



ETHIOINQUIRY



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About

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Examining Science and Technology Reporting and its Implications and Challenges for Development in Nigeria

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ARTICLE INFO

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Abstract

With the breakthroughs in information and communication technologies comes a paradigm shift in journalism practice where specialised reporting has taken centre stage in the media industry today. Hence science and technology reporting is a vital area that needs to be given adequate attention by the media and the society. Despite the importance of science and technology reporting to the development of society, its practice is bedevilled with a lot of problems. Same is the case in Nigeria as no significant attention is given to the area either by the appropriate authorities or other stakeholders like the media industry. Using the expository library method of research the paper notes that the science and technology reporter in Nigeria is faced with the problem of capacity building, public illiteracy and phobia of science, lack of a clearly articulated government policy on science and technology and lack of technical, scientific and technological equipment to drive science and technology reporting in the country. The study concludes that because of the importance of this specialised area in journalism, government should invest huge material and human resources in terms of funds, provision of specialised training and workshops for journalists to be empowered with the skills required in reporting and disseminating science and technology information to the public.

Keywords: Communication; Development; Journalism; Reporting; Science; Technology

1 INTRODUCTION

There is no doubt that the influences of science and technology in our world are widespread and enormous. The breakthroughs in science and technology are visibly evident in all spheres of our national life (Billingsley, 2020). Science and technology have been exploited to harness human and material resources to meet human needs and satisfy human wants (Svendson, 2020). The way the general public perceives scientific matters is greatly influenced by the media. It is often acknowledged that the public's reaction to scientific concerns is influenced by the media. The mass media's reach as a communication tool is unmatched. It also has substantial power to set agenda for public discussion. Due to the enormous roles played by the mass media, people rely on them as important source of scientific and other forms of information. However, issues pertaining to science are frequently not adequately covered by the mainstream media.

The shutdown of science desks in newsrooms worldwide has led to the description of science journalism as a dying profession (The Global Science Journalism Report, 2013, as cited in [Waithera \(2019\)](#)). The study also reveals that between 1989 and 2005, newspapers' percentage of devoted science sections decreased from almost 95% to 34 percent. This is similar to the recent report credited to Pew Research Center where the verdict that along with public trust, science journalism continues to shrink ([Flatow, 2024](#)). Due to this evolution, there is now inadequate knowledge to enable scientists become experts in disciplines outside of their own and to encourage scientific literacy among the general public. It has equally created a series of problems for science journalism as an area of focus because it relies on scientific research and discoveries to thrive.

Although science journalism is not an anomaly in Africa, it seems that the continent faces distinct difficulties. A study by [Matsilele et al. \(2024\)](#) discovered that the current level of science and technology coverage in the media of Southern African countries of Mozambique, South Africa and Zimbabwe was quite low. The study identified limited knowledge of journalists, inadequate resources, and preference for economic and political news as some of the factors affecting the frequency and quality of science reporting in the countries. Politics, sports, and economic news dominate scientific articles in Africa and around the world. On account of the "formal training deficit" in science journalism on the continent, some of the few science stories that are written and/or broadcast occasionally show lack of comprehension of the subjects being addressed. Additionally, press releases are frequently the basis for stories that lack depth, insight, or additional investigation. This has led to "churnalism," in which news outlets reprint press releases from campaign organisations and public relations firms verbatim, casting doubt on the calibre of scientific reporting ([Waithera, 2019](#)).

This situation puts the public and scientists at serious danger since it allows commercial interests to take advantage of earned media opportunities by passing off as "news" what is really a promotion for a firm, good, or service. It is a news culture of science-unfriendliness and also devoid of high ethical standards ([Tran & Nguyen, 2023](#)). This has undermined the coverage issues that pertain to science and technology in the society. It is resulting in the loss of interest by the science and tech-savvy audience who ordinarily try to catch-up on scientific discoveries and ground-breaking findings and results through the media. It also signals a bleak future for science journalism even in the face of the advancement in digital technology for the media industry.

There is also a general lackadaisical attitude to the coverage of science and technology issues in the media industry in Nigeria. ([Nwagbara & Azoriwa, 2018](#)) state that the lack of interest shown by the media towards science and technology issues in Nigeria can be partly attributed to the kind of complex and technical language science experts use in explaining what happens in their field. This makes it difficult for journalists to understand and report such issues properly. In this study, the need to stress the value of science and technology to the advancement of the country is equally crucial. Development is one of the goals of science and technology reporting. Coverage of science and technology issues by the media will create awareness and provide a pathway for national transformation to a struggling economy like Nigeria.

The situation in Nigeria with regard to science and technology is grim. Without science communication, science is murky, which is why the state of science communication reporting in the nation is a major reason for concern. To buttress the foregoing point, ([Holesovsky, 2021](#)) noted that the communication about science is on same level with the science being communicated. It is against this background that this study examines the challenges of reporting science and technology issues in Nigeria. The study also interrogates the implications of the inadequate coverage accorded to science and technology issues to Nigeria's development.

2 OBJECTIVES OF THE STUDY

The objectives of the study were to:

1. Examine the challenges of reporting and technology issues in Nigeria.

2. Investigate the implications of the inadequate coverage accorded to science and technology issues in Nigeria's development.

3 CONCEPTUAL REVIEW

Science and technology reporting and development are the main concepts for review in line with the title and direction of this study. In order to gain a thorough grasp of their application, these concepts are explored in this study. The use of journalistic principles to inform the public about scientific and technology issues, subjects, and advancements via the mass media is known as science and technology reporting. This specific area of journalism involves obtaining noteworthy information about events in the fields of science and technology, processing the unprocessed data, and presenting it to the public through media features and straight-news reporting (Nwafor, 2021). Like many other technical areas of journalism, it is not done haphazardly and may also come with its unique rigour for practitioners.

The concept of science means different things to different individuals. When we talk about science so many things come to our minds. The Latin word "scientia," which meaning "knowledge," is the etymological root of the English term "science." Humans engage in this intellectual effort to learn more about the natural world in which they live and to figure out how to organise that knowledge into patterns that have significance (Bello, 2021). According to this definition, science is the process of learning new things, including creating prototype ideas (Tirmizi et al., 2020). The systematic study of humans and the cosmos by experimentation, measurement, and observation can also be referred to as science. Scientists search for the laws governing the cosmos. With visible physical evidence as the foundation, science is the concentrated human endeavour to comprehend – or better comprehend – the history of the natural world and how it functions.

