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Editorial Note

We are delighted to present this issue of the SAJMR, which brings together an array of insightful articles that examine various aspects of governance, regulation, and economic development in different contexts. The research presented in these articles contributes to our understanding of critical issues and offers valuable insights for policymakers, practitioners, and researchers.

The first article, "An Analysis of Governance Practices among Non-Governmental Organizations in Small Island Economies: A Case Study of Rodrigues Island," investigates governance practices and sheds light on the unique challenges faced by these organizations. The second article "The Roles and Implementing Challenges of Public Participation in Municipal Service Delivery: A Critical Analysis of Mekelle City, Tigray Region, Northern Ethiopia," explores the various roles that public participation can play in enhancing the effectiveness of municipal service delivery. In the third article, "Users' Intention towards Digital Financial Service Adoption in Ethiopia," researchers explore a comprehensive understanding of the opportunities and challenges associated with the adoption of digital financial services in a developing economy. Continuing the focus on anti-corruption measures, the fourth article, "Anti-Corruption Regulation: A Comparative Analysis of Practices in Ethiopia, Singapore, Norway, and Rwanda," presents a comparative analysis of anti-corruption practices and valuable insights into effective approaches to combatting corruption. The fifth article, "A Critical Assessment of the Degree of Enshrinement of the Principles of Corporate Governance in the Securities Sector of Mauritius," critically evaluates the implementation and adherence to corporate governance principles within the securities sector of Mauritius.

Shifting the focus to accounting information systems, the sixth article, "An Analysis of the Impact of Accounting Information Systems on the Performance of Companies: Evidence from a Small Island Developing State," provides valuable insights into the role of technology in enhancing accounting practices and improving organizational performance. The seventh article, "An Informative Review of Selected Aspects of the Legislative Framework on the Banking Sector of Mauritius," offers a critical analysis of the current framework and proposes recommendations to strengthen the regulatory environment. The eighth article, "The Declining Trend of Wetland in Chefa (Amhara Region, Ethiopia) and its Impact on Local Ecosystem Services," examines the consequences of wetland degradation on local ecosystem services and highlights the importance of sustainable wetland management. Lastly, the ninth article, "Assessment of Business Process Reengineering Project and its Implementation Performance in Addis Ababa City Administration," assesses the impact of the project on organizational efficiency and identifies areas for improvement.

We extend our gratitude to the authors for their valuable contributions to the SAJMR, as well as to the reviewers for their diligent evaluations. The journal will continue to publish quality research and contribute to the dissemination of knowledge so that we can all benefit from it.

Dr. R. S. Kamath
Editor

An Analysis of Governance Practices Among Non Governmental Organisations In Small Island Economies; A Case Study of Rodrigues Island

Needesh Ramphul, Kesseven Padachi, Kumar Dookhitram,
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ABSTRACT: Good Governance is vital for the proper running of any type of organization. Likewise, Non-Governmental Organisations (NGOs) should also ensure that they follow good governance practices. However, many NGOs have been criticized because of corrupt practices and inefficient use of funds provided by the donors. Donors are calling for greater accountability and transparency in relation to the management of programs and projects by NGOs. The main purpose of this research is to further investigate into governance practices in NGOs through the perspectives of the funders and NGOs themselves in the small island of Rodrigues. The paper will help to analyse different aspects of good governance in NGOs. A focus group has been carried out among funders of NGOs and NGOs themselves. The study shows that the public image of NGOs can impact on funding of NGOs and training and development on good governance practices can help to improve their effectiveness.

Keywords: Funders, Good Governance, NGOs , Small Island Economies

Introduction

Rodrigues is a small island in the Indian Ocean and it is part of the republic of Mauritius. It has a population of approximately 42000 islanders. The main economic activities of the island are based on subsistence agriculture and fishing. It is also becoming a well-known tourist attraction for its peaceful environment and warm welcoming people. The island also experiences mass immigration to the island of Mauritius due to better job opportunities. As any other country or island, Rodrigues also faces lot of societal problems like poverty, drug addiction, unwanted pregnancy among the youth, AIDS, unemployment amongst others. As a result, there are a handful of non-Governmental Organizations (NGOs) in Rodrigues who are helping the local government to deal with these societal problems. The Rodrigues Council of Social Service (RCSS) is the umbrella organisation of NGOs present in Rodrigues. The organisation is responsible to fight for the welfare and proper operations of NGOs in Rodrigues. NGOs are an integral part of a democratic society and play an important role in the socio-economic development of Rodrigues. NGOs provide specialized services to society to satisfy the needs of the underprivileged people, assist in national disasters, promote sustainable and inclusive development, and are involved in various initiatives to ensure that human and other rights are respected. NGOs complement the services provided by the private sector and the government. In addition, their importance in enhancing social integration, social dialogue, participatory democracy, peace and social harmony cannot be underestimated.

The NGOs in Rodrigues receive funds from the National Social Inclusion Foundation (NSIF) which is based in Mauritius. They have to submit their projects and the NSIF will analyse the projects submitted before providing the relevant funds. On the other hand, NGOs receive funds directly from the Corporate Social Responsibility funds of private sector organizations based both in Rodrigues and Mauritius. Another source of finance for NGOs based in Rodrigues is from the European Union, the United Nation Development programs and other international donors. However, the funders of NGOs ensure that the funds are used for the accomplishment of the objectives set in the different projects submitted. These NGOs must ensure that they are being managed properly and they are achieving their objectives of improving social welfare in an

efficient and effective way. In other words, they have to ensure that they are following proper governance practices while conducting their various activities and they are really impacting in the reducing the negative impacts of social problems affecting the society in Rodrigues. However, the local press in Rodrigues has reported some alleged misuse of funds in certain NGOs and hence many people are questioning whether NGOs in Rodrigues are following good governance practices. In addition, there is scant research on the governance practices among NGOs in the island of Rodrigues. Thus, this research paper aims to further explore governance practices in NGOs in Rodrigues through both the donors' and NGOs' lenses. The paper will shed some light on the understanding of governance principles among NGOs and the donors, the ways in which donors assess the governance practices of the NGOs, the different governance practices which are implemented by NGOs, the problems that NGOs encounter to implement the different principles of good governance and the improvements that must be brought about so that NGOs can successfully implement the good governance principles in their respective organisations.

Theoretical Framework For Governance

The concept of good governance appeared for the first time in 1989 in a World Bank Report based on Africa, which outlines it as an 'exercise of political power to manage nations' concerns (Gisselquist, 2012). At some stage, many African nations have experienced failures in governance and a rise in corruption and the World Bank professed that 'a crisis of governance' triggered 'the litany of Africa's development problems' (World Bank, 1989). According to the World Bank, bad governance is portrayed by subjective policy-making, unaccountable formalities, biased or unjust legal schemes, the abuse of managerial power, a civil society which is uninvolved in public life, and extensive corruption (Gisselquist, 2012).

The UNDP-based principles deserve universal recognition but application remained something very complex. To provide a good framework for governments, the voluntary sector, communities and the private sector to put it into practice good governance for the well-being of citizens and society, the Institute on Governance, in 2003, grouped these UNDP principles in a set of five broad interconnected themes as summarized in the table 1 below.

Table 1: Principles of Good Governance according to the UNDP

Principles of Good Governance	The UNDP Principles and related texts
Legitimacy and Voice	<ul style="list-style-type: none"> • Participation - Everyone should have a voice in decision-making, either directly or via legitimate institutions that characterize their intention. Such wide involvement is based on freedom of association and expression, as well as capacity for constructive involvement. • Consensus orientation - It facilitates opposing interests to obtain a general agreement on what is group's best interest on policies and procedures.
Direction	<ul style="list-style-type: none"> • Strategic vision - Leading members and the public have a diverse and long-term view on good governance and social progress, together with an understanding of what is required for such growth. There is also a perception of the complexities of history, culture and society in which this view is rooted.
Performance	<ul style="list-style-type: none"> • Responsiveness - Establishments and policies attempts to serve all parties. • Effectiveness and efficiency - Processes and organisations, while making the greatest use of resources, generate outcomes that fulfil requirements.

Accountability	<ul style="list-style-type: none"> • Accountability –policy-makers in the public and private sector and civil society organisations (CSO) are publicly accountable, as well as to established participants. Depending on the organisation and whether the choice is internal or external, this accountability varies. • Transparency – It is constructed on the data free stream. Processes, organisations and data are available directly to those involved, and sufficient data is supplied to comprehend and supervise them.
Fairness	<ul style="list-style-type: none"> • Equity – There are possibilities for each person to enhance or retain their well-being. • Rule of Law – Legal frameworks, in particular human rights legislation, should be honest and impartial.

Source: Principles for Good Governance in the 21st Century 3 Policy Brief No. 15 - Institute On Governance, Ottawa, Canada. UNDP (1997) Governance for Sustainable Human Development. United Nations Development Programme.

Good governance has now assumed mantra status for both donor organisations and donation from other nations (Nanda, 2006). The commitment to 'national ownership' by the Paris Declaration of 2005 has also geared towards donor agencies' attention on good governance. While in the past international co-operation was much associated with aid irrespective of governance practices, today there is a paradigm shift from aid to partnership and Development Partners are compelled to think about governance as an essential aspect of their 'modus operandi' by funneling direct budget funding to affiliate governments (Hyden, 2008).

Governance In NGO's

NGOs are voluntary associations that are mission based and it is essential that they are able to renew themselves, and sustain their mission in a changing environment. Their key stakeholders include the government, volunteers, partners and their service users. These different stakeholders play an important role in the realization of the organization's goals.

Christensen (2004) observed that although there existed some minimum controls to prevent certain fraudulent practices, there was in the past hardly any need for NGOs to demonstrate if their programs do what they are intended and proclaimed to achieve. As numerous NGOs' profiles continued to expand significantly, public's trust in them started to drop and most of their activities were to be reported (Vakil, 1997; Ebrahim, 2005). This has been widely attributed to the rise in public financing for NGOs (Edwards and Fowler, 2002), increased competition from amongst NGOs for financing (O'Dwyer and Unerman, 2008) and high-profile participation of NGOs in widespread scandals (Jepson, 2005).

Although NGOs are today more open to the idea of promoting good governance within their ranks, many have been found to be somehow hesitant to report or discuss cases about corruption as this could lead to bad publicity especially to the media and, subsequently, this could induce a loss of funding from entities as their credibility are at stake (Larché, 2011). In order to facilitate discussions on corruption and to encourage preventive initiatives, in 2008, Médecins du Monde (MDM) conducted a survey directed at interviewing the 17 biggest French NGOs on their views on corruption, their methods to field research and risk assessment and management, and the processes in position to minimize and deter such impacts. Surprisingly, in this strictly private research, 11 of the 17 NGOs surveyed declined to take part. Among the NGOs that decided to participate, most acknowledged that bribery instances were component of the major organizational problems around humanitarian assistance (Larché, 2011).

Larché (2011) highlighted the need for NGOs to expand the range of risk assessment to assess whether their programs are susceptible to corruption, including theft or misuse of monetary

resources or in-kind products by conflicting sides, actual or presumed inequalities in the allocation of assistance and sexual exploitation and abuse by organization or associate employees of beneficiaries. Therefore, for these particular reasons, it is asserted that NGOs need to be transparent with investors.

Funding of NGO's

Over the past few decades, most NGOs and funding institutions have recognized the important connection regarding development and human rights. It has appeared that both principles go together. While witnessing so many rights violations, the significance of NGOs has become so much greater (Dean, 2016). Nevertheless, NGOs find themselves inept to be effective and efficient in the fight to counter the human rights abuse. Financial problems are the main reason as to why NGOs are struggling to accomplish their mission and vision. Due to the complexity of being identified by the funding organizations, NGOs began altering their activities and projects in ways that suited the donors' objectives. Funders' influence in developing countries is particularly evident among NGOs (Dean, 2016).

Barr et al. (2005) found out that NGO funds are generated through three major sources namely, public sector, internally by generating revenue, and the private sector. They also claimed that 10 percent of the local NGOs donations originate from private charities; the public sector provides 43 percent which includes grants and contracts; and 47 percent are derived from private transactions which are often obtained from the sale of products or services. Barr et al. (2005) orated that over-dependence on the private sector resources could push the NGOs away from their benevolent causes and feeds a competitive dispute with other private sector businesses.

NGOs obtain commodities as contributions from some other individuals and organisations for the implementation of their projects (Larson and Wambua, 2011). Funds consist of products offered to the recipient NGOs, along with equipment made available sometimes at a discounted rate. Volunteers and trainees' initiatives are often seen as contributions. Larson and Wambua (2011) clarify that NGOs generally depend on volunteers to implement projects and other programs. Most of the time, volunteers do not receive any pay and benefits from the NGO, although some financial payments, such as stipends or appreciation tokens, are sometimes offered.

Research Methodology

Qualitative Research Methodology : In this research, the exploratory research methodology was used since little research has been carried out on governance practices in NGOs particularly in small island economies including Rodrigues. Qualitative methods are also appropriate when the “purpose is to learn from the participants in a setting or process the way they experience it, the meanings they put on it, and how they interpret what they experience” (Morse and Morse, 2002). The idea is that participants represent and explain their perspective on a particular process and researchers accept this perspective and do not impose their own interpretations on the participants' perspective. Such an approach allows a researcher to understand how those participating in a situation perceive a particular process or situation. Given that our research wanted to get the perspectives of both funders and representatives of NGOs themselves on governance practices, it was more appropriate to use the qualitative research methodology to better understand the concept of good governance from their point of view rather than imposing our ideas on them. It also allowed the NGOs to share their views on different aspects related to good governance practices in their respective organisations and the problems that they encounter to ensure the application of good governance principles in their organization in practice.

Informants : Informants are people chosen because based on their experience they can provide information about good governance practices in NGOs in Rodrigues. The funders were chosen since they have lot of interaction with the NGOs and they also assess the NGOs in different aspects. Funders from both the private sector and the public sector were contacted for the purpose

of this study. The intention in this study is to ask them about their views on the meaning of good governance, the way in which they assess good governance in a NGO, whether good governance is a criterion for funding NGOs and lastly, the ways in which they feel that NGOs can improve good governance practices in their respective organizations. In addition, the representatives of NGOs were also selected for the purpose of collecting relevant information on good governance practices among NGOs in Rodrigues. They are responsible for ensuring good governance practices in their respective NGOs and they can give meaningful insights on the different aspects of good governance practices with their NGOs. They were called upon to give their views on their understanding of governance practices in NGOs, the way they ensure that good governance principles are being practiced in their organization,

Focus Group : Two focus groups were carried out in the island of Rodrigues. Several funders of NGOs in Rodrigues were contacted through their mails and only 2 funders from the private sector attended the focus group. On the other hand, 10 representatives of NGOs attended the focus group after being contacted through their respective mails and follow up done through the phone. We audio-taped the focus group after informants gave us permission to do so. Audio-taping was necessary since it would be very difficult to take sufficient notes to record everything informants say concerning their perspectives on good governance in NGOs. The contents of the focus group were transcribed verbatim so as to be able later to identify categories that informants used to explain their perspective.

Data Analysis : Steps proposed by Miles and Huberman (1994) were used to analyze the transcript from the focus group and field notes that were gathered from the funders of NGOs in Mauritius. Miles and Huberman (1994) suggest that qualitative data analysis should consist of three concurrent activity flows: data reduction, data display, and conclusion drawing and verification processes. The NVivo software was used to analyze the transcript obtained from the focus group. The data was coded based on the main objectives of the focus group and then similarities and differences were taken into account to identify the main themes and categories of the data.

Analysis Of Focus Group From The Funders' In Rodrigues

The meaning of governance in NGOs from the perspectives of funders was analyzed. It was observed that all of the informants agree to the fact that transparency and accountability are very important aspects of good governance in the NGOs in Mauritius. They also pointed to the fact that the composition of the board of directors of NGOs also gave indication of governance practices in the organization. The board has to be independent and there should be a variety of skills, experience and competence among the board members. Another key aspect of the meaning was that the NGOs will have good governance if they are able to meet their objectives and they are in line with the cause that they are supposed to fight for. Good governance also implied having people with the right competence in the NGOs in Mauritius. The following statements from the funders highlight different aspects of the meaning of good governance of NGOs in Mauritius; “Good governance. I think it has to do with the transparency of the processes. Whether it be the decision-making. Of course, fund management.” (Corporate Social Responsibility Manager, Private Sector Firm)

“I would add probably would be keeping the directions on the mission of the organization. It's important to keep the mission. Ensure that the staff, the management staff, is appropriate and it's usually the board who employs them. So, employ the right kind of people and ensure that all the processes are transparent. Policies, things are open and clear. And of course, all the feedback, the accountings, the audits, all the feedbacks are also according to best practices. Yeah, but it's transparent.” (Corporate Social Responsibility Manager, Private Sector Firm)

“For good governance, for me, it would have been at looking at the board. I want to know the diversity of the board, the competency of the board. The more diverse their board of NGO is, the more competent because you can see what jobs they are doing or they fund them in different

arenas.” (Corporate Social Responsibility Manager, Private Sector Firm)

Another important aspect about the research was to find out whether the funders take into account good governance before taking a decision on financing the NGOs in Mauritius. All of them agreed to the fact that good governance is an important factor that is taken into consideration before funding any NGOs in Mauritius.

“Bluntly, because you are getting money, we wanna know what you are doing with that money and we want to see the results of it. I mean I guess that’s the crooks of it.” (Corporate Social Responsibility Manager, Private Sector Firm)

“The funding will be based on the previous year of work you’ve done. If you’ve managed correctly your money with some good governance and you’ve given the result, you’ll just be getting the fund straight away.” (Corporate Social Responsibility Manager, Private Sector Firm)

As far as the dimensions of good governance is concerned, accountability and transparency are considered as the most important aspect of good governance since the funders want to ensure that the financial aid that are being provided are used properly by the NGOs and for the right purpose. Direction is another key component of good governance practices since funders give lot of importance on the purpose of the NGOs and the way they achieve their objectives to ensure the welfare of their beneficiaries. Performance also is an important element of good governance since they also want to ensure that the NGOs have the right processes to reach their objectives and funding can also depend on the achievement of key performance indicators.

“And those who are not transparent, they don’t just get money.” (CSR manager, Private Sector)

“If they can show us their accounts, if they can show us who are their different types of funders, if they can... mainly that. Which has been the specifics that we’ve asked for. Board of directors as well and also the procedures that they have in place. Like their management procedures, how they work internally that sometimes important when we don’t know them, especially.” (CSR Manager, Private Sector Firms)

“For good governance, for me, it would have been at looking at the board. I want to know the diversity of the board, the competency of the board. The more diverse their board of NGO is, the more competent because you can see what jobs they are doing or they fund them in different arenas. Then I would trust. And then also, how much money they have been and what project they have done before, how much money they have managed. You trust them on what they’ve done previously” (CSR manager, Private Sector Firm)

Another objective of the research was to find out the ways in which the funders ensure that NGOs are following good governance principles. From the transcript, it was found that the funders will usually ask the NGOs to submit data on the way the funds provided are being used. They mention the problems related to monitoring and internal control within the NGOs and it was pointed out that in some NGOs the data are not readily available. However, they ensure that the required information on the use of funds given to them and the activities that they are performing is enabling them to achieve their purpose. Furthermore, the funders also take into consideration the composition of the boards of NGOs and the skills of the board members.

“We ask for receipts; we ask for the whole thing that they have to fill in to show the proof. Sometimes we even go there to say we evaluate this and then we don’t validate that because that wasn’t in the plan. That’s not, so, that’s the financial aspect. They have to report on the activities, the big milestones. So, we have a huge calendar that they said of it’s a yearly program, they’ll have like in March to do it so. Now that. And then we ask them for feedback and they have to give us written reports, observation on whatever it is on how, on the impact based that’s all we have.” (CSR Manager, Private Sector Firm)

“We want to see the reports, we want to see the observation reports, sometimes it’s simple, but that’s very important and that we have to have access to and then we’ll go on site as well. Sometimes depending on the activities, we ask for that. And at the end of every year we ask for a ‘bilan de projet’ that reports on every single aspect.” (CSR manager, Private Sector Firm)

“If they can show us their accounts, if they can show us who are their different types of funders, if they can... mainly that. Which has been the specifics that we’ve asked for. Board of directors as well and also the procedures that they have in place. Like their management procedures, how they work internally that sometimes important when we don’t know them, especially.” (CSR manager, Private Sector Firm)

The funders were also asked about recommendations on the different ways in which Mauritian NGOs could improve on good governance in their respective organization. Most of them pointed out the fact that training is a significant tool that can help to improve good governance in their organization. According to them, lack of skills is affecting the way the organization is being run and inefficiencies can impact on the use of resources and achievement of objectives. Improving the skills of staff can help to ensure good governance in the Mauritian NGOs. Another recommendation was that NGOs must provide more information about their accounts, activities, composition of their board and the different procedures and policies that they have in place to ensure proper management of the organization.

“The transparency and the orderliness of the work which shows good governance. Knowledge is essential. Appropriate knowledge is essential to good governance. We can’t ask NGOs to have good governance if we are not ready as a country to give them the training for it.” (CSR manager, Private Sector Firm)

“So, it’s important and also good governance thinks that I would look at the training of the staff. If that NGO has ongoing training for the staff, CPD. Not only the management, the administrative side, but also for the technical side whether be it education or rehabilitation or whatever, the CPD.” (CSR Manager, Private Sector Firm)

“If they can show us their accounts, if they can show us who are their different types of funders, if they can... mainly that. Which has been the specifics that we’ve asked for. Board of directors as well and also the procedures that they have in place. Like their management procedures, how they work internally that sometimes important when we don’t know them, especially.” (CSR Manager, Private Sector Firm)

Analysis of focus group of NGOs in Rodrigues

During the focus group NGOs from Rodrigues also agreed that accountability and transparency are two very important aspects of good governance. In addition, they also pointed out that good governance is the way the NGOs are managed especially the administrative aspects. The way the board is elected is also a key component of good governance and they mention that there should be fairness in the election of board members. Everyone should be given the opportunity to be part of the board. Clear demarcation of responsibilities among members and proper communication among board, members and employees can help to ensure that NGOs are properly governed.

“Good governance is the way we manage the organisation. There should be transparency in every aspect for example in the financial aspect and also between those who are managing the organisation. There shouldn’t be any barrier when it comes to communication from those who are managing the organisation. We all should be on the same page and this is when the organisation will be able to follow the good governance practices. If each person has their own way of doing things, good governance cannot be followed.”(Representative of NGOs)

“For me, good governance is when an organisation has a board and also the members should have their own responsibility and they are following it well. And there should be a place where they are accountable for the work they have been doing in terms of management, finance and responsibilities that each of them has in the organisation. This will bring up the motive of the NGO.”(Representative of NGOs),

“Communication is important between the president, secretary and treasurer. We should all be on the same level financial-wise. And when there is a meeting, each one should be able to voice out clearly the situation of the NGO.” (Representative of NGOs)

“For example, when there is an election for board members, it should give opportunity to everyone and not just the same person being elected over and again.” (Representative of NGOs)

As far as the importance of good governance is concerned, NGOs voiced out that good governance helps to ensure transparency and accountability and this enables to create trusts between funders and NGOs. They strongly believe that good governance is a key factor in getting funding from both the public and private sector. Good governance is vital in promoting good ethics within the organisation and it also helps in improving trusts among members of the NGOs. NGOs see that good governance helps to ensure the continuity of the organisation. It also helps the youngsters to learn the proper way of managing NGOs and ensuring that the main objective of the organisation is achieved.

“Good governance creates trust which will make others come to us. Like in Rodrigues, when an NGO has transparency, most of the time they receive funding. At the same time when we have transparency and trust, others will trust us as well. Transparency creates trust hence the funders will know that they are providing funds to trustworthy NGOs.” (Representative of NGOs)

“An NGO should be transparent. If they will seek for help and their organisation is not transparent, it will be hard to receive funding. If you are transparent in your organisation, you will receive aid easily.” (Representative of NGOs)

“Good governance is very important for an NGO as will may drift apart if there is no good governance. For example, when you receive funds and you aren't transparent with what you are doing with the funding, with original copies of receipts and not falsified ones. If an auditor came to for audits, they will know what you are doing. If you show monthly reporting with proper data, it creates trust.” (Representative of NGOs)

“Show the youngsters good governance so that they follow it.” (Representative of NGOs)

“For me it's a about the continuity of the organisation, people will know that we are doing serious work. Also, the reputation of the organisation is important as it will help us receive funds and other actions that follows.” (Representative of NGOs)

The way in which NGOs from Rodrigues ensure good governance is by ensuring that they have a board and the board communicates the objectives to the members of the NGOs. They also monitor the activities of the NGOs so as to achieve transparency, accountability and proper use of funds.

“All NGO have a board; they look at the disciplinary conduct. If you receive specific instructions then we set up a subcommittee.” (Representative of NGOs)

“It depends on the activity; a supervisor will monitor the work and do reporting based on the work being done to show to the president. The monitor will report the situation to the president. Then decision will be taken based on the reporting for example, in the educational projects, we talk to the educators to try to solve any issue that they are encountering. If I talk to you three times, I will not mention the same thing a fourth time. Hence, decision will be taken based on the NGO's

contract as the person is well aware of same. Hence, we will put forward the good governance and take the proper actions.” (Representative of NGOs)

The different problems faced by the NGOs in Rodrigues to ensure good governance are: lack of people (Volunteers), loss of know how when there is labour turnover, no registrar office in Rodrigues and lack of training.

“For me one of the biggest problems is benevolence as it has a limit and can be problematic to NGOs. Sometimes in NGOs we don’t have the personnel that have the proper competency to do reporting. This can be a weakness to some NGOs.” (Representative of NGOs)

“One thing that NGOs have to be careful is the recruitment of staff in NGOs. Now we have laws about the minimum salary. Like mentioned earlier, we cannot invest all money in administration fees. The NGO would not be able to attain its objectives.” (Representative of NGOs)

“The problems that NGOs are encountering since we don’t have a registrar of associations, we have to wait for Mauritius to verify documents and it is very time consuming.” (Representative of NGOs)

All the NGOs in Rodrigues recommended that training will help to improve the level of governance in their respective organisation. They mentioned training in areas like accounting and management and at the same time the requested for a resource centre whereby training can be done specifically for NGOs in Rodrigues.

“People sometimes don’t know what they have to do. That’s why training is important.” (Representative of NGOs)

“I don’t think training should be limited to the tasks that the staff have to do. Maybe a training in accounting and management would be of a great help.” (Representative of NGOs)

“We wanted a resource centre where we could train people in Rodrigues. An ongoing training for example trains the trainer.” (Representative of NGOs)

Conclusion

The research findings have reinforced the need for accountability and transparency in the daily operations of NGOs and are a prerequisite to benefit from financial aids. The NGOs are fully aware of this and accordingly rely on the Board to set up the processes and maintain proper records to achieve transparency in the financing of their projects. The board is seen a key to good governance and board members should allow new blood to occupy such position. In order to support the functions of the main board, sub-committees are set up on a need basis and this goes to ensuring the good governance practices. There should be clear communication line and an environment where staff can express their ideas about the function of the NGOs.

Further the reputation of the organization is found as a main propeller to ensure the continuity of financial aid from funders and donor agencies. Another important aspect to ensuring good governance is training of the personnel in accounting and management and to have continuous professional development. However, one such hindrance to good governance is the high labour turnover which NGOs tend to face in view of the voluntary nature of the jobs.

From the funders’ perspective, the function of the Board is of critical in determining that the recipients of funds are using the money for its intended purpose. They are concerned as to the lack of records and internal control which impinge on the transparency and accountability of the running of the NGOs. They therefore attached importance to not only the composition of the Board, but the right board composition.

In order to address the skills gap, funders place due importance on the training of NGOs staff and

to ensure continuity of good governance, NGOs should have a CPD for its staff and board members. Adherence to good governance can be ensured on the sound and appropriate knowledge of staff.

Good governance practices in NGOs are very important to ensure proper use of funds given to them and at the same time improving the welfare of society at large. The reputation of a NGO is a key element in getting funds from both private and public funders and NGOs should have a good public image. The study is Rodrigues shows that NGOs are very careful about their public image and given it is a small island any information about malpractice by NGOs is propagated very fast among all components of the Rodriguan society. Even in big countries information about the reputation of NGO can be quickly communicated on social media and newspapers, and hence they need to be very careful about their public image so as to secure proper funding from different funders. Good governance can help to ensure the good reputation of the NGOs. This research is based on a focus group and the conclusions of the focus group can be confirmed by a survey among NGOs in different countries in Future.

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The Roles and Implementing Challenges of Public Participation in Municipal Service Delivery: A Critical Analysis of Mekelle city, Tigray Region, Northern Ethiopia

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Abstract : The purpose of the study is to assess the roles and implementing challenges of public participation in the municipal service delivery process and performance. A survey questionnaire, interview and focus group discussions were employed to collect the primary data. 382 questionnaires were collected from ordinary citizens, 8 interviews, and 3 FGD was also employed from local officials and CBOs and CSOs leaders in the city. Thus, it was a mixed research approach. Both parametric and non-parametric data analysis techniques were applied. The major findings are that the existing citizens' participation practice is not inclusive. The female and old aged groups are participating more than male and younger age groups. Similarly, citizens' with higher social connectedness (social networking) participate more than the other groups. Interms of socially connected groups, respondents with older ages, female and high-income were found comparatively more connected than their other counterparts. Finally, citizens' level of participation determines their level of municipal service satisfaction. As such, results of the study reveal that with increasing level of awareness, income and access to networking platforms; peoples participation in service delivery has increased resulting a positive change. Results, thus, present a departure from a common understanding of lowlevel of peoples' participation in service delivery and associated municipal governance.

Keywords: Citizens' participation, Social connectedness, Municipal Service Delivery.

Introduction

Nowadays scholars, development agencies, and international organizations recognize the twofold advantages of public participation viz. people get the timely service delivery demanded and facilitate the system to be more people friendly and accessible. It is, thus, a vehicle for achieving overall socioeconomic and environmental development endeavors across global, regional, and local governments. Participation is also an end objective by itself because it is among the basic human right which is included in the international covenants and national constitutions. Through effective public engagement programs, the process and outcomes of local planning, public policy and decision-making are expected to be more equitable, transparent, efficient, citizens oriented, and sustainable (Krishnaswamy, A. 2004). To be globally competitive and provide a good quality of life, cities need to deliver a wide range of services and infrastructure for their respective ordinary citizens. Thus, for urban areas to have demand-driven public projects and programs, it needs legitimate public participation and collaborative governance process. (Enid.S. and Andre. C, 2014). As such, effective public participation is representative of successful public sector reform programs that promotes equity and sustainable local development (Mezgebe, 2007). With all these crucial and comprehensive advantages, the local public participation process and performance face several challenges both in developing and developed countries. Hence, identifying the specific problems and providing actionable solutions calls for a detailed understanding through empirical study and literature experiences.

1.2. Statement of the Problem

The urban public needs are rapidly changing as society's become more diverse, fragmented, and complex. They expect the municipal services to deliver more accurately, better quality, faster but cost-effective. The ability to deliver more choice services, more transparency, and more accountability is needed to re-establish public trust in the municipal governance and public service

delivery process. The rationale for the decentralization and to have a participative government at the local level stems from a recognition that involving people in governance and service delivery processes makes local authorities accountable to their respective citizens for services and development in their area (Sirker and Cosic 2007). Unfortunately, many research studies conducted on the implementation of participatory governance and municipal service delivery in developing countries have exposed more problems and challenges compared to offering some feasible and workable solutions. Research made by World Bank (2007) In Ghana, citizens' participation in decision making and development planning in urban areas remains generally ad hoc, depending largely on the benevolence of a few assembly members. Similarly, findings of the study (Gwayi 2010) cited by (Makanyeza, Kwandayi, and Lkobe, 2013), asserts that poor public participation is rated among the vanguard problems that hinders public service improvement initiatives all over the developing world. In yet another research conducted by Saada A.Ali, (2017) in Tanzania. Electric supply also shows that municipal institutions adhere to the principles of good governance practices, but it does not abide by its Customer Service Charter which leads to poor service delivery and overall public mistrust on the municipal institution.

Likewise, a research result of Adigrat city of Tigray also shows largely the same result. About 80(62%) of respondents confirmed that there is no collaborative governance practice and officials are not open to the public.

From the above research results and the regional government Growth and Transformation Plan I (GTP I) evaluation report, it is clear that even though the federal and regional governments in Ethiopia took different initiatives and municipal service delivery reforms to improve participatory municipal governance and service delivery, there still remains the problem which is pervasive and requires immediate solutions and redressal of issues at hand.

Finally, though planners, developmental agencies and international organizations all encourage citizens' towards participation in local governance and service delivery process; its role is still debatable to many scholars. The most pressing issue is housing. Rents are increasing almost exponentially. When you're living on a budget and your rent increases on a lease renewal, it becomes very difficult to live there. Housing and community development are therefore the integral issues. Transportation is yet a big issue, as people struggle with ways to get around.

The issue of public participation demands a lot of communication and a lot of education. Elected officials often think they know it all, but the planning knowledge of community engagement allows us to hear other points of view as well. There is a need to build understanding and consensus in planning and urban governance.

1.3. Research questions

- How inclusive is the existing public participation practice of the city?
- What major factors are affecting citizens from participation?
- How the citizens' level of participation affects the citizens' level of municipal service satisfaction?

1.4. Research objectives

- To review the existing participation practice of the city in terms of inclusiveness.
- To identify the major factors which affect the level of citizens' participation.
- Analyze the relationship between the level of citizens participation and corresponding service satisfaction.

Related literatures

Public participation

In many works of literature in the field of study the terms “engagement”, “involvement” and “participation” have been used interchangeably. Similar approach has been used in a paper documented by (FAO, 1998). Accordingly, participation is defined as a “process of communication between local communities and development agencies, in which local people or ordinary citizens assume the lead role in analyzing their current situation to identify the need or problem requiring attention in order to plan, implement and evaluate development activities, and even implement and evaluate the quality of participation process itself”. Citizens’ participation in the context of new public management is defined as “an interaction of public administrators and citizens, concerned with public policy decision and public service delivery process” (Callaha, 2007).

According to the European Institute for Public Participation (2009), public participation can be described as a deliberative process by which interested or affected citizens, civil society organizations, and government actors are involved in policymaking before a political decision is taken.

2.2. Why public participation?

People’s participation in the public governance process not only enriches democracy by fostering citizens’ liberty and equality, but it also increases public transparency, enhance accountability, builds social capital, reduces conflicts, ascertains priorities in public goods and services, promote government legitimacy, cultivate mutual understanding among the ruler and ruled, or advances fairness and justice in the governance process and building trust among and within the participants, especially between the government at all levels and the ordinary citizens. (Box 1998; Putnam 2000; King & Martinelli 2005; Callahan 2007). Thus, effective people’s participation, especially at the municipal level enables citizens to set goals and priorities of their interest, supervise or monitor the actions of politicians and members of the city administration and hold them responsible and accountable for their decisions made and actions are taken.

According to the concept of a New Public Service, (Mindarti, 2007), put society as a citizen who has the right to be given the great quality of public services of the state. Citizens also have the right to protect their rights: their voices are heard, while values and preferences are cherished.

Sometimes helping government decision-makers and the public become more informed and an enlarged view of issues (Fung 2007). Public participation also supports having a more equitable distribution of limited public resources (Simonsen and Robbins 2000). Citizen involvement can also be a powerful source of ideas and motivations for social innovation and bureaucratic partnership; Citizens may be better positioned to assess the relevance and effectiveness of public services, so they can contribute much in the evaluation of public programs and service delivery processes and performance.

2.3. Public participation and municipal service delivery

One of the major reasons for establishing local government is to bring the government to the communities and it enables the local people can participate fully in the process of governance and it provides essential local services and thus speed up the pace of social, economic and political transformation (Amujiri, 2012). Citizens' participation in the process of public service delivery may lead to better public services, which comply with the needs of citizens, better decisions, higher quality, and more efficient collaboration in using public money for public services.

A developmental local government is a community-oriented approach and its all programs, initiatives, and reforms are broad and inclusive. (Koteze and Kellerman 1997) insist that as a result

of these citizens oriented approach, the local government will encourage public engagement, and consequently support the programs and activities that seek to develop and benefit the mass residents.

Hence, effective and well-managed citizen participation will lead to a situation where the local sphere of government receives a valuable contribution from the communities and this will help in determining the quality and quantity of public services delivered Madumo, O. S. (2014).

Furthermore, citizens' has better ideas than the public officials about the service they need, so ordinary citizens can help local service providers to understand their needs, requirements and priorities which are vital solutions for their current and future problems. Similarly, citizens may become directly involved in the design and delivery of services, a process referred to as problem-solving collaboration, According to Helen E. Landemore,(2012) the " Many Are Smarter than the Few"

2.4. Arguments on the need for public participation concept

Different arguments have been stated by different authors or researchers to advocate or opponent to the citizen participation towards improved local governance and service delivery process and performance.

Those supporters of public participation are denoted by 'People-centered' the other side is also called 'Authority Centered'; agencies should not be concerned that seeking public input means having to do what the public wants.'

Based on the people-centered view, citizens become active participants in the creation and implementation of the policies, decisions, and/ or any process which affects them. Citizens are capable individuals who are willing and able to take responsibility for their own choices, priorities, decisions, and actions, although one may say this is not always the case, i.e. unrealistic (Box, 1998; Robert, 2004 and Gaventa, 2006) who supports the people-centered view claimed that citizens are capable and efficient to participate in all aspects of local government matters of governance and public service delivery process and performance.

This is because people learned through participating and thus the educational element of participation (Robert, 2004) will make people more matured hence, participatory and people center governance is prominent for effective local governance and public service delivery process.

The proponents of citizens participation justify a lot of purposes for public participation; these may include: embodying the ideals of democratization participation and principles of inclusion; fulfilling legal requirements in the local governance process; improving social justice; enhancing social consensus; informing the local people about public decisions towards public problems and opportunities; analyzing and generating alternative solutions for local problems; and generating effective public policies, programs, plans and projects of having higher quality in terms of their content being they are demand-driven; in such policies, strategies, plans and projects the local citizens exert their all-round support in the implementation and evaluation process (Bryson et al. 2013). One of the important arguments for public participation is that it is an important end unto itself in a democratic society.

They have just noted the key role citizens' participation plays in reflecting and consulting local citizenship, the public, and the public values. Similarly, numerous other potential advantages of effective citizen participation are well documented; though public participation demands-resources such as skill, time and money of the participants, but can generate numerous advantages that significantly outweigh the expected cost of participation (Roberts, 2004; Feldman and Quick, 2009). Participants can contribute to the public decisions through providing new and generic information, different ways of seeing, public issue, and motivation to address identified problems

(Renn et al., 1993), sometimes helping government decision-makers and the public to become more informed and develop an enlarged view of issues (Fung, 2007).

Public participation can also support a more equitable distribution of limited public resources (Abers 2000; Simonsen and Robbins 2000). And it can create resources for future problem-solving and implementation to address new public issues by enhancing trust and legitimacy among the participants, building better relationships, and generating generic knowledge and interest about public policy issues and processes (Feldman and Quick, 2009; Ansell, 2011). Whether participation actually does produce these benefits depends on a number of factors which may from the local government side and/or from the participants side affect its contribution towards governance and service delivery process and performance.

Finally, the International Association for Public Participation IAP2 states that the benefits of public participation are better released through implementing effective and the best approach to engage for the purpose of audience and subject matter. The consequences of failure in policies, governance, and service delivery outcomes are costly than any investment costs of public participation embodied.

In contrast, based on the opponents or the viewers of Authority center, which are often supported by members of local government and elected or appointed officials, those who believe direct citizen participation is politically ‘naïve’, and governance mostly rests on informed and knowledgeable elite and it is more of nominal. Only a small group needs to be actively and directly involves in the public decision-making process. Some scholars such as (Crosby et al and Irvin and Stansbury, 2004; Yang, 2006), and Bowman and Kearney, 2007), argued that the local authorities focus on a limited scope or role for people’s participation in the decision-making process and the formulation of policies. According to Bowman and Kearney (2007) from the perspective of local government officials, people participation can be a nuisance because it may disrupt established routines.

