Utilisation and Promotion of Institutional Repositories at the Institute of Finance Management to Enhance Research and Institutional Visibility in Tanzania

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ABSTRACT
This study examined factors hindering the effective utilization of Institutional Repositories (IRs) at the Institute of Finance Management (IFM) in Tanzania, comparing insights from four higher learning institutions. Its specific objectives were to identify challenges affecting IR utilization at IFM, analyze strategies adopted by peer universities, and propose actionable measures for IFM to enhance IR engagement and institutional visibility. Using a qualitative approach, data were collected from 14 librarians (6 from IFM and 8 from other universities) and 2 ICT officials, all purposively selected. Findings revealed that IFM's low IR utilization stems from the absence of a clear IR policy and limited awareness of IR benefits among academic staff and management. In contrast, peer institutions emphasized proactive marketing, policy frameworks, and compliance mechanisms to boost participation. The study concludes that strategic interventions—including policy formulation, awareness campaigns, and mandatory submission guidelines—are critical to improving IR utilisation. By addressing these gaps, IFM can leverage IRs to increase research visibility and academic impact, aligning with successful practices in similar Tanzanian universities.

Key words: Institutional Repository, Research Output, Open Access Research, Tanzania.

1. INTRODUCTION

In 1878, Daniel Coit Gilman, the first president of John Hopkins University, said: 'It is one of the noblest duties of a university to advance knowledge and to diffuse it not merely among those who can attend daily lectures—but far and wide' (Jones, Andrew,& MacColl, 2006:15).Some150 years later, many researchers and faculty members have been largely reluctant to grant access to their published works or those published by a parent institution (Muneja & Ndenje-Sichalwe, 2017). Advances in ICT, on the other hand, have changed the scholarly communication and knowledge sharing model, and ushered in a new demand for digital repositories to facilitate the collection, preservation and archivingof scholarly assets academics create in academic and research institutions (Muneja & Ndenje-Sichalwe, 2017; Asad *et al*., 2019).

An institutional repository (IR) refers to a digital archive of intellectual products faculty, research staff, and students of an institution create that the information users from both within and outside the institution can access with a few, if any, barriers to such access. This repository also houses experimental and observational data of institutional members to support their scholarly activities. Moreover, an institutional repository can serve as an engine for spearheading change ininstitutions of higher education (Surker, Davis, &Tiropanis, 2010).

Globally, the open access movement pushes academics from inside and outside of universities to make their work as easily and affordably accessible as possible to the largest audience as soon as possible after they have finished it. An outgrowth of the movement is the institutional repository (IR), a digital library, whose contents are typically intended to be publicly available and preserved (Lynch, 2003; Ghosh & Kumar, 2007; Jantz & Wilson, 2008; Jain, 2011).Jones, Andrew and

MacColl (2006) proffer that an institutional repository provides an institution with means for sharing its intellectual wealth with a global community of scholars. Moreover, it allows all the interested readers to access discoveries and insights its members produce, hence enhancing the creation, access, and distribution of scholarship (Adjei, Mensah, & Amoaful, 2019). Generally, institutional repositories in academic libraries have resulted in human and technical resource investments to ensure infrastructural setup for archiving intellectual, cultural, and administrative output of their respective institutions that the wider public community can access to raise the visibility of research an individual university or institution generates (Rafiq & Ameen, 2013; Perez *et al.*, 2016; Adjei, Mensah,& Amoaful, 2019). Moreover, higher education institutions have embraced institutional repositories to bridge the knowledge access gap and accrue benefits associated with boostingthe visibility of their research that could otherwise be constricted at an individual academician level be readily available globally, hence raising institutional ranking profile both nationally and internationally to lofty standards (Muneja & Ndenje-Sichalwe, 2017; Ratanya & Muthee, 2018; Kayungi, Ndenje-Sichalwe, Manda, 2021). Other benefits of institutional repositories, according to Ezema (2013) and Asad *et al.* (2019), include ranking prestige, and visibility of researchers and their respective universities/institutions.