However, the word "technology" was created from the Greek words "logia," which means "study of," and "technie," which means "art," "craft," or "skill." Therefore, technology refers to methods of producing or doing things. It describes the creation, alteration, application, and understanding of tools, machinery, crafts, techniques, systems, and organisational procedures in order to address an issue or carry out a particular task (Carvalho et al., 2021). One could consider technology to be the activity that makes products primarily based on scientific knowledge widely available. It such knowledge that creates useful products for simplifying tasks for man and society in different dimensions and possibilities.

Although science and technology are indispensable in modern world, researchers widely believe they receive marginal coverage in the media. Perhaps this provides a logical explanation as to the reasons why the general public has a startlingly limited knowledge or comprehension of current science. This is especially the case in parts of sub-Saharan Africa. Accordingly, McKenna (2025) revealed that there is a challenge in respect of access to scientific information in sub-Saharan Africa with low levels of access reported in many countries. In view of the critical function of science and technology to national development, adequate coverage of science and technology should be seen as imperative when one considers overwhelming public interest in several scientific areas.

Scholars have made serious attempts to conceptualise the term development. The result is that there are numerous definitions. Everett Rogers cited in Oyero (2012) and Jegede (2017) defines development as a widely involved process of social change in a community with the goal of granting the majority of people power over their surroundings in order to bring about social and material growth such as increased equality, freedom, and other desirable aspects of life. According to Rodney (1972), development entails improved ability and aptitude as well as more autonomy, creativity, self-control, accountability, and material prosperity. The determination to leverage on the media to cause social engineering towards the creation of riches and the guarantee of both individual and community well-being is a key concern of development communication. In this regard, the mass media should be utilised to draw attention to development initiatives and encourage public participation in order to boost productivity (Anyanwu et al., 2019; Olaniyi, 2020; Sanusi & Omotade, 2023).

3.1 Relationship between Science, Technology and the Mass Media

It has long been recognised that the media contribute significantly to society by disseminating information that is essential to people's understanding and interpretation of their surroundings (Davidson, 2025; Liao, 2023; Paul & Rai, 2023). For the benefit of their audiences, the media represent, analyse, and assess issues in order to assist them make sense of the world and events (Ajetunmobi, 2023; Çobaner, 2021). Technical jargons, complex scientific language and analysis of research goals, objectives, and results are just aspects of what the media do in science journalism and reporting. This idea is about media framing of science.

In terms of scientific communication, the media are viewed as "brokers" between the public and science, influencing public perception of science-related events and framing social reality for their audience. It is unique to note that for some people, the media happened to be the only reliable science and technology information source (Schäfer, 2011; Yin & Yan, 2021). In actuality, media coverage, interpretation, and presentation have a big impact on how people perceive science and technology. To a reasonable extent, the audience relies on experts' interpretations of complex scientific findings for knowledge and understanding. This is made possible by the media.

The mass media offer the platform for the development and pursuit of the public-science connection, and it is within this platform that the public forms moral assessments of science (Elliot, 2019; Lewenstein, 2015; Schipani, 2024). Additionally, science has always been given a lot of weight in the news media, but contemporary news companies are more inclined to see science as a specialised field where science news competes with all other types of news for time and space (Dönmez, 2023; Funk et al., 2017; Su et al., 2015). The "gatekeepers," who choose which science articles to report based on their own journalistic values, are journalists or their editors. Their personal preferences, the complexity of the subject matter, deadlines, availability of science news, the availability of scientists for interviews, time and space constraints, and numerous other considerations can all have an impact on the stories they choose to publish.

Since science and the media have different rules, scientists cannot modify their methods or findings to fit the media, and journalists will not alter their reporting to fit scientists, scientists must understand how the mass media functions if they want to receive media coverage. Scientists frequently believe that the media either misunderstands them or purposefully misrepresents them and their science, and journalists occasionally accuse them of being inaccessible and speaking in technical terms. It's critical to keep in mind that scientists and journalists create information about the world in distinct ways in order for them to collaborate productively.

It should come as no surprise that when scientific messages transition from journal articles to news stories, their meanings change. Biases and inaccuracies infiltrate. Certainty replaces uncertainty. Hopeful developments turn become cures, and tentative improvements turn into breakthroughs. Journalists and scientists are likewise subject to rather varied standards. Scientists respect accuracy, impartiality, and detail. They typically do not modify the information for a certain audience and instead wish to put a lot of limitations and warnings. Journalists always consider their readers, viewers, and listeners while searching for a story. Drama, human interest, relevance, and real-world applicability are what they require. They also want to see the genuine person – someone who might even be funny – behind the lab coat. They are curious about the difficulties and benefits of being a scientist.

Infographics and captivating, straightforward images are also essential for journalists to captivate readers. It is important for scientists to realise that journalists are taught to pose challenging and inquisitive questions. They have the right to decline to serve as mouthpieces for institutional news or as channels for the viewpoint that a particular interest group wishes to express. They will evaluate a story based on their own listeners', readers' or viewers' news values and interests. Journalists and scientists collaborate most effectively when both sides see it as collaboration. Scientists can impart fresh knowledge and possess authority and competence. Journalists are skilled at making this into a tale that will appeal to the general public.

Scientists with greater effort to have good media knowledge and also learn to align with the rules usually

have the capacity to control the agenda of the media in more effective ways and this often result in working relationships that are mutually beneficial to parties involved. Adapting and conforming to journalistic conventions through collaborating with journalists may provide scientists with superior control over the tone and emphasis of the unfolding story (Kulkarni et al., 2022). But, since science journalism is ultimately about media rather than science, the journalists will always get the final say (Elías, 2018; Guenther, 2019).

A survey of over 1,300 biomedical researchers across five nations found that there was widespread interaction with the media and that there appears to be a greater link between science and the media than is commonly believed (Peters et al., as cited in Joubert (2015)). The researchers suggest several potential explanations for this, including a shift in the standards used to evaluate media performance from quality- and scientific content-oriented criteria to strategic, public relations, and effect-oriented criteria; greater professionalism in science journalism; and more effective communication tactics that have a greater impact on how science is covered in the media. While acknowledging that researchers' improved ability to collaborate with the media is beneficial for scientific journalism, they caution against the risks associated with scientists attempting to exert more influence over science coverage. For this reason, having "strong science journalism" that is both analytically critical and investigative – that is, capable of "credibly praising and criticising" research is crucial.