Similarly, another researcher in the area of study has stated some arguments that prevent direct citizens’ participation in the local governance and service delivery process; (Stivers, 1990 and Fishkin, 1991) expressed how the modern societies are too complex, and it is very difficult for governments to support through face to face relationships. But in the normal experience, all participants do not require face-to-face communication among the participants.

(Clevel, 1986) believed participation is undesirable because it would be too expensive, too slow for public decisions and a waste of time for all the participants. Others also argue that most actively involved citizens might represent private interests that are very different than the broader mass interest. Moreover, the majority of local governments do not have the capabilities to manage the dynamic issues facing in the current modern society’s interest through direct participation. In addition, people are too busy with their private lives, including supporting their families, thus most ordinary citizens have no interest to engage and spent their precious time on public agendas. All these issues prevent direct participation to take place and make sense in local governance and service delivery process and performance.

According to Barber (1984), excessive citizens’ participation by the government increases political conflict among the participants; it also jeopardizes stability and social order. High expectations for direct participation are difficult to meet with the government, thus it creates alienation, low self-esteem, and distrust and this discourage participation of the people. Grisez Kweit, M., & Kweit, R. W. (2007) Revealed that citizen participation had no impact or a slight negative impact on satisfaction and legitimacy

Critics of participation argue that it is too complicated, costly, and time-consuming, and for them that there is no evidence that participation improves the process and outcomes in public governance and service delivery efforts; hence, the costs associated with citizens’ participation in the light of what it does deliver are not justifiable.

However, there are compelling examples and best experiences from around the world of what goes wrong in circumstances where citizens are not consulted, and similarly, positive cases abound of the gains derived from citizen engagement (Cornwall, A. 2008). Lastly, based on the literature in the field of study, it can be concluded that the most important element that different People-Centered or proponents of citizen participation in the public governance process from Authority Centered or proponents of participation views is the level of people participating in the decision-making process. This, of course, is about power. So members of the local government advocate for Authority Centered in an attempt to keep power for themselves, and to avoid sharing their power with citizens and other governance actors. On this view, power is under local government control, and they are not willing to confer power to the people.

On the other hand, with the people center, citizens seek to be involved in the decision-making process that directly affects their lives and pursue the redistribution of power. Indeed, public participation is difficult to bring into the argument because many researchers, development agencies, and international organizations put citizen participation as not something which is given as a donation from the local authorities rather it is an ultimate human right. Citizen participation in decision-making processes at the local government level is a fundamental human right, not a discretionary policy option that policymakers can implement at their whim. (Sepúlveda Carmona, 2003). Thus, regarding its contribution towards effective local governance and service delivery, this research paper has come up with findings from empirical evidence and literature experiences.



Figure.1-Conceptual Framework

Developed by the researcher from different literature 2020.

Research Methods

Participants for the study were selected using a systematic random sampling approach. The Mekelle city is divided into seven sub-city administrations and each sub-city is further subdivided into 3-4 Kebele /ward administration. The city, the sub-cities, and Kebelles/ ward administrations have their independent governance structure of having legislative, executive, and judicial organs. Two Kebelles/ ward administrations were taken randomly from each sub-city.

According to the city Bureau of Finance and Economic Development (2018), the city has a total population of 423, 72. Based on (Morgan. K, 1970) sample size determination table, 382 residents with ages of more than 18 years were considered for the study through systematic random sampling technique. A semi structured questionnaire was used to collect the quantitative data. An informative interview was also conducted with the mayor of the city, the head of the municipal council, and three sub-city administrators. Similarly, FGD was also employed with CBOs and CSOs leaders in the city. The mixed concurrent triangulation approach has been used to

mix the quantitative data and results collected from the survey with the qualitative data and results obtained from interviews and FGD.

4. Results and Discussions

4.1. Respondents' Profile

From the sample respondents, 194 or 50.8% are male and the remaining 188 or 49.2 are female; similarly, 189 or 49.5% are younger age /18-35 and 193 or 50.5% are older age group /36-68; economically, 113 or 29.6% are people within absolute poverty their daily income is less than 1.9 USD, 232 or 60.7% are poor and low-income group their daily income is between 1.9 USD to 13.00 USD and the remaining 37 or 9.7% are middle and high income group and their daily income is greater than 13 USD. This economic classification is based on the criteria used by World Bank (2019) in its report on the 'Revised Poverty Illustration for East Asia and Sub-Saharan Africa: A New Threshold'.

4.2. Respondents level of participation

During the survey, the respondents were asked whether they had participated in any of the municipal governance and service delivery processes during the past one year. They were further asked as to how often they were participating? In case of non participation, whether or not, they have an interest to participate? The results of the survey indicated that about 163 or 42.70% respondents were participating in municipal governance and service delivery process during the last 12 months. This shows that a sizeable proportion of respondents have participated in any of the municipal governance and service delivery processes.

These findings are consistent with the study result of Kimutai et.al(2018) which was conducted in the Kisumu county of Kenya. Similarly, the research findings of Papa, R. O. (2016) are also in line with results obtained in this study. Results of the study revealed that 52.3% of the respondents asserted that they were participating in project development activities in the Busia County of Kenya. In yet another study conducted by Safari, K.H. et al (2013) related to the Salamas city of Iran also reported similar results. The study revealed that about 70% of respondents were consistently participating in municipal affairs.

4.3. Inclusiveness as a measure of effective public participation

Research works in the field of study assert that inclusiveness is among the prominent legitimate measures of effective public participation (IAPP, 2007). However, the survey result revealed that the public participation process of the city has a critical challenge concerning inclusiveness. Of the total 163 respondents who have participated in the municipal governance and service delivery process, 114 or 70% were female, 119 or 74% were older-aged and 113 or 69% were the poor and low-income groups. This indicates that the male, the younger age and the two extreme economic groups have less level of participation. Regarding the economic status, survey results are also consistent with the Friedman's (2006) clarification in which he asserts that the poor cannot gain a voice through structured participation forums because they are usually disorganized. Additionally, they cannot participate as they are fully engaged in their day-to-day personal life. Unlike the poor of the poor people, middle and high income group people have relatively less level of participation, as they are busy in their daily business and do not have time to participate. However, they have an interest to participate, if they get an opportunity through convenient participation platforms like e-participation.

Based on the discussion with the key informants and the triangulation of the facts with the survey results, it is revealed that different factors are influencing the citizens' level of participation. The results revealed that the factors such as citizens' level of social networking or social connectedness, and citizens' level of public service satisfaction have a higher positive effect on the citizens' level of participation. FGD findings revealed further that the other major factor that create problem towards inclusive citizens participation are the non implementation of the networking

sites in peoples domain and limited provision of diverse channels of participation accessible to the diverse needs of the community.

4.3. Participation and social networking

As Putnam (1993), cited in Sisiainen, M. (2003) the social networking or degree of citizens' connectedness refers to what extent that the ordinary citizens are involved in the formal and local traditional associations. Accordingly, 218 or 57% out of a total of 382 respondents in the survey were not involved in any of the association or not a member of any social networking groups. Remaining 164 or 43% respondents were the members of any of the social networking platforms. There may also be a duplication to some extent, as anyone who is a member of any political party, may also be a member in any civic or local traditional associations. On the other hand, of 382 respondents of the survey study 163 or 42.7% were participating in municipal governance and service delivery process of the city for the last 12 months. Similarly, from 163 respondents who were participating 147 or 90% were a member of any social networking groups.

Table.1- Cross tabs of citizens' extent of participation and their social networking or social connectedness

			The extent of participation in municipal governance		Total
			Not participate	Participate	
Social networking /SN	Not member	Count	202	16	218
		% within social networking	92.7%	7.3%	100.0%
	Member	Count	17	147	164
		% within social networking	10.4%	89.6%	100.0%
Total		Count	219	163	382
		% within social networking	57.3%	42.7%	100.0%

(Source; Own: Survey 2019)

Based on the above table-1, a relationship between social networking or social connectedness and citizens' level of engagement in the municipal governance process has been worked out using Spearman's rho correlation coefficient. Results of the relationship have been displayed in table-1. The result revealed a strong positive correlation between the two variables, $\rho = 0.74$, $n = 382$, $p = 0.00$. With a high-level citizens' social networking, there will be a high-level of citizens involvement in municipal governance and service delivery processes. This is also consistent with the results obtained by Ganesh Prasad Pandeya, (2015). Results of the study asserted that with the establishment of vibrant social networks, there has been a positive impact on the citizens' level of participation in the local governance affairs. This reveals that the establishment of vibrant social networking has power to have effective citizens' participation in the local governance process.

Table.2- Spearman's correlation result between citizens' extent of participation and their level of social connectedness

Correlations				
			Social networking	The extent of participation in municipal governance
Spearman's rho	Social networking	Correlation Coefficient	1.000	.743**
		Sig. (2-tailed)	.	.000
		N	382	382
	The extent of participation in municipal governance the last 12 months	Correlation Coefficient	.743**	1.000
		Sig. (2-tailed)	.000	.
		N	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

(Source; Own: Survey 2019)

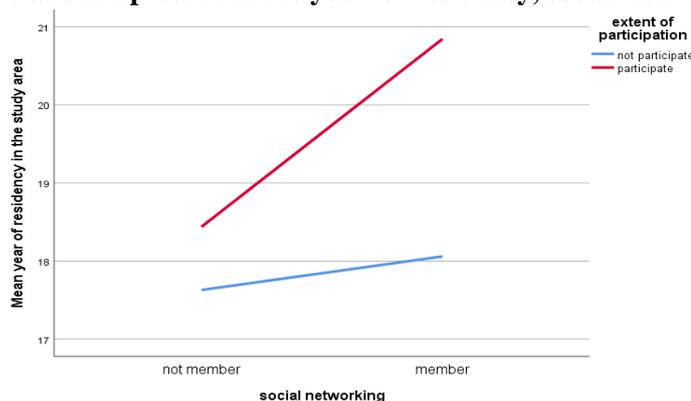
The survey result shows that of the total 194 male respondents 50 or 30.5% are members of any social networking group; but, of the 188 female participants in the survey study, 114 or 69.5% are members of any one of the social networking groups. Hence the survey result indicates women in the study area were more socially networked than those of the male gender group.

Similarly, results further indicate that the level of social networking increases with the age level. Relatively, higher socially connected age group is the 36-68 age group, which is about 62% of the old aged respondents. Most of the respondents in this age group are the members of any formal or informal social, economic, and political organizations. Contrary to the above, respondents in the lower age group 18-36 years, reflect relatively much lower 23% socially connectedness. Thus, demographically females and older-age group respondents have a better social connectedness than their other counterparts. Consequently, the level of participation in the municipal governance and service delivery process is relatively higher than the other demographic groups.

4.3.1-Social networking and participants' year of residency in the city

The other variable which affects the extent of participation and social networking is the year of residency of participants. It has already been concluded statistically that social networking or citizens degree of connectedness has a strong spill over effect on the citizens' level of participation. Number of years of residing in a locality (residency) is yet another factor that affects citizens participation in municipal governance and level of satisfaction derived from the service delivery by the local government. As such, citizens' year of residency affects social networking and the level of participation and vice versa. With an increase in the citizens' residency time in the city, they get a better chances to strengthen their social relations and connectedness. As a result, the extent and frequency of participation in municipal governance and service delivery process keeps on increasing. It is clear from the figure 2 that with an increase in the number of residency in the city, results in becoming a member of the organization and increase the chances of networking.

Fig -2: Relationship between the year of residency, social networking, and level of pp



(Source; Own: Survey 2019)

4.4. Participation and effective municipal service delivery

The correlation between citizens' participation and the effective municipal service delivery performance independent variables (demand-driven public projects and programs, improve service quality, timely accomplishment, improve a sense of ownership, and local resource mobilization). After full filling the necessary assumptions, Pearson's product-moment correlation coefficient has been employed. The result indicates that there is a positive correlation between the variables. The level of correlation coefficient between the citizens' level of participation in the municipal-governance process and the independent variables of effective municipal service delivery

performance is in the range of moderate to strong. The level of participation in the municipal-governance process and demand-driven public projects and programs, the value being $r = .709$. The level of public participation in the municipal-governance process and improve service quality the value being $r = .467$. The level of public participation in the municipal-governance process and timely accomplishment, the value being $r = .496$. The level of public participation in the municipal-governance process and improve a sense of ownership, the value being $r = .653$. The level of public participation in the municipal-governance process and local resource mobilization, the value being $r = .666$. For all these variables number of observations are 382 and p value is $< .01$. Results, thus, imply that with the high levels of citizens participation in the municipal governance process (independent variable), there will be a high level of the municipal service delivery performance (dependent variables).

Table.3- Pearson's correlation between effective citizens pp and effective service delivery variables

		Correlations					
		1	2	3	4	5	6
Effective Citizens' pp	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	381					
Demand-driven projects	Pearson Correlation	.709**	1				
	Sig. (2-tailed)	0.000					
	N	381	382				
Improve service quality	Pearson Correlation	.467**	.528**	1			
	Sig. (2-tailed)	0.000	0.000				
	N	381	382	382			
Timely accomplishment of public projects & programs	Pearson Correlation	.496**	.802**	.482**	1		
	Sig. (2-tailed)	0.000	0.000	0.000			
	N	381	382	382	382		
Improve sense of ownership	Pearson Correlation	.653**	.743**	.495**	.540**	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		
	N	381	382	382	382	382	
Local Resource mobilization	Pearson Correlation	.666**	.748**	.481**	.479**	.850**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	381	382	382	382	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

(Source; Own Survey 2019)

4.4.1 - The perceived level of government involvement in the governance process and participants' level of municipal service satisfaction

From a total 182 respondents, who were responding a negative responses that they are totally dissatisfied and unsatisfied by the service they get from the municipal government, 168 or 92% were replying a negative response that the municipal government is totally un-involved and un-involved in the governance process. Contrary to the above, from the 32 respondents who were replying that they are fully satisfied and satisfied with the service, they obtained only 1 or around 3% responded the government is uninvolved. These results clearly show how the citizens' perception of involvement is associated with the citizens' perception of service satisfaction. This is also parallel with research findings of Abraham (2013). The study result revealed that the citizens' level of satisfaction with service delivery is low. It shows that not more than 40% of ordinary citizens are happy with the current type of projects undertaken, the cost incurred in completing those projects, the completion rate and overall project management. This also corresponds with a low perception of citizens' involvement in the project management cycle. Thus, local officials like municipal leaders and city planners' need to consider the citizens as a vital resource that can

contribute to improving the quality of life through their involvement in the overall design, implementation and delivery of public services.

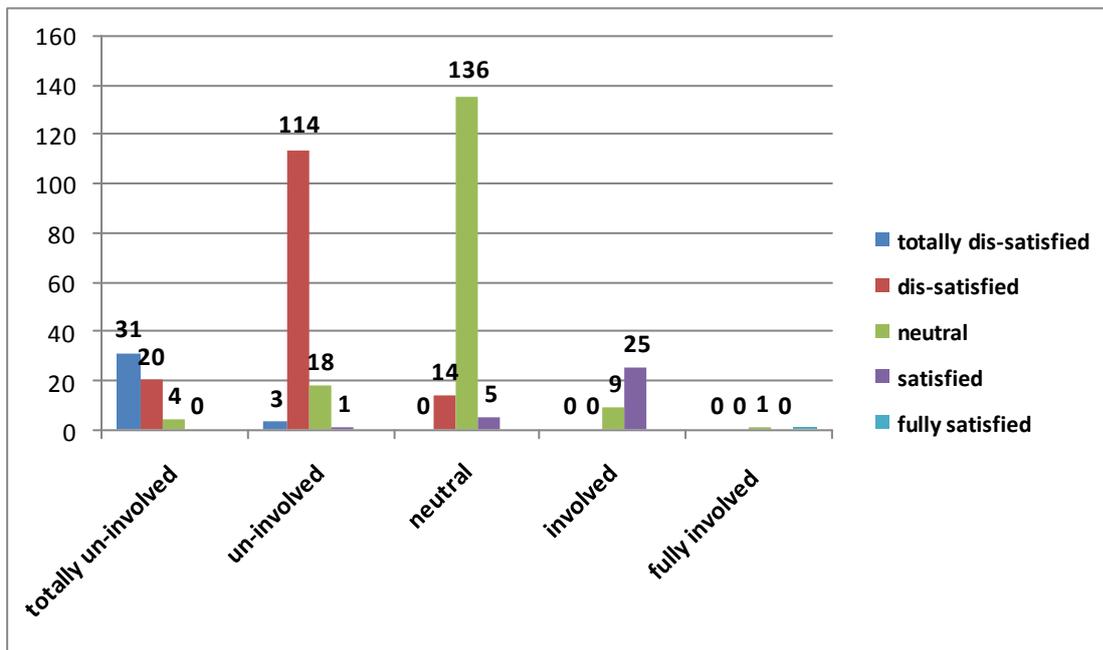
Table.4- Cross-tabulation between citizens perceived level of participation and service satisfaction.

How do you rate the current participation process of city administration? * How do you rate your level of service satisfaction with city administration? Cross tabulation?

Count		How do you rate your level of service satisfaction with the city?					Total
		TDIS	DIS	NET	SAT	FSAT	
How do you rate the current participation performance of the city?	Totally un-involved	31	20	4	0	0	55
	un-involved	3	114	18	1	0	136
	Neutral	0	14	136	5	0	155
	Involved	0	0	9	25	0	34
	Fully involved	0	0	1	0	1	2
Total		34	148	168	31	1	382

TDIS(Totally dissatisfied), DIS(Dissatisfied), NET(Neutral),SAT(Satisfied),FSAT(Fully satisfied). (Source; Own: Survey 2019)

Figure.2- Relationships between participation and citizens' perception of service satisfaction



Levels of citizens' service satisfaction and extent of participation in the governance process:

An attempt has been made to test the relationship between perceived levels of citizens' service satisfaction and the perceived extent of participation in the governance process using Pearson's Product Moment Correlation coefficient. Results obtained have been presented in table- 5. A preliminary analysis was performed to ensure that there is no violation of assumptions used in this analysis. To this effect the tests conducted include linearity, normality, and homoscedasticity. The result indicates that there was a strong positive correlation between the two variables viz. high level of service satisfaction and high level of perceived citizen participation in the governance process and vice-versa. The value being $r = 0.77$, with number of respondents being $n = 382$, and the value of $p = 0.00$. Results also support the similar findings of Heywood(2007) which asserts

that the effective cooperation of the municipal officials with the ordinary citizens could drive synergy where the optimal provision of public service better quality is achieved.

Table.5- Pearson’s correlation test result of citizens’ perception of service satisfaction and levels of involvement

Correlations			
		total_pp	total_ssat
Total perceived level of participation	Pearson Correlation	1	.778**
	Sig. (2-tailed)		.000
	N	382	382
The total level of Perceived service satisfaction	Pearson Correlation	.778**	1
	Sig. (2-tailed)	.000	
	N	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

(Source; Own Survey: 2019)

4.4.2-Citizens’ degree of participation and municipal service satisfaction

As indicated in the table-6 it is evident that of the total 163 respondents who replied that they were participating in the municipal governance process 47 or 28.8% are of level one or they have been informed what government decisions are / one-way communication; 83 or 50.9% replied that they are at the level two or consultation /two-way communication and 33 or 20% of the respondents have replied that they are at the level three or collaboration / deciding together.

Table.6-Cross tabs between citizens’ degree of pp and perceived level of service satisfaction

Citizen participation in the municipal governance process * degree of pp Cross tabulation						
			Degree of pp			Total
			Inform= level 1	Consult =level -2	Collaborate =level-3	
Citizens pp in the municipal governance process	PP	Count	47	83	33	163
		%	28.8%	50.9%	20.2%	100.0%
Total		Count	47	83	33	163
		%	28.8%	50.9%	20.2%	100.0%

(Source; Own Survey: 2019)

Similarly, the correlation coefficient has also been worked out between the citizens’ level of participation in the municipal-governance and its corresponding service satisfaction. The results have been presented in table-7. The correlation coefficient was worked out using Spearman’s correlation coefficient. The result reveals that there is a strong positive correlation between the levels of citizens' pp and citizens’ perceived service satisfaction $r=.637$ $N=163$, $p=<.01$. It could be inferred that with a high degree of citizens’ participation, there is likely to be a higher level of citizens' perceived municipal service satisfaction. Results of the study are in conformity with the findings of Bostance, B., and Erdem, N. (2000) in case of Nyagna township Cape Town in South Africa. Results of the study revealed that as citizens’ level of participation in water governance increases from no participation to citizens’ power of Arnstein’s theory of participation; citizens’ level of water service satisfaction also significantly improves.

Table.7- Spearman’s correlation between citizens’ degree of participation and perceived municipal service satisfaction

Correlations				
			Degree of pp	Service satisfaction
Spearman's rho	Degree of pp	Correlation Coefficient	1.000	.637**
		Sig. (2-tailed)		0.000
		N	163	163
	Service satisfaction	Correlation Coefficient	.637**	1.000
		Sig. (2-tailed)	0.000	
		N	163	382

** . Correlation is significant at the 0.01 level (2-tailed).

(Source; Own: Survey 2019)

To confirm the stand of the result, the level of citizens’ perceived municipal service satisfaction across the three degrees of citizens participation yet another exercise has been worked out using Kruskal Walis H test. Results of the exercise have been presented in the table -8. The mean rank for the three degrees of pp were 51.19, 79.43, and 131.29 for levels of 1, 2 and 3 respectively with N=163; statistical result=70.44; df2, p=0.00. Based on the result, it is justifiable to reject the null hypothesis H_0 (of no variation) and to conclude that the extent of perceived citizens’ municipal service satisfaction is significantly different across the three degrees/ hierarchies of citizens’ participation process. Hence alternative hypothesis H_1 has been accepted explaining the marked variation across the categories of participation. Based on Arnstein’s theory of the ladder of participation, citizens have to be encouraged/ promoted to get engaged and participate in ways that further up the ladder of participation and satisfaction.

Table.8-Kruskal Walis H test of citizens’ degree of pp and perceived level service satisfaction

Degree/ Hierarchies of citizens pp	N	Mean Rank	
Perceived levels of citizen service satisfaction	Inform= level 1	47	51.94
	Consult =level 2	83	79.43
	Collaborate=level3	33	131.29
	Total	163	

Test Statistics ^b	
	Service satisfaction
Kruskal-Wallis H	70.444
Df	2
Asymp. Sig.	0.000
a. Kruskal Wallis Test	
b. Grouping Variable: the degree of pp	

5. Conclusions

Citizens’ level of participation in the study area is not inclusive. The male, the younger age and the poorest groups have comparatively less level of participation as compared to their other counterparts. The main reason to have less participation is because of their poor level of social connectedness, deprived municipal service satisfaction and lack of diverse channel of participation by the municipal government.

Relatively female, older aged and higher income groups of respondents are more socially connected than the others. Similarly, citizens' year of residency also has a positive effect on citizens' social networking.

The study has critically investigated the roles and implementing challenges of public participation in terms of municipal service delivery process and performance. Though, the debate for the need of public participation in improving municipal service delivery process and performance took a long time; this study confirms the positive role of citizens' participation in municipal service delivery for Mekelle city of Ethiopia. Those citizens with a higher level of involvement in the municipal governance process also have greater perceived service satisfaction and vice-versa.

The findings of this study have significant implications to urban managers and city planners to have an effective public participation towards collaborative governance and effective municipal service delivery.

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Users Intention Towards Digital Financial Service Adoption in Ethiopia

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ABSTRACT: In recent times, mobile money services have become a fashionable services following to the rapid development of mobile technologies and increasing demand for cashless business transactions. Such demand has also ushered a new era to the banking industry and bank users. However, the bank users' intentions to adopt the services, particularly in Ethiopia, were not studied yet. To fill this study gap, data was collected from 384 users of banks branching in Addis Ababa and analyzed by integrating the modified extended unified theory of acceptance and use of technology (UTAUT2) and with the structural equation model. According to the path analysis, the study found performance expectancy, effort expectancy, facilitation conditions, hedonic motivation and price value to be a positive and strong predictor of the bank user's behavioral intention to adopt the mobile money services followed by the exogenous predictors such as perceived security and trust on the technology. Another interesting finding is that the users' behavioral intention to adopt such services is significantly transformed in to actual behavior. But, none of the moderating variables have significant effect on the users' behavioral intention to adopt the services and they are excluded from the path. Based on the finding, the study advises the mobile money service providers to use an aggressive approach to strengthen positive trust drivers, eliminate insecurity dimensions, and design aesthetically appealing services with a state-of-the-art technology which have multi-purpose operational interfaces.

Keywords: Mobile Money, UTAUT2, Users Intension, Banking in Ethiopia

Background information

Now a days, digital financial services and the technologies that power them are becoming the new normal. The banking industry is also changing for good. A study by Pazarbasioglu, et al. (2020) points out that innovative and disruptive technologies from new startups are changing the financial services industry. Realizing this, different countries are developing and customizing their regulations to allow small startup Fintech's companies.

Particularly, the mobile money (MM) has ushered a new era and been growing phenomenally over the banking industry globally and it has become an integral banking channel alongside Internet banking, ATMs, and POS terminals. As an innovative banking service, MM enables users to undertake financial transactions such as saving, credit, payment, transfer, mobiletop-up, etc using smartphones, mobile devices, biometric devices, tablets, and any other digital system anytime and anywhere where there is an internate connectivity. MM is also better digital alternative than the other traditional bank channels such as ATMs, internet banking and physical branches (Puschelet al, 2010).

Ethiopia, with its significant population size and significantly limited formal financial services, represents a big opportunity for existing financial institutions or new Fintech companies who could provide MM services. Unfortunately, the adoption MM in Ethiopia is at its infancy. According to a market scoping study by the World Bank Group in 2019, the state of Ethiopia's digital financial ecosystem is characterized by poor adoption. In contrast, eastern African countries like Kenya, Uganda, and Tanzania have excelled in the use of digital financial services. A study by Bereket and Hwang, (2020) confirms that although 22% of the population in Ethiopia have bank accounts and most of them uses mobile phones but the MM adoption rate is very poor.

Another assessment by world bank conducted in 2019 has also claimed that the current state of MM adoption in Ethiopia is poor. Similarly, the National Bank of Ethiopia's (NBE) financial inclusion strategy showed that Ethiopia has very limited financial inclusion percentages that could be significantly improved by the use of digital financial services NBE (2017). Although, NBE's strategy has identified the use of MM services as a major pillar, its potential, however, has not been realized due to the lack of technology and innovation, enabling government policy and regulatory environment, and infrastructure improvements are the key catalysts for advancing financial inclusion (Ndiwulira, 2017).

In line with global trends, new trends are being observed in Ethiopia. First, NBE who has so far been accused of not supporting the adoption with proper regulatory framework has issued a new directive at the end of March – Licensing and Authorization of Payment Instrument Issuers Directive No. ONPS/01/2020 and is on the verge of issuing a second directive that promotes the use (NBE, 2020). Second, the Ethiopian House of Peoples' Representative has approved the Electronic Transaction Proclamation ('the Proclamation) in its session of 29th May 2020 (Alemu, 2020). On contrast, user behavioural intentions to adopt MM in Ethiopia was not studied yet and was begged to be researched.

The adoption of digital technologies like MM displays different behaviors in different contexts. Several models and frameworks have been developed to explain user adoption of new technologies and these models introduce factors that can affect user acceptance. Some of the popular models are Theory of Reasoned Action Fishbein and Ajzen, (1975), Theory of Planned Behavior (Ajzen, 1985), Technology Acceptance Model (Davis, 1986), Unified Theory of Acceptance and Use of Technology (Venkatesh, et al., 2003) and Diffusion of Innovation theory (Rogers, 2003). Theory of Reasoned Action is the broader theory from which theory of planned behavior has emanated however, these theories are better suited for behavioral changes and health research.

Despite the model's limited number of determinants, perceived usefulness, and perceived ease of use, the Technology Acceptance Model (TAM) however is the most popular and most frequently used theoretical framework in new technology adoption research (Lai, 2017). Another framework used to explain the adoption of technology is the unified theory of acceptance and use of technology (UTAUT) which suggests four core constructs (performance expectancy, effort expectancy, social influence and facilitating conditions) are direct determinants of behavioral intention and ultimately behavior, and that these constructs are in turn moderated by gender, age, experience, and voluntariness of use (Venkatesh et al., 2003).

However, these models were not without limitations. The adoption of MM in Ethiopia could be determined by many other factors other than the above four core constructs. Other insinuating or causing factors like trust and security could also be a major factor. Accordingly, Venkatesh et al., (2012) has developed UTAUT2 which is an extension of UTAUT to allow the analysis of users intention to adopt MM in a voluntary setting with the integration of the users demographic characteristics (age, gender and experience) as a moderating factors. To demonstrate the stability UTAUT2 and test hypothesizes, this study has applied structural equation model (SEM).

2. Theoretical Framework and Hypothesis Development

The adoption of digital technologies like digital financial technologies shows different behaviors in different contexts. Several models and frameworks have been developed to explain user adoption behavior of new technologies. Some of the popular models are Theory of Reasoned Action Fishbein and Ajzen, (1975), which is an extension to the Theory of Planned Behavior, (Ajzen, 1985), Decomposed Theory of Planned Behavior,(Taylor and Todd, 1995); Technology Acceptance Model, (Davis, 1986), Technology Acceptance Model2(Venkatesh and Davis, 2000), and Unified Theory of Acceptance and Use of Technology, UTAUT (Venkatesh et al., 2003). UTAUT model is relatively new model which is developed by aggregating eight theoretical

models including above models and other model such as Triadis’s Model of PC Utilization, (1979), Rogers’ Diffusion of innovations, (1983), Deci & Ryan’s Motivational Model, (1985), and Bandura’s Social Cognitive Theory, (1989).

According to (Venkatesh et al., 2003), UTAUT model is composed of four core constructs of usage such as performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitation conditions (FC) significantly predict intention. Factors such as PE, EE, and SI have a direct effect on behavioral intention of using new technology (Mobile Money service (MM services) hereafter), while FC is direct determinant of usage behavior of MM services. These factors are moderated by demographic constructs such as sex, age, experience, and voluntariness of use.

PE is the strongest predictor of attitude toward behavioral in tension of using technology (Venkatesh et al., 2003). In this study, this extrinsic element can show the degree to which the bank customers expect that using the adopt MM services will help them to attain some gains in job performance. The variable includes fitness to the purpose (job-fit), perceived usefulness, and outcome expectation, which are used to describe the extent to which users perceive the use of the adopt MM services to help the work. In theory, gender, age and experience can influence the relationship between performance expectancy and behavioral intention to adopt adopt MM services.

Effort Expectancy (EE) is considered as an intrinsic element which determines individuals’ perception in relation to easiness to use new technology. In our context, it measures the amount of effort that the bank customers expect to invest in using the MM services. On the other side, SI directly determines effect of social factors such as friends, colleagues, family members on an individuals’ intention to adopt new technology. UTAUT recognizes the importance of considering social elements into the model. In this study, strong relationship between using the adopt MM services and early stages of user experience is expected. This is because many studies have demonstrated a positive and significant relationship between SI and a behavioral intention adopt new technology (Alshehri, Rutter and Smith, 2019). Finally, the FC is connected to the technical infrastructure, including adopt MM services (Venkatesh et al., 2003). In this context, it is the bank customer’s perception of how well the internet and Fintech provides support in using the adopt MM services.

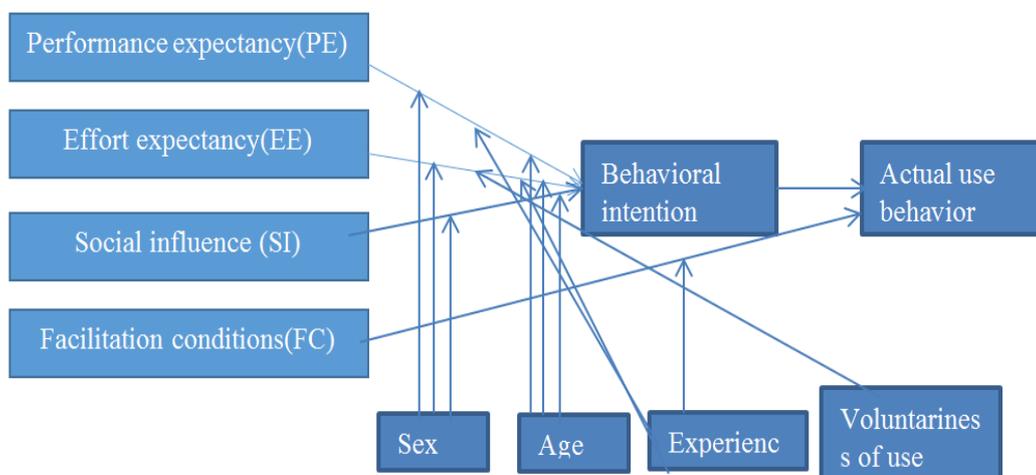


Figure 1. General UTAUT mode.

However, the adoption of adopt MM services could also be determined by many other factors other than these aforementioned core determinant factors. Other insinuating or causing factors like trust and security could also be a major factor. Moreover, the model has been criticized by many researchers. Because it is based on an organizational settings and built estimate adoption of technology among employees(Ooi & Tan, 2016; Venkatesh et al., 2012).Another studies also argues that technology adoption behaviour outside organizational setting or work environment differs on various dimensions such as differences in kinds of tasks and complexity of communications(Brown et al., 2006; Ooi & Tan, 2016).

As a result, Venkatesh et al., (2012) has developed UTAUT2 which is an extension of UTAUT to allow the analysis of users intension to adopt technology in a voluntary setting with the integration of the users demographic characteristics (age, gender and experie) as a moderating factors. The extended model incorporates three more constructs into UTAUT: hedonic motivation, price value, and habit. The inclusion these new constructs have produced produced a substantial improvement in the variance explained in behavioral intention and technology use (Chang, 2012). The effect of these constructs on user intentions to adopt technology are hypothesized to be moderated by age, gender, and experience.

Hedonic motivation (HM) refers to pleasure or enjoment derived from using a technology, and it plays an important role in defining technology acceptance and use (van der Heijden 2004; Thong et al 2006, Brown and Venkatesh 2005). Another study also shows that hedonic motivation is among the critical determinants of consumer intentions to use mobile shopping services (Yang, 2010).

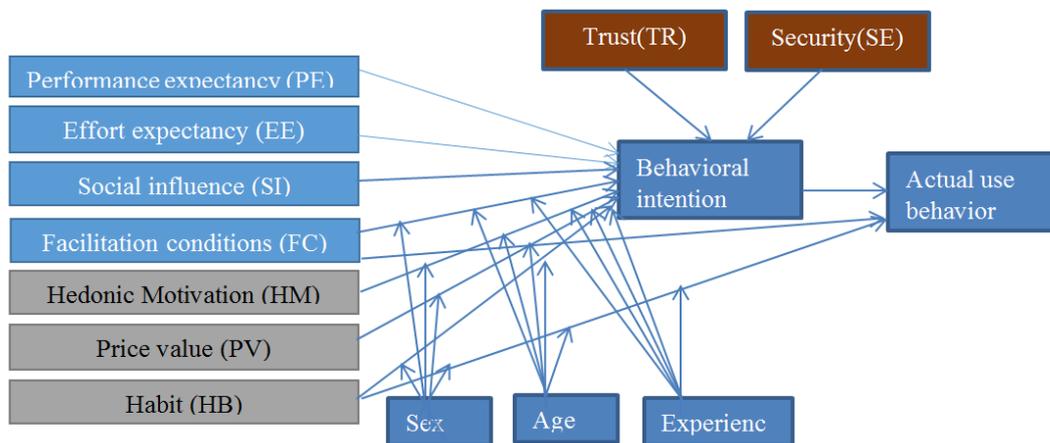


Figure 2. An extended UTAUT model.

Price Value (PV) refers to the monetary cost and pricing structure of using technology which may have a significant impact on consumers' technology use. Venkatesh et al. (2012) have defined cognitive as a trade-off between the perceived benefits of using new technology and the monetary cost of using it. A study by Mallat, et al., (2006) have also shown that Price Value plays a crucial role in shaping customers' willingness to adopt new technology.

Habit (HB) is defined as an extent to which people have a tendency to perform behaviors automatically because of learning (Limayem et al. 2007). It is also defined as an extent to which an individual believes the behavior to be automatic (Kijssanayotin et al. 2009).

Likewise, the inclusion of demographics moderators in the framework can add another imperative value to the model. Many studies have also prized the model as most appropriate model in scholarly studies in relation to information system adoption and technology acceptance.

In addition to the above critical variable, researchers, e.g. Cheng et al., (2011) and Qasim & Abu-Shanab, (2016) advise the need to amend the model to accommodate behavioral differences between countries. In this regard, the researcher proposes the incorporation of “trust on the MM services” and “perceived security in using MM services”. User’s trust on the MM services is a critical construct that is closely associated with financial transactions. Likewise, trust becomes an extremely essential factor when it is associated with monetary transactions performed through a wireless network (Qasim & Abu-Shanab, 2016). Given that the MM services involve monetary transactions that are mobile phone-based among users, trust is considered vital. Moreover, many researchers, e.g. Loh et al., (2020) and Ooi & Tan, (2016) have proven that trust is a salient predictor of user intentions to adopt technology.

Based on the above conceptual framework, the following hypotheses are developed:

- Hypothesis 1 (H1): PE has a positive influence on user intentions to adopt MM services
- Hypothesis 2 (H2): EE has a positive influence on user intentions to adopt MM services
- Hypothesis 3 (H3): SI has a positive influence on user intentions to adopt MM services
- Hypothesis 4 (H4): FC has a positive influence on user intentions to adopt MM services
- Hypothesis 5 (H5): HM has a positive influence on user intentions to adopt MM services
- Hypothesis 6 (H6): PV has a positive influence on user intentions to adopt MM services
- Hypothesis 7 (H7): HB has a positive influence on user intentions to adopt MM services
- Hypothesis 8 (H8): TR has a positive influence on user intentions to adopt MM services
- Hypothesis 9 (H9): TR has a positive influence on user intentions to adopt MM services
- Hypothesis 10 (H10): SE factor significantly affects user intentions to adopt MM services
- Hypothesis 11 (H11): Users’ behavioral intention has a positive influence on User actual behavior to use MM services

3. Research Materials and Methods

The use of the extended unified theory of acceptance and use of technology (UTAUT2) offers a structured approach with a tentative hypothesis as well as offers a chance to incorporate a new variable like ‘trust’ and ‘Security’. With this in mind, this research was designed as an explanatory (casual) research.

The choice of a research approach also emanates from the philosophy adopted. This research borrows a post-positivist lens to explain the topic at hand. The accepted approach to research by post-positivists is that it begins with a theory, collects data that either supports or refutes the theory, and then makes necessary revisions and conducts additional tests. Accordingly, the data was collected from customers of fifteen commercial banks branching in Addis Ababa and providing MM services in Ethiopia. However, the number of the service users was unknown and the researcher used a maximum sample size of 384 as suggested by Krejcie and Morgan (1970) for unknown population. Due to the non-availability of the sampling frame, the study uses convenience sampling.

To analyze both intrinsic and extrinsic factors that influence bank user intentions to adopt the MM services, a theoretical model of the UTAUT2 model was employed. The model claims that seven core constructs (performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value and habit) by incorporating ‘trust’ as ‘security’ as additional constructs. To evaluate the measurement model fit, a data analysis was performed through confirmatory factor analysis (CFA) and to evaluate the hypothesized relationships, structural equation modeling (SEM) is employed. Using the SEM enables to explore the path and significance of causal relations between latent variables. Considering that the model is sensitive to data multicollinearity, normality, and systematic missing data diagnostic tests were performed (Chen and Chang, 2012).

4. Data Analysis and Discussion

Following to the suggestion by Krejcie and Morgan (1970) for unknown population, 384 questionnaires were distributed to potential respondents but only 356 questioners were returned. This response rate is 92.3% of the sample which is higher than the minimum acceptable survey response rate of 50%. As shown in table 4.1 below, the sample was dominated by male respondents (58.4%) while 41.6% were females. Regarding age, the highest distribution (55.9%) is between 18 and 30 years old which are relatively youngsters while the remaining are 34.4%, 7.6% and 1.7% are between 34 and 40, 41 and 50, and above 50 years old respectively. With reference to the respondent's educational level, the most prominent educational level (42.1%) was the first degree followed by Certificate (29.5%) and second degree and above (19.9%).