However, Joo, Hofman and Kim (2019) have reported that some universities face challenges in effectively utilising institutional repositories to achieve maximum benefits. These include inadequate funding and staff, an overwhelming amount of data, institutional support for metadata creation, and sensitivity. These findings have also been reported in a few other studies such as Ivwighreghweta (2012), Dlamini and Snyman (2017), Ukwoma and Ngulube (2019), and Adam and Kiran (2021). These studies have also identified factors hindering IRs in the academic libraries under review in Nigeria and Africa generally. This study, on the other hand, uses the Institute of Finance Management as a case study to examine and identify challenges and propose strategies for possible adoption for the successful utilisation of IR, thereby reaping the optimal benefits of raising the visibility and dissemination of its scholarly output.

1.1 Tanzania Commission for Science and Technology and Its Research Role

To support industrial efficiency, the Tanzania Commission for Science and Technology (COSTECH) has reasserted its commitment to standardising, promoting, and integrating research, technology development and management, and innovation governance. Moreover, commission strives to guarantee that all STI stakeholders in the nation have a shared understanding, agreement, and commitment toaccomplishing national goals. In this regard, the 2021/22- 2025/26 COSTECH strategic plan reads in part:

> *"COSTECH will coordinate that unison in respect of the different mandates, roles and functions of each organisation has to play in STI delivery. It will, therefore, amongst its other core roles, set standards to ensure that research undertaking enhances outputs for industry and link the contributory roles of technology development, acquisition of technology and transfer across all related sectors to achieve the industrialisation agenda. This is geared towards facilitating commercialisation and balance of exports and imports"* (COSTECH, 2021:9).

Initially, COSTECH encountered several challenges in coordinating and monitoring activities related to scientific research and technology development. These challenges compromised comprehensive nation-wide coordination. Subsequently, COSTECH adopted the Whole of Government Approach (WGA) aimed to introduce coherence in coordination of joint STI activities performed by diverse ministries, independent departments and agencies (MDAs) to achieve the national development goal. Througha COSTECH-engendered unified governance of all sectors, vertical and horizontal coordination canfacilitate the harmonisation of coherent and non-overlapping policy/functions and roles for optimal results. Additionally, the WGA canmake better

utilisation of the scarce resources and offer tangible STI outputs. Stakeholders include the private sector, non-governmental organisations (NGO) and STI implementing development partners (DP) operating within the country.

Moreover, COSTECH has created a CIR-COSTECH IntegratedRepository—a digital service that collects, preserves, and distributes digital material—in a bid to realise proper co-ordination of research outputs in the country. In this regard, repositories are vitaltools for preserving an organisation's legacy since they facilitate digital preservation of research outputs in addition to fosteringscholarly communication. ThisIntegrated Repository that COSTECH has developed continues to offer support to institutions and universities inutilising their IRs as part of concerted efforts aimed to fulfil its two mandates, as stipulated in the Tanzania Commission for Science and Technology Act No. 7 of 1986, of:
a) Monitoring and coordinating the activities relating to scientific research and technology development of all persons or body of persons concerned with such activities, and
b) Acquiring, storing and disseminating scientific and technology information, and may, for that purpose hold or sponsor conferences, symposia, meetings, seminars or workshops, or publish any newspaper, journal or periodical or do any other act or thing designed to promote interest in science and technology development.

All these and other related goals facilitate the examination the research and development programmes of national research institutions, whether affiliated to the commission or not and advise them accordingly on the best way to achieve research objectives (COSTECH, 2021).The overall goal of the COSTECH institutional repository, or CIR,is to facilitate access to research output from institutions and universities so that one may determine a field's capability and determine whether or not the research outputs in these IRs adhere to scientific standards, including identifying national research output and advise the government, accordingly, on best way to formulate policy and disburse economy transformative research funds.

1.2 Research Problem

The IR provide an institution or university with enhanced visibility, ranking and recognition of its academics in addition to disseminating research findings (Ezema, 2013). Despite its obvious benefits, many institutions and librarians still contend with challenges to establishing guiding principles, with the best practices yet to materialise, hence the persistent underutilisation (Palmer, Teffeau, & Newton, 2008). In Tanzania, Mbughuni, Mtega and Malekani's (2022) findings based on 10 public universities show that only 46.2 percent archive their academic works in open access institutional repositories. Meanwhile, Muneja and Ndenje-Sichalwe (2017) attributedthe underutilisation of IR by academic communities to limited knowledge about IR benefits, lack of awareness of IR, and lack of knowledge on intellectual property rights.