Additionally, Pinto (2020), cautions about the dangers to science communication that come from commercializing research that is supported by private firms. He notes that pressure from public relation and marketing causes science writing to shift towards public relations, which leads to hype, sensationalism, and inflated claims. These concerns have led to a situation where information consumers and the general public are becoming more sceptical about science. The author comes to the conclusion that in this evolving environment, the goal of science communication is to increase public criticism of private scientific advancements rather than to win over the public.

It goes without saying that science journalism as seen in newspapers, magazines, popular science publications, radio, television, film and the internet are a major means of communicating and popularizing science. On the other hand, scientists through research, teaching and publications often need to engage the public through the media to engender public understanding of science and engage in other activities that may help improve scientific literacy among the population (Dutta & Batta, 2013). Such activities may include coverage of a follow-up effort by scientists or even a case-by-case treatment of research findings to validate new results. It could also be about dismantling conspiracy theories in the science world and proving that only scientific information should be relied upon in taking decisions about anything including personal health of individuals.

A practical example that may align with the foregoing statement is scenario surrounding the Covid-19-related conspiracies on preventive and curative measures. Access to social media and new media technologies exposed users to all manner of conspiracies in the wake of the outbreak and subsequent spread of the virus to different territories of the world. But again, science journalism was effective in that regard as it possesses the power to stimulate the gathering and dissemination of research-based information that would assist the public in making good health decisions – altogether leading to better health outcomes for the generality of the people. This aligns with research finding that during the pandemic there were interactions between science journalists and scientists primarily for the purpose of occasioning improvement in scientific culture of society, promote favourable attitudes of the public toward research and to achieve a society with better-educated individuals on health matters (Marín-González et al., 2023).

The spread of scientific findings from research on Covid-19 and related health information and communication was a major approach in the right against the pandemic. Awareness campaigns in the media based on sound scientific foundations proved useful in the fight to reduce the spread of Covid-19 in Nigeria (John, 2023; Ogah et al., 2022). This is another great relationship between the science (as seen in research), technology (as in the use of media technology), and the mass media (as demonstrated in the packaging of media messages) all in a bid to push back the dangers of a pandemic (as seen during the Covid-19 pandemic outbreak in the world and Nigeria in particular).

4 LITERATURE REVIEW

Developments in science and technology issues necessitated the creation of science beat and desk in most media organisations today. Hence, specialised reporting has become a novel component in the field of journalism. The science and technology beat could be described as a two-in one beat. It consists of a gamut of issues, topics, developments, trends, and happenings etc. Some of the issues covered by reporters in this field include health, environment, scientific inventions and prediction, to agriculture and news about industrial safety in our world (Mamboleo et al., 2023). According to Guenther (2019) science journalism as specialised journalism genre is about science, technology, and medicine, and was professionalised in the 20th century's second half. It must be noted that the areas of reporting remain complex to the lay-audience who may not have the requisite education and exposure to understand science and technology-related information in the original form as often released by a science institute or organisations.

Therefore, it is necessary to bridge the gap between the highly complex and technical field of science and technology and the media audience because science naturally involves terminologies and jargons that the general public can barely identify with. It is the place of journalists to break down this scientific language to the level the public would understand. This does not in any way imply reporting incorrectly to the point of losing the meaning of what is being reported. It has also been noted that “science and technology reporting in precision journalism where accuracy is of the essence” (Alao & Olawumi, 2014, as cited in Nwagbara and Azoriwa (2018) p. 3). Accuracy is considered indispensable in reporting science and technology (Allard, 2023; Gordon and Betty Moore Foundation, 2018). This is chiefly because once the wrong information is provided to the public and then they take action relying on such, the rippling effect may be devastating. A case in point is the Covid-19 health communication efforts by concerned stakeholders through the media. Health is reference here because a bulk of science writing in both developed and developing world center on medicine and health (Bauer et al., 2013). This puts science and technology reporters on their toes to do good by the profession.

Consequently, the dissemination of accurate and precise information on curative and preventive measures was just the only way out of the health situation such as the Covid-19 pandemic. Again, the complexities of the issues and moments of the pandemic reveal the need for transmission of precise information. Chen et al. (2021) lend credence that on the basis of China's experience, there is need for precise information transformation during the pandemic. This is a part of the larger advocacy for precise and accurate dissemination of science communication especially in times of great needs. Such accurate science communication was just the way out of the issue especially during Covid-19. Access to information is considered to be part of the indices to know that the world is on course to sustainable development (UNESCO, 2019).

Additionally, Dickson (2012) makes the case that science communication is a crucial part of development plans and that all stakeholders need to have access to pertinent scientific data in an understandable format; in other words, they need to have access to science that has been effectively communicated.

The public's comprehension of science and technology is greatly enhanced by the media. Usually, journalists take on the role of “intermediaries” between scientists and the general public with an interest in a particular scientific topic or issue. Consequently, Rödder et al. (2012) argued that an analysis of the media's portrayal of science would be necessary in order to fully comprehend the social representation of science, or how science is portrayed in the public consciousness. Nevertheless, very few studies have thoroughly examined the quantity, calibre, reach, and opinions of science and technology coverage in Africa.

A study conducted by (Matsilele et al., 2024) examined the influence of science reporting on journalism within the context of South Africa. The study demonstrated low coverage and concluded that different levels of influence shape science reporting, and that at the individual-level, it is about the journalist's knowledge of science and personal background. Furthermore, lack of skills was identified at the routine-level and organisations resource limitation was also identified. Only a small number of studies have thoroughly examined the quantity, quality, reach, and opinions of science and technology

coverage. This clearly shows that most African media and journalists are yet to give proper attention to science and technology issues in the continent. This is however a major issue for concern as it relates to the development of a continent that has most countries categorised/designated as developing or underdeveloped in the real sense of the word “development”.