In relation to the experience in using MM services, it was noticed that the great mass of respondents (53.9%) were observed to have an experience ranging from one year up to 3 years but 29.5% of respondents also have less than one year of experience which is significant proportion comparing with those who have above 5years experience (7.9%) in using the service. About the type of MM service that the respondents uses, 61% of the respondents uses CBE-Birr while the remaining uses Amole Wallet, Hello cash, H-Birr, M-Birr, and/or Telebirr services. However, most of them (54.5%) use the service occasionally 7.9 % have never used the service (only registered). Additionally, a majority of the respondents reported a monthly income ranging between Birr 5,000 and Birr 20,000 (72.2%).

Table 1. Respondents' profile.

Table 4.1. Respondent's demographic data		Frequency	Relative percentage (%)
Variable	Category		
Sex		208	58.4
	Males		
	Females	148	41.6
Age (year)	18-30	199	55.9
	31-40	124	34.8
	41-50	27	7.6
	>50	6	1.7
Level of education	High school or below	30	8.4
	Certificate	105	29.5
	First Degree	150	42.1
	Second degree or above	71	19.9
Experience (year)	Less than one year	105	29.5
	From 1 up to 3 years	192	53.9
	From 4 up to 5 years	31	8.7
	above 5years	28	7.9
Occupation	Government Employee	129	36.2
	Private employee	144	40.4
	NGO employee	21	5.9
	Self-employed	36	10.1
	Unemployed	26	7.3
Type of MM service	CBE-Birr	217	61.0
	Amole Wallet	11	3.1
	Hello Cash	7	2.0
	H-Birr	5	1.4
	M-BIRR	4	1.1

	Telebir	17	4.8
	Other two and more services	95	26.6
Monthly Income	<=3000	24	6.7
	3001-5000	36	10.1
	5001-1000	134	37.6
	10001-20000	123	34.6
	>=20000	39	11.0
Frequency	Occasionally	194	54.5
	Very often	134	37.6
	Never (only registered)	28	7.9

Source: own survey, 2022

Reliability and Validity of the Constructs

When we employ SEM for testing and evaluating multivariate causal relationships, it is essential to measure reliability and validity of the instruments used in the survey. Accordingly, Cronbach's alpha is computed for establishing the consistency of the constructs and the result shows alpha is greater than 0.7 for all constructs used in the model except for facilitating conditions (0.657) which is a good indicator of reliability according to Henseler, Ringle & Sinkovics (2009). The factor loadings (λ) for all the items under each constructs also found to be higher than 0.50. This was estimated to evaluate the correlation between the indexes and it satisfies the convergent validity criteria as per Byrne (2016). It is also shown that, the value of average variance extracted (AVE) and the coefficient of composite reliability (CR) are greater than 0.4 and 0.7 for all the constructs, respectively. According to Hair (2010), AVE's value is recommended to be above 0.5 and all construct are above this cut-off except for effort expectancy, facilitating conditions and actual use behavior which are above 0.4.

Table 2. Reliability and Validity of the Constructs

Construct	Item	Factor loading(λ)	Cronbach's α value	CR	AVE
Effort expectancy(EE)	EE1	.765	0.754	0.822	0.481
	EE2	.776			
	EE3	.629			
	EE4	.805			
	EE5	.674			
Performance expectancy (PE)	PE1	.861	0.803	0.840	0.641
	PE2	.746			
	PE3	.721			
	PE4	.723			
	PE5	.746			
Socialinfluence (SI)	SI1	.684	0.797	0.812	0.592
	SI2	.788			
	SI3	.674			
	SI4	.626			
Facilitatingconditions(FC)	FC1	.615	0.657	0.701	0.392
	FC2	.702			
	FC3	.737			
	FC4	.704			
	FC5	.629			

Construct	Item	Factor loading(λ)	Cronbach's α value	CR	AVE
Hedonic Motivation (HM)	HM1	.765	0.772	0.784	0.565
	HM2	.820			
	HM3	.815			
Price Value (PV)	PV1	.714	0.801	0.822	0.612
	PV2	.669			
	PV3	.628			
Habit(HT)	HT1	.845	0.750	0.764	0.496
	HT2	.677			
	HT3	.704			
Trust (TR)	TR1	.890	0.755	0.770	0.511
	TR2	.771			
	TR3	.775			
	TR4	.698			
	TR5	.687			
Security(SE)	SE1	.639	0.756	0.778	0.534
	SE2	.648			
	SE3	.684			
	SE4	.585			
	SE5	.562			
Behavioral Intention to use (BI)	BI1	.712	0.781	0.794	0.590
	BI2	.792			
	BI3	.811			
	BI4	.831			
	BI5	.794			
Actual use behavior(UB)	UB1	.724	0.701	0.717	0.414
	UB2	.695			

Source: own survey, 2022

Structural equation model analysis

To validate the extended UTAUT model presented in chapter two, and to test the research hypotheses, SEM was employed using AMOS23. Because, it is much realistic and powerful model than the standard multivariate statistics and multiple regression models. Moreover, AMOS23 is relatively new, powerful and graphical, easy-to-use software for structural equation modeling and to present the in an intuitive path diagram in a way that can show relationships among variables. Moreover, it is widely used software to get confirmative and interpretive results.

Structural model fit test

The initial assessment of the model showed that the model fit between the data and UTUAT2 wasn't satisfactory. In order to improve the model fit statistics, modification index values were reviewed and possible covariance among constructs was formed (see diagram 4.1). Following to the covariance adjustment, the statistics showed satisfactory fit of the model to the data as per the desirable range recommended by several scholars such as Hair et al., (2010) and Schreiber et al(2006) and Anderson and Gerbing, 1988. Because, all indices were found to be above the cut-points (desirable ranges) as shown in table 3 below.

Table 3. Structural Model fit test

Fit indices	Indicator	Desirable range
χ^2 (CMIN)/df	2.356	$1.0 \leq \text{CMIN}/df \leq 3.0$
TLI	0.924	$\geq 0.8 \sim 0.9$
CFI	0.944	$\geq 0.8 \sim 0.9$
RMSEA	0.62	≤ 0.08
GFI	0.889	$\geq 0.8 \sim 0.9$
AGFI	0.863	$\geq 0.8 \sim 0.9$
NFI	0.930	$\geq 0.8 \sim 0.9$

Source: own survey, 2022

Structural path analysis

After proving that the model fit index satisfies all acceptance criteria, the estimated path analysis of the SEM were then examined to explore the path and significance of causal relationships between latent variables and thereby to appraise the hypotheses. As shown in figure 1 and table 4.4, the result shows that the bank user's behavioral intention to adopt MM services (BI) was positively and significantly influenced by PE ($\beta = 0.207$), EE ($\beta = 0.122$), FC ($\beta = 0.344$), HM ($\beta = 0.052$), PV ($\beta = 0.067$), TR ($\beta = 0.194$) and SE ($\beta = 0.741$) statistically at less than 0.001 probability level. The bank user's actual MM adoption behavior (UB) was also affected by BI ($\beta = 0.046$) positively and significantly at less than 0.001 probability level.

Likewise, FC ($\beta = -0.028$) and HT ($\beta = 0.035$) affects the UB negatively and positively, respectively but only HT statistically significant at less 5% probability level.

Table 4. Regression Weights

	Estimate	Std. Error	t-Value	p-Value	Label
BI <--- EE	.122	.272	.448	***	
BI <--- PE	.207	.073	2.828	***	
BI <--- SI	.308	.715	.432	.291	
BI <--- SE	.741	.529	1.400	***	
BI <--- HM	.052	.216	.242	***	
BI <--- PV	.067	.047	1.407	***	
BI <--- TR	.194	1.532	.126	***	
BI <--- HT	-.654	2.106	-.310	.184	
BI <--- FC	.344	.770	.447	***	
UB <--- BI	.046	.112	.414	***	
UB <--- FC	-.028	.067	-.421	.213	
UB <--- HT	.035	.078	.452	.045**	

Source: own survey, 2022

Results hypothesis testing

The outcome of all hypotheses testing, as shown in Table 4.5 below, demonstrates that the estimation have supported 10 out 12 of the hypotheses. FC influence on users UB of MM services negatively and HT affects users BI to adopt MM. Even though, both results are contrary the researcher's hypothesis, their effect on the respective variables is not statistically significant even at 10% probability level.

Table 5. Results of Hypotheses Testing

Hypothesis	Supported
Ha1: PE has a positive influence on users BI to adopt MM	Yes
Ha2: EE has a positive influence on users BI to adopt MM	Yes
Ha3: SI has a positive influence on user BI to adopt MM	Yes
Ha4: FC has a positive influence on user BI to adopt MM	Yes
Ha5: HM has a positive influence on user BI to adopt MM	No
Ha6: PV has a positive influence on user BI to adopt MM	Yes
Ha7: HB has a positive influence on user BI to adopt MM	Yes
Ha8: TR has a positive influence on user BI to adopt MM	Yes
Ha9: TR has a positive influence on user BI to adopt MM	Yes
Ha10: Users' BI has a positive influence on user UB of MM services	Yes
Ha11: FC has a positive influence on user UB of MM services	No
Ha12: HT has a positive influence on user BI to adopt MM	No

Source: own survey, 2022

Discussion, Conclusions and Practical Implications

In this study, the researcher has empirically validated the theoretical research model, UTUAT2, developed by Venkatesh et al., (2012) by integrating with users perceived security and trust on the MM services. According to the inferential results presented above, it seems obviously that the proposed model has been able to reach an accepted level in the terms of predictive power in most of the endogenous factors. All fit criteria related to measurement model such as model fitness, construct reliability and validity are also successfully achieved. Particularly, the performance expectancy which can be explained by variable such as fitness to the purpose, perceived usefulness, and outcome expectation is strong predictor of the bank user's behavioral intention to adopt MM services. This result is in harmony with the theoretical literature of Venkatesh et al., (2003) and empirical evidences by Ismail et al., (2017), from Uganda, by Lubua & Semlambo, (2017) and Lema, (2017) from Tanzania, and Tobbin, (2011) from Ghana. Similarly, the estimation result for show effort expectancy and facilitation conditions (infrastructure) shows positive and significant effect on the user's behavioral intention to adopt MM services. These findings are in line with the above mentioned empirical evidences and the theoretical literature by Venkatesh et al., (2003). Particularly, the result regarding the facilitation conditions is in line with the theoretical literature by Alshehri, Rutter and Smith, (2019)too.

Amongst all the exogenous variables, perceived security exerts a maximal effect on user's intention to adopt MM services followed by facilitation condition, performance expectancy, trust on the technology and effort expectancy. This finding is also in harmony with several studies, for example Kumar et al., (2020) and Lema, (2017), undertaken in the area of behavioral intentions to adopt of new technologies. The potential reasons for security and trust on the service are reported as an instrumental factor could be due to the fact that it can reduces the perceived risk associated with technology and creates a positive attitude towards it. This is also in harmony with the justification provided by Shankar & Datta (2018) and Silic & Ruf (2018). More importantly, the users' behavioral intention to adopt MM services is significantly transformed in to actual behavior. However, the user's behavioral intention to adopt the service is not significantly affected by social influence which is contrary with the findings by Murendo et al., (2018)conducted in Uganda. This suggests that user's intention to adopt the service in Ethiopia is not mainly associated social image building or recommendation from family members, friends or other associates. But it is determined by the factors such as performance expectancy, perceived security, trust on the technological services, effort expectancy, infrastructure, hedonic motivation (entertaining capacity of the service), and cognitive trade-off between the perceived benefits of using the service and the monetary benefits from using it. Moreover, factors such as sex, age, and user's experience of using mobile technology which were considered in the construct as a moderators following to the

suggestion by Venkatesh et al., (2012) are excluded from the path. Because, no direct or indirect effect of the moderators on the users behavioral intention to adopt the service were observed.

Practical implications for policy

As the MM services continues to become a fashioned service following to the swift development of mobile technologies and increasing demand for cashless monetary transactions, the banking system is also enhanced instantly in many countries including in Ethiopia. However, the introduction of new MM services cannot fully achieve the expected benefits if it is not used by all banking account holders. Regarding the users' behavioral intention to adopt the services, the following practical implications are derived from the results of this paper.

First, the institutions engaged in providing MM service should use an aggressive approach to strengthen positive trust drivers. Such approach can create positive attitudes towards to the adoption of MM services by reducing trust inhibitors such as discomfort and insecurity dimensions which are sources of users' reluctance to adopt technology. Therefore, those banks and non-bank organizations offering MM services should aggressively promote better knowledge and attitudes towards their services through marketing activities. They should also strive to simplify their services interfaces and make it user-friendly that can avoid instances of users discomfort and frustration. Besides, they must set realistic goals in accordance with users' trust and security and assist them in overcoming difficulties when using the services. Because, assisting, guiding, and educating users can help to promote acceptance. Reliable, simple and user-friendly MM interface design can also ease transitions; thereby it can attract many more bank account holders to adopt the services with increasing varied services.

Second, the MM service providers should examine their service quality dimensions in order to increase their services users' hedonic motivation (enjoyment) and habit of using the MM services. In order to maximize, users' satisfaction and behavioral intentions to adopt the service, the service providers should offer a MM interface design which is reliable and easy to understand and operate with engaging functions. To do so, the service providers should design aesthetically appealing services with a state-of-the-art technology which have multi-purpose operational interfaces such as text messaging, hold-to-talk voice messaging, one-to-many messaging, video games, video and audio calls and conferencing, photograph and video sharing, moment sharing, location sharing, card repay, loans, mobile top up, utilities (bills) payments, documents and emojis transfer, article paywalls, online and spot shopping payments, red envelopes payments, and rail, air flight, taxi, movie and hotel bookings functions.

Finally, this research establishes new theoretical relationships which were not reflected on the extended UTAUT (UTAUT2) model developed by Venkatesh et al., (2012). The new paths involve Trust → BI, Security → users' BI, and then BI → Actual use behavior (UB). Therefore, the MM service providers should work to eradicate security concerns of the service users by designing a strong service application with useful security features. Moreover, the service should be designed in a way that demonstrates that the users' data and transactions are safe guarded from hackers. In this regard, a money pay back surety policy and third-party security certificates for all transactions can minimize transaction risks and boost users' confidence on the service.

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Appendix

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	115	2167.363	920	.000	2.356
Saturated model	1035	.000	0		
Independence model	45	5861.920	990	.000	5.921

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.085	.889	.863	.801
Saturated model	.000	1.000		
Independence model	.119	.389	.361	.372

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.930	.802	.948	.924	.944
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.929	.886	.891
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	1247.363	1115.225	1387.167
Saturated model	.000	.000	.000
Independence model	4871.920	4634.259	5116.238

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	6.105	3.514	3.141	3.908
Saturated model	.000	.000	.000	.000
Independence model	16.512	13.724	13.054	14.412

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.062	.058	.065	.000
Independence model	.118	.115	.121	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	2397.363	2431.603	2842.980	2957.980
Saturated model	2070.000	2378.155	6080.553	7115.553
Independence model	5951.920	5965.318	6126.292	6171.292

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	6.753	6.381	7.147	6.850
Saturated model	5.831	5.831	5.831	6.699
Independence model	16.766	16.097	17.454	16.804

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	163	168
Independence model	65	67

Execution time summary

Minimization:	.109
Miscellaneous:	2.735
Bootstrap:	.000
Total:	2.844

Estimates (Group number 1 - Default model)
Scalar Estimates (Group number 1 - Default model)
Maximum Likelihood Estimates
Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
BI	<---	EE	.122	.272	.448	**	
BI	<---	PE	.207	.073	2.828	***	
BI	<---	SI	.308	.715	.432	.291	
BI	<---	SE	.741	.529	1.400	***	
BI	<---	HM	.052	.216	-.242	***	
BI	<---	PV	.067	.047	1.407	***	
BI	<---	TR	.194	1.532	.126	***	
BI	<---	HT	-.654	2.106	-.310	.184	
BI	<---	FC	.344	.770	.447	***	
UB	<---	BI	.046	.112	.414	***	
UB	<---	FC	-.028	.067	-.421	.213	
UB	<---	HT	.035	.078	.452	.045	
EE5	<---	EE	1.000				
EE4	<---	EE	1.313	.131	9.990	***	
EE3	<---	EE	1.124	.114	9.859	***	
EE2	<---	EE	.918	.110	8.320	***	
EE1	<---	EE	.014	.092	.149	.882	
PE5	<---	PE	1.000				
PE4	<---	PE	1.124	.072	15.591	***	
PE3	<---	PE	1.007	.063	15.992	***	
PE2	<---	PE	.748	.055	13.524	***	
PE1	<---	PE	.271	.063	4.306	***	
SE5	<---	SE	1.000				
SE4	<---	SE	.812	.275	2.953	.003	
SE3	<---	SE	1.154	.296	3.896	***	

	Estimate	S.E.	C.R.	P	Label
SE2 <--- SE	1.583	.367	4.309	***	
SE1 <--- SE	2.597	.565	4.595	***	
SI4 <--- SI	1.000				
SI3 <--- SI	1.064	.123	8.675	***	
SI2 <--- SI	1.367	.140	9.791	***	
SI1 <--- SI	1.227	.129	9.530	***	
HM3 <--- HM	1.000				
HM2 <--- HM	1.085	.057	18.867	***	
HM1 <--- HM	.920	.058	15.746	***	
PV3 <--- PV	1.000				
PV2 <--- PV	.214	.126	1.705	.088	
PV1 <--- PV	.201	.121	1.657	.098	
TR1 <--- TR	1.000				
TR2 <--- TR	1.072	.101	10.642	***	
TR3 <--- TR	.484	.081	6.000	***	
TR4 <--- TR	.740	.094	7.881	***	
TR5 <--- TR	.644	.098	6.573	***	
BI1 <--- BI	1.000				
BI2 <--- BI	1.491	.320	4.655	***	
BI3 <--- BI	.813	.234	3.475	***	
BI4 <--- BI	1.248	.279	4.479	***	
BI5 <--- BI	.997	.268	3.718	***	
UB1 <--- UB	1.000				
UB2 <--- UB	3.988	8.874	.449	.653	
HT3 <--- HT	1.000				
HT2 <--- HT	.520	.162	3.217	.001	
HT1 <--- HT	.687	.115	5.990	***	
FC1 <--- FC	1.000				
FC2 <--- FC	.985	.126	7.833	***	
FC3 <--- FC	1.590	.189	8.412	***	
FC4 <--- FC	1.587	.179	8.884	***	
FC5 <--- FC	1.217	.158	7.702	***	

Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
BI	<--- EE	-.242
BI	<--- PE	.534
BI	<--- SI	.590
BI	<--- SE	.755
BI	<--- HM	-.142
BI	<--- PV	.186
BI	<--- TR	.428
BI	<--- HT	-1.195
BI	<--- FC	.519
UB	<--- BI	-.584
UB	<--- FC	-.533
UB	<--- HT	.805

			Estimate
EE5	<---	EE	.592
EE4	<---	EE	.784
EE3	<---	EE	.753
EE2	<---	EE	.572
EE1	<---	EE	.009
PE5	<---	PE	.777
PE4	<---	PE	.813
PE3	<---	PE	.834
PE2	<---	PE	.715
PE1	<---	PE	.241
SE5	<---	SE	.281
SE4	<---	SE	.220
SE3	<---	SE	.373
SE2	<---	SE	.510
SE1	<---	SE	.743
SI4	<---	SI	.530
SI3	<---	SI	.650
SI2	<---	SI	.858
SI1	<---	SI	.782
HM3	<---	HM	.836
HM2	<---	HM	.927
HM1	<---	HM	.744
PV3	<---	PV	.891
PV2	<---	PV	.277
PV1	<---	PV	.223
TR1	<---	TR	.652
TR2	<---	TR	.741
TR3	<---	TR	.369
TR4	<---	TR	.500
TR5	<---	TR	.407
BI1	<---	BI	.364
BI2	<---	BI	.490
BI3	<---	BI	.279
BI4	<---	BI	.444
BI5	<---	BI	.310
UB1	<---	UB	.027
UB2	<---	UB	.131
HT3	<---	HT	.560
HT2	<---	HT	.187
HT1	<---	HT	.369
FC1	<---	FC	.554
FC2	<---	FC	.576
FC3	<---	FC	.648
FC4	<---	FC	.725
FC5	<---	FC	.561

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
TR	<-->	HT	.234	.033	7.176	***	
SI	<-->	HT	.122	.023	5.378	***	
SE	<-->	TR	.117	.028	4.210	***	
SE	<-->	HT	.095	.024	4.018	***	
SI	<-->	TR	.090	.020	4.619	***	
SE	<-->	FC	.005	.005	.973	.330	
SI	<-->	HM	.135	.023	5.789	***	
SE	<-->	SI	.045	.013	3.458	***	
HT	<-->	FC	.041	.013	3.036	.002	
PE	<-->	FC	.128	.021	6.170	***	
PE	<-->	PV	.047	.024	1.941	.052	
EE	<-->	PE	.140	.024	5.729	***	
EE	<-->	FC	.080	.016	5.025	***	
PE	<-->	HT	.033	.020	1.634	.102	

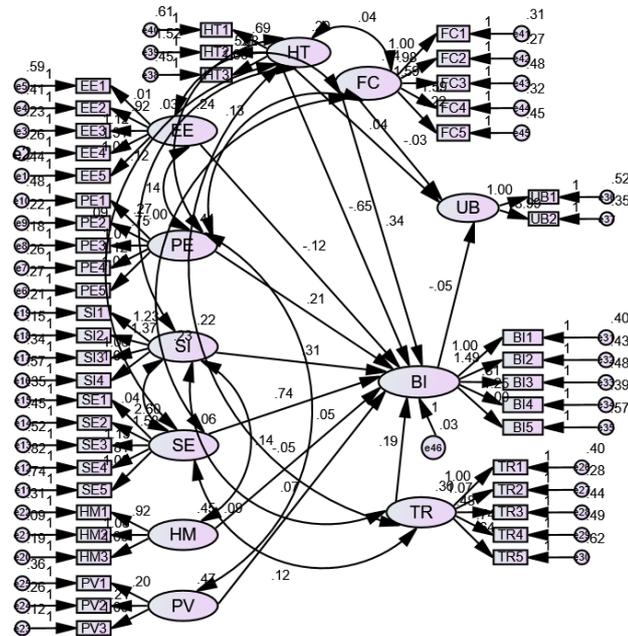
Correlations: (Group number 1 - Default model)

			Estimate
TR	<-->	HT	.951
SI	<-->	HT	.574
SE	<-->	TR	.853
SE	<-->	HT	.835
SI	<-->	TR	.351
SE	<-->	FC	.052
SI	<-->	HM	.426
SE	<-->	SI	.376
HT	<-->	FC	.244
PE	<-->	FC	.541
PE	<-->	PV	.108
EE	<-->	PE	.449
EE	<-->	FC	.440
PE	<-->	HT	.113

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
EE	.239	.043	5.519	***	
PE	.407	.049	8.310	***	
SE	.063	.027	2.375	.018	
SI	.223	.045	5.020	***	
HM	.451	.049	9.187	***	
PV	.473	.269	1.759	.079	
TR	.297	.048	6.192	***	
HT	.204	.050	4.042	***	
FC	.139	.028	5.043	***	
e46	.025	.024	1.039	.299	
e1	.443	.038	11.569	***	
e2	.258	.032	7.935	***	

	Estimate	S.E.	C.R.	P	Label
e3	.231	.026	8.841	***	
e4	.415	.035	11.748	***	
e5	.588	.044	13.323	***	
e6	.268	.025	10.509	***	
e7	.263	.027	9.681	***	
e8	.180	.020	9.054	***	
e9	.218	.019	11.414	***	
e10	.482	.037	13.212	***	
e11	.740	.057	12.988	***	
e12	.819	.062	13.124	***	
e13	.521	.041	12.683	***	
e14	.451	.038	11.901	***	
e15	.347	.046	7.581	***	
e16	.572	.046	12.433	***	
e17	.345	.030	11.608	***	
e18	.150	.022	6.710	***	
e19	.214	.023	9.351	***	
e20	.195	.022	8.834	***	
e21	.087	.020	4.292	***	
e22	.307	.027	11.286	***	
e23	.123	.265	.463	.643	
e24	.261	.023	11.285	***	
e25	.364	.029	12.363	***	
e26	.402	.037	10.856	***	
e27	.280	.031	9.136	***	
e28	.443	.035	12.817	***	
e29	.489	.040	12.241	***	
e30	.620	.049	12.682	***	
e31	.400	.033	12.192	***	
e32	.429	.040	10.826	***	
e33	.476	.037	12.710	***	
e34	.388	.034	11.441	***	
e35	.569	.045	12.544	***	
e36	.520	.039	13.320	***	
e37	.352	.027	13.252	***	
e38	.446	.049	9.055	***	
e39	1.524	.115	13.221	***	
e40	.612	.049	12.441	***	
e41	.313	.027	11.722	***	
e42	.271	.024	11.529	***	
e43	.484	.045	10.681	***	
e44	.316	.034	9.295	***	
e45	.447	.038	11.664	***	



Communalities

	Initial	Extraction
EE1	1.000	.776
EE2	1.000	.604
EE3	1.000	.704
EE4	1.000	.719
EE5	1.000	.656
PE1	1.000	.511
PE2	1.000	.755
PE3	1.000	.752
PE4	1.000	.781
PE5	1.000	.765
SI1	1.000	.678
SI2	1.000	.780

SI3	1.000	.676
SI4	1.000	.612
FC1	1.000	.612
FC2	1.000	.686
FC3	1.000	.628
FC4	1.000	.684
FC5	1.000	.627
HM1	1.000	.754
HM2	1.000	.808
HM3	1.000	.826
PV1	1.000	.690
PV2	1.000	.629
PV3	1.000	.635
HT1	1.000	.546
HT2	1.000	.578
HT3	1.000	.605
TR1	1.000	.589
TR2	1.000	.648
TR3	1.000	.601
TR4	1.000	.523
TR5	1.000	.672
SE1	1.000	.643
SE2	1.000	.644
SE3	1.000	.661
SE4	1.000	.602
SE5	1.000	.543
BI1	1.000	.600
BI2	1.000	.634
BI3	1.000	.531
BI4	1.000	.529

BI5	1.000	.625
CO1	1.000	.850
CO2	1.000	.845
CO3	1.000	.683
CO4	1.000	.695
UB1	1.000	.489
UB2	1.000	.488
Sex	1.000	.629
Exprience_Y	1.000	.685
age2	1.000	.673
Occupation_n	1.000	.507
Study_level	1.000	.639
Type_service	1.000	.724
Frequency	1.000	.552
Income	1.000	.601

Extraction Method: Principal Component Analysis.

Anti-Corruption Regulation: A Comparative Analysis of the Practices in Ethiopia, Singapore, Norway, and Rwanda

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ABSTRACT: This article aimed to analyze the existing anti-corruption regulations of Ethiopia, Singapore, Norway, and Rwanda, comparatively, to search for better anti-corruption practices' standard operating procedures (SOPs). This research is motivated to improve the existing practices of the Federal Ethics and Anti-Corruption Commission (FEACC) of Ethiopia. The above countries' anti-corruption agencies (ACAs) are different in terms of the mandate assigned to them (institutional models). The comparison was based on the factors that contribute to or hinder the effective administration and operation of anti-corruption mandates. The research was guided by the Theory of Change (ToC). A qualitative approach and comparative case study (multiple case study) designs were employed. The sources of data for this research were operational documents, legal documents, and international and continental organizations' reports, such as UNCAC's Country Review reports and Organisation for Economic Cooperation and Development (OECD) reports, among others; experts e-mail interviews at anti-corruption agencies in Ethiopia and Rwanda; and social media platforms (Facebook, Twitter, YouTube, and LinkedIn), as well as anti-corruption agency websites, were accessed as sources of data. The triangulation approach was implemented in a complementary way to achieve the research results. Data collected from various sources was processed qualitatively with the support of specialized software (Atlasti.9) and then analyzed by the researcher. Data analysis in this research involved detailed case-by-case analysis followed by comparative thematic analysis. The findings show that, even though there are some legal frameworks and SOPs in Ethiopia's FEACC, there are a series of challenges in effectively managing anti-corruption activities. Therefore, the research draws lessons from their better practices in Ethiopia. Finally, the research recommends issues for the betterment of anti-corruption efforts in Ethiopia and proposes areas for further research.

Keywords: Anti-corruption, Regulation, Practices, Standard Operating Procedure

Introduction

Corruption is acknowledged as a multi-dimensional problem affecting all human activities around the world, particularly in developing nations (Fritzen & Dobel, 2018; Sevüktekin, Nargeleşkenler, & Giray, 2010). To be exact, corruption in Ethiopia is an ancient phenomenon with a social and cultural background (Abeje & Narayana, 2015). Corruption emerges from poor anti-corruption policies, low civil service salaries, the absence of accountability mechanisms, and above all, a weak anti-corruption agency and legal system, particularly in developing states (Armstrong, 2000; Gebre, 2016). Eradicating corruption starts with formulating and implementing sound policy and anti-corruption systems, applying ethical principles in public organizations, and practicing good governance (Washington & Armstrong, 1996; Stevulak & Brown, 2011; Gebre, 2016). In this regard, many countries ratified and adopted international anti-corruption conventions and regional protocols, formulated domestic laws, policies, and regulations, and established anti-corruption institutions to resolve the problem of corruption. The regulatory measures and institutional strategies to fight corruption have become more important over the last two decades, as has the rise of bodies specialized in anti-corruption activities (Odhiambo, 2016). In this process, essential elements of the strategy are chosen based on appropriate policies and strategies that enhance the capacity and model of the institutional structure to play an expected role against corruption (UNDP, 2005).

Around the world, there are many anti-corruption agencies; their mandates, functions, and establishment vary; some ACAs were established from scratch as independent ACAs, while others were within ombudsman offices, special units within police departments, or justice departments (Schedler, Diamond, & Plattner, 1999). In this case, despite their various forms and models, we can mainly categorize them into preventive and multiple-purpose agency models in terms of mandates and functions (Arsema, 2010). In this case, the OECD recommended that the establishment of ACAs be better adapted to the specific national context by considering varying cultural, legal, and administrative circumstances (OECD, 2008). Among ACA's institutional models, so far, there is no conclusive evidence on which model is the best and most effective in preventing or combating corruption (Mitchell, Merrington, & Bell, 2014).

The existing anti-corruption regulation can be understood based on two interrelated strategies. The one is the compliance-based approach. It involves rules, administrative procedures, and regulations that involve discretion and sanctions in order to check corrupt acts (repressive measures). The other is the integrity-based approach, which provides an ethical and moral framework through socialization and training to arrive at acceptable moral standards (preventive measures) (Downe, Cowell, Chen, and Morgan, 2013; Rohr, 1978; Christensen & Læg Reid, 2011; Veresha, 2018). The above approach is used in a complementary fashion to address improper or unethical behavior in an organization or to arrive at an appropriate ethical/moral standard (Bowman & Knox, 2008; Cooper, 2012). ACAs have the upper responsibility to manage and regulate corruption ethics, either through an integrity-based and/ or compliance-based approach (Hijal-Moghrabi & Sabharwal, 2018; Gilman & Lewis, 1996). Despite these efforts, corruption remains a socio-economic and development problem for most countries around the world, especially in Africa (Mauritius, 2018). In this research, anti-corruption regulation is understood as any rules, procedures, processes, methods, management tools, or institutional structure designed to promote effective administration and management of ACA.

Similarly, the government of Ethiopia started designing the civil service reform program in 1994, and the FEACC was born out of this program by Proclamation Number 235/2001 as an independent multi-purpose agency model (Arsema, 2010). However, the mandate, functions, and power of the commission have been changed at different times. For instance, in 2015, the mandate of investigation and prosecution of the commission was given to other bodies, and in 2021, the commission's establishment proclamation was revised. Thus, the existing mandate and function of the commission are limited to corruption prevention.

This comparative research analyzed the anti-corruption regulation practices of the four countries' ACAs to draw lessons from their anti-corruption practices and identify the better regulations, mechanisms, and SOPs that produce the intended result at the input and activity stages by focusing on specialization, independence, resources, power, coordination, cooperation, and information exchange. As Lincoln and Guba (1985) and Marfan & Pascual (2018) stated, the goal of cross-country comparative research is to report the "lessons learned."

Because the empirical evidence and regional and international standards, protocols, and conventions stated that ACAs to function effectively, they must have relevant resources and effective policies; be independent and specialized; and coordinate and cooperate well with various bodies (Langbein & Sanabria, 2017; Gebre, 2016; Meagher & Volland, 2006; Quah, 2015; Doig, 2004; Dereje, 2018; Osifo, 2012; Sebek, 2019; Demmke & Moilanen, 2011; De Sousa, 2010; Mauritius, 2018; Quah, 2008; Johnson et al., 2011; Badet et al., 2016; Cardona, 2015; UNDP, 2011; UNDP, 2005; OECD, 2008; AUCPCC, 2003). In particular, the UNCAC in Article 5 recommends that the countries review their efforts to search for the most effective ways that produce success in eradicating corruption (UNCAC, 2003, p. 55).

The previous studies witness that, despite the various efforts of the FEACC of Ethiopia, corruption of all forms remains a major socio-economic problem in the country (AAU, 2010; Kilimanjaro, 2011; Selam Development Consultant, 2014; Transparency Ethiopia, 2008; Ibrahim, 2013; the World Bank, 2005; JGAMP, 2001; Plummer, 2012; Transparency International, 2014 & 2013). Thus, the commission's efforts were challenged due to a lack of independence and autonomy; a lack of specialized staff; low public confidence; a lack of cooperation with relevant bodies; inadequate resources; and an unclear mandate and functions to bring about the expected change in curbing corruption (Arsema, 2010; Biruk, 2016; Zemelak, 2017; Tewodros and Raymond, 2011; Rahman, 2018; Hasen, 2020). However, the above-mentioned studies pose some gaps in terms of the themes of the study, the scope of the study, the population of the study, and the methods. In addition, most of the studies were conducted ten years ago and focused on the previous mandate and functions of the commission.

The countries were chosen for this research based on their success stories in reducing corruption compared to Ethiopia. They established different ACA institutional models: Ethiopia's anti-corruption commission has been implementing a preventive model since 2015; Singapore's Bureau has a multi-purpose agency model; the Norwegian authority has a law enforcement model; and Rwanda's office is unique because it was established in the office of the Ombudsman.

Research questions

1. What are the features of the existing anti-corruption practices' standard operating procedures (SOP) in Ethiopia, Singapore, Norway, and Rwanda?
2. What better practices' standard operating procedures(SOP) can be adapted, implemented, and incorporated into the anti-corruption drive in Ethiopia?

Specific Objectives of the Research

To compare the existing anti-corruption standard operating procedures (SOPs) of Ethiopia with Singapore, Norway, and Rwanda.

To find out better standard operating procedures (SOPs) for an anti-corruption drive in Ethiopia.

Significance

The findings are significant in expanding the current understanding of the ACA's practices. It also presents lessons and options for Ethiopia to closely observe the existing conditions. Finally, it is also a baseline for further research.

Scope and Limitation of the Research

Thematically, it focused on the anti-corruption regulations of ACAs under their mandate jurisdiction and operationalized four themes. Geographically, it compared the central anti-corruption agencies of four countries. Methodologically, it employed a qualitative multiple/comparative case study design and was temporarily cross-sectional.

Regarding the limitation, the sources of data for this research were documents, e-mail interviews, and social media. The interview was not conducted at two ACAs (Singapore and Norway), and a few operational documents were accessed due to the sensitivity of the topic. In addition, limited information was included from social media that was permitted by the ACAs. However, the available data were triangulated to improve the validity and reliability of the results.

2. Review of the Literature

Anti-corruption Regulation

Regulation as a process of administrative rule beyond written laws encompasses a range of institutions, policies, and actors (Scott, 2010). Furthermore, according to Hood, Rothstein, and Baldwin (2001), regulation is defined as managing, ordering, and influencing behaviors through standard setting, compliance monitoring, and enforcement. Regulation involves both hard and soft laws in governing particular issues (Levi-Faur, 2011; Black, 2002, p. 1). The broad definition of regulation includes non-state processes and intentional mechanisms of social control, such as social norms that reshape and affect behaviour (Baldwin, Scott, & Hood, 1998).

Anti-corruption regulations range from formal legislation to ethical principles, codes of conduct, and training to cultivate ethical behavior (Downe, Cowell, Chen, and Morgan, 2013). Therefore, anti-corruption regulation can be understood as two interrelated approaches to managing ethics and fighting corruption. The one is the compliance-based approach. It involves rules, administrative procedures, and regulations that involve discretion and sanctions to check corrupt acts. The other is the integrity-based approach, which provides an ethical/moral framework through socialization and training to arrive at an acceptable moral standard (Bowman & Knox, 2008; Hijal-Moghrabi & Sabharwal, 2018; Rohr, 1978; Cooper, 2012; Gilman & Lewis, 1996; Veresha, 2018; Drahos, 2017, p. xxvii). In this research, anti-corruption regulation is understood as any rules, procedures, processes, methods, management tools, or institutional structure designed to promote effective administration and management of ACA.

Anti-corruption Institutional Models

The above-mentioned anti-corruption approaches have been classified by various scholars and international organizations into the following popular ACAs institutional models based on their functions, mandates assigned to them, and reporting procedures: multipurpose agency model; law enforcement-type institutions; preventive policy development and coordination institutions; and a parliamentary model (OECD, 2008; Quah, 2009; Toolkit, 2004; UNDP, 2005, p. 4).

The factors that contributed to or hampered the effective management of anti-corruption agencies:

Specialization

Specialized skills and a clear mandate to combat corruption are required for specialization. It refers to an agency's specific mandate, focus, and professional staff with specific skills (Cardona, 2015; Šebek, 2019; OECD, 2008; UNCAC, 2003; AUCAC, 2004; Babu, 2006). In this regard, identifying their mandate's jurisdiction, defining the scope, and eliminating mandate overlap and duplication are crucial for anti-corruption agencies' success (UNCAC 2nd & Harutyunyan, 2003; Mauritius, 2018).

Independence

In practice, independence includes freedom from any interference (Cardona, 2015; Mauritius, 2018). There are at least three categories of independence in the ACA context. They are organizational, financial, and professional. In general terms, the independence of the ACA is about adjudicating corruption offenses freely without any favor or terror, implementing recruitment and selection processes of staff without interference, and enjoying full freedom in discharging their mandate with confidence, which can contribute to the effectiveness of anti-corruption agencies (Transparency International, 2017).

Adequate Resources and Power

In this context, adequate resources include human training and development investment. In addition, the agencies must have sufficient jurisdiction with their investigative capacities, resources, and modern methods to develop evidence (Šebek, 2019; OECD, 2008; UNCAC, 2003).

Cooperation and Coordination with Various Bodies

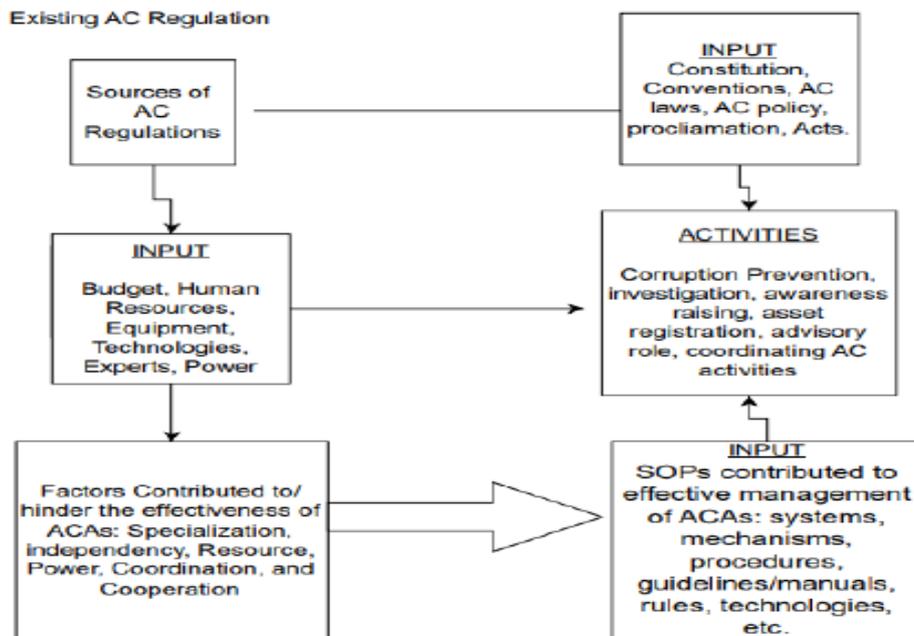
Cooperation in anti-corruption activities includes inter-agency coordination and international cooperation. Inter-agency cooperation and coordination have paramount significance for the effectiveness and success of anti-corruption agencies. Anti-corruption agencies typically collaborate with the police, the attorney general, public prosecution bodies, the judiciary, and audit offices (Mauritius, 2018). International and regional cooperation is undoubtedly important for anti-corruption agencies. In this framework, UNCAC Article 43 advocates cooperation at the international level for experience sharing. Research on anti-corruption agencies also reveals how cooperation, experience sharing, and knowledge transmission significantly contribute to institutional capacity enhancement by referring to the countries that successfully fight corruption, such as Singapore and Hong Kong (Mauritius, 2018).

