemoni (2009) and Khayundi (2011) which have revealed that there is paucity of research in archives and records management in the continent of Africa. The trend analysis in figure 1, as well as table 1, reveals that ARM research output in sub-Saharan Africa constitutes a small percentage of the total LIS research throughout the period under investigation in this study. The results indicate that whereas LIS research is progressing, the sub-discipline of ARM is less researched. Possible reasons for this pattern include the following:

- There are very few researchers in sub-Saharan Africa whose research focus areas include archives.
- There are few mainstream journals that publish ARM research in Africa. Onyancha (2008) identified 16 LIS journals published in sub-Saharan Africa, with the majority originating from South Africa. Of these, only seven featured among the top 20 leading journals that published ARM research in sub-Saharan Africa between 1986 and 2012 (see table 7).
- Few institutions offer ARM education and training in sub-Saharan Africa for example, in South Africa, out of 23 universities, 10 offer LIS education and training; and out of the 10, only four offer ARM education and training. These are the University of South Africa, University of Fort Hare, University of Zululand and the University of KwaZulu-Natal.
- Lack of skills in scientific writing on the part of some of the researchers.
- Insufficiency of financial and material means required for publishing.

In terms of the countries in sub-Saharan Africa that participated in the publication of ARM literature, the study revealed that, whereas 16 countries published at least one paper in LIS, only 11 of these published at least one paper on ARM. South Africa led in both cases. The pattern witnessed in table 2 indicates a better performance of those countries in which ARM is a subject of tuition and research in universities. For instance, the presence of ARM in

institutions of higher learning in South Africa, Botswana, Nigeria and Kenya is strong. This is also evident in tables 3 and 4 which reveal the most productive institutions and authors, respectively. The majority of the leading institutions and authors are affiliated with the countries that performed relatively well in the ARM research output.

This study revealed that, with regard to content, ARM research in sub-Saharan Africa is moving towards records management. Although 'archives' was the most common subject term according to the controlled thesaurus vocabulary, the authors' preference for the term 'records management' attests to that pattern. The fact that the keyword 'archives' was not supplied by the authors implies a shift of focus or mindset of the researchers from archives to records management, although the database still indexes the literature on records management under archives. We believe that the sub-field of records management therefore requires sufficient records management practitioners who will develop the relatively young but vibrant sub-field. We have noted, however, that the curriculum in most universities in sub-Saharan Africa focuses mostly on archival science, leaving out records management. Just as the term librarians is less preferred to knowledge managers or information scientists, the concept of archives seems to follow suit; hence, the preference for records management.

As expected, institutions of higher learning were the most active in ARM research, a situation that implies that academics are the most productive researchers in ARM. This begs the big question: "Where are the practitioners?" Records offices and archivists are conspicuous in their absence in the research process in sub-Saharan Africa. Perhaps, it is this pattern that has led Duranti (2012) to advise the southern African audience that "Archivists and records managers should become a locus of research by establishing a partnership with academics involved in international research, professionals involved in standards development, experts in law and information technology and, mostly, with the creators of the records under their jurisdiction. This would results in 1) the production of new knowledge, 2) the achievement of action-oriented research outcomes, 3) the education of all participants, 4) results that are relevant to the local setting, 5) appropriate research and development methodology, and 6) and the empowerment of the archives."

Although journals published in Africa featured prominently in the top 20 leading journals that published ARM research in sub-Saharan Africa, it was also noted that journals published outside Africa were equally used as channels of dissemination of the research. The preference of authors in developing countries to publish in foreign journals has been observed by various authors (e.g. Onyancha and Ocholla, 2004). Onyancha (2008) explained such a pattern of the authors' preference for foreign journals over local or regional journals by attributing it to the foreign journals' superior quality, as well as the databases' selection criteria of journals. The majority of the electronic databases select journals based on the journals' quality, which is measured by the average number of citations received by the journal over a given time period, the credentials of the editors and editorial boards, the inclusion of local and international academics on the boards, and the percentage of submitted papers published. This has partly influenced some scholars' perception that foreign electronic databases are biased in their coverage of journals whereby they index only those journals published in the developed countries and, more specifically, those that are published in the USA and the United Kingdom.

We believe that the following can bring about increased focus not only on ARM as a discipline but also as a field of research:

- Schools offering ARM programmes may have to apply best practices on ARM offerings and research, just as they have done for other LIS sub-fields/disciplines.
- Student and staff exchange programmes with institutions that have performed relatively well in ARM research may result in a better research performance in sub-Saharan Africa.
- Multi-disciplinary and inter-disciplinary research involving ARM researchers and those from other related disciplines/sub-disciplines may help to improve ARM research in sub-Saharan Africa.
- ARM research in sub-Saharan Africa should be promoted through subject-specific conferences such as ESARBICA (Eastern and Southern Africa Regional Body of the International Council on Archivists).

- Grooming and mentoring students will ensure sustainability of future research in ARM.
- Research collaboration with practitioners in ARM should be encouraged.
- There is also a need to offer relevant training on research, especially in respect of the young and upcoming researchers who may be lacking fundamental skills to conduct research. Research collaboration, which has been recommended above, may also assist to impart the necessary skills.

Conclusions

In conclusion, given the challenges of technological developments, there is a need for a paradigm shift not only in research into archives and records management so that the profession can keep up with modern societal needs. Informetrics provided an effective method that enabled the study reported in this article to achieve its aim of establishing a baseline in terms of the paucity and scope of ARM research in sub-Saharan Africa, and the interrelated need for more and stronger archival education and research training activities, as well as research collaboration in the region.

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