There is also the need to give science and technology reports a “human face” if such report should appeal to the public (Udo 2014, as cited in [Nwagbara and Azoriwa \(2018\)](#)). Udo further notes that most science and technology issues will at all times have a human application. Thus, reporters should always find out how the incident they are reporting affects the lives of the people, readers and listeners. [Fairbank \(2025\)](#) notes that against the knowledge-based solution to effective science reporting, there must be some form of confirmation-based reporting. This does not diminish the need for the reporter to build up a basic knowledge about the science and technology beat, read widely as there are daily advancements in the field, make contacts; he or she should know as many scientists as possible.

In a study, [Batta and Iwok \(2019\)](#) attempted to explore periphery nations’ communication scholars’ perception of science communication. Specifically, the researchers examined how science communication studies and research are perceived, how science is covered in Nigerian media, how politics views science communication, how diverse stakeholders and actors are, how science issues are disseminated, and how interested Nigerians are in science issues. The results of the study, which was conducted using a survey research design, indicate that, among other things, 49% of the respondents thought that there was insufficient scientific content in the media, 65% thought that science communication received little or no political attention, and 63% thought that there was little diversity among the actors and stakeholders in science communication. Based on the results, the study suggested that laws pertaining to science communication and primary, secondary, and tertiary science education should be prioritised by the government, business, lawmakers, and all other stakeholders and that there should be improvement in science journalism and advance research on science communication.

Similarly, [Tsanni \(2021\)](#) noted that scientific literacy in Nigeria is low due to lack of science coverage in the Nigerian media. This in itself is a major problem of learning and knowledge in the country. Accordingly, science journalism training is said to be absent in Nigeria; a situation that has resulted in a few journalists and editors with a science background (Meyer, as cited in [Tsanni \(2021\)](#)). These issues contribute to the improvement of dearth of science knowledge in segments of the Nigerian society. The media plays a critical role in the education of its audience ([Kapur, 2018](#); [Keefer & Khemani, 2014](#); [Raju, 2019](#); [Ritakumari, 2019](#)) who are members of the public. This is part of the traditional function of the mass media. However, when practitioners are not knowledgeable in science and technology, how are they able to impact such on the public. The answer is as good as anyone’s guess.

5 METHODS

This study is qualitative and so considered secondary data gathering methods. It is based on a systematic review of existing data in form of literature in online materials, government reports, journal articles, and articles in book chapters as well as textbook. The data collection method employed was online databases and archives such as ResearchGate, Web of Science and UNESCO. Initial results show that over 112,000 results after which the selection process was initiated. Result from the process saw the hits reduced to 2,717. Afterwards, the researchers repeated the process to prune the number to 107 in the validation process. The exclusion criteria at this stage include articles published prior to 2010 and others about science and technology in relations to other fields other than journalism practice and education. This implies that the inclusion criterion was based on recent and literature. This yielded 12 articles upon which this review rests. These were synthesised to arrive at the position on the challenges associated with reporting science and technology issues in Nigeria while also creating discourse points as per implications of the inadequate coverage accorded to science and technology issues in Nigeria’s development.

6 RESULT AND DISCUSSION

6.1 Obstacles Science and Technology Reporters Facing in Nigeria

A number of challenges have posed great obstacles to journalists covering science and technology beat in Nigeria. The lack of understanding in the fields of science and technology is one of these issues. Given the significance of scientific concerns to society, the media should typically be quite interested in covering them. Unfortunately, there is a common belief that this is rarely the case since media outlets and journalists frequently lack the expertise and corresponding motivation to cover science and technology. [Nwafor \(2021\)](#) confirmed this position that in most newsrooms in Nigeria media houses, reporters are reluctant to take up assignments dealing with science and technology and most time are compelled by external factors and forces to cover a field neglected for a long time. This is particularly true in Africa, where there is a dearth of journalists with specialised knowledge in science and technology, as well as a lack of the skills required to understand and interpret such information before disseminating it to various audiences as news, features, and other texts.

Closely related to the knowledge gap in science and technology is the lack of value attached to science and technology in Nigeria. In Nigeria for instance, there is a preference for other disciplines compared to science and technology. Even though successive governments try to introduce several policies to encourage science and technology in the country, the discipline has continued to receive less interest from the citizens. This is coupled with the fact that the country is not yet technologically developed; only few trained experts in science and technology are available. This problem has deeply affected the educational system in the nation which is why several journalists are not equipped with the basic knowledge of science and technology in journalism profession.

Sensationalism and mistrust is a generally problem that scientist and journalists battle with very often. Despite the fact that balance and accuracy are regarded as fundamental components of journalism, it appears that competition and ineptitude have contributed to sensationalism and the devaluation of significant topics. Although it is impossible to generalise, this is regrettably a common occurrence in African journalism. In truth, the issue has been linked to incapacity and a lack of specialised knowledge, which has caused conflict and mistrust between scientists and media. The idea, and occasionally myth, that journalists will constantly sensationalise or misreport material has contributed to this mistrust.

The media and scientists are engaged in a sort of cold war. William Balikuddembe of The Sunrise newspaper and chairman of the Uganda Science media Association supports Tenywa's claim that scientists are reluctant to provide information because they worry that the media may publish it incorrectly ([UNESCO, 2011](#)). This frosty relationship made scientists not to be open to media men to disclose their scientific research or works. Whereas the journalists may just be out there to report the issues, the infusion of opinions by some reporters may appear to be at variant with the objectives of the research that led to the scientific results in the first instance.

In the same vein, [Ineji \(2014\)](#) opines that the ethics of science, which bars scientists to be quoted in the mass media on certain discoveries and breakthroughs usually, discourages journalists from science beat. He further notes that this is against the background that every journalist wants to quote sources to give credibility to their stories. This ethical standard usually makes journalist's to be reluctant in reporting science and technology in Nigeria. The case of Dr. Jeremiah Abalaka, a Nigerian doctor is a case in point. Dr. Abalaka who claimed to have found the cure for HIV/AIDS has not been properly reported by the mass media because of his refusal to open up on the procedure of the development of his vaccine. His refusal to open up had created the impression that science is complex and no journalist is ready to report his discovery without attribution to source of information ([Ineji, 2014](#)).