Theoretical Framework: Theory of Change

Theory of Change (ToC) is a multi-purpose tool that can be applied for planning, managing, monitoring, and evaluating research, especially change-oriented research (Akca, 2021). White (2009) defines the "theory of change" as a method for improving the processes of project design, implementation, and evaluation. It is a tool used to model how short-term changes lead to long-term impacts. The ToC methodology was developed to explore behaviors and outcomes that are not easily measurable, so it is well-suited for anti-corruption organizations. Funnell & Rogers (2011) and Johnsen (2012) comment that the ToC can be helpful for policy architects and evaluators in the anti-corruption field.

The five components of a theory of change are inputs, activities, outputs, outcomes, and impact (Rogers, 2014). An anti-corruption agency's "effectiveness" would be assessed by comparing its internal processes, outputs, and resources against those of other ACAs. Such measures aren't based on corruption levels being measured (Johnsen, Hechler, De Sousa, & Mathisen, 2011). The indicators are divided into categories based on the basic functions that ACAs usually perform, including general management (organizational strategy, standard operating procedures, internal monitoring mechanisms, reporting procedures, and the standardization of work processes through documentation and guidance (manuals, handbooks); knowledge production, management, and dissemination; law enforcement; corruption prevention; and inter-agency cooperation (Johnsen et al., 2011; Vogel, 2012). The assessment of an organization's capacity includes an analysis of its systems and management processes, as well as its financial, human, and other resources (Lusthaus, Anderson, & Murphy, 1995). The adequacy of inputs and the effective activities of ACAs determine an expected change, which is comprised of outcomes and impacts according to the principles of the theory of change.

Conceptual Model



Source: Literature based Conceptualization.

This conceptual model was developed for this research based on the literature. Ethiopia is implementing corruption prevention functions (preventive ACA model), Singapore is implementing preventive and investigative anti-corruption functions (multi-purpose ACA model), Norway is implementing corruption investigation and prosecution ACA functions (law enforcement model), and Rwanda is implementing a preventative, policy development, and coordination model (unique). Their AC functions are rooted in the United Nations Convention against Corruption. The proclamation and constitution, AC policies, Penal Code, Prevention of Corruption Acts, National Security Provisions, and Environmental Crime Provisions; and UN, AU, and OECD Conventions are the major sources of anti-corruption regulation, which immediately give the mandates of the ACA input for its activities with a budget, human resources, expertise, equipment needs, and available technology. Thus, the ACAs play different roles in the war against corruption. These activities include expanding ethics education, asset registration, preventing corruption, and advising on corruption issues. In this case, ACAs developed standard operating procedures (SOPs) for their activities.

The factors that promote or hinder the effectiveness of the commission to implement its mandates include specialization, independence, resources and power, cooperation, inter-agency collaboration, and the existing anti-corruption regulations of the ACAs and their mandate boundaries, which imply the existing functions and organizational structure (models) of the ACAs.

3. Research Methodology

This article adopted a qualitative comparative multiple case study that focused on the anti-corruption agencies of Ethiopia, Singapore, Norway, and Rwanda. The decision to select them was premised on the fact that they are presently operating in their respective countries with a common objective, i.e., fighting corruption, which is a global problem. The comparison was intended to search for alternative lessons, better standards, and operating procedures that boost the effective management of anti-corruption agencies, particularly the Federal Ethics and Anti-corruption Agency of Ethiopia. Comparative analysis improves our critical understanding of our own society's ways of thinking, patterns, and systems by examining similarities and differences in issues established and implemented in other societies (countries). Hence, the comparison provides an opportunity for alternative options and the search for solutions for specific constraints by

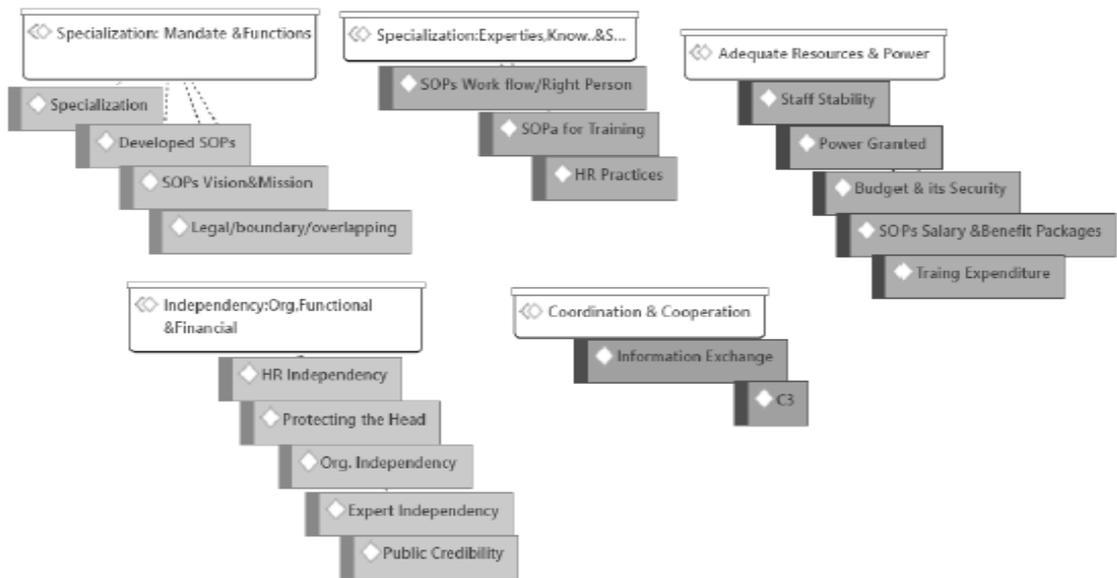
indicating the ways and means of resolving them (Esser & Vliegthart, 2017; Kim, Brenner, Liang, & Asay, 2003).

The sources of data for this research were key informants' e-mail interviews, ACA's social media platforms, and documents such as the national, regional, and international legal documents; the national, regional, and international ACA reports; and books. The key informants were experts from ACAs in Ethiopia and Rwanda on the positions of anti-corruption strategy, institutional design, performance evaluation, advisors on anti-corruption, directors of human resources, and change management who were relevant to the study.

A purposeful sampling strategy was used in qualitative research as a means or strategy to achieve the saturation criterion (Creswell, 1998a). In qualitative research, sampling must be flexible enough and should mirror the problem statement. With in-depth investigations of specific phenomena, the sampling population should be heterogeneous (Miles & Huberman, 1994). On the other hand, the criteria sampling technique, as its name implies, entails establishing criteria before selecting the study population, respondents, and/or sites. As a result, selected respondents or sites were thought to have a wealth of information or knowledge about the specific issue (or issues) under investigation (Nastasi, 1998). The volume of interviews was determined by data saturation logic.

Comparative case study research, which is conducted on the public policies of different countries, should collect data by interviewing public officials as well as public policymakers in their respective countries instead of relying on official websites and institutions' official documents is more crucial to getting information (data) in a particular context (Seixas et al. 2018). Therefore, in this research, documents and expert interviews were employed during data collection. Furthermore, social media platforms (Facebook, Twitter, LinkedIn, and YouTube) and AC agencies' websites are also used as sources of data. Therefore, in this case, expert interviews, social media platforms, and official websites were also used as data sources to support the evidence in the document (for triangulating) with the responses of the interviewees. In line with these sources of data, relevant international, national, as well as AC agencies' operational documents were collected and analyzed before interview data to justify and fill the evidence gap created by documents; in this way, the evidence collected from various sources together attains data saturation and data triangulation. Methodological triangulation provides sufficient enriched and in-depth evidence (data) from multiple sources (Denzin, 2012). Data saturation is crucial to all types of research. Data saturation can also be achieved through methodological triangulation (Bekhet & Zauszniewski, 2012). Qualitative researchers decide on a sampling plan and determine the sample size based on their estimation and judgment (Moser & Korstjens, 2018). The data analysis in this research was a comparative thematic analysis of four cases.

4. Results and Discussion This section analyzed anti-corruption regulations/ SOPs (any rules, procedures, processes, methods, management tools, or institutional structure designed to promote effective administration and management of ACA). The features of existing standard operating procedures (SOPs) to search for better practices that contribute to specialization, independence, adequate resources, coordination, cooperation, and information exchange within and between various bodies.



Coded and Developed by Atlas.ti.9 window
 Figure.4.1 Themes: Analytical Framework

Comparative Analysis: the Federal Ethics and Anti-Corruption Commission (FEACC) of Ethiopia, the Corruption Prevention and Investigation Bureau (CPIB) in Singapore, the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime (NAIPEEC), the Office of the Ombudsman of Rwanda (OOR).

The features of Existing Standard Operating Procedures

Specialization: mandates and functions:

The finding shows that the existing mandate of the FEACC overlaps or already exists in other institutions without clear and strong SOPs that define exactly their roles. Moreover, the finding reveals that compared to the three ACA, the commission's existing mandate and functions are not enough to effectively fight corruption and manage AC activities according to the ToC. In this regard, international best practice standards state that specialization needs to be supported by strong inter-agency coordination and cooperation mechanisms to eliminate mandate overlap and duplication (Mauritius, 2018). In addition, the previous study result also reveals that the mandate overlap and unclear mandates of the ACA create a series of gaps and limitations for implementing their AC policies and programs (UNCAC 2nd & Harutyunyan, 2003). On the other hand, to communicate its vision and mission, the commission typically develops a manual (regulations, directives, guidelines, etc.). Compared to the FEACC, the three ACA have better SOPs, mechanisms, techniques, and systems other than the regulations. In this regard, the empirical literature reveals that AC legal frameworks are not enough to fight and control corruption effectively; mechanisms are needed to implement anti-corruption legislation and manage ACA (Odhiambo, 2016).2016).

Interms of specialized expertise, knowledge, and skill: The research found that the FEACC's human resource (HR) practices (recruitment, training) are based on internal administrative regulation and general civil service proclamation. The SOP was not developed in some aspects of human resource practices (short-term training procedures, etc.). Compared to FEACC, the three ACAs have better SOPs in HR practices (e-recruitment, training curriculum, strong regulations, technologies, etc.). Therefore, unlike the FEACC, the three ACAs have developed and implemented the SOPs that realize specialization: expertise, knowledge, and skill. In this regard, international standards demonstrated that specialization is vital for the effective functioning of ACAs. Because fighting corruption requires specific knowledge, expertise, and

skills (OECD, 2008). In addition, the previous empirical finding reveals that to promote professionalism in the organization, there must be a career system in place based on the principle of meritocracy that allows the promotion and recruitment of civil servants fairly and neutrally with clear regulations that delineate the rights and responsibilities of public servants (Saint-Martin & Thompson, 2006).

Regarding the issue of independence, the research found the following issues: in the commission's HR practices, there is only administrative regulation (manual) that is subject to manipulation; the commissioners' dismissal procedure is not transparent, or there is no concrete evidence for their dismissal decision by the government (the practice is against the commission's establishment proclamation); the commission is currently accountable to the executive; and the commission lacks SOPs that enhance experts' professional freedom.

Compared to the FEACC, the CPIB is significantly independent of any influence. However, the research found that, similar to the FEACC, the Bureau is accountable to the prime minister. Therefore, this condition departs from the principles of independent ACAs, stating that organizational independence is the least possible degree of government participation in the appointment of the agency's authorities and implementation of its functions, and its decision-making and functional independence refer to the agency's ability to carry out its functions without the undue interference of any third party or the executive (Mauritius, 2018). In addition, according to the OECD (2008), the independence of a specialized ACA is considered a fundamental requirement for the proper and effective exercise of its functions. The reasons why the independence criteria rank so high on the anti-corruption agenda are closely linked with the nature of the phenomenon of corruption. On the other hand, compared to the FEACC, the Bureau has outstanding HR practices that enhance its independence (e-recruitment procedures, training SOPs, the "Government Instruction Manual," directors nominated from civil servants, etc.). In NAIPEEC, with the principles of a transparent government system in place, the independence of the authorities is ensured. For instance, the recruitment processes are implemented through e-recruitment, and the potential applicants apply online. There is also a procedure that ensures experts' freedom. The OOR has a strong legal basis that ensures its independence, including the constitution. In this case, the finding shows that the appointment procedure of the Ombudsmen is transparent and that they are free from any influence. In addition, Rwanda has an outstanding civil service management system, regulations, and a standard e-recruitment procedure. The other interesting SOP is the public credibility evaluation system: Rwanda Governance Scorecard, Rwanda Bribery Index, auditing system, public suggestion boxes all over the country, the evaluation survey is conducted by an external consultant, and the office organizes a panel discussion at the grass-roots level. Therefore, the findings of this research on the HR practices of ACAs in Singapore, Norway, and Rwanda support the previous research by Langbein & Sanabria (2017); it reveals that independent and professional public organizations are those that implement merit-based criteria in human resource management rather than politically affiliated criteria and are free of subjectivity and interference, which can be more likely to ensure the independence of ACAs.

Interms of adequate resources and power: This research found that the FEACC prepares the annual budget as per the commission's establishment proclamation and the guidelines of the Ministry of Finance, which is approved by the Parliament and funded by the Ministry of Finance. Regarding the issue of staff salary and employees' stability, the research found that the commission salary scale is low and there is a high turnover rate; in this case, the commission lacks the SOP for employee retention. In addition, short-term training investment has no established standard that pre-determines the required budget and lacks training need assessment procedures. Compared to the FEACC, the CPIB's budget is revised from time to time based on market conditions and has clear legal provisions. Furthermore, the findings show that, unlike FEACC, the CPIB staff salary and benefits are constantly reviewed based on government policy that declares and determines the salary scale by considering the current

market condition. The Bureau invests more in staff training and capacity development based on the assessment of experts' performance and skill gaps. In this regard, this finding supports the previous study by (Demmke & Moilanen (2011), which states that for ACAs to be effective, the political elite must support the design and implementation of anti-corruption policies and regulations. On the other hand, based on transparent budgeting procedures, the government of Norway spent more on NAIPEEC, and significant resources were allocated to help both foreign and domestic police agencies that investigate corruption. The issue of salary and benefits is determined based on Norway's wealth redistribution policy, and the NAIPEEC implements various projects on the capacity development of its staff in collaboration with the Ministry of Finance, the Ministry of Justice, and the universities.

The evidence shows that Rwanda has a similar budgeting procedure to Ethiopia. The office's budget is based on legal provisions such as Rwanda's constitution, the Presidential Order, and the law governing the office and is approved by the parliament. Capacity building at institutional, organizational, and individual levels takes priority. In addition, the training and development program is managed by the Rwanda Development Board. The issues related to employees' salaries are also determined by the presidential order, the Prime Minister's order, and the Rwanda public sector pay and retention policy and implementation strategy. The salary and benefits packages are composed of a basic salary, a housing allowance, a transportation allowance, a state contribution to social security, and a state contribution to medical care. In addition, a staff horizontal promotion system is in place based on the staff evaluation performance contract.

Therefore, in terms of adequate resources (budget) for their operation, employees' salaries, and capacity development, this finding shows that compared to Ethiopia, Singapore's, Norway's, and Rwanda's ACAs have better resources (budget) to fulfill their mandate. Therefore, this finding, related to the previous study result, reveals that an effective human resource policy articulates better civil service pay and enhances human resource capacity development (Armstrong, 2000).

In terms of the power granted to the ACAs, according to the FEACC Revised Establishment Proclamation No. 1236/2021, the commission has the power: to prevent corruption; raise awareness; play an advisory role; organize (media, ethics liaison offices, and various institutions); coordinate AC activities; register assets; and follow up anti-corruption laws; and represent the country by collaborating with others overseas. Compared to FEACC, the outstanding powers granted to CPIB are:

The Prevention of Corruption Act (PCA) has extra-territorial powers over a Singaporean citizen to deal with corrupt acts outside Singapore and investigate both corrupt citizens and non-citizens. The Bureau is also authorized to investigate any bank, share, expense, or purchase with full power. The CPIB has the power to investigate anyone, including the prime minister. The mandate boundary of the Bureau includes both the public and private sectors. On the other hand, the NAIPEEC, as per the Penal Code, which declares criminal acts, has the power to: cancel individuals' and enterprises' jobs; cancel the right to operate in the country; as well as the power related to investigating all forms of financial institutions and financial records. OOR has the power: to assess public projects and make recommendations for implementation by various institutions; to conduct operational audits of public and private institutions and make recommendations for the audited institutions to follow; to request explanations from the authorities of institutions that have not implemented the recommendations; to recover public assets; and to propose new laws to the Parliament. In addition, the outstanding power of the office is that, according to Organic Law No. 03/2012, it has the power to request the Supreme Court to review a judgment rendered at the last instance due to injustice. Therefore, the research found that, compared to the FEACC, the three ACA

have more power in corruption prevention and investigation. But the power of the commission lacks the element of law enforcement, which is crucial to the ACA.

Interms of coordination, cooperation, and information exchange: the FEACC establishing proclamation, 2021, states "the Commission shall establish relations and cooperation on behalf of the country with national, regional, and international bodies." However, it is not coordinated and does not collaborate well with other institutions or bodies, especially with the Federal Police and Attorney General (Ministry of Justice), and there are no clear and specific SOPs to govern the three institutions working on corruption (the FEACC, Federal Police, and Attorney General (Ministry of Justice)). However, at the national level, the commission works with various bodies based on the MoU, such as religious institutions, civil society, medical associations, trade forums, the business sector, and others. Unlike the FEACC, the CPIB established and developed the following SOPs: a permanent secretary in each ministry; a Practical Anti-Corruption Guide for Businesses (PACT); a Government Instruction Manual (GIM); workshops; Innovate, Digitilize, Engage, and Adapt and Skill Up (IDEA); a Public-Private Partnership (PPP); an Anti-Corruption Partnership Network (ACPN); and Various Intelligent Systems in One Network (VISION). On the other hand, NAIPEEC has the following SOPs: works with multinational organizations and forensic professionals on the prevention and detection of fraud and corruption; has a joint governance model; has a joint alliance against the black economy; and has ethics guidelines for public services. In addition, the authority also cooperates with law enforcement authorities internationally through EUROPOL, INTERPOL, and the Egmont Group, police cooperation, EUROJUST, Nordic police cooperation arrangements, and police-to-police cooperation. Their relationship and cooperation mechanisms are regulated by the Police Act and the Criminal Procedure Act, and most of the time the authorities use video conferencing to conduct meetings with them.

On the other hand, the law that established the office under Article 25(3) states the role of the National Anti-Corruption Advisory Council. In this case, the office follows up on the anti-corruption activities through the Advisory Council at all levels. The office collaborates with international organizations through membership. It also collaborates and works on cross-cutting issues such as gender, family promotion, etc. In addition, the office developed the following SOPs for information exchange: an MoU, an Advisory Council, a secure intranet system for managing files and workflow across all its departments, email, a WhatsApp group, periodical staff meetings, and Cybercafé. Complaints received through Cybercafé.

Therefore, the research shows that, compared to FEACC, the CPIB, NAIPEEC, and OOR have relatively better SOPs for coordinating, cooperating with, and exchanging information. However, the commission is not yet well coordinated and has not collaborated with other national, international, and regional institutions/bodies. Specifically, research indicates that the commission should coordinate and cooperate with the Federal Police and Attorney General (the minister of justice). In this regard, the previous study by Dereje (2018) stated that "policy implementation cannot achieve its intended goals with a single ministry, agency, or department; it must bring together all potential stakeholders with diverse interests" (p.1) Furthermore, the evidence indicates that "one of the important features of specialized bodies promoted by different international instruments is cooperation with civil society. This standard applies not only to the preventive and education bodies but also to the law enforcement bodies. An anti-corruption body cannot function in a vacuum, and none can perform all tasks relevant to the suppression and prevention of corruption alone. Efforts to achieve an adequate level of coordination, cooperation, and exchange of information should take into account the level of existing fragmentation of the anti-corruption functions and tasks divided among different institutions (OECD, 2008).

In addition, according to Mauritius (2018), cooperation in anti-corruption activities includes inter-agency coordination and international cooperation. Inter-agency cooperation and

coordination have paramount significance for the effectiveness and success of anti-corruption agencies. Anti-corruption agencies typically collaborate with the police, the attorney general, public prosecution bodies, the judiciary, and audit offices. But in practice, existing experience reveals that, in various countries, inter-agency cooperation and coordination are weak or don't exist due to political interference and mandate overlap among institutions. In practice, however, different countries address the challenges by establishing special multidisciplinary coordinating commissions, enacting special legal provisions on cooperation and information exchange, or signing special agreements and memorandums among relevant institutions on cooperation and information exchange (UNDP, 2011; OECD, 2008).

The Lessons Learnt: Standard Operating Procedures

The lessons drawn from the comparative analysis of the four ACAs presented are based on: Specialized: mandates and functions; Specialized: expertise, knowledge, and skills; independence—organizational, functional, and financial; adequate resources and power; and coordination, cooperation, and information exchange. In this regard, the researcher's early statement was that "despite the contexts and environments in which anti-corruption agencies operate, the researcher believes that best practices can be learned from everywhere." Furthermore, scholars reveal that, so far, there is no conclusive evidence on which AC model and practices are the best and most effective in preventing or combating corruption (Mitchell, Merrington, & Bell, 2014). However, empirical evidence and regional and international standards, protocols, and conventions stated that, for anti-corruption agencies to function effectively, they must have relevant resources and effective policies that are independent and specialized, as well as coordinate and cooperate well with various bodies (Langbein & Sanabria, 2017; Gebre, 2016; Meagher & Voland, 2006; Quah, 2015; Doig, 2004; Osifo, 2012; Sebek, 2019; De Sousa, 2010; Mauritius, 2018; Quah, 2008; Johnson et al., 2011; Badet et al., 2016; Cardona, 2015; UNCAC, 2003; UNDP, 2011; UNDP, 2005; OECD, 2008; AUCPCC, 2003).

The comparative research concludes that compared to the CPIB, NAIPEEC, and OOR, the FEACC's existing SOPs are not effective according to the principles of the ToC; the inadequacy of inputs and the lack of effective SOPs for its activities hinder the realization of the expected result. Therefore, the research supplies the issues that need to be considered in Ethiopia with lessons from Singapore, Norway, and Rwanda. A cross-country comparative study aims to report the "lessons learned" (Marfan & Pascual, 2018; Lincoln & Guba, 1985).

What better practices' standard operating procedures (SOP) can be adapted, implemented, and incorporated into the anti-corruption drive in Ethiopia?

In terms of the clarity of the legal framework and specialization, the research found that the FEACC has some legal documents and SOPs for preventing corruption. However, there is a challenge in the clarity and competence of the mandate, functions, and working procedures: overlapping areas have no strong, clear, and specific SOPs that delineate the roles and coordinate them; the quality of internal working procedures; the consistency of the internal structure; tension in the ever-changing mandate and functions; and the identity of the ACA as a specialized agency. The commission's HRM practices, on the other hand, are based on directives and guidelines, which are manual documents that can be manipulated or corrupted and cannot address the human capital market; the commission lacks a standardized job description, workflow procedures, and short-term training assessment SOPs; the commissioners' dismissal procedure is not transparent (the practice is contrary to the commission's establishment proclamation); and the commission is currently accountable to the executive. The procedures for coordinating and exchanging information within and between various bodies are ineffective and lack clear SOPs. Especially with the Federal Police and the Attorney General (Ministry of Justice), the research identified this as a fundamental challenge.

Therefore, the CPIB has a broad and powerful mandate and responsibilities in preventing and investigating corruption in public, private, and overseas; developed SOPs (Pro-Enterprise Panel (PEP), Zero In Process (ZIP), POWER, More Vision, Less Bureaucracy (MVLB), mobile exhibitions, videos, and cartoon films); Kopi Lim, the corruption reporting channel; the annual customer survey procedure; and the procedure for managing false information. HRM is guided by the principles of meritocracy, equal opportunity, and transparency: e-recruitment and listing criteria (communication skills, physical fitness, psychometric principles, pen-and-pencil test, structured interview panel, and behaviour traits model). The training programs and modules are designed for employees at all levels in cooperation with educational institutions, and there are scholarship opportunities. The staff is stable due to: protection, transparency, attractive salary and benefits, training and scholarship opportunities, government commitment, transparent policy, and procedure.

The CPIB is an independent ACA with effective laws, an independent judiciary, political commitment, and responsive public service; the directors are nominated from the public service. However, it is accountable to the prime minister. Bureau's budget, staff salaries, and benefits are regularly reviewed (a conscious policy of the government to peg salaries to the level of the economy). Training expenditures are based on skill gaps. The Bureau also granted extraterritorial jurisdiction over citizens and non-citizens (to investigate any bank account, share account, purchase account, expense account, or any other account, etc.). The Bureau has SOPs for coordination, cooperation, and information exchange such as PACT, IDEA, ACPN, GIM, and expert workshops in the areas of excellence in the investigation, excellence in computer forensics, and excellence in ACA management.

On the other hand, the NAIPEEC is the central and specialized (police and prosecutor) agency in the investigation and prosecution of economic, environmental, and computer crimes in public, private, and international organizations with adequate legal framework and SOPs, including the Pollution Control Act, the Wildlife Act, the Biodiversity Act, the Act relating to Motorized Traffic in Unfenced Areas and on Watercourses, the Salmon and Inland Fisheries Act, and the Act relating to Motorized Traffic, etc. The authority closely works with various bodies based on clear SOPs and no overlapping mandates. Its HRM is transparent (e-recruitment procedures, social media/technologies), has a training curriculum, and cooperates with national and international research and training institutions for the same. The Authority's staff is stable due to, among other things: their protection, transparency, attractive salary and benefits, training and scholarship opportunities, transparent governance and government commitment, policy stability, team spirit, and wealth redistribution policy.

The powers granted to the authority are to seize and access such records and to freeze transactions; in this case, a court order is not required. Enterprises involved in corruption may also lose their operating rights, be prohibited, etc. The authority has wide networks around the globe to develop SOPs for cooperation and information exchange, such as the Joint Government Model (JGM), Work Related Crime (WRC), Joint Alliance against the Black Economy (JABE), ethics guidelines, video conferencing, EUROPOL, INTERPOL, and the Egmont Group.

The OOR is a unique institution; it combines the functions of an ombudsman with those of an independent ACA with a robust legal framework and mandates and coordinates AC activities at the national level through the advisory council. The council is critical to preventing overlapping mandates. The office developed SOPs: rules and regulations; a procedure manual; e-services and e-recruitment; a service charter for citizens; an investigation manual; an AC policy; the prevention and repression of money laundering; the financing of terrorism and the proliferation of weapons of mass destruction; and the Online Declaration of Assets System

(ODAS). Its HRM has a strong legal foundation, such as the Constitution, with an e-recruitment procedure (website, publication, e-mail, SMS, audiovisual), and new staff are sworn in. The staff is stable due to attractive salaries and benefits, professionalism, meritocracy, transparent procedures, the government's commitment to fighting corruption, etc. The office has extraordinary powers, such as the power to propose new laws to Parliament and review court decisions. The office coordinates, cooperates, and exchanges information through an advisory council, working on cross-cutting issues; it also has SOPs for a secure intranet system, WhatsApp groups, and the Cybercafé for information exchange.

The diagram below summarizes the issues that need to be considered in Ethiopia, along with lessons learned, as shown below:

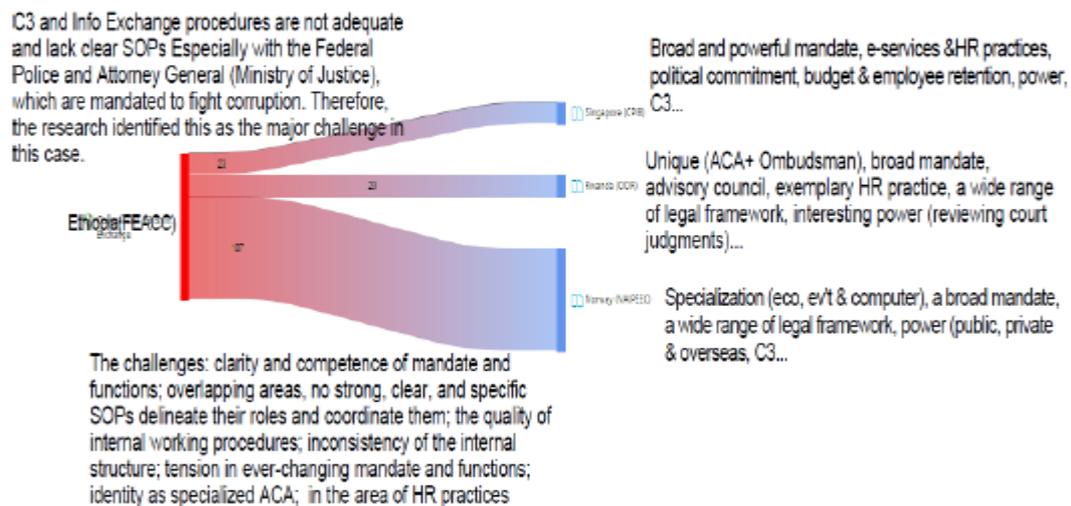


Diagram 5.1 Senkey Diagram

Atlas.ti.9 Window Analysis output

5. Conclusion

This chapter concluded the study by summarizing key comparative research findings based on the research questions and making recommendations; it also attempted to propose the gaps for further research.

The comparative analysis concludes that compared to the CPIB, NAIPEEC, and OOR, the existing AC practices of the FEACC are not effective at the input and activity levels, according to the ToC. To be exact, compared to the FEACC, the three ACAs have better-specialized mandates and functions; factors that contributed to their independence (financial, organizational, and functional); better resources and power that fit into their missions; and better SOPs and mechanisms for coordinating, collaborating, and exchanging information. As a result, this research aimed to search for and draw lessons from ACAs in Singapore, Norway, and Rwanda to provide better options for AC efforts in Ethiopia.

6. Recommendation

The research recommends the lessons learned from ACAs that emerged from the comparative findings of this research as an opportunity to improve the existing anti-corruption practices in Ethiopia for the parliament, stakeholders, and the commission itself.

7. Implication and Future Research

Given the significance of cross-country comparative research in drawing lessons from different contexts, this research contributes to generating new knowledge on the working methods of four countries' anti-corruption agencies. This research is also distinctive in that it brings together four ACAs, which operate in different contexts as well as in terms of institutional model, policy, and practice. Practically, the research assists practitioners and policymakers in closely observing the existing practices in Ethiopia in comparison to others. Finally, the research recommended the limitations and uncovered dimensions of this particular issue.

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A Critical Assessment of the Degree of Enshrinement of the Principles of Corporate Governance in the Securities Sector of Mauritius

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ABSTRACT: This article analyses the enshrinement of the principles of corporate governance as provided by the 2016 Code of Corporate Governance of Mauritius in the legal and normative framework governing the securities sector. The rationale is that the 2016 Code is non binding in nature and it is important that the corporate governance principles be given legal force. Therefore, the legal framework on the securities sector in Mauritius, consisting of the Securities Act and the listings rules of the Stock Exchange of Mauritius is critically assessed to examine the degree of enshrinement of the principles of corporate governance. This is important because it is only after these principles are enshrined that the good health of companies can be assured with an effective adherence to these principles. It has been observed that only part of these principles are enshrined in the law which does not complete the picture to the detriment of companies operating in the securities sector.

KEYWORDS: Mauritius, corporate governance, securities sector, listings rules, Securities Act.

Introduction

The securities sector of Mauritius has been hailed as one of the most vivacious and promising sector of the Mauritian economy. An equity and debt market which is very dynamic is provided by the country which positions itself as the second largest market in Africa. The sector bestows investors with world class trading facilities. Fixed interest securities and equity are traded through intermediaries who are regulated as investment dealers. Since its inception in 1989, the Stock Exchange of Mauritius (SEM) is one of the pioneers in sustainability in the African region (Economic Development Board, 2019).

A formal stock exchange was formed in Mauritius by the Stock Exchange Act of 1988. It is run and managed by the private limited business Stock Exchange of Mauritius Limited (SEM), whose goal is to administer and promote an effective, liquid, fair, and transparent securities market. The Financial Services Development Act of 2001 grants the Financial Services Commissions (FSC) authority to manage and oversee stock exchange activities. The Stock Exchange runs two markets: the Over-The-Counter Market, which is unregulated and where shares of 80 businesses are quoted, and the Official Market, a regulated market where securities of about 40 listed companies are traded. The Mauritian stock market has developed over the past few decades into one of the top small markets on the African continent from a regulatory, technical and operational perspective. In 1989, it was a pre-emerging market with ten listed businesses, a market capitalisation of USD 254.7 million, and a turnover of USD 5.9 million.

There are 11 stockbroking firms that have been granted Financial Services Commission (FSC) licenses, and they are the primary players on the stock market. Brokers and their dealers are required to pass a qualifying exam and meet the requirements for eligibility set forth by the Exchange. Other requirements must be met, including the imposition of a minimum paid up capital and personal guarantee right away after receiving a license. The Stock Exchange's rules and a code of conduct that governs how stockbroking firms should conduct their business must be followed by all stockbrokers. The SEMDEX and SEM-7 are the two primary indices that follow the price development of securities listed on the Official Market. The SEMDEX is a price index for all listed equities that is weighted based on each stock's percentage of the overall market capitalisation. The SEM introduced the SEM-7 in March 1998. This index, which includes the

seven largest qualifying shares on the Official List, is based on market capitalisation, liquidity, and investability. For both domestic and international market participants, the SEM-7 has been intended to adhere to international standards and serve as an investable benchmark. SEMTRI, a Total Return Index, was introduced in October 2002 to allow investors to profit from dividends and capital gains paid out by listed firms.

With around 95 companies listed on the SEM and directly involved with the securities sector of Mauritius, it is essential that principles of corporate governance be incorporated in the legal framework regulating the securities sector which consist mainly of the Securities Act and the listing rules of the SEM. In this way, listed companies would be legally bound to conduct business in a way that is aligned with the spirit of corporate governance as dictated by the legal framework on securities. This is more relevant to Mauritius since, so far, the need for companies to operate within the parameters of corporate governance is only voluntary based on the 2016 Code of Corporate Governance (2016 Code). It is therefore imperative that the bindingness of these principles be enhanced by their incorporation in the legal framework governing the securities sector of Mauritius.

Against this backdrop, this article begins by introducing the 2016 Code of Mauritius discussing particularly its legal effects and bindingness. It is also briefly contrasted with its predecessor which is the 2004 Code to highlight the major differences between them. A brief literature review on the importance of corporate governance in general on businesses is then presented in the ensuing section. It then embarks on a critical assessment of the Securities Act of Mauritius and the listing rules of the SEM which, as stated above, form the legal backbone of the securities sector. This critical assessment is conducted using the 8 principles of the 2016 Code which are governance structure, the structure of the Board and its committees, director appointment procedures, directors duties, remuneration and performance, risk governance and internal control, reporting with integrity, Audit and relations with shareholder and other key stakeholders.

The 2016 Code of Corporate Governance of Mauritius

A significant development in Mauritius' corporate governance framework can be attributed to the updating of the 2004 Code of Corporate Governance in 2016. A review of the 2003 Code of Corporate Governance was necessary due to the expansion of the financial services industry. The 2003 law requires modifications, according to the majority of respondents in a 2014 National Committee of Corporate Governance (NCCG) study (NCCG 2016, p. 5). The NCCG also outlines the following reasons for updating the 2003 Code: the requirement to conform the new Code to any new laws or regulations that apply in Mauritius, such as the Bank of Mauritius Guidelines; the need to learn important governance lessons from the 2008 global financial crisis as well as from local failures like the BAI and the Bramer Bank; and the need to identify and implement global best practices in corporate governance (2, 3). It is clear that these improvements have been made to strengthen the 2016 Code's efficacy and guarantee that businesses are required to abide by its ideals.

Debating the bindingness of the 2016 Code from a critical point of view.

The substantial literature on the subject has exhaustively shown the non-binding character of corporate governance codes. Haskovec contends that the authors of corporate governance rules never intended to create a legally binding rule or law. According to him, the objective was to establish a "over-arching, flexible, and principle-based" framework that would enable businesses to adhere to pertinent regulations or to provide justifications for their non-compliance in certain situations (2012, p. 8). According to Ringlelet et al. (2004, p.51–65), the voluntary nature of corporate governance codes lends legitimacy to the code issuer. Seidi elaborates on this claim by stating that since the individuals issuing the codes are not democratically elected, as would be the case with a government passing legislation for its citizens, they prefer to issue a voluntary code, with the issuance being justified by the idea that "anyone can issue rules as long as they are not

binding" (2006, p. 4). The corporate governance code is viewed by Snyder (1993, p. 2) as "rules of conduct which, in theory, have no legally binding force but which nevertheless may have practical effects." Since a "soft law" cannot be enforced by a court, Cini writes (2001, p. 207), "implementation must rely solely on the goodwill of those agreeing to and affected by it."

A case has been made in Mauritius that the 2016 Code is enforceable due to some changes made to the country's laws and regulations. The Financial Reporting Act of 2004's Section 79 has formed the crux of this debate. It stipulates that the Financial Reporting Council may issue a warning or a notice if a public interest business has disobeyed any financial reporting or accounting standard as required by, among other things, the 2016 Code. It also states that the entity will commit an offence and be subject to a punishment of up to one million rupees if corrective measures are not taken within 30 days of the notice. The 2016 Code is said to be binding if this clause is improperly understood to suggest that. First, because only public interest entities are covered by the law, and second, because the fine imposed only relates to the requirements for financial reporting and accounting. The Financial Reporting Act's specific requirements are the only way the law effectively enforces Principle 6 of the 2016 Code, "Reporting with Integrity." Additionally, the clause only applies to public interest entities and is not applicable to "other companies" as defined in the NCCG Report 2016 (p. 11).

The 2016 Code cannot be regarded as binding in light of the aforementioned. The goal of the Financial Services Commission's Circular Letter (CL280218), which was released on February 28th, 2018, is to inform licensees of their responsibilities under the 2016 Code. The Financial Reporting Act of 2004's Section 46(2) grants the Financial Services Commission (FSC) the authority to order licensees to abide by the Code and to impose regulatory sanctions "where non-compliance with the Code amounts to a breach of the relevant Acts or licensing conditions" (p. 4). This is how the FSC describes its role. These clauses once more serve to emphasise the 2016 Code's non-binding character. This is due to the fact that the FSC would only impose regulatory consequences if a violation of one of the Code's eight guiding principles led to a violation of further laws or licensing requirements. In other words, there is no penalty if a firm violates a principle but does not break the law. This justification can be used to underline the 2016 Code's continued non-binding status. Additionally, a Corporate Governance Act rather than a Code would have been created if the nation's lawmakers had wanted to make the Code legally binding.

The 2016 Code alone does not have legal force. When dealing with situations where businesses have not complied with corporate governance standards, for example, no court of law in the nation at this time can enforce any of the eight principles of the 2016 Code. The primary question raised by the paper is whether or not the eight principles have been indirectly incorporated into the various legal frameworks that govern the securities sectors. The Code itself has been criticized for being purely optional and lacking any sort of binding authority. It's possible that some of the principles match to or are comparable to already-existing laws included in parliamentary acts or regulations. Despite its demarcation and upgrade, the 2016 Code itself is not made enforceable. Having said that, there are numerous methods in which corporate governance and its principles can be effectively improved, utilized, and implemented in the Mauritian corporate structure. One approach would be to formally transform the 2016 Code into a lawful act of Parliament. However, taking such a step appears to be impractical, if not impossible, as it would face strong opposition from the business community for a number of reasons. A different approach is to evaluate whether or not the various 2016 Code principles have already been incorporated into the current legislative and normative framework that governs the securities business.