Even though the Institute of Finance Management (IMF) installed its institutional repository in 2015 to archive all the academic works, policies and students' dissertation, its utilisation has yet to pick up the required temp for the IFM to reap maximum benefits. On the one hand, the IFM's strategy has been to convince academicians to deposit their works; on the other hand, its promotion of the IR has been dogged by lack of a policy to guide the practice coupled with limited knowledge on copyright issue. It is against this backdrop that this case study was undertaken to explore the challenges pertaining to the IFM's IR and attendant strategies for possible adoption to engender the effective utilisation of its IR, raise institutional visibility and boost its ranking in the Tanzania and global academic community. Specifically, the objectives of the study, therefore, were to identify challenges that hinders the effective utilisation of IR for raising institutional visibility at IFM; examine strategies that selected universities have adopted to engender effective utilisation of IR in

Tanzania; and determine appropriate strategies that IFM can adopt for effective IR utilisation to enhance institutional visibility.

2. METHODOLOGY

The study adopted a qualitative approach under the interpretive paradigm to explore the challenges of institutional repositories at the IFM and propose counterstrategies for possible adoption to ensure effective utilisation and promotion in a bid to raise the visibility of individual faculty staff members and the institute at large. The qualitative approach enabled the researchers to obtain strategies on how to utilise the IR installed and seek opinions on how they overcome the challenges pertaining to low IR awareness amongst their academic staff and how they negotiated copyright issues regarding full text availability vs. abstracts-only.

The study used purposive sampling to select four higher learning institutions (all public universities in Tanzania), namely the University of Dar es Salaam, Sokoine University of Agriculture, Mzumbe University and Nelson Mandela University. These universities havemade significantstrides in promoting and utilising their respective institutional repositories. In addition, these four institutions have had more than 1,000 research and dissertations archived in their respective IRs. Similarly, the study used purposive sampling to select 14librarians (6 from IFM and 8 from the four university libraries under review) and two ICT officials working with IRs in different capacities in their respective institutionsto collect data from them through face-to-face and telephone interviews. Their selection was based on their strategic positioningwithin the institutions under review, the role they play, specifically, in IR management either as the archival personnel, policy formulators, or technical personnel, hence serving as drivers of IRs in their respective universities and as mediators between librarians and academic staff—the information users. Guest et al. (2020) recommends conducting 11 to 12 interviews to reach the higher end of the range (95th percentile) of saturation in qualitative studies.

3. FINDINGS AND DISCUSSION

3.1 Factors Hindering Effective IR Utilisation at IFM

During interviews held with six library staff at the IFM, and the majority (5, 83%) indicated lack of institutional policy to govern the whole process of institutional repository management was a stumbling block and when coupledwith low awareness of what an institutional repository entails, including its benefits among academic staff and management, resulted in ineffective utilisation of institutional repository, as Figure 1 illustrates:
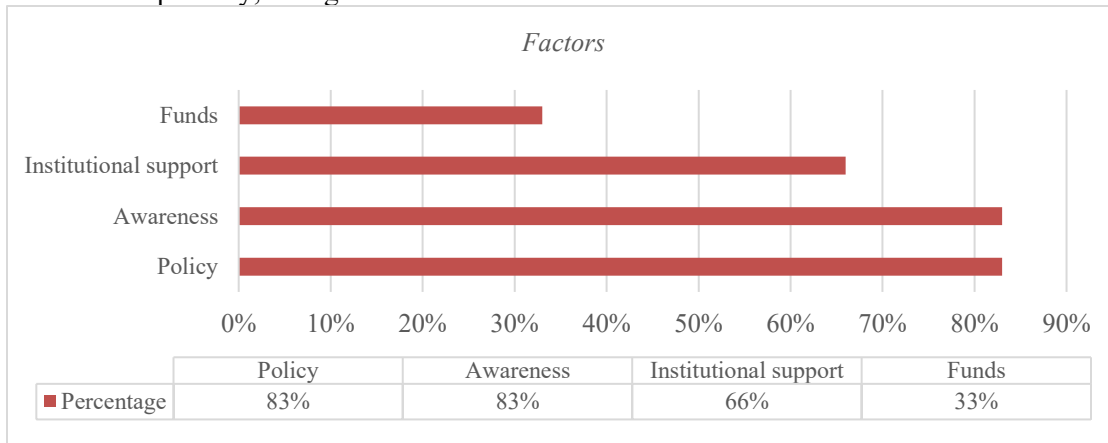