Inadequate training of journalists on science and technology reporting is another obstacle. Journalism training institutions in Nigeria are yet to integrate science communication courses in their curriculum. Hence prospective journalism students in training are not equip with the requisite skills on what it takes to report science related issues. In this regard, [Ineji \(2014\)](#) contends that most mass communication schools and colleges do not have science courses in their curricula where as they have courses like

law, psychology, sociology and other humanity courses in their curricula. He further notes that this makes graduates of mass communication to be deficient in science and hence creating the fear that science is exclusively complex than any other field. However, this scenario is changing gradually as the mass communication curriculum in Nigeria is currently being unbundled to reflect the reality of the times in journalism profession globally. The foregoing has been corroborated with the submission that the biggest obstacle to Africa's capacity to maintain its current economic growth and rank among the world's top manufacturing and exporting continents is its inability to shift its educational offerings from the humanities and social sciences to STEM courses (Khumbah, 2016, as cited in [Batta and Iwok \(2019\)](#)).

Closely related to the above is the lack of research materials on science and technology in Nigeria. [Ineji \(2014\)](#) observes that this problem makes journalists to be helpless in reporting science issues because reporting science effectively requires that a journalist should make reference to scientific materials. Hence since materials are not readily available journalists hardly embark on research to know current trends in the scientific world. This compounds the myth that science is complex to report to the public. This is against the background that if journalists are to report science effectively, they have to engage in research that would unravel the implications of scientific discoveries to the common man.

In addition, the technical language of science also complicates issues to most journalists reporting this beat. Due to lack of background in science discipline most journalists are unable to break down scientific information for public consumption. Little wonder so many journalists shy away from reporting science and technology issues. Researchers have hinted that one of the most frequently stated explanations for reporting practices that media critics deem problematic is journalists' lack of scientific training or expertise ([Okon & Eleba, 2013](#); [Tran & Nguyen, 2023](#)). Due to this ignorance, many media lack the ability to critically examine scientific and technical advancements, especially when the scientists or innovators are trying to conceal their flaws.

The challenge of a local news culture that may not be friendly towards the promotion and development of science and technology journalism is another serious obstacle. It is indeed a challenge because the style of report as well as the reluctance to report on issues that promote science may as well dim the light in the area of journalism. This can be seen from a similar study conducted in Vietnam that identified the challenge of science-unfriendly news culture as one obstacle facing science and technology journalism ([Tran & Nguyen, 2023](#)). This implies that

6.2 Implications for Nigeria's Development

Scientific literacy is very important to national development. When majority of the public are not literate on science and technology issues they will be misled. [Dickson \(2012\)](#) emphasises the need to stem the flow of bad information or misinformation about science in the society. According to him, one of the ways in which the media should stem the flow of misinformation about science is for the media industry to always cross check and verify facts and information from scientists before they let out information to the public domain. Going by the Nigerian situation, most people are not scientifically literate because of the phobia associated with science and technology. Hence, this has huge implications to Nigeria's development. When people are not literate in science they will find it very difficult to read or listen to media reports on scientific inventions or discoveries. This is one of the reasons why science news is not interested to most of Nigerian public.

The importance of scientific literacy and its implications to public policies around the world has been acknowledged ([Kennedy & Overholser, 2010](#), as cited in [Dutta and Batta \(2013\)](#)). They stress that if only a small number of people in a democracy is knowledgeable about science and technology, the level of public discourse becomes low and policy making poor. They add that citizens require some level of scientific knowledge about issues such as energy policy, climate change, evolution, and disease prevention to stimulate progress. Such progress can only be stimulated in a knowledge-based foundation. In other words, the nation that prioritises capacity development through the education of its citizenry in science and technology may just be on its way to growth and progress.

The state of science and technology development in Nigeria is very bleak and not encouraging at all. Agbakwuru (2017) cited in [Batta and Iwok \(2019\)](#) reported that even though the federal government declared a state of emergency on science and technology sector in Nigeria there is yet a commensurate commitment to implement government policies and strategic plans on science development in the country. The lack of implementation of government policies on science and technology has cause the country to retrogress in its development in all spheres of national life. Nigeria is lagging behind in national development because of government poor attitude towards science and technology. [Dickson \(2012\)](#) contends that all stakeholders must make sure they contribute to the advancement of science and technology and that scientific communication is a crucial part of development initiatives.

One of the things that drive innovation in terms of development is research. Research is a major factor that facilitates development and progress in any country. This has been buttressed with the assertion that research and development are two distinct yet inseparable ([Mahr et al., 2023](#); [Namanji & Ssekyewa, 2012](#)). Therefore, investing in science and technology would mean that the government must be ready to inject funds and resources towards research that would lead to national transformation. Nigerian Journalists and scientists have been neglected by government in terms of provision of research grants to fund researches on science and technology. This situation has made Nigerian journalists ill-equipped with the requisite skills to report science issues. In fact, it is also the case elsewhere in Africa as skills gap was identified as a major challenge that hinders science reporting by science and technology journalist practicing in the continent ([Afadhali, 2024](#)). If this will be curbed, it is imperative for the government and the private sector to heavily invest in science and technology development in the country.

It is an exercise in futility to delve into science and technology reporting without the necessary technical equipment and gadgets. Despite having a wealth of human and material resources, including engineers and technicians, Nigeria lacks technology because these resources are not being used effectively ([Gulma, as cited in Nwachukwu and Udenze \(2019\)](#)). Perhaps this explains why science reporting has been accorded low premium among most media organisations in Nigeria. This is especially pathetic among government media outfits. The paucity of the needed technology required for venturing into science reporting is seriously lacking in the country. This is in contrast to most developed nations where these gadgets are readily available. This is the reason why Nigerian scientists should be supported with the required resources needed to invent locally made equipment that would fit into our environment and thus meet the demands for science and technology reporting in Nigeria. Put in another way, and in line with the position of [Mamboleo et al. \(2023\)](#), the intellectual, financial and technical capacity of journalists especially those in the developing world must be strengthened to enable them generate science news report and even provide the audience a blend of local content and perspective.

7 CONCLUSION

The paper was able to establish the fact that reporting science and technology is very important to the survival of society. This is imperative because virtually everything in the society runs entirely on the wheels of science and technology. It is because of this reason that the mass media must educate the public on issues relating to science and technology. For the media to do this job effectively the journalist must be well trained with the skills to gather, process, and disseminate scientific information to the audience. The paper argues that media coverage and reportage of science and technology has been low in Africa and Nigeria owing to the fact that government has not accorded it the priority it deserves. A majority of Nigerian journalists are not well trained in reporting science and technology. This problem stem from the fact that they have not been expose to the rudiments of science communication during their training days in school. Hence, venturing into it in real life becomes complex and difficult. In addition, most media organisations in the country do not have modern technological equipment required for science communication coverage. In view of the importance science and technology reporting occupies in the scheme of things in the society the government must ensure that the give adequate attention to this area by providing the human and material resources needed to rejuvenate this specialised aspect of journalism profession in Nigeria.