A brief overview of the 2004 Code

A Committee on Corporate Governance was established in Mauritius in September 2004. The main objective of the aforementioned committee was to spread awareness of corporate governance among businesses and organisations in both the public and private sectors. Transparency,

accountability, meritocracy, fairness, management principles, and the fight against corruption were the major working criteria of the committee (NCCG, 2019). In response to the World Bank's Report on the Observance of Standards and Codes for Corporate Governance from October 2002, which recommended the adoption of a Code of Corporate Governance for Mauritius, the committee's work resulted in the creation of a Code of Corporate Governance for Mauritius. Mervyn King, the author of the King Reports on Corporate Governance for South Africa, participated in the publication of the first Code for Mauritius in October 2003 following national consultations with diverse stakeholders (Mauritius Times, 2012).

The 'comply or explain' approach served as the foundation for the 2004 Code. In essence, this concept states that an alternative to the Code may be approved or put into practice as long as it results in excellent corporate governance and transparency. The following were some of the Code's salient characteristics: (1) The CEO's and Chair's roles must be distinct; (2) There must be at least two independent and two executive directors; (3) An Audit Committee and a Corporate Governance Committee are necessary; (4) Communication and disclosure are stressed; and (5) Independent auditors. The level of application among the 2004 Code's supporters appeared to be the main issue. The need for the Code to be revised has been fuelled by the 2008 global financial crisis and the several company failures in Mauritius, including the BAI and the Bramer Bank. The 2016 Code's key characteristics are detailed below.

An overview of the 2016 Code

At the outset, it must be noted that the 2016 Code has, by large, retained the main idea and core principles of the 2004 Code. The 2016 Code consists of eight principles namely Governance Structure, Structure of the Board and its Committee, Directors appointment's procedures, Directors' duties, remuneration and performance, Risk Governance and Internal control, Reporting with integrity, Audit and Relations with shareholders and other key stakeholders. The new Code 2016 is thought to be a part of a bigger set of regulations that also includes (1) Mauritius laws like the Companies Act, (2) regulations, and (3) listing guidelines like the one for the Mauritius Stock Exchange. (4) standards, best practices codes, and directives (5) Official company documentation, such as the board charter (National Code of Corporate Governance 2016, p. 5). Undoubtedly, the 2016 Code has a few noteworthy characteristics that set it apart.

Public interest entities, public sector organisations, and other enterprises are the three categories of businesses that are subject to the 2016 Code. The Financial Reporting Act of 2004 defines public interest entities and includes a list of public sector organisations that are designated as such in its first Schedule. While the Code does not define other companies, it does state that they are encouraged to follow its guidelines as much as they can (NCCG 2016, p. 11). The Board of Directors of a firm is in charge of making sure the principles are followed and put into action. The 2016 Code stipulates that proof of the same must be presented through annual reports and company websites, which should also provide explanations for any instances where the principles are not applicable and lead to the adoption of a substitute good practice. The emphasis has also been placed on the requirement to provide examples of how the principles have been used rather than simply repeating them in annual reports or on websites. The 2016 Code has supplied templates and wordings for how this reflection must be expressed in annual reports and websites (NCCG 2016, p. 11–12).

The 2016 Code is explicit on the structure and content of the reporting exercise, but it is silent on any type of follow-up method. There is no comprehensive process in place to oversee circumstances where a corporation does not submit reports as needed. This could be viewed as a crucial flaw in the 2016 Code. It should be emphasised that auditors are obliged to determine areas of non-compliance with the Code, report on those areas, and determine whether the arguments and explanations provided are adequate. The method to be followed if the auditors are not satisfied is not specified in the Code, though. According to the Financial Reporting Act and General Notice

1016 (2013), companies must also submit a statement of conformity to the Financial Reporting Council. The aforementioned Council is thereafter mandated to routinely "monitor" the application and reporting of the Code. It is suggested that the term "monitor" does not have a clear enough definition because it is not obvious if it simply refers to ensuring that processes have been followed or whether the Council will conduct a thorough evaluation of the implementation and application of the 2016 Code.

The 2016 Code chooses to use an annual reporting exercise, meaning that businesses must report on the implementation and application of the eight principles each year. It is argued that ongoing and year-round encouragement of this reporting was necessary. Companies' websites might have been used to report on any of the principles, collectively or separately, to improve adherence to the Code. In the sense that one would not have to wait a full year to learn what corporate challenges are emerging as a result of non-compliance with the Code, this would have further improved the culture of corporate rescue.

Highlighting the major differences between the two Codes

The 'apply and explain' approach to corporate governance is one of the most important contrasts between it and its predecessor. It indicates that all involved businesses must implement all eight 2016 Code principles and document how they did so in their annual reports or websites. It should be mentioned that Mauritius is one of the first nations to have used this strategy. It has disassociated and set itself apart from the "comply-or-explain" strategy advocated by the UK's Cadbury Report in 1992, as well as the "apply-or-explain" strategy advocated by South Africa's King III Report in 2009 and the Dutch Tabaksblat Code of Corporate Governance in 2004. Additionally, this is in contrast to the 2004 Code of Mauritius, which used the "comply-or-explain" policy. Due to the 2016 Code's newly adopted approach, businesses are now required to follow all eight of its principles without the option of an alternative, and in certain circumstances, to explain and defend non-compliance.

Lack of templates is one of the challenges in ensuring the adoption and implementation of corporate governance principles. The 2016 Code makes an effort to address this issue by offering templates. For instance, the 2016 Code offers templates for the Audit Committee and Remuneration Committee in addition to templates for the Charter. This might improve the uniformity and standardisation of how the Code is applied and implemented. The 2016 Code also promotes the efficient use of businesses' websites as a channel for disseminating crucial information about the application and implementation of the Code. The website can be used to report on a variety of topics, making it simple for all shareholders and stakeholders to access this information. It may be argued that its predecessor had fallen short in maximising the use of company websites as a tool for corporate governance.

Literature Review

Without a doubt, corporate governance has grown to play a crucial role in modern business. According to Sjaafjell (2010), corporate governance affects how economies evolve globally and how effectively societal goals can be attained. Famous corporate failures like Parmalat, Enron, and similar situations have, in fact, confirmed the value of having strong corporate governance structures in businesses (Vinten 2002, p. 4). In response to catastrophes like Parmalat and Enron, many nations created strong normative frameworks for corporate governance to prevent such economic catastrophes at the domestic level. For instance, the UK produced the Higgs Report and the Smith Report in 2003, while the USA passed the Sarbanes-Oxley Act in 2002 (Pass 2006, p.467).

Internationally coordinated efforts have been made to promote ethical business conduct and avert corporate failures through effective governance. Internationally recognized corporate governance

norms have been created by organizations like the Organisation for Economic Development (OECD) (Solomon 2007, p.1). The OECD Principles of Corporate Governance, according to Jesover and Kirkpatrick (2005, p.127), have received "worldwide recognition as an international benchmark for sound corporate governance" since their establishment in 1999. They go on to say that stakeholders, governments, regulators, and investors in both OECD and non-OECD nations actively employ these concepts. They have also been accepted as a crucial Standard for Sound Financial Systems by the Financial Stability Forum. Following a thorough review process, the 1999 OECD Principles were updated in 2004 (Jesover and Kirkpatrick 2005, p.129). Six areas of corporate governance are covered by the OECD Principles: ensuring the foundation for an efficient corporate governance framework; shareholder rights; equitable treatment of shareholders; stakeholder participation in corporate governance; disclosure and transparency; and board responsibilities (OECD Principles, 2004).

The following phrases are used to further explain the first area: The structure for corporate governance should support resource allocation that is both effective and transparent. It should facilitate efficient supervision and enforcement and be consistent with the rule of law (OECD Principles 2004, p. 13). The following rights of shareholders have been added: The corporate governance structure should ensure the fair treatment of all shareholders, including minority and foreign shareholders, as well as the protection and facilitation of the exercise of shareholders' rights. In the event that their rights are violated, all shareholders should be able to seek effective remedies (OECD Principles 2004, p. 19). The corporate governance framework must support institutional investors, stock markets, and other intermediaries by offering sound incentives across the investment chain and ensuring that stock markets operate in a way that supports good corporate governance (OECD Principles 2004, p. 31).

The OECD Principles (2004), on page 37, state that the corporate governance framework should recognize the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises. The corporate governance framework should make sure that timely and accurate disclosure is made on all significant matters pertaining to the corporation, including the financial situation, performance, ownership, and governance of the company, according to the OECD Principles on disclosure and transparency (2004, p. 41). In terms of the duties of the board, the corporate governance framework should ensure that the organization is strategically guided, that the board effectively monitors management, and that the board is accountable to the organization and the shareholders (OECD Principles 2004, p. 51).

According to Haxbi and Aguilera (2015), over 90 countries have so far adopted their own national codes of corporate governance to control the business world. The main criticism of using codes to promote ethical business conduct centers on the fact that they are not legally binding. Contrary to strict regulations like the Sarbanes-Oxley Act of 2002 in the USA, it is argued that codes do not have the same level of legal force in terms of compliance (Haxbi and Aguilera 2015). Cuervo (2002, p. 84) also draws attention to the issue of the weak enforcement of corporate governance codes as a restriction on the applicability of such codes. On the other hand, German research indicates that there is strong pressure to embrace the Code regulation and that financial markets have considered the requirements in the German Corporate Governance Code to be meaningful (Goncharov, Werner, and Zimmermann 2006, p.432). Additionally, according to Cuervo-Cazurra and Aguilera (2004), the adoption of corporate governance codes is frequently prompted by pressures on businesses to increase efficiency and legitimize their actions. Therefore, it is evident that even a non-binding code of corporate governance can be effective if there is the right political will or market will.

The creation of the Financial Services Sector has significantly altered the economic climate in Mauritius. In the past, companies have been an idea since the beginning of the colonial era. 'La Compagnie des Indes', for instance, was in charge of running Mauritius itself (Report on Corporate

Governance for Mauritius, 2003, p. 5). It should be noted that until the country's introduction of the Companies Act in 1984 and the founding of the Stock Exchange of Mauritius (SEM) in 1989, there had not been any significant developments. The biggest phase of change started in 2001 when a number of policies were put in place. These included the adoption of the International Accounting Standard, new listing requirements for companies listed on the SEM, the introduction of the new Companies Act of 2001, and the creation of a National Committee on Corporate Governance (Report on Corporate Governance for Mauritius 2003, p. 5). The National Code of Corporate Governance (NCCG) for Mauritius was decided upon by the Committee on Corporate Governance in 2002. The establishment of a voluntary code was advocated for in 2002's Reports on Observance of Standards and Codes, which highlighted several corporate failures in the private sector (Mahadeo and Soobaroyen 2012, p. 236).

A survey of the literature reveals a paucity of studies on the relationship between corporate governance and the securities industry in Mauritius. the requirement to apply corporate governance concepts to the insurance industry as of the turn of the millennium. According to Vittas, corporate governance, internal controls, and risk management all had significant flaws. Additionally, he pointed out that there was a lack of current risk-based capital requirements and that solvency ratios fell short of international standards (2003, p.1). Vittas also emphasized that although the Financial Services Commission's establishment tightened oversight and improved the regulatory environment, there were still some issues. He stated that laws governing risk management, internal controls, and corporate governance needed to be updated to reflect new international standards (2003, p. 14). He said that new regulations on corporate governance and the responsibilities of directors, on internal control and risk management systems, and on the obligations of actuaries and auditors would be introduced with the introduction of the draft Insurance Bill 2004 (2003:, p. 16).

The current literature review demonstrates that while the concept of code of corporate governance has been thoroughly researched upon from various angles such as the non-binding nature of it, there is no direct literature on how the new Code of 2016 of Mauritius applies to the financial services sector domestically. No academic work has been carried out in a comprehensive way on the degree to which the principles have been enshrined in the legal and regulatory framework of the securities sector nor in the overarching legislation that regulates companies in Mauritius.

The legal and regulatory framework on securities sector in Mauritius

The primary piece of legislation governing organizations engaged in the securities industry is the Securities Act (SA) 2005. It is intended to offer a framework that enables businesses to function completely transparently. It also stipulates that rules and guidelines for disclosure must be followed, along with criteria, demands, and prudential principles. In the securities industry, the FSC is also essential. It issues licenses to Investment Fund Intermediaries, Clearing and Settlement Facilities, Securities Exchanges, and Securities Trading Systems. Additionally, it registers reporting issuers and investment clubs. In accordance with FSC approval, an investment fund may get a license under section 97 of the SA 2005 as a corporation, trust, limited partnership, foundation, or protected cell.

The SA 2005's Section 23 established the Stock Exchange of Mauritius (SME), which is in charge of overseeing the securities industry. To that end, it has a set of guidelines and rules. There are the Listing Rules, the Securities (Purchase of Own Shares) Rules 2008, Guidance Notes 1 and 2 on Business Plans and 3 on Interaction with Investment Analysts and Media Personnels. The FSC's rules add to the aforementioned framework. The Securities (Licensing) Rules from 2007, the Securities (Public Officers) Rules from 2007, the Securities (Disclosure Obligations of Reporting Issuers) Rules from 2007, the Securities (Brokerage Fee for Government of Mauritius Securities and Bank of Mauritius Securities) Rules from 2011, the Securities (Brokerage Fees for Exchange Traded Funds on Foreign Underlying) Rules from 2013, and the Securities (Preferential Offer) Rules from 2017 are a few examples.

The FSC also has rules that go beyond the securities industry's regulatory framework. The Securities (Instruments) Regulations of 2013, the Securities (Acquisition of Shares of Dissenting Shareholders during Takeovers) (Revocation) Regulations of 2011, the Securities (Acquisition of Shares of Dissenting Shareholders during Takeovers) Regulations of 2010, the Stock Exchange (Prescribed Securities) Regulations of 2002, the Stock Exchange (Brokerage Fee for Debentures) Regulations of 1999, the Stock Exchange (Brokerage) Regulations of 1989, The Guidance Note on Securities Token Offerings is another document.

The degree of enshrinement of the eight principles of the 2016 Code in the legal and regulatory framework on securities sector

The method used here is a critical examination of the aforementioned legal framework to determine how deeply ingrained the 2016 Code's eight guiding principles are. It should be emphasised that while the Securities Act of 2005, its implementing regulations, and the SEM's Listing Rules comprise the framework for securities that is legally binding, the FSC rules and regulations on securities are considered to be soft laws.

Principle 1 – Governance Structure

It is pertinent to note that there are no explicit legal provisions in the SA 2005 that regulate the issue of governance structure. The SEM Listing Rules, which provide that the issuer must notify the SEM of the convening of any board meeting for deciding on dividend payment or for announcing profit or loss of any year, treat this problem seriously. In accordance with articles 11.31 and 11.32, it further stipulates that the SEM must be informed of any board decision. The Listing Rules specifically provide that the title, function, and position of the Chairperson should be distinct from those of the CEO (paragraph 11.42A) with regard to corporate governance. The requirement of a board charter and code of ethics is not provided for under the current legal system. For a high-risk industry like the securities business, it is stated that (Whitelaw, 2000). In comparison to the Hong Kong Stock Exchange requirements (HKEX, 2019), which are legally obligatory listing requirements, the provisions on governance structure are far less detailed.

Principle 2 – The structure of the board and its committees

At least one-third of the directors of a securities business must be independent and have relevant experience, according to Section 18 of the SA 2005. Directors are also required by the same clause to work in the best interests of investors and give precedence to their interests in the event of a disagreement. According to Section 11.42A of the SEM Listing Rules, an issuer (business) is required to maintain an Audit Committee that is made up only of board members. The basic legal and regulatory framework does not, however, include board diversity with regard to women. It should be highlighted that the crucial issue of board diversity in terms of gender parity and representation is not covered by the legal framework on board structure. According to research, stock markets with reasonable gender representation have increased investment returns (UNEP FI, 2017).

Principle 3 – Director Appointment Procedures

One of the requirements for the granting of a license is that the officials of the applicant be fit and proper individuals, according to Section 12(d) of the SA 2005. Neither the SA 2005 nor the SEM Listing Rules contain any further substantive rules regarding the appointment methods and processes. The pertinent soft laws do not address this aspect of Principle 3 either.

It is emphasized that the Companies Act of 2001 partially regulates the appointment of directors and related processes. The SA 2005, a special binding regulation that governs the securities industry, is somewhat lax when it comes to the nomination of directors. According to Wei (2005),

the process of appointing directors has a significant impact on the success and growth of the Chinese stocks market. The law does not address important concerns like election, induction and orientation, professional growth, and succession planning.

Principle 4 – Directors duties, remuneration and performance

The SA 2005's Section 12 addresses the subject of conflict of interest. It states that a license can be denied if the applicant lacks the necessary policies or procedures to deal with conflicts between business interests and the fair, open, and orderly operation of the market. Additionally, section 13(2) (e) gives businesses the option to implement rules for the management of conflicts of interest. Insider interests are likewise governed by the SA 2005, which stipulates that they must be declared in writing in accordance with section 90. However, the legal framework is completely silent regarding the responsibilities of directors, a crucial element of Principle 4.

According to the FSC Guidance Note on Securities Token Offerings (STOs), anyone who asks another person to engage in a transaction involving securities is required to conduct due diligence on the STOs. It implies that if the directors carry out this activity, it counts as one of their legal obligations. Regarding director compensation, the SEM Listing Rules state that an issuer must include information about the salary paid and perks in kind granted to directors in the text of its application to be listed.

Directors' responsibilities are included in FSC and SEM administrative directives, recommendations, and guidelines; nonetheless, the SA 2005 does not specifically include any binding rules on the legal responsibilities of directors. It should be highlighted that this element is covered by case law and the general provisions of the firms Act 2001 as general laws applying to firms. To increase the level of accountability and answerability of directors, the SA 2005 must specifically state the unique legal obligations of directors in the securities sector. In fact, directors of securities firms have been named as defendants in lawsuits pertaining to particular matters pertaining to their duties (Brochet & Srinivasan, 2014).

Principle 5 – Risk governance and internal control

Licenses can be refused if the FSC is not convinced that the operational rules and processes of the applicant are guaranteeing a fair, transparent, and orderly operation of the market, according to Section 12 of the SA 2005, which regulates matters required for award of licenses. Additionally, section 20 of the SA 2005 mandates that an audited report on risk management practices and how they are being used must be included in a clearing and settlement facility's annual report. The FSC may also establish regulations governing the capital and liquidity needs of dealers and advisers under Section 50 of the SA 2005.

In order to effectively and efficiently supervise all of the actions of the CIS management and the workers, it is required by the Securities (Collective Investment Schemes and Closed-end Funds) Regulations 2008 that internal control be established by the CIS manager through written regulations. It should be underlined that the current regulatory framework governing the securities industry sufficiently provides for risk governance and internal control.

Principle 6 – Reporting with integrity

Companies engaged in the securities industry are required under Section 20 of the SA 2005 to submit yearly reports describing their corporate governance practices to the FSC. Section 13(2) (a) of the SA 2005 emphasizes the idea of financial integrity because it gives entities the option to create their own securities exchange standards regarding financial integrity and business ethics. A CIS manager must maintain books and records in accordance with the Securities (Collective Investment Schemes and Closed-end Funds) Regulations of 2008. According to Section 44(2) of

the aforementioned regulations, the CIS manager must also maintain accurate accounting records that are reported. Section 47 (1) (b) of the SA 2005 mandates that auditors of CIS must report on any major flaw in the company's financial records or internal control systems.

According to the SEM Listing Rules, a company must acknowledge the presence of an internal audit function that communicates regularly with the Audit Committee and make its Annual Report available on its website. More importantly, the Annual Report needs to state how much the 2016 Code is being followed. The legislative structure outlined above is commendable in terms of reporting with integrity. Only the Act's usage of the term "business ethics" is legally binding. Additionally, it demonstrates how the 2016 Code and the securities industry are related.

Principle 7 – Audit

According to section 20 of the SA 2005, businesses engaged in the securities industry are required by law to submit audited financial statements prepared in accordance with IFRS to the FSC. The requirement that audited reports adhere to International Standards of Auditing is stated expressly in the same section. The SA 2005's section 55 states that investment dealers and advisers must adhere to the same standard.

Principle 8 – Relations with the shareholders and other key stakeholders

According to section 17(1)(b) of the SA 2005, businesses engaged in the securities industry are required to publish averages, indices, and period statistics to ensure investors' equity and transparency. According to section 32 of the SA 2005, investment dealers and advisers also have responsibility for the behavior of their representatives, especially if a client relies on them to act in good faith while making an investment. A fine not to exceed MUR 100 000 will be imposed on dealers who fail to provide clients for whom they have completed a security transaction with a confirmation of that transaction and a statement of account without delay. Section 56 of the SA 2005 also regulates dealings with clients. Section 68 of the SA 2005 mandates the use of a prospectus in order to act in the best interests of clients when offering securities to the general public.

Clients must be able to evaluate the financial status, obligations, assets, and profits and losses of the company issuing securities, in accordance with section 71 of the same Act. Defective prospectuses are subject to both criminal and civil penalties under Sections 80 and 82, respectively. According to sections 87 and 88 of the SA 2005, reporting issuers are also required by law to promptly inform the public of any major change that has taken place and has the potential to impact the value of the securities. Additionally, according to sections 111, 112, 113, 114, 115, and 116 of the Act, market abuses like insider trading, disgorgement, fraudulent trading in securities, market rigging, fraud in relation to securities, and false or misleading conduct in relation to securities are all prohibited. The SEM Listing Rules' paragraph 3.9 (a), which allows for the suspension or removal of a firm from its official list in the event that such action is required to protect investors, provides additional investor protection.

Conclusion

While Principles 1, 2, 3, and 4 may not be sufficiently covered by the binding legal framework, Principles 5, 6, and 7 and 8 are adequately enshrined, according to a review of the legal and regulatory framework on the securities sector. The latter ideas have been integrated in tandem with the SA 2005 and the SEM Listing Rules. The SA 2005 should be updated to include the board's charter, code of ethics, and the idea of effectiveness. It is also advised to include a general section to explain how the governance structure and the board's responsibilities are related. In addition to the SA 2005's beneficial provisions regarding independent directors, it must be amended to reflect the idea of gender representation in the direction of board diversity. It is advised that the SA 2005

be changed to include detailed rules for the appointment of directors and their selection processes. The SA 2005 also needs to specify what constitutes a suitable and proper person in the context of the securities industry, which may differ from other financial services industries. The SA 2005 should be changed to clearly address the moral and legal obligations of directors of securities companies. More specifically, the SA 2005 should explicitly recognise the ethical principles that directors must follow.

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“An Analysis of The Impact of Accounting Information Systems on The Performance of Companies.” Evidence From a Small Island Developing State.

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ABSTRACT: Accounting information system (AIS) is a crucial tool for managers striving to preserve a competitive advantage in the face of rapid technological innovation. This research investigates the impact of AIS on the performance of companies. It has been found that implementation of AIS, effectiveness of AIS, accuracy of AIS, and reliability of AIS all contribute to the improvement of the performance of companies in Mauritius. The principal purpose of this research is to investigate the conceptual and theoretical foundations as well as empirical research pertaining to the impact of AIS and companies' performance. Previous research demonstrate that AIS do help the enhancement of company performance. Tests such as Pearson Chi-Square, the test for Normality, mean, mode, and median, the hypothesis summary test, and Spearman correlation using Statistical Package for the Social Sciences (SPSS) package were conducted. It was concluded that AIS do play a significant role in enhancing the performance of companies in this modern world by supplying the data necessary to make appropriate and effective decisions for the success and growth of businesses.

KEYWORDS: Accounting Information Systems, Implementation, Effectiveness, Accuracy, Reliability, Performance

Introduction

It is of no doubt that all organisations including non-profitable firms, must have a fully functional and reliable accounting department in order to have proper control. However, in this modern era, the 21st century, the world is rapidly changing, and people are trying their best to adapt their living style according to the modernisation of technology. The accounting sector is of no exception. With the demand of this modern era, traditional paper-based accounting has been relatively rare, and it can mostly be said that the accounting world is now mostly depending on AIS. All information is now being generated and stored using AIS, but data are still being input by a human. Organisations are using financial information that has been processed by AIS to make decisions about how to improve the performance of the company.

Nowadays, organisations focus on methods which they can use to maximise profits, market share and quality, especially with the available modernised technology. One of the major use of technology is AIS. There is numerous previous research that has been conducted worldwide on the impact of AIS on organisational performance such as for example Khairuddin (2010), Kouser (2011), and Sajady et al., (2008).

However, it is found that there is limited research in small island economies such as Mauritius (Padachi 2012). Nevertheless, it can be said that there exists a gap in the literature about how AIS has contributed to the improvement of the performance of companies in Mauritius. Indeed, there are various other studies about accounting in SMEs and traditional accounting, but those studies lack the specification of AIS's impact on the performance of companies in a small island developing state context.

This study will specifically focus on how AIS has contributed to improving the performance of companies using four main factors such as implementation, effectiveness, accuracy and reliability. Most importantly, this study will focus only on companies in Mauritius and will analyse to what degree the modernisation of technology has impacted those companies.

The aim of the study is to analyse factors of AIS which contribute to improving the performance of companies in Mauritius. Through this study, four factors such as implementation, effectiveness, accuracy and reliability will be described and tested in order to determine the extent to which they contribute towards improving the performance of companies. Also, this study will be used to analyse how the implementation of AIS has been a success in most companies in Mauritius, a small island developing state forming part of the African region and how effective and accurate it has been in improving performance.

Literature Review

The Contingency theory

Contingency theory is required to assess environmental factors such as competition intensity, strategy, and environmental uncertainty, which can lead to a more effective management accounting system. The interaction and implementation of management AIS and business strategies have an impact on managerial performance. Implementing a suitable strategy necessitates the use of trustworthy data for decision making and these data are provided by the management AIS. Management AIS necessitates the use of information technology (Abernethy & Guthrie, 1994).

The McLean and DeLone Model

A model related to information systems was made by 'McLean and DeLone', which has since been used in varieties of studies around the world (Al-Okaily, 2021; Wieder & Ossimitz, 2015 and Popovic et al., 2012). The model was first introduced by DeLone & McLean (1992), who identified categories that have been referred to as the common dimensions of information system success, such as system quality, information quality, and usage level (DeLone & McLean, 1992).

Implementation of AIS on the performance of companies

When the ideas of organisation and performance are brought together, it arrives at the following definition of organisational performance: "the result of the successfully coordinated activities within an organisation." It's possible to argue that it has something to do with how effectively a well-coordinated team of individuals carried out a particular task. It refers to the manner in which a corporation is organised in order to achieve its goals as well as the means by which it does so (James, 2012).

In their study, Jaleel & Alfartoosi (2022) mentioned that nowadays as technology is continually evolving and providing new ways to improve and simplify people's lives. In the future, businesses should embrace the efficient use of AIS to get timely, accurate, and useful data to improve decision-making. It follows that Jaleel & Alfartoosi (2022); Kurniawati & Saputra (2019), Klinsukhon and Ussahawanitchakit (2016) and Jarah & Iskandar (2019), found a statistically significant correlation between AIS implementation and companies' performance in their studies. Implementation of AIS also plays an important part in the decision-making process at managerial levels (Gebremedihin, 2019). To add on, Chaturvedi & Sharma (2021) stated that AIS has been an essential tool in information and technology adoption because it is not only based on financial controls but has also had a substantial impact on performance improvement assessment. This is in addition to the fact that AIS is based on financial controls. As such, the following hypothesis is proposed:

H1 : The implementation of AIS has a positive impact on improving the performance of companies

Accuracy of AIS on performance of companies

It is possible to refer to AIS as being accurate if it has strictly complied with all applicable accounting standards and regulations, as well as any changes that may occur to any of those standards (Kohlbeck & Warfield, 2010). In addition to Kohlbeck & Warfield (2010), Nakitende (2019) referred to accuracy as the faultlessness of reports with all constraints and the inherent exactitude of the management process. Nevertheless, Taiwo (2016) mentioned in their research that information and communications technology (ICT) has been used to improve the performance of organisations by providing accurate accounting data and information, which has helped to improve financial reports.

Moreover, another study that was conducted by Bukenya (2014) concluded that there is a significant link between the accuracy of AIS and financial performance. On the same note, it was mentioned that accuracy was helpful in making decisions because the higher the quality of the financial report is, the more accurate it is, which in turn boosts the confidence of managers to rely on the information contained in the report.

In addition, Abu-Ekeret et al. (2019) stated that accuracy facilitated decision-making by gauging the quality of accounting information and establishing a connection between the expression of the quality of accounting information that was more accurate and higher levels of quality in the expectations for the future. As a result, the following hypothesis is proposed:

H 2 :Accuracy of AIS has a positive relationship with improving the performance of companies

Effectiveness of AIS on performance of companies

Huber (1990) stated that one of the effectiveness of AIS is to increase system integration which is to improve internal communications throughout an organisation. According to Stankovic et al.,(2012) if an individual really want to see the effectiveness of AIS, they have to analyse the firm's superior performance in managing its resources for operations, investment and financing undertakings.

Teru et al.,(2017) stated that AIS does have an effect on fulfilling a company's mission, consideration and sensitivity to its environmental actions, and capacity to understand and respond to market demands from different perspectives. AIS helps in classifying sufficient, accurate, and relevant data in the quest to taking concrete decisions and in controlling business activities.

Furthermore, Jaleel and Alfartoosi (2022) claimed that efficiency is also determined by the links and controls of input and output of the AIS. It indicates efficiency when the value of output information exceeds the value of its data inputs. The AIS effectiveness is linked to the extent to which the system is intended for the general public.

Adrian-Cosmin (2015) mentioned that AIS can generate financial accounting, both valid and dependable. This corroborates with the study by Jaleel & Alfartoosi (2021) where AIS was considered to be a prediction tool for future events and phenomena even before making any decisions. Accordingly, it was concluded that, particularly in the modern era, the attributes of accounting information systems, such as relevance, accuracy, and efficiency, do have a major influence on decision-making (Jaleel & Alfartoosi, 2021). Hence, the following hypothesis may be deducted:

H3: The effectiveness of AIS has a significant relationship with improving the performance of companies

Reliability of AIS on performance of companies

As a fundamental aspect of management, system assurance is essential to verify that the data generated from AIS is reliable. Conversely, an unstable system may display a variety of negative side effects, such as the inability to prevent unauthorised access to the system, leaving it susceptible to viruses, hackers, and loss of data confidentiality. Loss of data security includes corrupted, insufficient, and falsified information, and genuine support difficulties causing unforeseen bad consequences from system modifications, such as breakdown of access to system administrators, loss of information privacy, or loss of information credibility (Boritz, 2005; McPhie et al., 2000 and Topash, 2014).

Maines&Wahlen (2006) described reliability as an essential characteristic of AIS. According to the authors, reliability was important as it helped in decision-making and represented the extent to which information was unbiased, error-free as well as representationally faithful. In addition, Jarah and Jarrah (2022) stated that reliability was a term which referred to data and information that are devoid of inaccuracies and that accurately reflect economic conditions and occurrences.

Karuna (2009) reported that reliability is an important attribute of financial accounting data. To add on, Khan& Ahmed (2016) stated that reliability allowed consumers to safely rely on the quality of the information provided and that this information was verifiable, faithfully represented and judicially error-free as well as bias-free.

Additionally, according to prior research, AIS quality is positively connected with decision-making quality because it reduces the burden of the decision-making process, hence improving its quality (Gonzales et al, 2015; Arnott and Pervan, 2015). Nevertheless, Al-Hanini (2015) concluded that there is a positive and significant relation between the reliability of AIS and business performance. As a result, the following hypothesis is proposed:

H 4 : Reliability of AIS has a positive impact on decision-making to improve the performance of companies

Research Methodology

For this research, quantitative approach is being used as it is a source of first-hand and it helps to collect concrete and relevant data thus lowering the level of bias. For the collection of data, a self-administered questionnaire was selected. Moreover, as mentioned above, the dependent variable is the Performance of Companies, and the independent variables that will be tested are factors of AIS which are implementation, effectiveness, accuracy and reliability of AIS. For this study, the targeted population is employees from the accounting and financial firms in Mauritius. A simple random sampling was used and 214 accounting firms in Mauritius were targeted and a questionnaire was sent to all of the companies.

The questionnaire was a 'self-administered' one as it was delivered online; through emails and some were sent on WhatsApp, and some were replied to in person. Moreover, the questionnaire considered only closed-ended questions with simple, easy-to-understand and direct questions and the respondents had to choose from a limited number of potential answers. A pilot test was also carried out to ensure that the structure and phrases used were simple to read and double-barrelled questions were eliminated. Both Excel and SPSS Software Statistics 22 were used to analyse the data collected.

The most commonly used parameter is Cronbach's coefficient alpha. The average correlation between all the scale's items used in this study was above 0.70, indicating that they were all consistent (Sekaran and Bougie, 2010).

Numerous challenges and limitations have been encountered and tackled in order to complete this study. Firstly, there is limited research that has been done on the impact of AIS in Mauritius and this has proved to be disadvantageous as this study is based on companies in Mauritius. Moreover, some respondents of the questionnaire did not fully understand the concept of the survey and still decided to answer it even though the company they work with, do not use AIS. Furthermore, this study targeted at least 214 responses but received only 150 valid responses.

Findings

Demographics Profile

The number of respondents consisted of 73 males and 77 females concluding that both males and females were willing to answer the survey. Among the 150 respondents, 65 are aged between 18 – 25 years which is about 43.33%, 51 are aged between 26 – 30 years which is about 34.00%, 21 are aged between 31 – 35 years which is about 14.00% and only 13 are more than 35 years old which is the only 8.67% of the whole. It can be deduced that out of the random accounting employees, mostly young adults were willing to contribute to this survey. The majority of respondents are bachelor's degree holders which are around 46.67%, followed by master's degree holders which are around 26.67% and higher school certificate holders which are around 15.33%. Most respondents (51.33%) have less than 5 years of experience. The second was 5 – 9 years (32.00%), followed by 10 – 14 years (10.67%). The least number of respondents have more than 15 years of experience (6.00%). It can be deduced that junior employees, senior employees and interns were more willing to participate in this survey. Managers, supervisors, CEO, administrative officer and business talent were least interested in this survey. The percentages of their responses were 4.00%, 1.33% 1.33%, 0.67% and 0.67% respectively. In total, 29 companies have been using AIS for more than 10 years and only 26 companies have been using AIS for less than 1 year. It can be found that most companies in Mauritius have a piece of knowledge about the impact of AIS on the performance of companies.

The mean, mode and median have been calculated for each variable studied. Most respondents agreed to the implementation, effectiveness, accuracy, reliability of AIS and its impact on performance of companies, as the mean, mode and median are all based on the value 4 which is the coding for agree in SPSS. Hence, it was firstly concluded that the all hypotheses would be accepted, however further testing were needed to confirm this statement.

Cross-tabulation have been used for the Pearson Chi-Square test as same helps to analyse the relationship between the different variables. It was concluded that in accordance with the Pearson Chi-Square test, which was less than 5 for all the variables studied, all the hypotheses would be accepted.

A test to determine whether data is normally distributed or not was conducted, so as to decide which test would be chosen. A Kolmogorov-Smirnov test was used and the p-value for implementation, effectiveness, accuracy, reliability and performance were equal to 0.000 which is less than 0.05. It was concluded that data is not normally distributed, and a Spearman Correlation should be done

Table 1 - Spearman Correlation

			Correlations				
			IMPLEMENTATION	EFFECTIVENESS	ACCURACY	RELIABILITY	PERFORMANCE
Spearman's rho	IMPLEMENTATION	Correlation Coefficient	1.000	.554**	.690**	.642**	.578**
		Sig. (2-tailed)	.	.000	.000	.000	.000
		N	150	150	150	150	150
EFFECTIVENESS	EFFECTIVENESS	Correlation Coefficient	.554**	1.000	.707**	.736**	.583**
		Sig. (2-tailed)	.000	.	.000	.000	.000
		N	150	150	150	150	150
ACCURACY	ACCURACY	Correlation Coefficient	.690**	.707**	1.000	.705**	.609**
		Sig. (2-tailed)	.000	.000	.	.000	.000
		N	150	150	150	150	150
RELIABILITY	RELIABILITY	Correlation Coefficient	.642**	.736**	.705**	1.000	.589**
		Sig. (2-tailed)	.000	.000	.000	.	.000
		N	150	150	150	150	150
PERFORMANCE	PERFORMANCE	Correlation Coefficient	.578**	.583**	.609**	.589**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	.
		N	150	150	150	150	150

** . Correlation is significant at the 0.01 level (2-tailed).

As shown in the Gable 1 illustrating the results of the Spearman Correlation test, the independent variables and dependent variable are all positively significantly correlated. This means that **H1**, **H2**, **H3** and **H4** are accepted.

Since the correlation coefficient range from -1 to 1, it can be deduced that there is a positively strong correlation between all independent variables which are implementation, effectiveness, accuracy and reliability of AIS, and the dependent variable, which is performance of companies in Mauritius, as the Spearman's coefficient are 0.578, 0.583, 0.609 and 0.589 respectively. It can be concluded that implementation, effectiveness, accuracy and reliability of AIS have a strong positively statistical correlation with performance of companies.

Many previous findings that have been mentioned earlier support this argument such as Jaleel and Alfartoosi (2022), Kurniawati and Saputra (2019), Klinsukhon and Ussahawanitchakit (2016) and Jarah and Iskandar (2019), who found a statistically significant correlation between AIS characteristics and companies' performance in their studies.

Conclusion

Accounting is an important aspect of every company. However, companies nowadays have to adapt with the changing technological working environment and make AIS a part of the company. The findings of the study concludes that AIS does have a positive impact on performance of companies in Mauritius. The independent variables, Implementation, effectiveness, accuracy and reliability of AIS, were proved to positively impact performance of companies in Mauritius. All data that were collected from the survey were analysed and all results were positive. It can

successfully be concluded that factors of AIS do impact performance of companies in Mauritius positively. It is recommended for a small island developing state like Mauritius to do more awareness programmes about the positive impact that AIS has on performance of companies. Moreover, it is recommended that most companies must now include AIS as part of their operations. The importance of AIS must be demonstrated to everyone in the organisation especially to the younger generations of the workforce. They should be provided with training about the importance and use of AIS and this will help them to adapt quickly to the new working systems.

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An Informative Review of Selected Aspects of The Legislative Framework on The Banking Sector of Mauritius

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ABSTRACT: Considering the immense significance of the banking industry, and specifically the Bank of Mauritius as the apex banking organisation of the country, this article tries to give an overall understanding of selected aspects of banking, including licensing procedures, gaining control of a bank, protecting depositors, bank secrecy requirements, insolvency-related issues, and environmental, social, and governance (ESG) requirements. This paper's main goal is to update and inform people with a keen interest in Mauritius' banking industry on the most current changes and advancements in the aforementioned areas.

Introduction

There are 19 banks in Mauritius, including 5 local banks, 12 foreign banks (mostly subsidiaries and a few branches), 1 joint venture, and 1 private bank with a license. The Bank of Mauritius (BoM) has granted each bank a license to conduct banking operations both domestically and abroad. The breadth of services offered in the banking sector sets it apart. Banks provide card-based payment services, such as credit and debit cards, internet banking, and phone banking, in addition to traditional banking services (Mauritius Bankers Associations). Banks also provide specialized services including fund management, custodial services, trusteeship, structured lending, structured trade finance, international portfolio management, investment banking, private client operations, treasury, and specialized finance. Corporate, institutional, and private clients can choose from a variety of foreign banking and financial services provided by the international banks. In Mauritius, some of the biggest and most reputable international banks can be found operating actively across international borders. The domestic banking sector has performed satisfactorily, as revealed by the official data from the Bank of Mauritius' Financial Stability Report for December 2020, despite the severe shocks that have recently affected the global banking scene (Mauritius Bankers' Association).