Factors

	Policy	Awareness	Institutional support	Funds
■ Percentage	83%	83%	66%	33%

Fig 1: Factors Hindering Utilisation of IR at IFM
Source: Field Data (2024)

On the other hand, a slightly lower number (4, 66%) indicated that institutional support was also inadequate as some of the policies, for instance, research and publication guidelines guidingpostgraduate students in their research does not stipulate the submission of a soft copy of their dissertations/thesesfor uploading into the IR. Only, some (2, 33%) cited lack of funds for buying scanners to transform the massive hard copy collections that the institute owns into softcopies for uploading into the IR. During an interview, a library ICT liaison personsaid:
"Awareness about the institutional repository is a challenge. Perhaps the library hasn't done enough marketing to provide education; but also, the lack of policy is another challenge which makes all efforts to market or even solicit publications for deposit into the IR cumbersome."

Similar findings were observed by Dulle (2010), Mgonzo and Yonah (2014), Muneja and Ndenje-Sichalwe (2017), Mbughuni, and Mtega and Malekani (2022), who noted that the effectiveness of many IRs suffered due to funds, low bandwidth, low intuitional support, low awareness among academic communities and negative perception of open access publications. Such grossly limited funding occurred regardless of the institutional IR benefits.

3.2 Institutional Repository Utilisation Strategies Other Universities Employ
The study generated data from four universities helped to determinethe strategies they deploy to ensure effective utilisation of their institutional repositories. To start with, the University of Dar es Salaam had 6,574 recorded research in the IR, which included students' dissertations, academic staff research output and policy documents; Sokoine University of Agriculture had 4,237 documents in their IR; Mzumbe University had 3,309 documents; and Nelson Mandela had 1,461 documents, as per COSTECH's Integrated Repositories data extracted in January 2024.
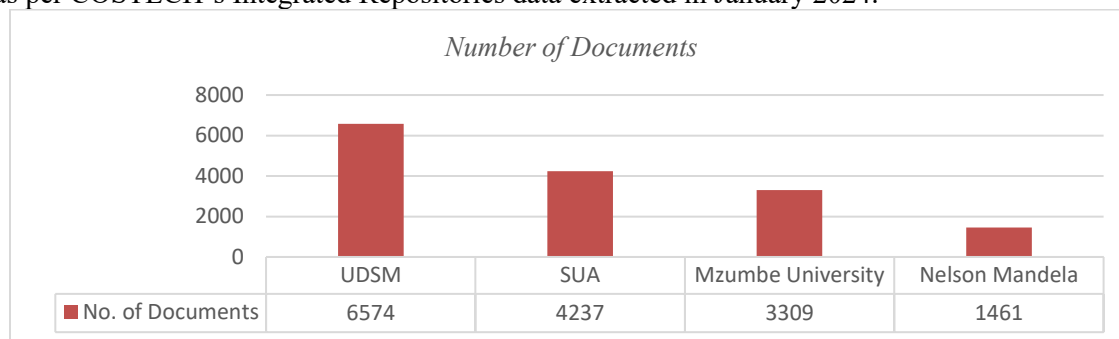

Number of Documents

	UDSM	SUA	Mzumbe University	Nelson Mandela
No. of Documents	6574	4237	3309	1461

Fig 2: Number of Documents in Selected Institutional Repositories
Source: COSTECH (2024)

During visitation to these respective institutions, it emerged that only senior librarians were charged with the duty of managing the institutional repository because the wider public than access the output of the uploaded documents, hence no mistakes can be done to embarrass the given institution or university.Similarly, Muneja and Ndenje-Sichalwe (2017) found that the libraries were better placed to manage IR than faculty/departments and ICT unit in Tanzania. In this regard, in-depth interviews were held with eight (8) senior librarians of the institutions tasked with overseeing IR management and two (2) ICT officers who provide technical assistance.