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References

- Ajetunmobi, U. O. (2023). Media framing and construction of socio-political issues in nigeria: (dis)connection between theory and professional ethics? *Mediterranean Journal of Social and Behavioural Research*, 7(2), 93–101. <https://doi.org/10.30935/mjosbr/13053>
- Allard, A. (2023). Nudging accurate scientific communication. *PLoS One*, 18(8), e0290225. <https://doi.org/10.1371/journal.pone.0290225>
- Anyanwu, B. J. C., Okolichukwu, A. V., & Okodogbe, P. E. (2019). The role of the mass media in national development. *IMSU Journal of Communication Studies*, 3, 113–123. <https://imsujcs.com/Journals/archives/vol3/010.pdf>
- Batta, H. E., & Iwok, U. (2019). Perception of science communication culture by communication scholars in a periphery nation. *The Nigerian Journal of Communication*, 16(2), 523–550. <https://tnjc.org.ng/wp-content/uploads/Vol16N2Full/Perception-of-Science-Communication-Culture.pdf>
- Bauer, M. W., Yulye, J., Ramos, R., Massarani, L., Amorim, L., & Howard, S. (2013). *Global science journalism report: Working conditions and practices, professional ethos and future expectations*. Science, Development Network, London School of Economics, and Political Science. <https://eprints.lse.ac.uk/id/eprint/48051>
- Bello, M. S. (2021). Issues and trends in science education for sustainable economic development in nigeria. *New Trends in Science, Technology, Management and Social Sciences in Africa*. <https://acjol.org/index.php/vjstm/article/view/1779>
- Billingsley, K. (Ed.). (2020). *Science, technology, & society: A student-led exploration*. Pressbooks. <https://pressbooks.pub/anne1/chapter/conclusion>
- Carvalho, L. C., Jeleniewicz, M., & Vanková, Z. (2021). Business models for digital economy: Good practices and success stories. In L. C. Carvalho, L. Reis, A. Prata, & R. Pereira (Eds.), *Handbook of research on multidisciplinary approaches to entrepreneurship, innovations and icts* (pp. 1–21). IGI Global. <https://doi.org/10.4018/978-1-7998-4099-2.ch001>
- Chen, W., Zhang, W., & Li, L. (2021). Precise transmission for covid-19 information: Based on china's experience. *International Journal of Environmental Research and Public Health*, 18(6). <https://doi.org/10.3390/ijerph18063015>
- Çobaner, A. A. (2021). Representation of syrian children in turkish media from a child-oriented rights journalism perspective. In F. Özsungur (Ed.), *Handbook of research on policies, protocols, and practices for social work in the digital world* (pp. 355–375). IGI Global. <https://doi.org/10.4018/978-1-7998-7772-1.ch020>
- Davidson, W. P. (2025). Mass media and social media. In *Encyclopedia britannica*. <https://www.britannica.com/topic/public-opinion/Mass-media-and-social-media>
- Dickson, D. (2012). Science communication: An essential component of development strategies. *The UNESCO Courier*. https://overseas.mofa.go.kr/unesco-en/brd/m_8666/view.do?seq=674606
- Dönmez, I. (2023). Newspapers in science communication: A content analysis on science and technology news. *İstanbul Gelişim Üniversitesi Sosyal Bilimler Dergisi*, 10(1), 93–112. <https://doi.org/10.17336/igusbd.915432>
- Dutta, A., & Batta, H. (2013). Theoretical and practical perspectives on science communication around the world: A literature review. In D. Wilson & H. Batta (Eds.), *Science, health and environmental communication* (pp. 1–53). Ibadan University Press.

- Elias, C. (2018). Science journalism as an academic discipline: The fusion of western media and science seen from a literary and social perspective. *Communication Papers – Media Literacy and Gender Studies*, 7(13), 163–172. <https://e-archivo.uc3m.es/rest/api/core/bitstreams/8b00c94d-39dc-4790-9434-eb5869b84731/content>
- Elliot, K. C. (2019). Science journalism, value judgments, and the open science movement. *Frontiers in Communication*, 4, 71. <https://doi.org/10.3389/fcomm.2019.00071>
- Fairbank, V. (2025). Should science journalists know science? *Canadian Journal of Philosophy*, 1–19. <https://doi.org/10.1017/can.2025.3>
- Flatow, I. (2024). *Science journalism is shrinking – along with public trust in science*. Retrieved October 20, 2024, from <https://www.sciencefriday.com/segments/science-journalism-trust-in-science>
- Funk, C., Gottfried, J., & Mitchell, A. (2017). *Niche information sources are most trusted to get the fact right about science*. Pew Research Center. <https://www.pewresearch.org/journalism/2017/09/20/niche-information-sources-are-most-trusted-to-get-the-facts-right-about-science>
- Gordon and Betty Moore Foundation. (2018). *Just the facts: The importance of accuracy in science journalism*. Retrieved October 20, 2023, from <https://www.moore.org/article-detail?newsUrlName=just-the-facts-the-importance-of-accuracy-in-science-journalism&tagToFilterBy=ab660061-a10f-68a5-8452-ff00002785c8>
- Guenther, L. (2019). Science journalism. In J. Nussbaum (Ed.), *Oxford research encyclopedia of communication*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228613.013.901>
- Holesovsky, C. (2021). *The science of science communication*. Retrieved October 20, 2024, from <https://www.aldacenter.org/thelink/posts>
- Ineji, P. U. (2014). Print media coverage of science: The fear and myth. *Mkar Journal of Media and Culture*, 1(2), 90–95.
- Jegede, E. (2017). From modernisation to alternative paradigm: Development in history an ideological implications of unequal relations for the periphery. *LWATI: A Journal of Contemporary Research*, 14(4), 274–300. <https://www.ajol.info/index.php/lwati/article/view/169193>
- John, S. G. (2023). Impact of media messages on containment of coronavirus pandemic in nigeria. *Journal of Public Health in Africa*, 14(2), 2048. <https://doi.org/10.4081/jphia.2023.2048>
- Joubert, M. (2015). *Science communication: An introduction to theory and trends*. Retrieved October 20, 2024, from <https://www.drussa.net/drussa.mobi>
- Kapur, R. (2018). *Role of media in the development of education*. Retrieved October 20, 2024, from <https://www.researchgate.net/publication/323725768>
- Keefer, P., & Khemani, S. (2014). Mass media and public education: The effects of access to community radio in benin. *Journal of Development Economics*, 109, 57–72. <https://doi.org/10.1016/j.jdeveco.2014.03.010>
- Kulkarni, S., Thomas, R., Komorowski, M., & Lewis, J. (2022). Innovating online journalism: New ways of storytelling. *Journalism Practice*, 17(9), 1845–1863. <https://doi.org/10.1080/17512786.2021.2020675>
- Lewenstein, B. V. (2015). Science and media. In J. D. Wright (Ed.), *International encyclopedia of the social and behavioural sciences* (2nd ed., pp. 163–166, Vol. 21). Elsevier. <https://doi.org/10.1016/B978-0-08-097086-8.95066-9>
- Liao, C.-H. (2023). Exploring the influence of public perception of mass media usage and attitudes towards mass media news on altruistic behaviour. *Behavioural Science*, 13(8), 621. <https://doi.org/10.3390/bs13080621>
- Mahr, N., Michael, R., & Scalia, S. (2023). *Research & development: R&d definition, process & examples*. Retrieved October 20, 2024, from <https://study.com/academy/lesson/what-is-research-and-development-definition-methods-examples.html>
- Mamboleo, G., Chebutuk, R. D., & MAtu, N. (2023). Science as a beat in journalism: Current status and implications for the future. *Journal of Media and Communication*, 2(1), 66–72. <https://doi.org/10.51317/jmc.v2i1.375>
- Marín-González, E., Navalhas, I., Dijkstra, A. M., de Jong, A., & Luís, C. (2023). Science journalism in pandemic times: Perspectives on the science-media relationship from covid-19 researchers in southern europe. *Frontiers in Communication*, 8, 1231301. <https://doi.org/10.3389/fcomm.2023.1231301>