As the specifically assigned AML/CFT supervisory body for the financial institutions that fall under its jurisdiction, the Bank of Mauritius is obligated to oversee those institutions with regard to the AML/CFT regulations. Bank of Mauritius licensees under the National Payment Systems Act 2018 and all banks, non-bank deposit taking institutions, cash dealers, and money lenders are referred to as "Financial Institutions" and are subject to regulation by the bank (Ramphul, 1998). Given the huge importance of the banking sector and the Bank of Mauritius in particular in Mauritius, this article attempts at providing an overview of selected aspects such as licensing procedures, acquiring control over a bank, protection of depositors, bank secrecy requirements and insolvency-related issues and Environmental, Social and Governance (ESG) Requirements. The primary purpose of this paper is to inform stakeholders interested in the banking sector of Mauritius about the recent developments and updates regarding the above mentioned aspects.

Research Methodology

This article adopts a doctrinal legal research methodology which focuses on the analysis of legal provisions from legislations, followed by a critical assessment of the scope and substantive contents of the laws. The legal provisions pertaining to the selected aspects of the banking sector of Mauritius have been critically read and analysed in view of gauging its effectiveness and relevance in the modern set-up within which the banking sector currently operates. By so doing,

recommendations can then be formulated based on the criticisms that are highlighted from the doctrinal legal approach.

Results and Discussions

Legislative Framework on Banking in Mauritius

The Bank of Mauritius Act of 2004, the Banking Act of 2004, and any regulations or guidelines issued by the Bank of Mauritius (BoM) pursuant to those Acts serve as the primary regulatory framework for the banking industry in Mauritius. The Bank of Mauritius Act of 2004 established the BoM as the nation's central bank and outlines its goals, prerogatives, and duties. The licensing, operation, regulation, and supervision of banks and other financial institutions (such as non-bank deposit taking institutions and cash dealers) are outlined in the Banking Act of 2004. According to this Act, the BoM has broad authority and the right to impose rules relating to the operations, activities, and standards those banks and other financial institutions must uphold. The BoM may also provide instructions or guidelines. The use of cloud services, governance, ESG, capital adequacy, outsourcing, liquidity risk management and other prudential measures, application of Basel III, and AML/CFT, among other topics, are just a few of the guidelines that have been released thus far and are regularly updated.

The Financial Intelligence and Anti-Money Laundering Act, the Prevention of Terrorism Act, the Prevention of Terrorism (International Obligations) Act, and the United Nations (Financial Prohibitions, Arms Embargo, and Travel Ban) Act are among the additional laws that apply to the banking industry and are referred to as "banking laws" under The Banking Act and are related to AML/CFT under the supervision of the BoM. Other laws that are pertinent to the banking part are included below in addition to the basic laws such the Companies Act, the Insolvency Act, and Income Tax.

Another important piece of legislation is the National Payment Systems Act. The primary goal of this Act is to ensure the public's safety, security, efficiency, and accessibility of the national payment systems and payment systems being operated in Mauritius. This Act also places these systems under the BoM's control. The Public Debt Management Act, which gives the BoM authority to issue and oversee government-issued loans. The Mauritius Deposit Insurance Scheme Act establishes a program to: (a) safeguard insured depositors of a bank or non-bank deposit-taking institution by offering insurance against the loss of insured deposits; and (b) By ensuring that depositors quickly have access to their insured deposits in the case of a bank or non-bank deposit taking institution failure, you may help maintain the stability of Mauritius' financial system. The Financial Services Act of 2018 enables the creation of the Office of the Ombudsperson for Financial Services, which will accept and handle consumer complaints about financial companies.

Licenses and Application Process

The "banking business" (as defined below) is a regulated activity in Mauritius, and any firm wishing to engage in such business operations must first get a license from the BoM. A potential applicant may work in the financial industry, Islamic banking, digital banking, or private banking (Ayadi et al, 2016).

The term "banking business" refers to the following: "(i) the business of accepting sums of money in the form of deposits or other funds, whether or not such deposits or funds involve the issue of securities or other obligations howsoever described, withdrawable or repayable on demand or after a fixed period of time or after notice; and (ii) the use of such deposits or funds, either in whole or in part, for: - (A) loans, advances or investments, on the own account and at (B) the business of purchasing an asset from a supplier pursuant to an agreement with a person for the purpose of

leasing the asset to the person, subject to payment of installments and the option to retain ownership of the asset at the conclusion of the contractual period; (iii) paying and collecting checks drawn on or paid into bank accounts by customers and making other payment instruments available to customers; and (iv) incidental and necessary banking services.

Islamic banking refers to any financial enterprise whose goals and operations, in addition to following the generally accepted principles of sound governance and risk management, are in line with Islam's ethos and value system (Beck et al, 2013). According to the Act, "banking business carried exclusively through digital means or electronically" means "banking business carried on." The term "private banking business" refers to the activity of providing high-net-worth clients with banking and financial services and products, including but not limited to an all-inclusive money-management relationship. A bank with a license to conduct only private banking business or strictly Islamic banking activity may submit an application to the BoM to only carry out its licensed activities via digital or electronic delivery channels. As a result, a license for banking, Islamic banking, digital banking, private banking, or all of the above may be issued to an applicant.

A body corporate, which can assume various forms in this context, is required to apply for a banking license. The applicant may be a standalone organization, a branch of a foreign bank, or a subsidiary. The BoM may define additional requirements or exemptions from the appropriate legal, regulatory, and supervisory framework, depending on the form the applicant chooses to take. Any application for a banking license, regardless of type, must be submitted to the BoM together with a MUR250, 000 non-refundable processing fee and a properly completed application form. The BoM will examine and approve the application. Therefore, it is advised that the applicant interact with the BoM to make sure that it receives all of the information it needs.

In order to evaluate whether the applicant is suitable for a banking license, the BoM also has broad authority to seek any material it thinks essential. Typically, this information would be substantial information regarding the applicant's competence and skill to meet the relevant licensing standards. A business plan outlining the prospective company's nature, organizational structure, internal controls, and projected financial statements, including anticipated cash flow statements, must be submitted by the applicant, among other things. The applicant must show that it has at least ten full-time officers who are appropriately qualified, including the CEO, the deputy CEO, and important functional heads. Additionally, the applicant must have its main office in Mauritius, and its annual operational expenses must be less than MUR25, 000,000.

An applicant will need to show that it has the necessary policies, practices, and controls in place to satisfy the licensing criteria, including the minimum capital and liquidity ratio and other regulatory, statutory, and prudential specifications as may be specified by the BoM (Repullo, 2004). The BoM may give an in-principle permission subject to the terms and conditions it deems appropriate while awaiting the application's final decision. However, the applicant must not interpret an in-principle approval as a license to conduct banking activity or as giving rise to any justifiable hope that the application would be approved in its entirety. If the applicant fails to meet the requirements set forth in the permission's terms and conditions, the in-principal approval will automatically expire.

Requirements for Acquiring or Increasing Control over a Bank

According to Section 33 of the Banking Act of 2004, the BoM must be consulted before any individual intends to acquire or enhance their influence over a bank in a way that results in that person directly or indirectly acquiring (a "significant interest"). Important interest in this context is defined as directly or indirectly owning, alone or jointly with an associated party, or otherwise possessing a beneficial interest amounting to, 10% or more of the capital or of the voting rights of a financial institution; directly or indirectly having the authority to appoint, alone or jointly with a

related party, 20% or more of the total membership of the board of a financial institution; or directly or indirectly applying a substantial interest.

Any person wishing to acquire a significant interest in a bank must notify the BoM at least 30 days in advance. This notice must include, among other things, the name, background in business, personal history, and experience of the person making the acquisition as well as any other parties involved. It must also be accompanied by a certificate of good standing from a competent authority attesting to the applicant's and any other parties' financial standing, as well as any intentions or suggestions that the party making the acquisition may have to liquidate the financial institution, sell its assets, merge it with another business, or make any other significant changes to its operations, organisational structure, or management.

The BoM also has the discretionary authority to request any further information it sees fit. Before approving a proposed acquisition, the BoM must take into account a number of factors, such as (a) whether the proposed acquisition would result in undue influence, a monopoly, or substantially lessen competition; (b) whether the financial situation of any acquiring person might jeopardize the financial stability of the financial institution or prejudice the interests of its depositors; and (c) the competence, experience, or integrity of any acquiring person, or of any proponent. The convenience and needs of the community or market to be served will not be met by the proposed acquisition, and many purchasing parties fail to provide the BoM with all the necessary information. In Mauritius, there are no limitations on foreign stockholders. Any acquisition that violates Section 33 of the Banking Act would be regarded as void and without the right to vote or receive dividends.

Anti-Money Laundering and ML and Combating the Financing of Terrorism Requirements

As an associate member of the Financial Action Task Force (FATF), Mauritius is an original founding nation of the Eastern and Southern Africa Anti-Money Laundering Group. In order to demonstrate its commitment to the global community and the fight against money laundering and terrorism financing (ML/TF), Mauritius has also approved and joined a number of global conventions, protocols, and treaties (Ramlall et al, 2017).. The Financial Intelligence and Anti-Money Laundering Act of 2002, the Financial Intelligence and Anti-Money Laundering Regulations of 2018, the United Nations (Financial Prohibitions, Arms Embargo, and Travel Ban) Sanctions Act of 2019, the Prevention of Terrorism Act of 2002, the Convention for the Suppression of the Financing of Terrorism Act of 2003, the Financial Services Act of 2007, and Part VIIIA of the Ban are the various legislations.

The BoM is expected to oversee financial institutions with regard to the AML/CFT requirements outlined in the banking regulations since it is the designated AML/CFT supervisory authority of the financial institutions falling under its scope. The BoM has released a guideline on "Anti-Money Laundering and Combating the Financing of Terrorism and Proliferation" (the "BOM Guideline") to provide direction and aid banks in complying with their AML/CFT duties. The Guideline outlines the general guidelines for how financial institutions (including their branches and subsidiaries), members of their board of directors, management, and staff members should conduct themselves in order to fend off ML/TF.

The BOM Guideline emphasises that in order to comply with the pertinent AML/CFT statutory and regulatory obligations, financial institutions and their senior management have to establish and enforce their own policies, procedures, and controls (Beebeejaun, 2020). In order to reduce and successfully manage the risks of ML/TF, banks must, among other things, undertake risk assessments and use a risk-based approach to their client due diligence protocols, controls, and procedures (Ross et al, 2007). Any examination of ML/TF risks must take into consideration all other pertinent risk variables, including the type of transaction or product offered, the size and location of the customer, as well as the nature, scale, and scope of the bank's operation.

Additionally, banks are required to notify the Financial Intelligence Unit (created under FIAMLA) of any transactions that raise a plausible suspicion of money laundering or terrorist financing. Banks are legally required to designate a compliance officer and a money laundering reporting officer (MLRO) as part of corporate governance. The BOM Guideline suggests that the MLRO and compliance officer be two different people. The choice of whether the compliance officer can additionally perform MLRO duties is left up to the financial institutions. If found guilty of violating the BOM Guideline, the offender faces a fine of up to MUR1 million and an additional MUR100,000 penalties for each day or portion of a day that the offense goes unpunished if it is not corrected.

Depositor Protection

In order to give depositors with security, up to a specific amount, in the event that one of the licensed banks or non-bank deposit taking institutions fails (Garcia, 1997), the Mauritius Deposit Insurance Scheme was established under the Mauritius Deposit Insurance Scheme Act 2019 (the "Act"). The Mauritius Deposit Insurance Corporation Ltd, frequently referred to as the agency, is in charge of managing and administering the program. The agency's duties and responsibilities include, among others, managing the funds deposited into the deposit insurance fund, accumulating premium payments, paying compensation for insured deposits, and giving depositors other ways of getting their insured funds. The depositor protection scheme's coverage area includes any Mauritius resident who is qualified to receive compensation for an insured deposit in the event that a deposit-taking institution fails.

Deposits made in local and international currencies are both protected under the program, up to a specific amount. Yet they have to fall into the following categories: time deposits that are made in Mauritian currency and foreign currencies; deposits in current accounts in both Mauritian currency and foreign currencies; and other similar deposits or amounts as the agency's board can decide on.

Any deposit of no more than the amount of any debt owing by a depositor to the deposit taking institution if such debt is matured or past due, or the highest amount that would otherwise be eligible for compensation, whichever is lower, is not protected under the scheme. Additionally, any deposit of a related party, any deposit that is frozen by a court order, and sui generis deposits are not protected under the scheme. The maximum amount of coverage per insured depositor is MUR300,000 or any other sum that may be required by law. The insured depositor may be entitled to deposits in excess of the coverage restricted or insured amount if sufficient money are recovered after the sale of the failing deposit taking institution's assets.

Payments for insured foreign currency deposits are made in Mauritius rupees, with the agency setting the exchange rate. Banks and non-bank deposit taking entities pay the majority of the scheme's premium contributions. These financial institutions are expected to contribute to the fund a premium of 20 cents per 100 rupees on their insurable deposits, or any other permitted premium amount. It receives funds in addition from interest or other income from investments made with the fund. Any investment made with money from the fund must adhere to the investment guidelines established by the plan and endorsed by the agency's board. Investments in deposit-taking institutions and high-risk securities are expressly prohibited by the investment policy.

Bank Secrecy Requirements

In addition to being strictly governed by legislation that has been created with that goal in mind, common law in Mauritius also governs bank secrecy (Rahman, 2014). English and French common law duties of confidentiality served as major sources of inspiration for the common law concepts. In a nutshell, the jurisprudence holds that the prohibition against disclosing information about a customer's account or any transactions with the bank to a third party is an implied term of the contract between a bank and its customer. A rigorous duty of confidentiality and non-

disclosure of any information that the bank holds about the customer is imposed under Section 64 of the Banking Act legally. According to Section 64(1) of the Banking Act, this obligation extends to everyone who has access to customer information while working with the bank on a professional basis, including service providers like accountants or external auditors. Additionally, according to Section 64(1), banking officers must swear an oath of confidentiality in the manner specified in the Banking Act's schedules.

There are some circumstances in which a bank may be allowed to divulge information about a customer, which qualifies the bank's obligation of confidentiality to its customers (Latimer, 1995). If the customer has given their express or implicit agreement, if there is a public responsibility to reveal, if the revelation will safeguard the bank's interests, or if the bank is required to do so by law or court order, information may be disclosed by the bank. A further law has been passed to provide additional regulators the authority to order a bank to reveal private information in response to a court order when there are good reasons to suspect severe crime, tax evasion, money laundering, fraud, corruption, or financing of terrorism. Among these regulators are the commissioner of police, the director-general of the Mauritius Revenue Authority established under the Mauritius Revenue Authority Act, the Enforcement Authority established under the Asset Recovery Act of 2011, the director-general under the Prevention of Corruption Act of 2002, and the chief executive of the Financial Services Commission established under the Financial Services Act of 2007.

When these statutory authorities have the right to request information disclosure from a bank, they are also subject to a confidentiality obligation when performing their statutory tasks. Any unauthorised disclosure of such information to a third party could constitute a serious criminal offence with harsh punishments. Both the Banking Act and the Mauritian Criminal Code have penalties for breaches of banking confidentiality. A violation of Section 64 is a crime under the Banking Act, punishable by a fine not to exceed MUR1 million and a sentence of imprisonment not to exceed five years. According to the Criminal Code, the violation is punishable by a fine of up to MUR 100,000 and a sentence of up to two years in prison.

Insolvency, Recovery and Resolution

The Financial Stability Board's Key Elements of Effective Resolution Regimes have not yet been applied in Mauritius. Conservatorship (Todd, 1994) is the primary tool for resolving a failing or bank that is likely to fail under the current legal system. If the BoM has good reason to believe that: the bank's capital has been harmed or that such impairment is imminent, it may appoint a conservator according to Section 65 of the Banking Act to safeguard the assets of the financial institution for the sake of its clients as well as other creditors. A conservator can additionally be appointed if the financial institution, its directors, or senior management officers participated in actions that are harmful to the interests of the bank's depositors, infringed any AML/CFT obligations or guidelines, or if the financial institution's assets are insufficient to adequately safeguard the bank's depositors or creditors. Upon the appointment of the conservator, the latter assumes complete control over the bank and is given the authority required to preserve, defend, and reclaim any of the financial institution's assets as well as to collect all money owed to the bank as well as any obligations owed to it. The conservator additionally enjoys the authority to completely or partially halt the repayment of any debts and current deposits of the financial institution. There is a 180-day deadline for the conservator to rescue the financial institution, unless the BoM decides otherwise.

When there is proof that a bank's capital is impaired or unsound, its capital-to-assets ratio is less than 2%, its operations are hazardous or illegal, their continued operation would be harmful to their clients' interests, or their license has been withdrawn, the BoM will appoint a receiver to manage and govern the bank. According to Section 77 of the Banking Act, the receiver must start the legal processes leading to the financial institution's assets being forcedly liquidated or take any

other actions necessary with regard to the financial institution within 30 days of taking possession, at the latest. The receiver has a broad spectrum of powers during the receivership, including the ability to manage, control, or shut down the activities of the financial institution, halt or restrict the financial institution's payment commitments, start, defend, and conduct any legal proceedings, suspend, in entirety or in part, the repayment or withdrawal of deposits and other liabilities of the financial institution, and interrupt or reduce the right of creditors to claim or obtain interest on any money owed to the financial institution.

During a forced liquidation, claims made against a financial institution's assets are resolved in the following priority order: necessary and reasonable costs, charges and expenses incurred by the receiver, including their remuneration; wages and salaries of officers and employees of the financial institution in liquidation for the three-month period preceding the taking possession of the financial institution; taxes, rates and deposits owed to the government of Mauritius; savings and time deposits not exceeding in amount MUR100,000 per account; other deposits; and other liabilities. According to the guidelines of Sub-Part II of Part III of the Insolvency Act 2009 (Insolvency Act), a financial institution may also be closed down. According to Section 100 of the Insolvency Act, a business may be wound up in one of three ways: through a court-issued winding-up order; a voluntary winding-up initiated by a resolution adopted by the company; or through a resolution of creditors adopted at the watershed meeting. A voluntary winding-up may take the form of either a shareholders' voluntary winding-up, in which case the liquidator is chosen at a shareholders' meeting when the business is solvent, or a creditors' voluntary winding-up, in which case the company is insolvent and the liquidator is chosen at a creditors' meeting. A liquidator is appointed and has custody and control over the financial institution's assets as of the start of a voluntary winding-up.

According to Section 91 of the Banking Act, in the event that a financial institution is wound up, all of its assets must be made available in the following priority sequence to pay off all of its deposit liabilities: deposit liabilities incurred by the financial institution with its customers; deposit liabilities incurred by the financial institution with other financial institutions; and other liabilities of the financial institution.

Horizon Scanning and Environmental, Social and Governance (ESG) Requirements

Globally, digital transformation and ESG have been recognized as essential to banks' continued existence and growth to meet client demand, new financing methods, and market expectations (Azmi et al, 2021). The government, the BoM, and the Financial Services Commission have been highly active in enacting laws regarding fintech, digital banking, the selling of virtual assets and tokens, ESG, climate change, green bonds, and sustainable bonds over the previous two years. A report on the "Future of Banking in Mauritius," written in partnership with the Mauritius Bankers Association and a global consulting firm, was released by the BoM in October 2022. The report lays out a clear strategy for the banking industry's future, which includes expanding in Asia and Africa as well as maintaining and upgrading services for domestic customers. Innovative goods and services, new technologies, and business models, as well as adherence to international norms and laws, environmental sustainability, and human capital development, are the main areas of development that have been recognised as being essential to achieving the goal. In these sectors, regulatory developments are anticipated.

The BoM has launched the following activities in relation to the financial risks brought on by climate change and environmental deterioration from the beginning of 2020. The Network of Central Bank and Supervisors for Greening the Financial System has welcomed it as a member. It published a Guide for the Issue of Sustainable Bonds in 2021. This guide was created to give a general overview of the procedures and guidelines for the issuing of sustainable bonds and their listing on markets authorized to operate in Mauritius. In keeping with this, the Financial Services Commission's Guidelines for the Issue of Corporate and Green Bonds in Mauritius, released in

2021, add to the Guide by expanding on different regulatory standards that issuers must adopt in accordance with global best practices for the issuance of green bonds.

The BoM opened its Centre for Climate Change. The second deputy governor serves as the chairman of the Centre's main committee, which has four task teams. The goals include incorporating climate-related and environmental financial risks into the BoM's regulatory, supervisory, and monetary policy frameworks; reviewing the BoM's internal operations with a view to reducing its carbon footprint and becoming a more sustainable organisation; looking into improving disclosures on climate-related and environmental financial risks; supporting the development of sustainable finance; building capacity and raising awareness for climate-related environmental and financial risks.

The BoM published a Guideline on Climate-related and Environmental Financial Risk Management in 2022, which took into account the proposals made by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) in its Supervisors' Guide, "Integrating climate-related and environmental risks into prudential supervision", published in May of 2020, in addition to other pertinent guidance published by the NGFS, the Financial Stability Board, and the Basel Commitment. To increase the banking industry's resistance to these risks, the Guideline outlines the expectations for a sensible approach to financial risks related to the environment and the climate. Its goal is to help financial institutions integrate strong governance and risk management frameworks for financial risks associated with the environment and the climate into their current risk management frameworks. Additionally, banks will be in a better position to recognize the opportunities and hazards associated with the shift to a low-carbon and more circular economy and take those factors into account in their strategy, interactions with counterparts, and other decision-making procedures.

The Guideline also defines the basic guidelines that banks may follow when creating their financial disclosures relating to the environment and the climate. The requirements of the Guidelines apply to various aspects of the organization and operation of the banks, including their business model and strategy, governance, internal control structure, and risk management. They additionally apply to the use of scenario analysis and stress testing, as well as the disclosure of information about the financial risks related to climate change and the environment to which they are exposed, as well as the potential effects of material risks and their risk management strategies. The disclosure requirement will go into effect for the fiscal year ending December 31, 2023.

Conclusion

It can be safely stated that the legislative framework on the selected aspects of the Mauritian banking sector are aligned with international norms and standards. The banking sector in Mauritius offers numerous dependable advantages that have aided in its success. With one of the most stable and business-friendly economies in the region, it has been directing investments for decades as it sits at the intersection of Asia and Africa. The banking industry in Mauritius, however, also faces a number of difficulties and dangers. To guarantee Mauritius retains its position and development as a desirable International Financial Centre, these issues must be resolved. Delivering world-class services to African and Asian clients while serving as one of the primary bridges linking the rest of the world to Africa is the worldwide vision for the future role of the Mauritius banking sector. The banking industry in Mauritius has outlined a distinct, aspirational, and achievable strategy for the future: to keep enhancing the home market's level of service and to broaden its reach internationally, particularly in Asia and Africa.

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The Declining trend of Wetland in Chefa (Amhara Region, Ethiopia) and its Impact on Local Ecosystem Services

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ABSTRACT: The objectives of this study were to study the perception of local community towards wetland ecosystem, assessing existing ecosystem services, investigating drivers, pressures, state (detecting land use/land cover changes observed in the wetland), impacts, responses, discovering the challenges and forwarding potential conservation strategies of Chefa wetland ecosystem. The study employed household survey, key informant and observation data collection techniques and adapted the driver, pressure, state, impact, response framework to assess ecosystem service. Statistical Package for Social Sciences and Micro Soft Excel were used to analyze respondents view. Geographic Information System, Remote Sensing and Earth Resources Data analysis System techniques were used to generate and analyze historical data regarding changes in wetland area coverage. The study explored the perception of local community towards wetland and large numbers of respondents has low perception towards wetland services especially regulating and supporting services. The wetland provides an estimated 721,000 and 845,000 quintals of crop, fruit and vegetable food provisioning services respectively. An average number of 6,230 fish, 60,931.4 tons of feed for livestock and 60,931.4 tons of sand is gained from the wetland ecosystem. Water, medicinal plants and thatching grass are also the vital provisioning services rendered by Chefa wetland. Valuable cultural benefits; religious gathering, wedding ceremony celebration, health benefits and educational services, regulation services; flood prevention and local climate conditioning; supporting services such as habitat for varied fauna and flora were found to be important services of the wetland. Various drivers such as population and policy exerted pressures like overexploitation of resources and inappropriate farming practices which in turn altered the state of the wetland manifested in terms of decrease in wetland area coverage, species composition and disruption of ecosystem services. The wetland area of 7,490.04ha in 1988 was declined to 1,815.91ha in 2018 which means 75.76% is changed to different land use/land cover classes. Different challenges contributed to the inexistence of management practices in the study area such as low understanding of ecosystem services by local communities, planners and practitioner, absence of appropriate wetland management policy, complete dependence on the wetland resources, climate variability etc. So, actions such as awareness raising, family planning, diversifying livelihood etc. need to be implemented to minimize the root causes/drivers of change on the wetland and to ensure its sustainability.

KEY WORDS: Ecosystem Services, Wetland, Conservation Strategies, Spatial change

Introduction

Wetlands are one of the most robust divisions of natural infrastructure i.e. the topography of earth surface. Wetlands typically and significantly offer a variety of services and benefits to human society, earth's natural ecology or ecosystems and they have played a central role in human development throughout history. Wetlands are the most productive and diverse ecosystems hydrologically and ecologically both. And as a result they are able to deliver a wide range of ecosystem services (ESs) of value to people and society living nearby in and around. Ecosystems generate services that contribute to human welfare and wetlands can be considered a form of wealth.

Wetlands are among the most valuable ecosystems on the planet. As described in Mitsch and Gosselink (2015, pp. 3–4) and earlier editions:

Although the value of wetlands for fish and wildlife protection has been known for a century, some of the other benefits have been identified more recently. Wetlands are sometimes described as kidneys of the landscape because they function as the downstream receivers of water and waste from both natural and human sources. They stabilize water supplies, thus mitigating both floods and drought. They have been found to cleanse polluted waters, protect shorelines, and recharge groundwater aquifers. Wetlands also have been called nature's supermarkets because of the extensive food chain and rich biodiversity that they support. They play major roles in the landscape by providing unique habitats for a wide variety of flora and fauna. Now that we have become concerned about the health of our entire planet, wetlands are being described by some as important carbon sinks and climate stabilizers on a global scale.

From thousands of years, river landscapes have been used as settlement areas, infrastructure and production areas. Ecosystem services are natural assets (Barbier 2011) produced by the environment and utilized by humans, such as clean air, water, food and materials and contribute to social and cultural well-being (Fischer et al. 2009) and have high economic value (Barbier et al. 1997, Emerton and Bos 2004, Turner et al. 2008). Wetlands are among the world's most productive and valuable ecosystems. They provide a wide range of economic, social, environmental and cultural benefits. Wetlands provide a wide range of ecosystem services that contribute to human well-being and in recent times they have been broadly classified as provisioning, regulating, cultural and supporting (MEA 2005). These services include maintaining water quality and supply, regulating atmospheric gases, sequestering carbon, protecting shorelines, sustaining unique indigenous biota, and providing cultural, recreational and educational resources (Dise 2009). Despite covering only 1.5% of the Earth's surface, wetlands provide a disproportionately high 40% of global ecosystem services (Zedler and Kercher 2005).

Population growth, economic development, the increasing intensification of freshwater (-resources) and land use (infrastructure development, land conversion, water withdrawal, eutrophication and pollution, overharvesting and overexploitation, and the introduction of invasive alien species.) are the primary direct and indirect drivers of the degradation of wetland ecosystems. The associated changes lead to a shift in the available functions and the associated services of river landscapes and are the reasons why the degradation and loss of wetlands is more rapid than that of other ecosystems wetlands.

However, much of the researches into wetland Ecosystem Services have focused on large wetlands receiving protection under various designations and in contrast the "small patches" of wetlands that are often overlooked and unprotected, due to their omission from wetland inventories, can play a pivotal role in the delivery of a number of important ecological services. These include: water quality regulation; hazard control (e.g. flood risk); numerous resources for human uses; habitats for plants, animals and micro-organisms; recreational opportunities; and the aesthetic value of the countryside. Much of this ability to deliver ESs arises out of their position within the landscape, as they are often located at significant positions along hydrological pathways where they are able to interact with waters draining agricultural land (Baker et al. 2009), or provide wildlife refuges within agricultural systems (Trochlell and Bernthal 1998).

It is universally understood that wetland ecosystems play an important role in ecological, economic, social and cultural functions. Wetlands (mainly rivers and their associated flood plains) have been the heart of human civilization (Mateos, 2004). Wetland ecosystems played a key role throughout the development and survival of the humanities. Since the 1971's Ramsar convention, the issue of wetlands has dominated the discussions. Seldom people missed to realize the importance of wetlands for their sustenance. Majority of people assume that wetlands are common resources to exploit and are in abundance and anyone is entitled to use them (Schuyt, 2005). Many people have not observed wetlands are either drained or lost and need proper management. Studies show that 50% of the world's wetlands have been disappeared in the past century (Gourbesville, 2008).

Ethiopia possesses a great diversity of wetland ecosystems (shallow lakes, rivers and streams, swamps/marshes, flood plains, reservoirs and ponds, and high mountain lakes) as a result of the formation of diverse landscape; however, wetlands and their resources are not fully documented (Siraj, 2004). These wetland ecosystems have been providing various services including water, grass, agricultural land, wild life, recreational, flood mitigation as well as spiritual and cultural values. Their uses also include a source of pasture during dry seasons (Shewaye, 2008).

Chefa wetland is one of the largest wetlands of Ethiopia found in Oromia Special Administrative Zone in Amhara Region that provides a wide variety of ecosystem services to its local inhabitants. The wetland provides multiple provisioning services to the local communities and peoples in its vicinity. It is a shelter to 50,000 Afar and Oromo pastoralists and provides feed source for their 200,000 livestock (Gutema, 2003 as cited in Tessema et al., 2013). It has an immense importance as environmental, socio-economic services as well as for the sustenance of the local community.

The purpose of the present study is to measure the declining trend of areal extent of Chefa wetland and also to evaluate and make assessment of the ecosystem services provided by it, the major drivers of changes, challenges for its conservation and the potential conservation strategies to protect and preserve the Chefa wetland.

Literature Review and Background of the study

The concept of Ecosystem Services (ES) originated in the 1970s and gained importance in environmental discussions in the 1990s. According to the “Millennium Ecosystem Assessment”, ES are the interface between ecosystems and human well-being and can be defined as the benefits that humans can derive from ecosystems (MEA 2005b). Vemuri and Costanza (2006) found a significant relationship between natural capital (in terms of ES) and life satisfaction. The concept of ES thus also represents an important approach to making services and functions provided by ecosystems “tangible” and to communicating their significance to various stakeholder groups. Therefore the ES concept can also play an important role in knowledge transfer and in demonstrating the importance of ecologically functional river landscapes (e.g. Böck 2016); Poppe et al. 2016).

The concept of ecosystems as natural assets is already having an influence on how policymakers view wetlands. For example, the Changwon Declaration of the 10th Conference of the Parties of the Ramsar Convention states that “wetlands are vital parts of the natural infrastructure we need for addressing climate change” (Ramsar Convention 2008). Given that wetlands, which comprise coastal wetlands, freshwater swamps and marshes (including floodplains), and peatlands, amount to 6–8 million km² globally (Mitsch et al. 2009), these ecosystems are an abundant source of natural capital.

In identifying the ecosystem services provided by natural environments, such as wetlands, a common practice is to adopt the broad definition of the Millennium Ecosystem Assessment (MEA 2005) that “ecosystem services are the benefits people obtain from ecosystems”. Thus the term “ecosystem services” is usually interpreted to imply the contribution of nature to a variety of “goods and services”, which in economics would normally be classified under three different categories (Barbier 2007): (i), “goods” (e.g. products obtained from ecosystems, such as resource harvests, water and genetic material); (ii), “services” (e.g. recreational and tourism benefits or certain ecological regulatory and habitat functions, such as water purification, climate regulation, erosion control and habitat provision); and (iii) cultural benefits (e.g. spiritual and religious beliefs, heritage values).

To assess the contribution of nature in providing such “goods and services”, one needs to measure its impact on human welfare, or, as Freeman (2003, p. 7) succinctly puts it: “The economic value of resource-environmental systems resides in the contributions that the ecosystem functions and services make to human well-being”, and consequently, “the basis for deriving measures of the economic value of changes in resource-environmental systems is the effects of the changes on human welfare.” Similarly, Boyd and Banzhof (2007, p. 619) state that “final ecosystem services are components of nature, directly enjoyed, consumed, or used to yield human well-being.”

Regardless of how one defines and classifies ecosystem services, as a report from the US National Academy of Science has emphasized, “the fundamental challenge of valuing ecosystem services lies in providing an explicit description and adequate assessment of the links between the structure and functions of natural systems, the benefits (i.e. goods and services) derived by humanity, and their subsequent values” (Heal et al. 2005, p. 2).

The structure and functions of many wetlands can be uniquely defined by hydrological processes; it is possible to identify the spatial unit, or natural landscape, that is distinct to each type of wetland. In particular, different aspects of the hydrological system underlying wetlands and their services operate at different scales, e.g. surface inundation (flooding), water quality and biodiversity. Thus, as a wetland landscape varies in scale, due perhaps to conversion, draining or other human-induced disturbances, the impact on the provision of and synergies between wetland services can be substantial. Such a landscape approach is being used increasingly for assessing the cumulative effects of wetland loss and degradation, characterizing wetland boundaries and identifying restoration or mitigation opportunities (NRC 1995, Bedford 1996, 1999, Gwin et al. 1999, Mitsch and Gosselink 2000, Simenstad et al. 2006). It follows that the various goods and services provided by a wetland will also be tied to, and thus defined by, its landscape extent; i.e. “wetland values depend on the hydro geomorphic location in which they are found” (Mitsch and Gosselink 2000, p. 27).

If the hydrology-related services of wetlands are related to their landscape extent, then characterizing wetland ecosystems as natural assets is straightforward. In other words, as there are “reciprocal interactions between spatial pattern and ecological processes” (Turner 2005, p. 319), it is the spatially heterogeneous area of a wetland landscape that is the fundamental to its ability to provide the various wetland ecosystem services.

There are several studies that are focused on large wetlands and ignorant or overlooked small wetlands and they have often been viewed as problematic in terms of agricultural production and, consequently, have been subject to land drainage (Acreman and McCartney 2009). There is also some evidence that suggests these wetlands may be significant contributors to greenhouse gas emissions (Hefting et al. 2006, Matthews et al. 2009, 2010) and, in some cases, increase the potential for flooding (Bullock and Acreman 2003).

Wetlands play an important role in hydrological regulation (Bullock and Acreman 2003), but because of their ability to improve water quality through processes such as denitrification and sediment retention, they have been described as “kidneys of the landscape” (Mitsch and Gosselink 2007). However, in performing these processes, greenhouse gases can be produced that affect air quality and climate (Hefting et al. 2006). Furthermore, they can enhance biodiversity conservation (Pilgrim et al. 2010) by providing habitats for plants and animals (Hillbricht-Ilkowska 2008). In some contexts they may be part of productive systems, hence providing biological products.

Wetlands continue to decline globally, both in the area and in quality. As a result, the ecosystem services that wetlands provide to society are diminished. The state of the world’s wetlands involves a myriad of aspects of quantity and quality. Providing a historical perspective, the MEA (2005) reported that more than 50 % of the area of certain wetland types had been lost during the 20th century in parts of Australia and New Zealand, Europe and North America. It noted that

extrapolating this rate of loss to other regions or wetland types was “speculative only.” For example, according to Junk et al. (2013), the amount of loss of wetlands around the world varies between 30 and 90 %, depending on the region under consideration.

Davidson (2014) provides the most recent and comprehensive picture of historical wetland losses. In his study of 189 wetland assessments, Davidson estimated that wetland losses in the 20th century were 64-71 %, “and for some regions, notably Asia, even higher.” He found that “losses of natural inland wetlands have been consistently greater, and (have occurred) at faster rates, than (those) of natural coastal wetlands.” His review found that the extent of inland wetlands declined 69-75 % during the 20th century, while coastal wetlands declined 62-63 %.

Recent studies on a regional scale have generally produced similar negative findings, although the rate of loss varies significantly from region to region. For example, the Yellow Sea has been identified as an area of greatest concern in the East Asian-Australasian Flyway (MacKinnon et al., 2012). Using a remote sensing methodology, Murray et al. (2014) studied approximately 4,000 kilometers of the Yellow Sea coastline. They reported a loss of approximately 65 % of intertidal wetlands over the past 50 years. From the 1980s to the late 2000s, approximately 28 % of intertidal wetlands were lost, which constitutes a 1.2 % annual decline.

Wetland ecosystems, including rivers, lakes, marshes, rice fields, and coastal areas, provide many services that contribute to human well-being and poverty alleviation. Some groups of people, particularly those living near wetlands, are highly dependent on these services and are directly harmed by their degradation.

The local people are getting benefit from irrigation in the dry season, fishery, source of feed and water for their cattle. A study conducted by Tessema et al. (2013) on the role of Chefa wetland to the local communities around Kemissie provides some information with respect to provisioning services (crop, livestock, fishery, and mattress making). Moreover, the wetland provides significant habitat and support services. Gutema (as cited in Tessema et al. 2013) stated that the Chefa wetland host large number of bird species next to Lake Awassa. According to Getachew et al. (2011) there is great biodiversity in Chefa wetland area like; 2789 macro invertebrates belonging to 34 families, 3128 birds belonging to 57 species. But, these functions and services of wetlands are under threats from a wide range of causes. Wetland cultivation, overgrazing, wasteful use of water from feeder streams, conflict over limited grazing resource are reasons for the degradation of wetland ecosystem. The attention given to them by government institutions, local administrators, communities and other beneficiaries is very low or even non-existent in some circumstances.

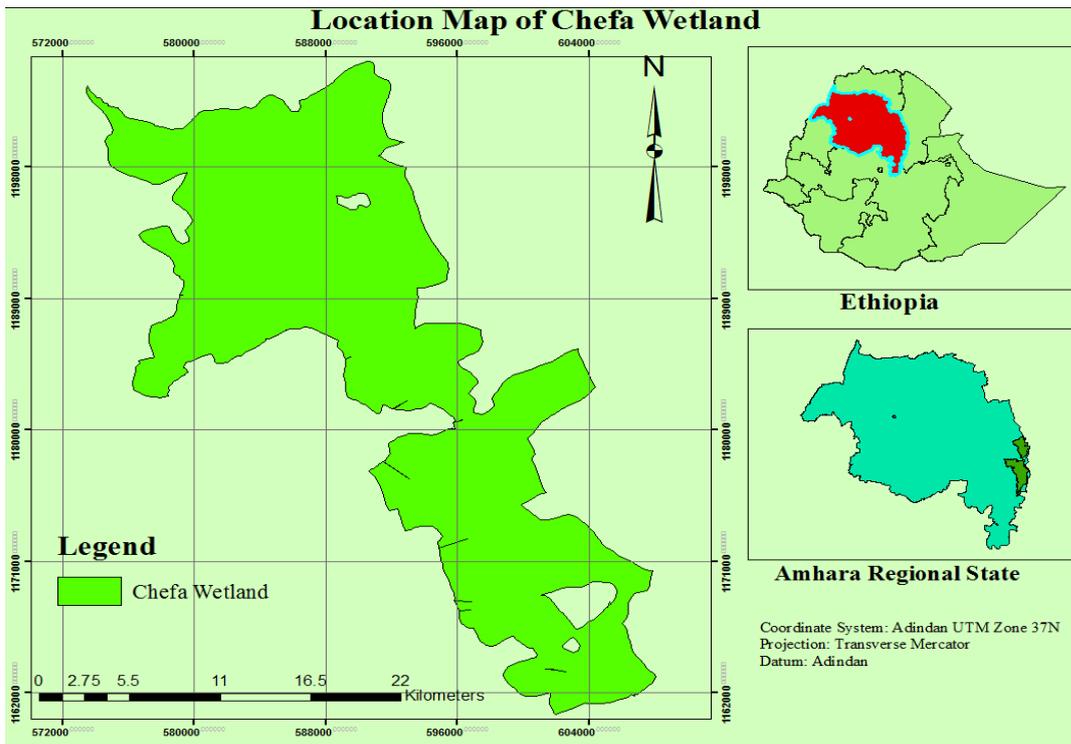
Wetland Ecosystem in Ethiopia is under pressure emanating from conversion into agricultural lands; especially for rice production, over exploitation of wetland resources, deforestation, soil erosion and land degradation, siltation, settlement, climate change and pollution. Fogera and Chefa wetlands in Amhara national regional state, for example, are highly affected by excessive use of swamps and flood plains for cultivation of rice and other horticultural crops. Moreover, Boye-Kito wetland located around the town of Jima and Lake Chelelaka in Bishoftu town has shrunk due to expansion of agriculture and urbanization (EBI, 2014).