The University of Dar es Salaam was the first higher learning institution to take the IR initiative in 2008. The University Library has 6,574 students' research reports and it was noted that the postgraduate research guideline that necessitates graduates to submit multiple copies and one of those copies to be submitted to the library has enhanced the growth of their IR yearly. During an interview, one of the participants said:

> "*The library is still struggling to create awareness of the benefits of the repository amidst copyright questions. However, the deposit of a student's dissertation/thesis into the library through the postgraduate research guideline is the one that has facilitated yearly deposits*

into the IR. As a library, we are still trying to find ways to create more awareness to academic staff about the IR, but we are not yet there as we have few published works by academicians deposited. More strategies are needed."

The Sokoine University of Agriculture launched its IR in 2011; now, they have an IR policy in place. Their policy stipulates clearly that before any academic staff is promoted, all theiracademic papers and chapters submitted for promotion consideration must be uploaded into the repository so that others can view the papers that have earned them the academician promotion, hence the high number of academic staff in their repository. During an interview, one of the participants said:
"Our academic staff submits their papers to the Librarians for uploading or they upload the papers themselves into the IR. This has been accomplished due to awareness creation through policy and marketing. In turn, academic staff feels proud to have their works deposited as other academicians can view them and in turn, raise the profile of the university."

At Mzumbe University, promotion for library staff is one of the strategies for ensuring that the documents in their repositories. Although most of them are still progressing with a lot of adjustments in-between. As one librarian noted:
"We do a lot of marketing concerning the IR, but most academic staff are still reluctant to submit their works worrying about copyright issues. We are hoping with the TCU guideline on research availability of a given institution made available via the institution repository might boost our deposits and curb the resistance that we now experience."

At Nelson Mandela, the IR policy helps the librarians to do their best to market the repository to students and academic staff. Given the number of students, they have across all programmes and the availability of 1,461 academic content in their IR, the IFM hopes to learn from their persistence alongside other libraries initiatives.

Apparently, scholarly communication on knowledge sharing and dissemination has brought a new demand for the creation of digital repositories to facilitate collection, preservation and archival of scholarly assets created by academics within academic and research institutions. Yet, most of the academicians are unaware of the IR benefits the institution and their profession as well as the library, which are still dealing withthe intellectual property right (IPR) question that most academicians pose resulting into their reluctance. Individual efforts also solicit academic works from academician, but policies need to put more stringent requirements perhaps to ensure compliance (Muneja & Ndenje-Sichalwe, 2016; Nunda & Elia, 2019; Mbughuni, Mtega & Malekani, 2022).

4. CONCLUSION AND RECOMMENDATIONS

Information and communication technologies (IR) benefit universities, especially IFMs, according to the study. However, because there is no policy in place and academic staff and management are not aware of it, usage is poor. Marketing is being used by universities such as UDSM, SUA, Mzumbe University, and Nelson Mandela to increase awareness among staff, teachers, and students. However, the lack of information literacy programmes and intellectual property rights (IPR) continue to make use poor. According to the study, IR rules can guarantee adherence and provide academic staff and librarians with guidance on how to utilise IRs efficiently. To gain from country recognition in research output and academic professional research domains, IFMs must use their IRs in accordance with the COSTECH strategic plan for research output coordination.

Accordingly, the study recommends that:
  i)   The IFM create an information retrieval (IR) policy to guarantee responsibility and adherence among academic staff members and librarians.

ii) Librarians should promote IR to academics with a view to improving visibility and national recognition.

iii) The library should appoint senior staff members with IT expertise.

iv) Regular IR training should be offered by the institute in association with COSTECH, covering updates to technology and uploading of materials.

v) Postgraduate students should submit their dissertations with IRs in accordance with research norms.

vi) Information literacy programmes to improve efficient use and elevate the institute's and academic staff's research reputation should be created for students, academic staff, and management.

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