- Matsilele, T., Msimanga, M. J., Tshuma, L., & Jamil, S. (2024). Reporting on science in the southern african context: Exploring influences on journalistic practice. *Journal of Asian and African Studies*. <https://doi.org/10.1177/002196231224668>
- McKenna, J. (2025). *Growth of open science in africa*. Retrieved April 20, 2025, from <https://blog.mdpi.com/2025/04/15/open-science-in-africa-2>
- Namanji, S., & Ssekyewa, C. (2012). Role and nature of research in development. *Makerere Journal of Higher Education*, 4(1), 1–10. <https://ajol.info/majohe>
- Nwachukwu, S. T., & Udenze, C. (2019). Science, technology and innovation (sti) policy and the technology development of nigeria: Prospects and challenges. *Proceedings of the 2019 LGT-UNN International Multidisciplinary Conference on Technology*. https://lgt-unn.unn.edu.ng/wp-content/uploads/sites/219/2018/06/NWACHUKWUST_STI.pdf
- Nwafor, K. A. (2021). *Science and technology reporting*. National Open University of Nigeria.
- Nwagbara, G. U., & Azoriwa, E. C. (2018). Owerri journalist's attitude towards science and technology reporting. *Novena Journal of Communication*, 6, 1–11.
- Ogah, A. I., Alom, K., Gbakighir, M., Ogayi, A. J., & Awuna, G. (2022). The media in the containment and management of the spread of covid-19 pandemic in nigeria. *Mkar Journal of Media and Culture*, 7(1), 262. <https://www.researchgate.net/publication/372524658>
- Okon, G., & Eleba, T. (2013). Information technology and journalism practice in nigeria: A survey of journalists in portharcourt metropolis. *Review of European Studies*, 5(5), 111–118. <https://doi.org/10.5539/res.v5n5p111>
- Olaniyi, F. O. (2020). Influence of mass media in the promotion of community development programmes in akinyele local government area of oyo state, nigeria. *American International Journal of Nursing Education and Practice*, 1(1), 1–11.
- Oyero, O. (2012). *Development communication and broadcasting*. National Open University of Nigeria.
- Paul, S., & Rai, M. (2023). The role of the media. In S. N. Romaniuk & P. N. Marton (Eds.), *The palgrave encyclopedia of global security studies* (pp. 1278–1286). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-74319-6_277
- Pinto, M. F. (2020). Open science for private interests? how the logic of open science contributes to the commercialisation of research. *Frontiers in Research Metrics and Analytics*, 5, 588331. <https://doi.org/10.3389/frma.2020.588331>
- Raju, R. (2019). *Role of media in education*. <https://www.researchgate.net/publication/362945587>
- Ritakumari, S. (2019). Educational media in teaching learning process. *Bhartiyam International Journal of Education & Research*, 8(3), 7–13. <https://www.gangainstituteofeducation.com/documents/Singh-Ritakumari.pdf>
- Rödder, S., Franzen, M., & Weingart, P. (Eds.). (2012). *The sciences' media connection – public communication and its repercussions*. Springer. <https://www.researchgate.net/publication/278027574>
- Rodney, W. (1972). *How europe underdeveloped africa*. Panaf Publishing, Inc.
- Sanusi, B. O., & Omotade, K. M. (2023). Mass media roles as communication tools for national development. *International Journal of Innovative Science and Research Technology*, 8(11), 1687–1691.
- Schäfer, M. S. (2011). Sources, characteristics and effects of mass media communication on science: A review of the literature, current trends and areas of future research. *Sociology Compass*, 5(6), 399–412. <https://doi.org/10.1111/j.1751-9020.2011.00373.x>
- Schipani, V. (2024). Journalism and public trust in science. *Synthese*, 56, 204. <https://doi.org/10.1007/s11229-024-04701-0>
- Su, L. Y.-F., Akin, H., Brossard, D., Scheufele, D., & Xenos, M. A. (2015). Science news consumption patterns and their implications for public understanding of science. *Journalism and Mass Communication Quarterly*, 92(1), 1–20. <https://doi.org/10.1177/1077699015586415>
- Svensden, B. (2020). The nature of science and technology in teacher education. In U. Kayapinar (Ed.), *Teacher education – new perspectives*. IntechOpen. <https://doi.org/10.5772/intechopen.95829>
- Tirmizi, S. M. A., Malik, Q. A., & Hussain, S. S. (2020). Invention and open innovation processes, and linkages: A conceptual framework. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 159. <https://doi.org/10.3390/joitmc6040159>
- Tran, M., & Nguyen, A. (2023). Besieged from all sides: Impediments to science journalism in a developing country and their global implications. *Journal of Science Communication*, 22(04). <https://doi.org/10.22323/2.22040204>