Research Methodology

Study Area

Chefa wetland is located 300 km northeast of Addis Ababa, the capital of Ethiopia. The wetland plain is located within 10°32' to 10°58' N latitudes and 39°46' to 39°56' E longitudes. Its total area is 50,317.3ha. The wetland type comprises seasonal intermittent freshwater marshes on inorganic soils, including sloughs, seasonally flooded meadows, and sedge marshes. There is hot springs on the eastern side of the flood plains and a few isolated hills. The altitude of the wetlands

ranges from 1445 m to 1520 m above sea level, but altitudes exceed 2000 m and even 3000 m in the surrounding Ethiopian Highlands. The main feeder of the wetland system is the Borkena River, which is heavily silted during periods of rain.



From 19 kebeles (administrative Blocks) five kebeles were selected based on cluster hence one kebele from upper catchment and four kebeles (two from each) were selected from middle and lower catchment of the study area.

Research Design

The descriptive research design is used for this particular study since it helps to describe systematically existing situation, ecosystem services, perceptions and challenges towards these services, and to find out conservation strategies for the sustainable conservation of the wetland ecosystem.

The prime concern of this research is to study the perception of local communities towards wetland ecosystem, prevailing services of the wetland that are important to human wellbeing, socio-economy, wild fauna and flora. It also focused on identifying the major drivers, pressures, state, impacts, and responses, challenges of conservation and strategies to fix the challenges. So, the research method applied was inventories through field survey, direct observation, spatial mapping besides to assessing through semi-structured interview and survey questionnaires. Thus, the study collected data through participatory approaches, including key informants and experts' opinion, native knowledge of households and stakeholders, and trend analysis using GIS and RS. Moreover, it reviewed secondary data sources (Published articles, books and reports).

Sample Size Determination

The sample size of the present study is calculated based on Cochran (1963) formula. If the population is small then the sample size can be reduced slightly. This is because a given sample size provides proportionately more information for a small than for a large population. The sample size (n_0) can be adjusted using the following equation,

$$n = \frac{n_0}{1 + (n_0 - 1)/N}$$

Where, n=required sample size

n_0 = sample size without finite population correction

1=constant

N= the target population size

Thus, the final sample size at 93% of confidence level was:

$$n = \frac{n_0}{1 + (n_0 - 1)/N} = \frac{162}{1 + (162 - 1)/5334} = 157.$$

So, the final sample size (n) for the household survey was 157.

The sample size is distributed among five kebeles as follows;

S.No	Kebele Name	No.of Households	% share	No.of Samples
1	ChiretiDebeso	1892	35	56
2	Sitir	1170	22	34
3	BisheEdeda	943	18	28
4	Gerbi	750	14	22
5	Kelo	579	11	17
Total		5334	100	157

The respondents/households of respective kebeles were listed by order with their ID No given to them. Then after, systematic sampling with the formula n^{th} value was employed to select respondents from each kebeles. The study computed “ n^{th} ” value by dividing the size of the target population by the desired sample size where “n” is stands for the sampling interval.

$$\text{So, } n^{\text{th}} \text{ value} = \frac{\text{Target population}}{\text{required sample size}} = \frac{5334}{157} = 34 \text{ was sampling interval}$$

Some key informants are selected based on purposive sampling because they are more familiar and own more understanding in their respective profession/issues, not large enough for power of probability sampling and they provide crucial information based on field surveys, semi structured interviews and questionnaires for analysis and interpretation.

In order to analyze the spatio-temporal change of the wetland, Land sat imagery of 1988, 2003 and 2018 was freely downloaded from United States Geological Survey (USGS) website. These data were used to produce the historical land use/ land cover maps of the study area and wetland changes monitoring and mapping in particular. The source and acquisition date of these data are given in table below.

No.	Satellite image	Date of Acquisition	Path	Row	Resolution	Source	Application
1	Landsat5	05/03/1988	168	53	30m	USGS	LULC map
2	Landsat7	24/03/2003	168	52	30m		
3	Landsat8	27/03/2018	168	53	30m		

To collect, organize and analyze the relevant data the materials and software used are Earth Resources Data Analysis System (ERDAS Imagine 2014) for image pre-processing, stacking single bands, and supervise maximum likelihood classification of land classes, ArcGIS 10.3.1 for data analysis, management, spatial referencing, geo referencing and make layout for final mapping and the study area clipping process was operated by ArcGIS software.

Analysis and Discussion

Perception of Local Community towards Chefa Wetland Ecosystem Services

Household respondents were asked on a total of 12 services (Table 1) such as provide a place of beauty, conserve native plants and animals, help native animal movements, provide native fish habitat, increase bird life which in turn decreases pests, recharge ground water, help to trap and recycle nutrients, help control floods, help prevent soil erosion, provide recreational opportunities, an important source of income, and is valued by the community to put their level of agreement.

As clearly presented in table 6, from the total of 157 respondents that expressed their perception on the service provide a place of beauty, 54 (34.4%) replied disagree or not important, followed by 45 (28.7%), 34 (21.7%), 15 (9.6%) and 9 (5.7%) strongly agree, agree, undecided and strongly disagree respectively. The service conserves native plants and animals was selected by 73 respondents as not important (53 disagree and 20 strongly disagree) whereas 53 respondents perceive important followed by 31 undecided.

Concerning help native animal movements 145 respondents replied disagree (73), undecided (48) and strongly disagree (24). Seven of the total respondents replied agree and only five replied strongly agree. The wetland service habitat for native fish was recognized by large number of the household respondents, with 52.2% and 47.13% response rate of strongly agree and agree. Only, 0.6% the respondents disagreed with the service. This implies that the Chefa wetland ecosystem hosts native fish to a considerable level

The wetland service habitat for native fish was recognized by large number of the household respondents, with 52.2% and 47.13% response rate of strongly agree and agree. Only, 0.6% the respondents disagreed with the service. This implies that the Chefa wetland ecosystem hosts native fish to a considerable level. Regarding increasing bird life which in turn decreases pests 66, 37, 34, 14, and 6 respondents perceived or replied disagree, undecided, agree, strongly disagree and strongly agree respectively. This service was perceived less important or not understood at all by the majority of the respondents. On the service recharges ground water more than a quarter of respondents (40.76%) replied disagree and strongly disagree followed by 38.12 % replied agree and strongly agree. Few proportion (21.12%) responded undecided.

The other service selected to capture the perception of respondents was the role of wetland to trap and recycle nutrients. The frequency result shows that 60 (38.2%) replied disagree, 52 (33.2%) undecided, 23 (14.6%) strongly disagree, and 22 (14%) replied strongly agree and agree. Services such as flood control prevent of erosion, recreational opportunities and as a source of income were strongly agreed by six, five, 17 and 18 respondents respectively. There was no respondent who replied strongly agree for the variable named the wetland was highly valued by the local community. As well, 26,20,32,35 and one respondent replied agree for the stated services. Likewise, respondents with a size of 31, 33, 22, 26, and 1 replied undecided. This low understanding of respondents towards ecosystem services was explained by one key informant as 'Local communities perceive wetlands as the place only used to graze cattle and expand agricultural lands. This perception entirely stemmed from the low level and awareness towards nature and environment.'

Table 1: Summary of Perception of Household Respondents towards Chefa Wetland Ecosystem

Ecosystem Services	Level of Agreement									
	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	Number of respondents	%								
Provide a place of beauty	45	28.7	34	21.7	15	9.6	54	34.4	9	5.7
Conserve native plants and animals	11	7.0	42	26.8	31	19.7	53	33.8	20	12.7
Help native animal movements	5	3.2	7	4.5	48	30.6	73	46.5	24	15.3
Provide native fish habitat	82	52.2	74	47.1	0	0.0	1	0.6	0	0.0
Increase bird life which in turn decreases pests	6	3.8	34	21.7	37	23.6	66	42.0	14	8.9
Recharge groundwater	17	10.8	43	27.4	33	21.0	45	28.7	19	12.1
Help to trap and recycle nutrients	11	7.0	11	7.0	52	33.1	60	38.2	23	14.6
Help control floods	6	3.8	26	16.6	31	19.7	70	44.6	24	15.3
Help prevent soil erosion	5	3.2	20	12.7	33	21.0	78	49.7	21	13.4
Provide /recreational opportunities	17	10.8	32	20.4	22	14.0	64	40.8	22	14.0
An important source of income	18	11.5	35	22.3	26	16.6	55	35.0	23	14.6
Is valued by the local community	0	0.0	1	0.6	1	0.6	66	42.0	89	56.7

Asked whether they practice wetland conservation practices such as maintaining a tree/vegetation around wetland area, managing grazing access to wetland, action to restore drying of wetland, control of weeds in wetland or not, 155 (98.7%) of the participants replied ‘no.’ The remaining 2 (1.3%) respondents replied yes. The respondents present their own reasons for not undertaking conservation measures. From the total of 155 respondents who replied ‘no’, 78 (50.32%) replied wetland management is not my concern followed by 63 (40.64%) lack of knowledge. Cost and time as a constraint for not applying conservation measures were selected by 40 (25.8%) of respondents, 20 (12.9%) for each.

Provisioning Services of Chefa Wetland Ecosystem

A total of 19 provisioning services, namely food (fish, birds of different variety, leaves and fruits, crop), water (irrigation, drinking/both animal and human, household use/ washing, cooking), firewood, animal products from wildlife, wood for charcoal making, grass for fodder, thatching grass, sand and stone for construction, agricultural tools, and medicinal plants were listed and presented to respondents to select among them. Accordingly, medicinal plants were selected by 99.4% (Table 7) of the respondents which indicates its prominence as a provisioning service. Medicinal plants locally named ‘Tena Adam’, ‘KundoBerbere’, ‘Kentefa’, ‘Warka’, ‘Shiferaw’, ‘Ye LomiZaf,’ were used for both animal and human diseases healing. Water provisioning services such as drinking water and household use (washing, cooking) were selected by 98.7% and 97.5%

of the respondents respectively which shows the vitality of the wetland as a source of water for the local community. These provisioning services were gained from both ground and surface water sources like springs, deep wells and hand dug wells support household drinking whereas rivers and streams (Abaya, Beteho, and Borkena) utilized to meet the demand for household water uses such as washing, cooking, and livestock drinking.

Table 2: Provisioning Services of Chefa Wetland Selected by Household Respondents

Provisioning services	Number of respondents	%
Medicinal plants	156	99.4
Drinking water	155	98.7
Household use/washing, cooking	153	97.5
Thatching Grasses (for hamlets)	148	94.3
Crop	136	86.6
Fodder (Grasses)	134	85.4
Leaves and fruits of plants as fodder	114	72.6
Fish	102	65.0
Fuel wood	78	49.7
Irrigation	72	45.9
Animal products from wild life	61	38.9
Tool making/agricultural	57	36.3
Bird	57	36.3
Sand for construction	41	26.1
Bee Keeping	16	10.2
Wood for Charcoal making	2	1.3
Timber	0	0.0
Termite Hill (clay soil)	0	0.0

The other water provisioning service rendered by Chefa wetland was irrigation which was selected by 45.9% of the respondents. Irrigation for dry season cultivation was obtained from rivers (Abaya, Beteho and Borkena), community ponds and deep wells.

One of the key informants emphasized the key role of Chefa wetland as a water source for the local community as ‘Being known for its enormous water potential in the region, Chefa wetland provides the community with a lot of water source alternatives from surface (rivers) and ground water sources (rope pumps, hand dug wells and deep wells) for both household consumption and livestock drinking. Food provisioning service primarily crop was the life sustaining service of Chefa wetland selected by 136 (86.6%) of the respondents. The wetland ecosystem grows a broad variety of crops used for both household consumption and market. Cereal crops like Teff, Sorghum, Maize, Chick Pea, and Bean were some of the crops grown in Chefa wetland ecosystem.

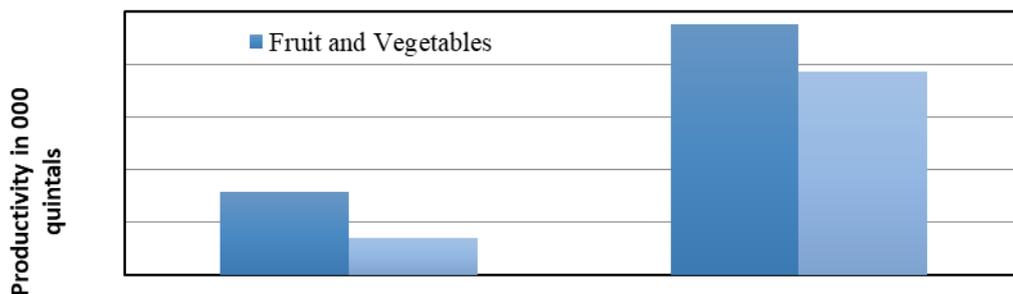


Figure 2: Crop, Vegetable and Fruit Production in the Study Area Using Irrigation in 2017

Cultural Services of Chefa Wetland Ecosystem

As shown in table 3, cultural services such as religious gathering and healing from diseases were selected by 155 (98.7%) and 152 (96.8) respondents.

Table 3: Summary of Cultural Services of Chefa Wetland

S.No.	Cultural Services	No.of respondents	%
1	Religious gathering	155	98.7%
2	Using hot springs for health benefit	152	96.8%
3	Swimming	98	62.4%
4	Recreation from viewing birds	92	58.6%
5	Wedding ceremony	40	25.5%
6	playing games	39	24.8%
7	Educational trip to the wetland	10	6.4%
8	Experimental/practical work	3	1.9%
9	Academic research	0	0.0%
10	Birthday ceremony	0	0.0%

Respondents also gave their witness for other services such as swimming (98) viewing birds (92), wedding ceremonies (40), playing games (39), educational trip to the wetland (10) and experimental/practical work (3). Academic research and birth day celebration were not selected by household respondents

Religious gathering was mainly practiced in the wetland during the sacred holydays of Muslims namely 'Eid Al Fatir (at the end of fasting month) and Eid Al Adha (after 70 days of Eid Al Fatir) to perform prayer. This activity was undertaken twice per year on the green fields/pastures of the wetland.

Hot springs, assumed as the miracles from the Creator among the locality, were valuable services of Chefa wetland recognized by the majority. They were not only used by those who got illness but also by those who were healthy since the hot springs are considered as a preventive mechanism against different diseases.

Among the participants one respondent has raised that 'Chefa wetland is a naturally gifted healing place for being endowed of its impressive hot springs. There is no need to visit health centers for diseases like skin and fever as long as the hot springs are there. Anybody, whether from the local resident or any other place else, can take bath in the hot springs without any payment for the service.'

Regulation Services of Chefa Wetland Ecosystem

The study has used six common regulation services of wetland ecosystem (Table 4) and household respondents were asked on each variable to forward their level of agreement based on their understanding and experience. Accordingly, from the total respondents 59 replied undecided followed by 58, 29, eight and three respondents replied disagree, agree, strongly disagree and strongly agree respectively for the service flood control. On the service ground water recharge 40.13% of the respondents replied agree followed by 26.11% disagree, 22.3 % undecided, 5.1% strongly disagree and 1.91% strongly agree.

Maintenance of fresh air and local weather conditioning was selected as inexistent service with 63 responses followed by 36 undecided responses. Respondents of 24, 20 and 14 size were replied agree, strongly agree and strongly disagree respectively. For the services maintenance of soil fertility, purification of water sources, and waste assimilation 60, 65, and 90 respondents were replied disagree, followed by 47,45,and 22 undecided , 32,29,and 32 agree, 11,13, and 10 strongly disagree, five, seven and three strongly disagree respectively. The survey result depicts that, majority of the respondents have low understanding on regulatory services of Chefa wetland ecosystem with the exception of ground water recharge which was responded strongly agree and agree by almost half (49.68%) of the respondents.

Table 4: Summary of Households Perception on Regulatory Services of Chefa Wetland

Regulation services/ Variables	Stro- ngly Agree	Agree	Unde- cided	Disagree	Strongly Disagree	Total
Flood control and water overflow prevention	3	29	59	58	8	157
Ground water recharge	15	63	35	41	3	157
Maintenance of fresh air and local weather conditioning	20	24	36	63	14	157
Maintenance of soil fertility	7	32	47	60	11	157
Purification of water sources	5	29	45	65	13	157
Waste assimilation	3	32	22	90	10	157

Supporting the response of few households' agreement and strong agreement some of the key informants clarified flood control and water overflow prevention service as stated under:

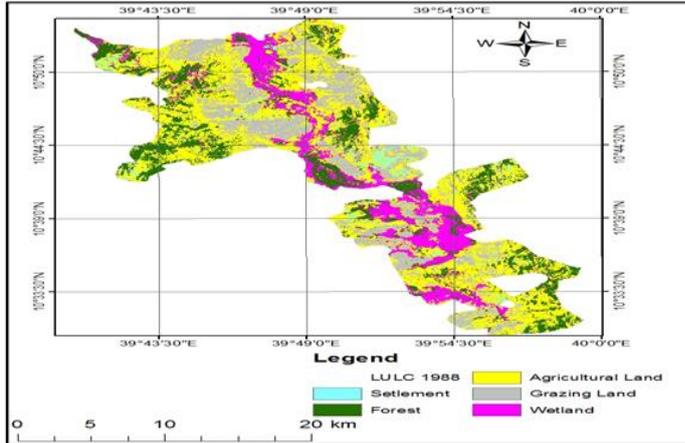
The flat geographic nature, which reduces the flood speed and the presence of marsh areas (areas with high absorption capacity) in Chefa wetland ecosystem, prevents the overflow and inundation of Borkena River to agricultural lands and settlements. The right witness for this service is observing the inundation of the flood plain during summer (rainy season in Ethiopia). If the wetland was not there the agricultural lands and settlements you see around the wetland were totally impossible to think.

In the same way, a remarkable idea was presented by one of the key informants on the service ground water recharge as follows: 'Percolation has a direct relationship with the slope, soil type and vegetation cover of a specific area. Chefa wetland ecosystem can be described as a sponge placed in a bucket of water. The gentle slope along its vegetation cover and fertile soil resources allows good percolation and storage capacity and less evapotranspiration as compared to highlands and surrounding areas. In addition to this, even though few in numbers, the swamps absorb both the high runoff and the incoming rain which in turn plays a pivotal role to recharge ground water significantly.'

Decrease in Spatial Extent of Chefa Wetland

Land use/Land cover in 1988:

The land use/land cover of the study area was classified in to five classes(Table 5) for the mentioned year. Agricultural and grazing land covered the largest portion of LULC with an area of 21,419.3ha (42.6%) and 11,030.02 ha (21.9%) respectively. Area covered by forest was



9,274.27ha (18.4%) whereas wetlands (swamps and water body) 7490.04ha (14.9%). The smallest proportion 1103.65 ha (2.2%) of the study area was covered by settlement.

Figure 3: Land use/land cover Map of the Study Area in 1988.

Table 1: Area Coverage of LULC in the Study Area 1988-2018

S.No	Class Name	LULC in 1988		LULC in 2003		LULC in 2018	
		Area (in 000'ha)	%	Area (in 000'ha)	%	Area (in 000'ha)	%
1	Agricultural Land	21.42	42.60	24.46	48.60	22.95	46.6
2	Forest	9.27	18.40	10.02	19.90	6.87	13.6
3	Grazing Land	11.03	21.90	9.13	18.20	15.27	30.3
4	Settlement	1.1	2.20	3.18	6.30	3	6.6
5	Wetland	7.49	14.90	3.49	6.90	1.90	3.8
Total		50.32	100.00	50.28	100.0	50.33	100.0

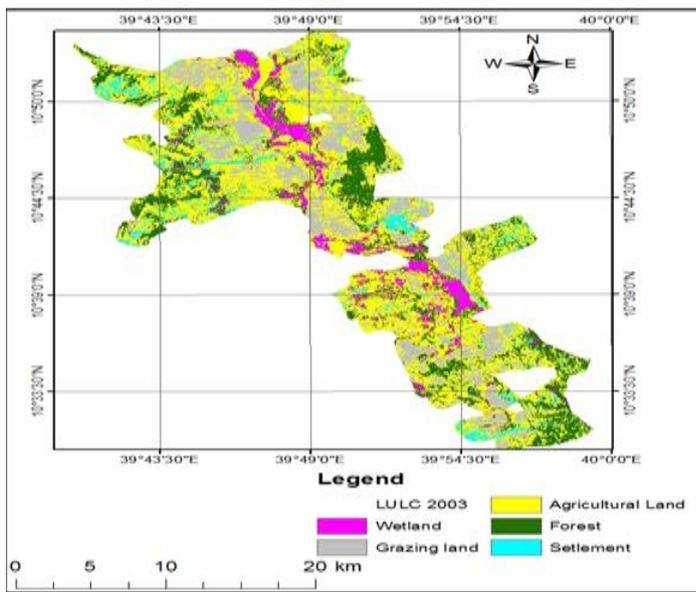


Figure 4: Land use/land cover Map of the Study Area

The pink color in the Figure 3, represents wetland (water bodies and marshes) which indicates the presence/distribution of these valuable resources in the upper, middle and lower catchment of study area for the 1988. This distribution of wetlands indicates the anthropogenic intervention in the study area were low for the mentioned year.

In the year of 2003 the Land use/Land cover after 15 years, moderate LULC changes were observed on agricultural land, settlement and forest land which showed 6.01%, 4.1% and 1.5% increase respectively (Table 5). On the other hand wetland area in 2003 undergone dramatic decline figuratively expressed as 8% followed by grazing land that was reduced to 18.2% (0.2% decline).

As depicted from figure 4, the wetland distribution in this year was highly limited to the upper and middle catchment of the study area indicating the high prevalence of wetland conversion to different LULC classes in the lower catchment.

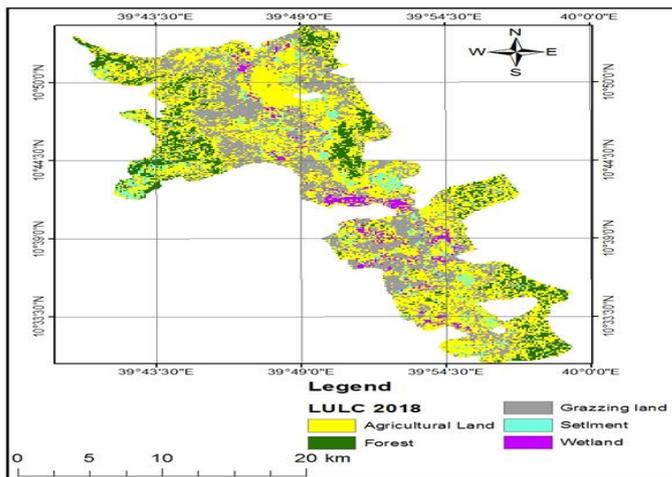


Figure 5: Land use/Land cover Map of Chefa Wetland in 2018

After three decades, Land use/Land cover in 2018 a significant LULC change was observed on grazing land that showed a 12.1% rise (6,138.4ha). Settlement was also increased by 0.6%. Inversely, agricultural land was declined from 48.7% to 45.6%, followed by forest land which was reduced to 13.7%. Wetlands continue to decline as the previous 6.9% coverage was reduced to 3.8%. The abundance of wetlands throughout the study area declined after 30 years (Figure 5) which shows the high anthropogenic impacts on the wetland ecosystem.

Land use/Land cover Change Matrix between 1988 and 2003

As described in table 6, LULC change matrix between the years 1988 and 2003 shows that a total wetland area of 5,747.29ha was converted to different LULC classes. The largest proportion of the wetland area was converted to agriculture (3,712.91ha) followed by grazing land (1910.39ha), forest (123.08ha), and settlement (0.91ha). This shows that agricultural expansion on the wetlands was a leading driver resulted in change of Chefa wetland state particularly important habitat types.

Likewise, the conversion of wetlands to grazing land depicts the swamps and water bodies were dried of different pressures exerted on them at different times. The matrix result also shows forestry (eucalyptus plantation) and settlement was undertaken on the wetland.

Table 6: Land use/Land cover Change Matrix between 1988 and 2003

LULC 1988	LULC 2003						Column Total
	LULC Class	Agriculture	Forest	Grazing land	Settlement	Wetland	
Agriculture	12,676.08	2,693.53	3,130.11	2,127.96	767.42	21,395.09	
Forest	2740.36	5291.61	331.79	124.78	774.92	9,263.47	
Grazing Land	4893.36	425.09	5150.37	390.97	161.49	11,021.27	
Settlement	438.22	30.01	184.44	409.34	40.52	1,102.52	
Wetland	3,712.91	123.08	1910.39	0.91	1742.55	7,490.04	
Row Total	24453.70	10020.63	9127.32	3176.96	3,486.9	50,265.16	

Note: the cells in the table indicate the unchanged LULC classes

Land use/Land cover Change Matrix between 2003 and 2018

In similar fashion the LULC change matrix between 2003 and 2018 indicates that continued wetland conversion to agriculture, forest, grazing land and settlement was observed in the study area. Agriculture land area of 1,815.91ha (Table 7) was expanded on

the wetland in those years. Considerable area of wetland (1061.09ha) also converted to grazing land followed by tree plantation (66.98ha) and settlement (0.97ha).

Table 7: Land use/Land cover Change Matrix between 2003 and 2018

LULC 2003	LULC 2018					
	LULC class	Agriculture	Forest	Grazing land	Settlement	Wetland
Agriculture	11814.83	1635.51	8112.59	2004.99	888.04	24455.95
Forest	3775.70	4966.51	521.59	357.03	399.24	10020.08
Grazing land	3941.49	38.22	4791.94	316.20	40.73	9128.58
Settlement	1672.86	59.24	943.72	477.97	24.64	3178.43
Wetland	1815.91	66.98	1061.09	0.97	542.07	3487.02
Row total	22920.79	6866.46	15253.94	3334.15	1894.73	50270.06

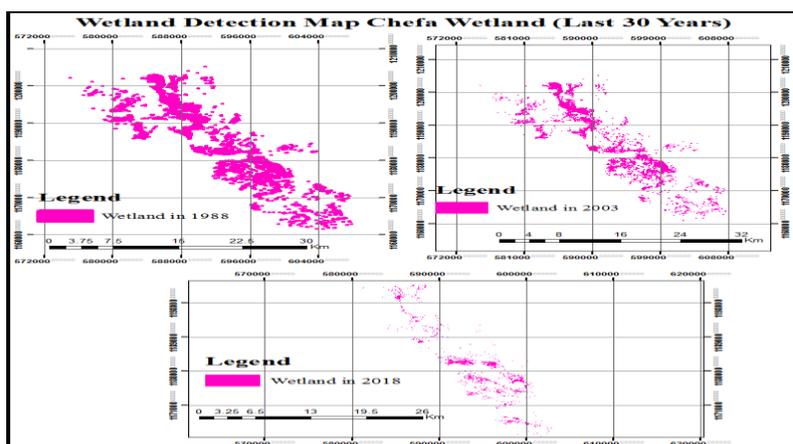


Figure 1: Wetland Change Detection Map of Chefa Wetland between 1988, 2003 and 2018

As demonstrated in figure 6, comparison of the last thirty years wetland area distribution in the study area shows great variations as wetlands were extensively observed throughout the study area for the base year 1988. The distribution started to decline after 15 years from the base year since the wetland distribution was decreased in all catchments though the degree differs. Massive decrease in wetland distribution was observed after 30 years as the distribution was narrowed to middle catchment and negligible coverage was noticeable in upper and lower parts of the Chefa wetland.

In addition to households and key informants view, results from satellite image analysis and interpretation were used to know the regulating services of Chefa wetland. According to the data from Landsat8 (2018), the LULC of the study area was constituted by 45.6% agricultural land, 30.3% grazing land 13.7% forest, 6.6% wetland (water body and swamp)and 3.8% settlement (Table 5). Those different LULC of the wetland provide undeniable regulation services. Forests and plantations provide local weather conditioning, ground water recharge, purification of ground water sources, prevent soil erosion and maintain soil fertility. Likewise, swamps largely provide waste assimilation other than the above mentioned services. Moreover, the gentle slopes allow negligible runoff and soil erosion is unexpected. The high carbon stock in marsh lands and under the root of vegetation covering the grazing land maintains the carbon cycle and increases soil fertility in the area.

Conclusion and Recommendation

Conclusion

The objective of this research was to study the perception of local community towards wetland ecosystem, assessing the existing ecosystem services. Finally, the study has reached on the conclusion that Perception and awareness towards ecosystem services of Chefa wetland was limited particularly on the supporting and regulation services. This low understanding was prevalent encircling the vast rural community and even the educated part of the community especially managers and political leaders. This has its own implication for policy intervention either in educating the local community and or building capacities institutions found at different levels. The assessment and inventory made by the study displays Chefa wetland ecosystem provides enormous ecosystem services ranging from direct/tangible to intangible/abstract services. A total of 16 provisioning services and nine cultural services were identified. The services play a pivotal role to sustain the whole life system in the locality. They provide the basic necessities like food, water, medicine apart from spiritual and health benefits, maintaining biodiversity, regulating climate and prevention of hazards. Understanding these multidimensional services there must be a mechanism either to boost or use them in a sustainable manner.

In Chefa wetland ecosystem lots of drivers were interacting to pose pressure bringing changes to state of the wetland and consequently impacting the services gained from the wetland ecosystem. In the absence of response or remedial actions the possibility of the wetland ecosystem to supply its services in sufficient or sustainable way raises big question. The findings are in conformity with the LUC detection made for the last three decades that shows substantial change in habitat and land use/land cover. A valuable part of the wetland has undergone through complete conversion to other land uses indicating a quick response for rehabilitation. Besides these, there were also challenges that complicated wetland management in the study area with some have relation with understanding and lack of knowledge, others have strong relationship with institutional and policy failures and few challenges had innate relationship with the natural system or climate variability. So, interventions to tackle problems/challenges should be all rounding and systematic in nature. Potential conservation strategies are proposed based on the findings and challenges identified by the study. The interventions proposed have again an awareness, policy and institutional context.

Recommendations

The services provided by wetland ecosystem are unique and valuable for the community and the environment. What matters most is the sustainability of these life supporting ecosystem services. So, the study has proposed the following recommendation to be undertaken at different levels and times.

- Awareness creation and raising understanding of the local community, planners, decision makers, project implementers and local governments towards ecosystem services should be undertaken consistently so as to bring behavioral change.
- Incorporating issues related to wetland ecosystem services in to capacity building activities given for experts working at different levels of administration and institutions.
- Making consecutive support, inventory, monitoring and evaluation of wetland ecosystems services to undertake timely and appropriate measures for the changes that would be observed.
- Facilitating academicians and higher education institutions to undertake research and use efforts to implement the findings of those academicians to the extent possible.

Recommendations for Rural Land Administration and Use Office (RLAUO) and Agriculture Development Office (ADO) at Wareda (block) Level

- Internalizing family planning in coordination with health sectors, introducing best varieties of animals and crop, building adaption and resilience to climate variability and diversifying the income sources of the local community.
- Applying environmental friendly agricultural technologies/inputs and reducing the high dependence on inorganic and environmentally polluting inputs minimize the impacts on water resources and existing biodiversity has to be undertaken by local governments and farmers.
- Undertaking environmental impact assessment prior to the implementation of farm projects and establishment of industries on the wetland ecosystem.
- Stopping illegal settlement, drainage and plantation of eucalyptus and rehabilitating the damaged parts of the wetland ecosystem in combination with local community and political leaders exercising power at different levels.
- Controlling the expansion of invasive alien species and preventing the encroachment of local communities into the wetland ecosystem
- Decreasing the high livestock population by introducing high yield providing livestock breeds and implement proper grazing land management through controlled and rotational grazing systems

Recommendations for Further Research

- Quantification of carbon sequestration capacity of the wetland
- Economic Valuation of wetland ecosystem services
- Quantifying the environmental consequences of wetland reclamation and conversion in to other land uses

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Assessment Of Business Process Reengineering Project And Its Implementation Performance In Addis Ababa City Administration

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ABSTRACT: In public sector institutions, business process reengineering (BPR) is a topic of wide interest. Government institutions can use BPR to enhance their performances in terms of reducing processes' cost and cycle time, increasing service quality, and increasing customers and employees satisfaction. However, the implementation phase of BPR pointed as the most challenging. Addis Ababa city administration is characterized poorly in the implementation of BPR system. The main objective of this study was to assess the business process reengineering project and its implementation performance in Addis Ababa city administration. The study employed both quantitative and qualitative approaches using data collection tools that include structured and un-structured questionnaire, focused group discussions and key informant interview. The SPSS statistic was used for the descriptive and inferential analysis. The findings indicate that the institutions have been practicing favorable results in BPR project and its implementation. The determinant factors contribute to the high level of performance. The coefficient of determination describes the influential power of the determinant factors. The Pearson Correlation Coefficient also describes positive relations and statistically significant between and among the determinant factors. Although the implementation process has brought tangible results, it is not free from some challenges. Weak involvement of managements; lack of establishing management teams who follow up and support the implementation processes; weak in existing data analysis; weak generating breakthrough ideas; and weak in employees training are the major challenging identified. Therefore, institutions should be openly and well communicated to the stakeholders and customers. If there is a good case to undertake the changes, the top management and employees must support the changes and drive it to the paradigm shift.

KEYWORDS: BPR Project, Implementation, Performance.

INTRODUCTION

Background of the Study

In the world of competition, change is the key word. In today's highly competitive and constantly changing market place, in order to thrive and operate successfully, it is inevitable for public institutions to give up obsolete ways of doing business and adjust to changes in their environment (Hammer M, 2002). Business Process Reengineering (BPR) is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvement in critical contemporary measures of performance such as cost, service quality and speed (Hammer M. and J. Champy 1993).

According to Hossain A. (2014), many government institutions of the world changed and reengineered their business in order to achieve their customer's expectations and attain competitive advantage. Business process reengineering is dramatic change and design of workflows and business processes that represent the organizational structures, management systems, employee responsibilities and empowerment, performance measurements, incentive systems, skills development, and the use of information technology. Achieng N. (2014) found that business process reengineering has become useful weapon for any corporate organizations that is seeking for improvement in their current organizational performance and intends achieve cost leadership strategy in its operating industry. He recommended that reengineering process remains

effective tool for organizations striving to operate as effectively and efficiently as possible. Organizations are required to reengineer their business processes in order to achieve breakthrough performance and long term strategy for organizational growth.

Zaini Z. and A. Saad (2019), suggested that successful BPR model can result in great reductions in cost or cycletime, and improvements in quality and customer service. In public institutions where changes are going on at alarming speed, it is needed to switch over from rigid business style to quick, responding and flexible process. Business process re-engineering is the radical redesign of business processes to achieve dramatic improvements in critical aspects like quality, output, cost, service, and speed. Business process reengineering (BPR) aims at cutting down enterprise costs and process redundancies on a very huge scale.

According to Hagos S. (2012), for many years, the tight bureaucratic and task centered approaches of civil service institutions of Ethiopia led to fragmentation, overlap and duplications of efforts than being responsive, flexible and customer focus. To this end, Business Process Reengineering (BPR) has been considered as a government sector technique to help organizations fundamentally rethink how they do their work in order to dramatically improve customer service, cut operational costs, become responsive, flexible and customer focus. Abay A. (2011) described that all government institutions of the Federal Democratic Republic of Ethiopia embarked in Business Process Reengineering (BPR) project and its implementation as groundwork to underpin result based performance management system and provision of seamless services to the public sector institutions.

According to Mberengwa I. and N. Daba (2011), in Ethiopia, Addis Ababa City Administration is implementing business process reengineering in order to improve the performance of its public institutions. During the period June to October 2008, experts drawn from different sectors participated in the redesigning and organizing of business processes through shifting from functional /departmental structure to process-centered organizing practices. Since 2004, Addis Ababa city administration has been endorsing BPR as a foundation for seamless service provisions to its customers in its all bureaus which comprise of ten sub-cities.

Problem Statement

Despite the significant growth of the BPR concept, ensuring the success of BPR implementation is still in considerations. Though public service institutions are embarked in BPR project and its implementation, still remain an issue to be addressed. Mberengwa I. and N. Daba (2011), conducted study on the effectiveness of BPR implementation in Addis Ababa City Administration. They also found that the number of employees in the city increased after reengineering due to new posts created during the reengineering process through the decentralization of some processes to the local levels (sub-city and kebele levels) of the city. Their study results further found that even though process selection was adequately done in many departments, some activities were not properly regrouped after processes were redesigned which resulted in multiple approvals and delays in decision making. They conclude that comprehensive planning for the full implementation of the process is considered as the major problem.

Mberengwa I. and N. Daba (2011) also found that employee participation during reengineering was weak. The front line employees did not get sufficient information and proper performance evaluation was not undertaken. Managers were not involved in the designing, coaching and advocacy roles, and are still engaged in operational and routine activities. Employee satisfaction was found to be low because there is no incentive system. The system as whole is not automated. According to Khalil O. (1997), BPR implementation failures mostly attributed to failure to implement BPR principles properly that include comprehensive planning, existing process analysis, designing new process, pilot testing and full implementation process. Muhammad N. (2013), also identified some of the common reasons pointed that include change management,

management heterogeneity, top management rigidity, lack of proper training, lack of resources, management competency and support, lack of leadership commitment, lack of proper communication strategy, lack of proper organizational structure and organizational culture, project planning and management and IT infrastructure.

Sibhato H. and A. Singh (2012) found that having BPR motivated by customer demands, effective utilization of resources, good information exchange and flow, continuous performance improvement, using technology, developing and communicating clear written goals and objectives, proper alignment of BPR strategy with the institution strategy, using progress evaluation are rated as the most critical success factors. Lack of employee training, unrealistic report to outsiders that hide actual progress of BPR implementation, management frustration with slow business results, lack of top management determination, top management reluctance to fund BPR implantations, employees' negative attitude, lack of top managers enthusiasm, lack of IT to support BPR requirements are the top ranked obstacles to BPR implementation in public service institutions. This implies that effectiveness of BPR implementation is below average and the institutions are not gaining the competitive advantages expected from the radical change

Prasad Y. (2015) conducted research on assessing the implementation and challenges of Business Process Reengineering (BPR) in Hawassa University. He found that BPR was not successfully accomplished which needs further effort in the future. Less attention for empowerment, improper application of management system, lack of change management accomplishment and insufficient management support were critical challenges in implementation of BPR. Prasad Y. (2015) also found that information technology, infrastructure, information technology usage, educating employees and comfort on the redesign process were critical success factors of BPR.

Tadesse W. (2019) found that the reform programmes were top down, lacking the required ownership from the side of lower-level leadership and employees. As a result, the reform programmes were not popular and did not enjoy a reasonable level of commitment at the bottom of the hierarchy where the reform efforts were to be brought down on the ground for implementation and institutionalization. The other finding demonstrated in this study was related to the fact that the reform agents as well as the process owners in the implementation endeavors were assigned not based on merit but political commitment.

Based on the theoretical and empirical literature review presented, certain research gaps have been observed among the researchers. The literature shows that there are many ways in which countries can reform their businesses and ensure professionalism in the reform system. However, these measures and efforts are dissimilar in different countries as well as in different institutions of a country. Thus, without examining the local context, drawing conclusions on the business process reengineering performance in the civil service institutions based on research outputs conducted somewhere else may lead to wrong decisions in the context of Addis Ababa, Ethiopia.

Therefore, it is necessary to conduct a study that assesses and realizes expectations of the goals of the institutions' business process reengineering implementation performance by identifying determinant factors affecting the current gap in BPR implementation performance. The institutions require the assessment of its implementation performance in relation with the determinant factors outlined by Davenport T. and J. Short (1990) and Hossain A. (2014). Therefore, based on the conceptual framework developed by these authors, in order to determine the performance of BPR project and its implementation, comprehensive planning, existing process analysis, designing new process, pilot testing and full implementation process are treated as the determinant factors. These variables are basically expected to solve the practical problems of the BPR reform. Since the problems are clearly defined, the aims and questions of this study are explicitly and clearly stated and are likely lead to problem solving outcomes of the institutions. Thus, the above statements guide the study in building up the following basic research questions.

Basic Research Questions:

- a) What are the overall bundle performances of the BPR implementation?
- b) Which factors dominantly predict the BPR implementation?
- c) What are the challenges the institutions have been facing in the implementation process?

Objective of the Study

The general objective of the study was to assess the business process reengineering project and its implementation performance in Addis Ababa city administration. The specific objectives are:-

- ❖ To determine the overall responses of respondents;
- ❖ To identify the overall bundle levels of implementation performance;
- ❖ To describe the relations between and among the determinant variables;
- ❖ To identify the extent each overall determinant factor affects the performance;
- ❖ To determine the most influencing factors; and
- ❖ To pinpoint the challenges the institutions have been facing.

Scope of the Study

The scope of this study was employees who are working in the civil service institutions of Yeka Sub-city woerda 9, woreda 11 and Woreda 12 City Administration Offices of Addis Ababa city administration. The respondents were both service providers that include managers, experts and employees of the institutions who have direct contribution to BPR related activities. The sample of these selected bureaus was considered as respondents of the study.

Significance of the Study

The government has designed and is implementing strategies, policies and plans to guide and manage the overall development of the civil service institutions. Achieving high performance in service delivery through the development of determinant factors accelerated the implementation of BPR project is a key objective of the Government of Ethiopia. However, the management of the civil service institutions did not work on factors influence implementation performance of civil service institutions (Darge M, 2015). In this competitive environment it is necessary to know factors affecting BPR implementation; and know the level of their early responsive service provision performance in the institution.

This study lies in identifying the determinant factors affecting the BPR implementation. The findings of this study help both the management and employees of the institutions. It also helps policy makers and researchers. It helps the managements in understanding the most significant factors; solving practical problems and improving the BPR implementation performance that achieve their respective institutional goals. It also enables the employees to associate their performance and motivation with specific activities' results at work; and improve their performance.

In addition, knowledge emerging from this descriptive research finding will inform policy-makers to understand the determinant factors that enable them to appropriately identify the factors that will solve problems in early responsive and productivity of the institutions. The findings of this study will also be useful for academicians and stakeholders to design appropriate design for effective and efficient service delivery performance of the institutions.

LITERATURE REVIEW

Definitions and Concepts of BPR

According to Hammer M and J. Champy (1993), before business process reengineering (BPR) emerged, it was widely accepted by industries and business enterprises that a work should be broken down into its simplest tasks. This led to the structure of enterprises becoming hierarchical and functional in order to manage such divided tasks. In a world increasingly driven by the three Cs (Customer, competition and Change), institutions are on the lookout for new solutions for their business problems and to provide better products or services. Thus, the topic of BPR involves discovering how business processes currently operate, how to redesign these processes to eliminate the wasted effort and improve efficiency, and how to implement the process changes in order to gain competitiveness. Hammer M and J. Champy (1993), proposed that BPR can help organizations out of crisis situations by becoming leaner, better able to adapt to market conditions, innovative, efficient, customer focused and profitable in a crisis situation.

According to Hammer M and J. Champy (1993), BPR is an organizational method demanding radical redesign of business processes in order to achieve greater efficiency, effectiveness, better quality, more competitive production and increase customer satisfaction. They also defined the BPR as “the fundamental rethinking and radical redesigning of business process to achieve dramatic improvement in critical contemporary measures of performance, such as cost, quality, services, and speed”. These definitions comprise four keywords: fundamental, radical, dramatic and process. These four keywords of BPR implied that before redesigning the process understanding the fundamental business operation is necessary, while it ignores the underlying rules and assumptions of the old or traditional business processes to radically redesign the process for dramatic performance of business process that can be measured in terms of speed, cost and quality.

According to Lindon R. (1994), organize around outcomes; substitute parallel for sequential processes; bring downstream information upstream; capture information once at the source; provide a single point of contact; ensure a continuous flow of the main sequence; first reengineer, then automate; and challenge assumptions are the principles of BPR. Mekonnen N. (2019) suggested that government organizations should use Business Process Reengineering (BPR) to enhance their performances in terms of reducing processes' cost and cycle time, increasing service quality, and increasing customers and employees satisfaction. Kenneth N, et al. (2018) found that reengineering processes does not have to always involve large investments in technology for it to work. Especially for SMEs, it is possible to reengineer a process without having to make use of sophisticated technology or any technology for that matter.

Conceptual Framework

In order to be successful in BPR projects, institutions should work hard to ensure a reasonable transition to the new process. According to Davenport T. and J. Short (1990) and Zigiariis S. (2000), BPR project process and its implementation process consist of specific steps aiming to a successful outcome. Hossain, A. (2014) also outlined the main steps for each methodology. He came up with new methodologies called “The true road to successful BPR”. Therefore, the following are the common necessary factors identified by different literatures in the assessment of performance of BPR project and its implementation.

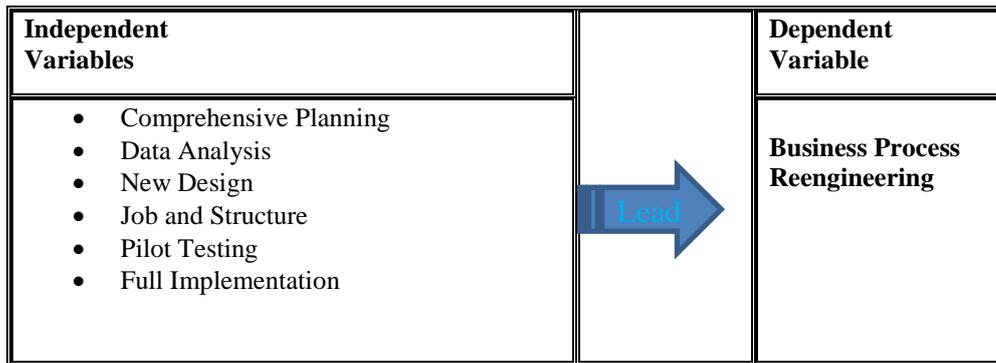


Figure 1.1: Modified Conceptual Framework

Planning for BPR: -During the planning phase, the institutional top level management has to think about the BPR as positive view. According to Manganelli R. and M. Klein (1994), involving senior management in the planning of a BPR project and its implementation process is crucial to the success of the BPR project and implementation results. Top level management has to consider their vision and mission in front of their aim for the BPR design and implementation. Then, the institutions have to plan for the BPR project and its implementation process. The planning phase consists of the following components. Top level management understand the concept of BPR very well; has commitment to implement BPR; conduct discussions with its employees on BPR project; identify core and support business processes end to end to be redesigned; establish management teams who follow up and support the design teams; establish capable employees to the BPR project teams and assigned roles for each one of them; provide trainings to the teams; and allocate all the necessary resources.

Existing data analysis/ AS-IS: After having the plan, the organizations have to start existing data collection from the different resources like external and internal resources which require for clarifying current scenario in the business process. The data has to focus on top level vision and mission, current technology used by the organization, problem and treats faced, cost and time constraint in traditional business process etc. According to Zigiari S. (2000), the data collection and analysis phase consists of the following components. The design teams should get trainings in the area of BPR design and implementation; understand the name of the core and support business processes; identify input, activities and output delivered; diagram the old high and detail level mapping; and identify the gap of the existing process and stakeholders' demands. After collecting all the data the BPR team will identifying the GAP of existing process and the factors which are affecting on the current business process and their impact level on the business. This phase is basically to understand and measure the existing processes to avoid the repeating of old mistakes and to provide a baseline for future improvements.

New BPR process design / TO-BE: In the BPR design process the BPR team will create step by step approaches for reaching the aim. Team will distribute the task among the all team member of BPR team. While design the BPR process the team will always have alternative which help to implement into the different scenario and situation. Most suitable alternative will get select by the team member and positive answer of their question which the team planned to find the BPR process. According to Zigiari S, (2000) benchmarking, identify existing problems, rules, assumptions and assumption busting; brainstorm new ideas; describe inputs, outputs and stretch objectives of each new process; diagram the new high and detail level mapping; and performance standard of the new business process are the major steps.

Job and Structure: The institutional jobs and structure of a business should be considered fair game during reengineering. Reorganizing subunits to minimize unit interdependencies or hierarchal structure holds potential for reducing costs and improving productivity. Inevitably, reengineering may cause significant change in jobs, organizational structure and human resource architecture

(Zigiaris S, 2000). This stage should include organize jobs around outputs; redefine job titles; redeploy employees to new roles and responsibilities on the new tasks; organize human resources according to knowledge , skills and attitudes needed; and organize institutional structure.

Use of pilot testing: Pilot test is essential before going to full implementation of BPR projects. The objective of this stage is providing training to employees in the operation of new processes, so employees will feel comfortable in the changing job environment. It is essential to train employees to new roles and responsibilities. Thus, developing and providing training programs; establishing any attempts of resistance to change; and fulfilling all the requirements for the new business processes are the steps that have to be taken by executive management of the institution. This stage is introduction of new processes into business operations. The objective of the stage is to evaluate the new standards operating under the new processes, emphasizing the fact that working under the old processes is not an acceptable practice. In addition this stage also helps to realize the new desired standards with the actual performance during the pilot test. The institution has to have better continuous monitoring system to test the progress of the new business process basically in relation to the new performance standards. As the process gives the outcomes as per the plan, then it is acceptable.

Full implementation of the new business process: According to Hammer, M. and Champy, J. (1993), one of the steps in BPR methodology is the BPR project implementation. Performance management applies to organizations as well as individuals to monitor progress toward the goals and make adjustments to achieve those goals more effectively and efficiently. This performance management helps institution to measure and evaluate its performance. Setting performance measures and evaluation are necessary to indicate the attainment levels of performance goals. The management requires introducing systems of continuous monitoring to support the process; meeting the objective of the institution effectively and efficiently; attaining the customers satisfaction as expected; increasing its own competitiveness by improving quality; increasing its provisions by reducing waiting time of service delivery; increasing its own competitiveness by reducing costs; periodically assessing process performance results; attaining the desired results of the new business process; reorienting performance appraisal and reward process to the implementation of the new process; and encouraging managers and staff to use performance data to find ways of further improving the new process.

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STUDY METHODOLOGY

Study Areas

The study areas constituted three selected woreda offices of Yeka Sub-city of Addis Ababa city administration. The participants of this study were from these selected offices. The selected offices were based on the three sectors categorizations of the Federal Civil Service Institution. From each sector the offices were selected randomly. For the sake of similar characteristics, the respondents were taken from these offices that encompass office of Finance, Trade and Industry, Construction, Health and Public service, and Human resource development.

Study Population and Sample Size Calculation

There are eleven sub cities in Addis Ababa city administration. Although Addis Ababa city administration has ten sub cities, the choice of Yeka sub-city is selected purposely. Yeka Sub-city comprises of twelve worked a administration offices. Managements, experts and employees of each office were the total population of the study of which the respondents were selected randomly. These offices were taken in considering the similarities of their level of services, characteristics and functions in providing services to the citizens. Many statistical books discuss methods for estimating sample size. There are several software programs available to help with sample size calculation. The sample of this study is calculated by using Taro Yamane (Yamane T,

1973) formula with 95% confidence level. Accordingly, 240 respondents were considered as a sample of which 210 were correctly filled and returned. In addition to this sample size, interviews with top level managements and three focused group discussions consisting of 36 respondents were conducted in the study areas.

Study Design

The research design is intended to provide an appropriate framework for the study. A very significant decision in research design process is the choice to be made regarding research approach since it determines how relevant information for a study will be obtained. The choice of appropriate design largely relies on the type of the research questions that the study intends to deal with. It is also a procedural plan, structure and strategy of investigation; so it is concerned to obtain answers to the basic research questions (Kumar R, 2011). Since the study concerns the assessments of factors affecting BPR implementation performance as it exists at present, the study uses the descriptive research approach. As Kothari, C. (2004) articulates, the major purpose of descriptive research is a description of the state of affairs as it exists at present.

Mixed research design is the most appropriate for this study. Both quantitative and qualitative data were collected. Both have their own distinctive character and philosophical foundation that make them suitable for the study. The quantitative research approach involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in a formal fashion. It is specific, well structured, and is tested for their validity and reliability. On the other hand, the qualitative data were collected. Qualitative data collection is exploratory; it involves in-depth analysis. Its collection methods mainly focus on gaining insights, reasoning, and motivations; hence, they go deeper in research.

Instead of concentrating only on the response of the structured questionnaire, the researcher triangulates the data that was gathered through questionnaire with the data that was obtained from interviews, focused group discussions, and the related document reviews. The importance of collecting and considering primary and secondary as well as qualitative and quantitative data is used to triangulate and supplement the diverse data generated from different sources which in return is used to make the data and the result of the research findings reliable.

Data Collection Tools

Data collection tools (questionnaire, interviews and focused group discussions) were used to gather the required data. For the quantitative data, well-structured questionnaire with close-ended responsive/ numerical questions/ and open-ended non-numerical questions/ narrative/ were used to gather the data from the respondents. The primary data were collected primarily from first hand sources through these data collection instruments. The close-ended quantitative method was organized using the Likert five scale format considered on 1-5 points scale. '1' represents the lowest level of agreement or high disagreement, whereas '5' represents the highest level of agreement or high agreement. The points of the scale indicate the degree of agreement level of the respondents.

For the qualitative data, semi-structured questionnaire were used to gather the data through interview from top level managements of the institutions; and through focused group discussions from a mixture of customers, employees, experts and middle level managements of the institutions. The secondary data were collected from the offices' quarterly and yearly performance reports; and research findings of various scholars on the topic under investigation. The importance of collecting and considering quantitative and qualitative as well as primary and secondary data were used to triangulate and supplement the diverse data generated from different sources which in return used to make the research findings reliable.

Data Quality

Data quality were assured using appropriate data collection process techniques such as giving orientation to data collectors about the contents of the questionnaire. The questionnaire is distributed for the respondents to be filled in with the help of data collectors. Data collectors assist the respondents in case of difficulties in filling the questionnaire; and, in case, inform problems that countered at the time of data collection immediately to the researcher; and the researcher take appropriate solutions. The interviews and focused group discussions also conducted by both the researcher and data collectors. Questionnaires checked for missing values and inconsistency. Those found to have missing values and inconsistencies were excluded from the study and considered as non-respondent.

Data Analysis Method

After the completion of data collection process, data screening, coding, entering and analyzing is made so as to check the consistency and validity of data collected with different tools. Both quantitative and qualitative data were used for the analysis. The quantitative data is analyzed through both descriptive and inferential statistics using SPSS software version 25(Statistical Package for Social Science).The descriptive statistics (frequency distribution, percentile, minimum, maximum, mean and standard deviation) were used to examine the general level of the determinant factors.

The aggregate mean value of the responses on all the determinant factors that describes above the cut-off point of 2.5 is acceptable. According to Yalegama S, et al. (2016), the result below 2.49 shows disagreement or unacceptable, the result in between 2.50 and 3.34 shows average agreement which is acceptable and the result in between 3.35 and 5.00 shows high agreement which is more acceptable to the level of performance of civil service of the institution. The following table describes the level of agreement in civil service performance.

Table: 3.1 Standard levels of decisions

Low (Disagreement)	Average (Agreement)	High (More Agreement)
< 2.49	2.50 - 3.34	3.35 - 5.00
<49.9%	50% - 66.9%	>=67%

Source: Adopted from Yalegama, Chileshe and Ma (2016)

The inferential statistics (reliability test, correlation coefficient test and regression analysis) is also used to consider the consistency, relationships and the extent of the effects of the independent variables on the dependent variable. The qualitative data is also used for the triangulation and discussion analysis, basically in finding out the major problems encountered in practicing the management competencies effect on civil service performance of the institutions.

Reliability test: - Internal consistency reliability is a measure of consistency between different items of the same construct. Cronbach's alpha is a reliability test designed by Lee Cronbach in 1951. According to Lombard M. and M. Senekal (2015), coefficients of 0.90 or greater are always acceptable, 0.80 or greater is acceptable in most situations and 0.70 may be appropriate in some exploratory studies. Therefore, for this study, R-value equal to 0.70 or greater is accepted.

Correlation coefficient test: - Pearson correlation coefficient is a static tool that indicates the degree to which two variables are related to one another. Thus, for testing the relationship between and among the variables, Pearson correlation coefficient is calculated. According to Ahmed M. (2015), the sign of a correlation coefficient (+or-) indicates the direction of the relationship between-1.00 and + 1.00. Variables may be positively or negatively correlated. A positive

correlation indicates a direct positive relationship between two variables. A negative correlation, on the other hand, indicates an inverse, negative relationship between two variables. The range of correlation coefficient (r) and strengthens of the correlation is described. According to the above authors, the range of correlation coefficient (r) and strengthens of the correlation are described as follows.

Table 3.2: Pearson Correlation

Correlation coefficient (r)	Strength of the correlation
From 0.01 upto 0.09	Negligible association
From 0.10 upto 0.29	Low association
From 0.30 upto 0.49	Moderate association
From 0.50 up to 0.69	Substantial association
From 0.70 and above	Very strong association

Multiple Regressions Mathematical Equation: - The independent variables treated in the study are planning, existing data analysis, new design of business process, job and structure, pilot testing and implementation. On the other side, the performance of BPR implementation is considered as the dependent variable. In order to measure the effects of the independent variables on the dependent variable, Multiple Regression Mathematical Equation is used. The correlation analysis also used to determine the relationships among the independent variables.

The Multiple Regression Mathematical Equation is described as:

$$\text{BPR Performance} = f(\text{CP, EDA, NPD, JS, PT and FI})$$

$$\text{BPRP} = \beta_0 + \beta_1 \text{CP} + \beta_2 \text{EDA} + \beta_3 \text{NPD} + \beta_4 \text{JS} + \beta_5 \text{PT} + \beta_6 \text{FI}$$

Where:-

BPRP = Business Process Reengineering Performance

PL = Comprehensive Planning

DA = Existing Data Analysis

ND = New Process Design

JS = Job and Structure

PT = Pilot Testing

FI = Full Implementation

With the help of the above given equation, the effects of independent variables on the dependent variable are measured. Is the intercept term that gives the mean effect on dependent variable of all the variables excluded from the equation, although its mechanical interpretation is the average value of BPRP when the stated independent variables are set equal to zero. $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ and β_6 refer to the coefficient of the irrespective independent variable which measures the change in the mean value of BPRP, per unit change in their respective independent variables.

RESULTS AND DISCUSSIONS

General background information of the respondents

In this section, details are given of selected background information of the respondents. The literature highlights the importance for managers and employees of public service institutions to examine the services that are provided to its customers in order to commit themselves to dynamic improvements in service provisions. Now a days, service provisions are being driven by need assessment, which requires desired goals of public sector institutions that is more strongly directed to the service provisions to their customers. The items in the evaluation of the BPR

implementation performance is used as an instrument for closing the gap between the current views and desired achievements of the public sector institutions. Accordingly, the background information of the respondents is also important in giving professional responses to each question.

Table: 4.1 Gender, age and educational level of the respondents

No.	Items	Scale	Frequency	Percentage (%)
1	Sex	Female	65	31
		Male	145	69
		Total	210	100
2	Age	18-28	100	47.6
		29-35	85	40.5
		36-65	25	11.9
		Total	210	100
3	Qualification	First degree	205	97.6
		Diploma	5	2.4
		Total	210	100

Source: Own survey, 2021

In the above table 4.1, the general background information of the respondents is described. The information includes sex, age and qualification of the respondents. Position in the institution and total work experience in any institution were also identified. Most of the respondents 145 (69%) were male and 65(31%) were female that were included in the study area. Most of them, 100 (47.6%), were youths who are in the age of 18 to 28 year. When we observe the educational background of the respondents, 205 (97.6%) of the respondents were first degree holders. Only 5 (2.4%) respondents were diploma holders.

Table: 4.2 Position and work experience of the respondents

1	Position in the institution	Manager	5	2.4
		Process owner	30	14.3
		Team leader	75	35.7
		Expert/Employee	100	47.6
		Total	210	100
2	Total service year in the institution	< 2 years	55	26.2
		2 to 5 years	55	26.2
		5 to 10 years	65	31
		Above 10 years	35	16.6
		Total	210	100

Source: Own survey, 2021

The position of the respondents in their respective institutions was also described. Most of the respondents, 100 (47.6%), were experts or employees of the institutions, 75 (35.7%) were team leaders, 30 (14.3%) were process owners, and only 5 (2.4%) of the respondents were managers of the institutions. With regard to total service year in the institution of the respondents in their current institution, majority of them, 65 (31%), have service experience of between five to ten years. Fifty five (26.2%) have service experience of less than two years and 55 (26.2%) of them have service year of between two to five years. Only 35 (16.6%) of them have total service year of above ten in their current institution. The data indicates that most of the respondents are male. In relation to age structure of the respondents most of them are youths. In terms of educational background of the respondents most of them were first degree holders. The data also describes that most of the respondents have service experience of above five years in their current institutions. Most of the respondents are experts and team leaders who are familiar with services provided for the customers of the institutions. The data also describes that most of the respondents have total service year of above five years in their current institutions.

The Overall Responses of the Respondents

In this section, details are given to the items of the assessment of the Business Process Reengineering Project and its Implementation Performance in Addis Ababa City Administration. The service providers' perception in the assessment process is used as an instrument for identifying the gap between the desired results and achieved results in the implementation process in the institutions. As indicated in the methodology section, 240 questionnaires were distributed to the respondents out of which 210 were correctly filled and returned. In addition to the structured questionnaire, three focused group discussions and nine interviews were conducted. The results in terms of the items of the elements of the BPR implementation performance are described as follows.

Table 4.3 shows the respondents average of the overall responses of each items of the determinant factors. The responses of the individual items are summarized under each determinant factor. Each frequency describes the average responses of each item. Accordingly, 81% of the total respondents responded to moderate level and above while only 19% of the total respondents show below the moderate level. The result implies that the institutions practice a well-accepted performance in the implementation of good governance.

Table 4.3: The average responses of the overall bundle of the determinant factors

No.	Determinant Factors		Response Level				
			Str. disagree	Disagree	Moderate	Agree	Str. agree
1	Comprehensive planning	Frequency	9.625	30.5	74.25	73.25	16.87
2	Existing data analysis	Frequency	7	31.2	75.6	72	23,8
3	New process design	Frequency	8.6	31	67.3	70.2	32.8
4	Job and structure	Frequency	7.75	24.75	61	67.5	49
5	Pilot testing	Frequency	8	34.66	69.3	56.3	41.66
6	Full implementation	Frequency	12	20.4	66.2	85.6	25.88
Average of Overall Responses			9	30	70	73	28
Overall Percent (%)			4.29	14.29	33	34.76	13.3
N=210							

Source: Own survey, 2021

As can be observed from Table 4.3, the respondents responded in each items of the independent variables. The responses of the individual items reveal differences among respondents. However, the mean values of all the responses of the items of the determinant factors show above the moderate level (i.e 3.4315). This shows that the implementation performances of each determinant variable are well. This implies that the institutions practice is well accepted performance in BPR.

Table 4.4: The minimum, maximum, mean and standard deviation values of the responses

Variables	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Std. Error	Statistic
BPR performance	1.71	4.86	3.4789	.05611	.81306
Comprehensive planning	1.50	4.50	3.2726	.04370	.63333
Existing data analysis	1.60	5.60	3.3638	.05105	.73973
New process design	1.67	8.00	3.4452	.06003	.86996
Job and structure	1.67	5.00	3.5964	.05561	.80588
Pilot testing	1.67	4.67	3.4243	.06045	.87601
Full implementation	1.20	4.60	3.4390	.05607	.81246
Average			3.43		
Valid N =210					

Source: Own survey, 2021

Correlation Analysis: The Pearson Correlation Coefficient is a statistic tool that indicates the degree to which two variables are related to one another. The sign of a correlation coefficient (+or-) indicates the direction of the relationship between-1.00 and + 1.00. Variables may be positively or negatively correlated. A positive correlation indicates a direct positive relationship between two variables. A negative correlation, on the other hand, indicates an inverse, negative relationship between two variables (Ruud Wetzels and Eric-Jan Wagenmakers, 2012). Table 4.5 below clearly shows that the relationship between two variables is negligible, low, moderate, substantial, or very strong.

Table4.5: Pearson Correlation

Correlation coefficient(r)	Strength of the correlation
From 0.01 upto 0.09	Negligible association
From 0.10 upto 0.29	Low association
From 0.30 upto 0.49	Moderate association
From 0.50 upto 0.69	Substantial association
From 0.70 and above	Very strong association

Source: Kotrlik J, et al. (2011)

Determining the degree of association between the determinant factors and BPR performance is the main purpose of conducting an analysis using Pearson correlation coefficient. So, in this section the hypotheses were tested based on the correlation result summarized in table 4.6 below.

Table 4.6: Pearson Correlation Analysis between Independent variables and dependent Variable

Variables		BPR performance	Comprehensive planning	Existing data analysis	New process design	New process design	Pilot testing	Full implementation
Pearson Correlation	BPR performance	1.000	.627	.280	.507	.719	.805	.782
	Comprehensive planning	.627	1.000	.515	.564	.524	.700	.654
	Existing data analysis	.280	.515	1.000	.613	.304	.412	.277
	New process design	.507	.564	.613	1.000	.594	.719	.531
	Job and structure	.719	.524	.304	.594	1.000	.787	.782
	Pilot testing	.805	.700	.412	.719	.787	1.000	.856
	Full implementation	.782	.654	.277	.531	.696	.856	1.000
	Correlation is significant at the 0.01 level							

Table 4.6 describes the correlation analysis between the independent variables and the dependent variable; and among the independent variables. The result of the existing practices in independent variables and dependent variable shows that pilot testing ($r = 0.805$, $p = 0.000$), full implementation ($r = 0.782$, $p = 0.01$) and job and structure ($r = 0.719$, $p = 0.000$) have very strong association, positive relationship and statistical significant. Comprehensive planning ($r = 0.627$, $p = 0.023$) has substantial association, positive relationship and statistical significant. New process design ($r = 0.507$, $p = 0.068$) has substantial association, positive relationship but statistical insignificant.

Regression Analysis: Regression analysis is a reliable method of identifying which variables have impact on a topic of interest. Regression analysis is a systematic method that is used to investigate the effect of one or more predictor variables on dependent variable. The process of performing a regression allows us to confidently determine which factors matter most, which factors can be ignored, and how these factors influence each other. Thus, multiple linear regression equation is used in order to investigate the effect of each and overall bundle of selected determinant factors on the dependent variable. The coefficient of determination (denoted by R^2) is a key output of regression analysis. It is interpreted as the proportion of the variance in the dependent variable that is predictable from the independent variable. The coefficient of determination is the square of the correlation (r) between predicted variable and actual variable; thus, it ranges from 0 to 1. An R^2 between 0 and 1 indicates the extent to which the dependent variable is predictable.

Table 4.7: Multiple Linear Regression Equation Summaries

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	df1	Sig.
1	.842 ^a	.709	.701	.44486	.709	82.522	6	.000
a. Predictors: (Constant), Comprehensive planning, Existing data analysis, New process design, Job and structure, Pilot testing, Full implementation								
b. Dependent Variable: BPR Performance								

As shown in table 4.7, the overall bundle of determinant factors explains 70.9% ($R^2 = 0.709$) of the dependent variable. This suggests that 70.9% of BPR performance level in the institutions clearly depends on the independent variables while the remaining 19.1% is determined by other unaccounted factors in the study. If the P value for the F-test of overall significance test is less than significance level, we can reject the null-hypothesis and conclude that the model provides a better fit. The result $F = 526.050$ which is greater than 1 and $P < 0.01$ indicates that the combination of determinant factors have positive effect on good governance which is statistically significant and confident at 99%.

Table 4.8 Multiple Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.386	.198		1.949	.053
	Comprehensive planning	.171	.075	.133	2.295	.023
	Existing data analysis	.027	.056	.024	.475	.635
	New process design	.110	.060	.118	1.838	.068
	Job and structure	.229	.063	.227	3.660	.000
	Pilot testing	.380	.095	.409	3.985	.000
	Full implementation	.256	.078	.256	3.294	.001

N=210, AdjustedRSquare=0.709, F=82.522, over all model significance = 0.000

Table 4.8 compares the relative contribution of each independent variable by taking the beta value under the unstandardized coefficients. The higher the beta value indicates the strongest its contribution to the dependent variable. Accordingly, pilot testing (Beta=0.380) makes the strongest contribution in explaining the dependent variable in which the results revealed that, a one unit increase in pilot testing would lead to a 0.380 unit increase the level of BPR performance and followed by full implementation and job and structure (B=0.256, B=0.229) respectively.

Comprehensive planning, job and structure, pilot testing and full implementation contribute to the dependent variable with beta values of B= 0.171, B=0.229, B=0.380 and B= 0.256 respectively. These variables have positive relationship and have statistically significant contribution (Sig < 0.05) for the prediction of the dependent variable. On the other hand, existing data analysis (B=0.027, Sig.= 0.635) and new process design (B=0.110, Sig.= 0.068) have positive relationship but they have statistically insignificant contribution for the prediction of the dependent variable.

The equation of multiple regressions is built on dependent variable and independent variables. The objective of using regression equation is to make more effective at describing and predicting the stated variables based on their contributions to the dependent variable. Therefore, using the result in the regression coefficient described in table 4.6, the estimated regression model is shown below.

$$Y = 0.386 + 0.171X_1 - 0.027X_2 - 0.110X_3 + 0.229X_4 + 0.380X_5 + 0.256X_6$$

BPR Performance = 0.386 + 0.171 Comprehensive planning - 0.027 Existing data analysis - 0.110 New process design + 0.229 Job and structure + 0.380 Pilot testing + 0.256 Full implementation

The beta value of independent variable (comprehensive planning) is 0.171 with value 2.295 and significant level of .023. The beta value of independent variable (existing data analysis) is -0.027 with t value -0.475 and significant level of .635. The beta value of independent variable (new process design) is -0.110 with t value -1.838 and significant level of .068. The beta value of independent variable (job and structure) is 0.229 with t value 3.660 and significant level of .000. The beta value of independent variable (pilot testing) is 0.380 with t value 3.985 and significant level of .000. The beta value of independent variable (full implementation) is 0.256 with t value 11.558 and significant level of .000. The beta value of independent variable (rule of law) is 0.107 with t value 3.294 and significant level of .001.

These beta values indicate the amount of change in the dependent variable due to changes in independent variables. Accordingly, pilot testing, full implementation, job and structure and comprehensive planning have positive relationship and statistically significant at $P < 0.05$ with the dependent variable. This implies that the null hypotheses of the four independent variables (H_0) are rejected. On the other hand, both new process design and existing data analysis have negative relationship and statistically insignificant at $P > 0.05$ with the dependent variable. This implies that the null hypotheses of the two independent variables (H_0) are accepted.

4.2 Discussions

Tadesse W. (2019) said that the Ethiopian government has been engaged in several reform programmes to improve the delivery of services within the public sector. It has been found that these public service reform programmes are mainly national in terms of agenda. The reform programmes were initiated in line with the introduction of a market-led economic system and as a part of a structural adjustment programme in 1991. From this reform tools, one is Business Process Reengineering. Sibhato H. and A. P. Singh, (2012) found that although the desired and stretched

goals and objectives of BPR are clearly written and documented in the institutions, these goals and objectives were not well communicated and set in to the staff members mind and attention. Consequently, the institutions are unable to manage and accomplish the goals and objectives. Trying to change too much too quickly; making business mistakes due to pressure to make quick results; BPR created unfriendly working environment; lower employee productivity; lower employee moral for implementing BPR; resignation of productive personnel and employee high resistance to change were the major problems. They also found that the current status of BPR is rated by the respondents to be below the moderate extent in the Likert scale in the institutions. This implies effectiveness of BPR implementation is below average and the institutions are not gaining the competitive advantages expected from the radical change.

Prasad Y. R. (2015) found that the extent of BPR implementation did not exceed average value of (65 percent) which recommendations of BPR are not successfully accomplished which needs further effort in the future. Khoshlafz M. and S. Hekmati, (2016) found that all t-test values of the independent variables are statistically significant, which means the relationships of all the variables are significant ($\alpha = 0.05$). Al- Mashari, M. and M. Zairi, (1999) mentioned that many BPR actions fail without paying attention to many factors. As was mentioned earlier literature in the problem statement, numerous researchers have found the weak performance of BPR projects and its implementation. Numerous researchers (e.g. Mberengwa I and N. Daba (2011); Muhammad N. (2013); Tadesse W. (2019); Sibhato H. and A. P. Singh (2012)) have also identified weak performance of BPR projects and its implementation.

Mberengwa I and N. Daba, (2011) found that employee participation during reengineering was weak. The front line employees did not get sufficient information and proper performance evaluation was not undertaken. Managers were not involved in the designing, coaching and advocacy roles, and are still engaged in operational and routine activities. Employee satisfaction was found to be low because there is no incentive system. However, employees' efforts to achieve the set standards and improve service delivery and their initiation for change improved despite the fact that the system as whole is not automated. Further, accountability and responsibility of management also improved as a result of the BPR.

Muhammad N. (2013) also identified some of the common failure reasons pointed that include change management, management heterogeneity, top management rigidity, lack of proper training, lack of resources, management competency and support, lack of leadership commitment, lack of proper communication strategy, lack of proper organizational structure and organizational culture, project planning and management and IT infrastructure.

However, some of the researches correlated with accepted performance of BPR in the government institutions (e.g., Larsen, M. and M. Myers, 1997) and N. Mekonnen (2019)). Most of the factors correlated with this performance include comprehensive planning, training, pilot testing and organizational structure. Most of the factors (reviewed earlier) correlated with success were include senior management support and vision was present, as was a strong project leader. Additionally, staff in the project team came from different institutions and could therefore understand the organization structure, culture, and processes from each perspective. All members of the team indicated that the team environment and spirit was one of the aspects they enjoyed most about the project. The results of these earlier studies are in line with this study in most causes of the weak predictors of the dependent variable.

This study found that 81% of the total respondents responded to moderate level and above while only 19% of the total respondents show below the moderate level. The result implies that the institutions practice a well-accepted performance in the implementation of good governance which favors the result of some earlier study. The mean values of all the responses of the items of the determinant factors how above the moderate level (i.e. 3.4315).The Pearson Correlation Coefficient indicates a direct positive relationship between the variables. The overall bundle of

determinant factors describes 70.9% ($R^2 = 0.709$) of the dependent variable while the remaining 19.1% is determined by other unaccounted factors in the study. Comprehensive planning, job and structure, pilot testing and full implementation have positive relationship and statistically significant contribution ($\text{Sig} < 0.05$) for the prediction of the dependent variable. On the other hand, existing data analysis and new process design have negative relationship and have statistically insignificant contribution for the prediction of the dependent variable.

Involving senior management in the planning of a BPR project and implementation process is crucial to the success of the BPR project and implementation results. However, the planning phase is not free from some limitations. The responses from few respondents indicated their disagreement with the preconditions they observe on the open-ended section of the questionnaire. The responses from the focused group discussions and interviews also described some limitations in planning phase. Low awareness in understanding concepts of BPR; low commitment of employees to implement the new business processes; lack of training on BPR; lack of employees participation in preconditions phase; lack of proper team selection; lack of proper planning concepts and skills for the planners; lack of basic necessary knowledge, skills and attitude of process owners and employees of the institutions before initiating the BPR project; and lack of understanding and identifying core and support business processes of the institutions are the problems that were identified.

The data collection and analysis and designing new process are also not free from some limitations. Lack of training on how to collect and analyze the data of old processes; limitation in customers and stakeholders' needs and problems identification; insufficient data; and undeveloped enough data collection systems are the problems that were identified. The design of the new business processes also describes that the existing rules and problems were not identified clearly, so the existing rules and assumptions were not busted; the new business processes of all institutions of the city administration are unique which did not consider the resources and skilled human resources availability in each institution; no customization of the activities and standards according to the respective institutions; and putting performance standards for the services were not based on critical data gathered.

As BPR results in a major structural change in the form of new jobs and responsibilities, it becomes a prerequisite for successful implementation to have formal and clear descriptions of all jobs and responsibilities that the new designed processes bring along with them. However, the organization of jobs and structure approach phases problems that include lack of appointment of the right man at the right position; improper of working areas particularly the layout of the offices are not much to provide services to disabilities, elders, even for adults because the process owners who have daily contacts with the customers are on the fourth floor which is difficult to pass the way; awareness creation training or communication on jobs and structure was not conducted with the employees; and unfair organization of jobs and redeployment of employees on the same job in the institutions, because in some institutions there are many employees where as in other institutions there are few employees which was not fair in service provisions. The provisions of the training to the workforce and weak in pilot testing were the problems pinpointed. The desired results in the full implementation have also limitations. The problems include low provision of productivity/services; waiting time in the corridor of the institutions; no revision of BPR standards for further improvement; standards are not as designed; and existing gaps between the theories and practicing of BPR implementation within the institutions.

Generally, this study found well accepted performance of the BPR project and its implementation results which favors some of the earlier researches. Based on the data collected from focused group discussions and key informants, this study found similar problems. However, the reliability and validity testing approaches of the result describes against the earlier researches which conclude the weak performance of BPR project and its implementation.

CONCLUSION AND RECOMMENDATION

Conclusion

For the sake of ensuring clear understanding in the implementation process of BPR and its implementation, the conclusion is made short and precise. Accordingly, based on the data analysis, interpretation and results, I have come up with the following conclusion. In general, the implementation process of BPR project and its implementation performance have contributed favorable results to achieve the desired results of the institutions. The BPR implementation performance of each determinant variable is well accepted. The overall bundle of determinant factors explains high implementation performance of the project. However, existing data analysis and new process design have statistically in significant contribution for the prediction of the dependent variable.

Findings indicate that most (81%) of the total respondents responded to moderate level and above. The mean values of all the responses of the items of the determinant factors show above the moderate level (i.e. 3.4315). The Pearson Correlation Coefficient indicates accepted and direct positive relationship between all variables. The overall bundle of determinant factors describes 70.9% ($R^2 = 0.709$) the dependent variable. The regression analysis results that comprehensive planning, job and structure, pilot testing and full implementation have positive relationship and statistically significant contribution (Sig < 0.05) for the prediction of the dependent variable. However, existing data analysis and new process design have statistically in significant contribution for the prediction of the dependent variable. The result implies that the institutions practice a well-accepted performance of BPR project and its implementation.

Although the findings have brought about tangible results, it is not free from some challenges. The findings described some failure factors associated with the BPR design and implementation process. Lack of understanding BPR concepts; lack of establishing management teams who follow up and support the design teams; lack of leadership commitment and support by senior management; insufficient understanding about existing data; failure to generate breakthrough ideas; failure to assess project performance in the early stages of business reengineering efforts to provide feedback; failure to effectively monitor progress of performance standards according to the schedule; lack of continuous employee training; unrealistic report that hide actual progress of BPR implementation; and employees' negative attitude are the major obstacles to BPR implementation in public service institutions.

Recommendation

The performance of BPR project and its implementation results has had both positive effects and challenges. Based on the findings and conclusion made, I have come up with the following recommendations.

- ❖ In order to undertake BPR, the most important factor to ensure success of BPR implementation is to analyze the current situation to identify goals, objectives and possible strategies. Public institutions should develop and practice in analyzing the existing data analysis and new business process design by identifying the core and support business processes.
- ❖ To publicize the goals, objectives and strategies, the institutions should be openly and well communicated to the stakeholders. If there is a good case to undertake the continuous monitoring and supporting the progress, the top management and employees drive it through to success.
- ❖ To bring dramatic improvements, the implementation process must be in accordance of performance standards. Public institutions should develop citizen charter and communicate the customers and stakeholders through training, media, brochure etc. The institutions should

conduct continuous customers' needs and problems to achieve the objects of performance standards and improve customers' satisfaction. All provided services should be in accordance with the stated performance standards.

- ❖ Institutions should provide continuous capacity building trainings to develop the capacity of service providers. Institutions should develop continuous awareness creation training to ensure efficient and effective implementation of service provisions.
- ❖ Institutions should allocate all the necessary resources that mainly include skilled human power, office furniture, and office layout to provide services effectively and efficiently. Institutions should sustain employees by developing different rewarding and incentive systems to decrease turnover and sustain employees in the institutions.

At last to answer the dynamic service demand of customers and further improvements of service provisions the institutions should understand the strengths that should be improved and identify problems that should be solved, in such a way that the institutions can achieve the desired objects.

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