- Tsanni, A. (2021). *Unique models fuse science with journalism in nigeria*. Retrieved October 20, 2024, from <https://www.theopennotebook.com/2021/01/19/unique-models-fuse-sciene-with-journalism-in-nigeria>
- UNESCO. (2011). *Media coverage of science and technology in africa*. https://www.upf.edu/pcstacademy/_docs/cosce_en_03.pdf
- UNESCO. (2019). *Access to information: A new promise for sustainable development*. <https://unesdoc.unesco.org/ark:/48223/pf0000369162>
- Waithera, H. W. (2019). *Science in the media: African science desk baseline assessment report*. African Academy of Science. Nairobi.
- Yin, L., & Yan, Y. (2021). Science and technology through mass media. In L. Yin & Y. Yan (Eds.), *Science communication practice in china* (pp. 153–171). Springer. https://doi.org/10.1007/978-981-16-3203-7_9



Effects of Corpus-Based Instruction on Students' Academic Writing Development and Their Perceptions toward Learning with Corpora: A Focus on Self-Compiled Corpora

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Abstract

This study aimed to examine the effect of corpus-based instruction (CBI) on EFL learners' academic writing development and their perceptions toward CBI, on third-year Software Engineering students (N = 50) of Woldia University, Ethiopia in 2024. Mixed-methods approach with an interrupted time series quasi-experimental research design was employed. For the 36-hour classroom intervention, a self-compiled corpus of 200 IELTS Band 9 essays was exploited with AntConc software. The data gathering tools used in the study were Test scores, a questionnaire, and semi-structured interviews. Using an explanatory sequential data analysis technique, a paired samples t-test, percentage, and mean were used using SPSS version 26 for quantitative data and thematic analysis for qualitative ones. The analysis revealed significant statistical differences in all pairs of posttest scores at a value of $p=0.000$. Besides, low, medium, and high scorers' posttest writing performance showed a mean difference of 37.35, 29.41, and 14.82, respectively, from their initial test achievements. These findings indicate that CBI effectively enhanced academic writing, especially for low and medium scorers. Participants also expressed positive views on CBI's role in grammar and vocabulary development, despite its moderate impact on task achievements and text coherence. However, further studies shall be done on different academic writing genres.

Keywords: Academic writing development; AntConc software; corpus-based instruction; perception

1 INTRODUCTION

1.1 Background of the Study

Academic writing is a well-structured, organized, accurate, and evidence-based written text that conveys messages to different audiences, and it is a very common practice in higher education settings like colleges and universities (Durrant, 2022). However, some challenges hinder readers' understanding of the intended meaning due to several writing difficulties (Yangın-Ekşi et al., 2023). Among several challenges of teaching academic writing, the impacts of cognitive, individual, pedagogical, and psychological issues have been shown as central concerns (Bailey, 2017).

Moreover, a lack of genre awareness, syntactic knowledge, lexical awareness, and modern technology utilization remains as major difficulties of academic writing instruction (Durrant, 2022). To minimize these difficulties of EFL learners at higher education level approaches to teaching writing: product, process, genre, and process-genre have been employed for several decades, even though the problem persists (Bondi, 2014; Flowerdew, 2010).

In academic writing instruction, producing quality essay/genre types like argumentative, expository, narrative, and explanatory is an important issue. For each essay type, grammar accuracy, vocabulary usage, text coherence and cohesion, and task achievements are the four common quality assessment criteria (Bailey, 2017). Nowadays, as an alternative approach, the corpus-based instruction (CBI) has become more popular in the field of academic writing pedagogy (Durrant, 2022). Due to the advancement of technology, the previous Data-Driven Learning (DDL) has been benefited, and the EFL researchers, teachers, and learners have shown a positive interest in applying it for academic writing teaching and learning purposes indirectly (i.e., without internet access). As a form of DDL, students can access diverse authentic materials, correct errors, and receive feedback to address their writing difficulties using written corpora (Leech, 2014; Luo & Liao, 2015; Oshima & Hogue, 2007).

For many authors like Anthony (2017), Durrant (2022), and Tribble (2001), a corpus (plural-corpora) is a collection of written or spoken texts that can be used directly (i.e., direct approach) or indirectly (i.e., indirect approach) as language inputs in teaching different language skills. For direct use of corpora, EFL learners and teachers can exploit corpus data through online concordance tools. For a direct approach (on-hand), lots of online corpora have been manipulated and used for EFL research and pedagogy purposes (Durrant, 2022; Zhao, 2015). For indirect use, corpus data can be used for instructional and research purposes without internet access, applying different software like AntConc, MonoConc, WordSmith, and printouts (Anthony, 2005; Le Foll, 2021). According to Zhao (2015), among many others, the British National Corpus (BNC), the Michigan Corpus of Academic Spoken English (MICASE), and the Corpus of Contemporary American English (COCA) are the most commonly known types of corpora that EFL teachers, learners, and researchers can use for their particular purpose. On the contrary, there are some opponents to using these general and specialized corpora. For Zhao (2015), managing and using a large number of corpora for specific purposes is difficult. On the other hand, getting adequate and appropriate corpora is another challenge (Le Foll, 2021). Since corpus data is fragmented and decontextualized, it also lacks context. Moreover, using CBI consumes more time (McCarten, 2010).

However, due to the advancement of computer technology, a “corpus of written language texts can be entered into a computer by scanning, typing, downloading from the internet or by using files that already exist in electronic form” so that EFL teachers and researchers can bring authentic texts in the actual classroom that can minimize all the aforementioned challenges (O’Keeffe et al., 2007). In this regard, according to Anthony (2005), self-compiled corpora are relatively focused, tailored, and manageable. They can be collected and prepared systematically from one or more sources to be exploited using a computer through user-friendly, freely available software, i.e., AntConc, through its concordance tools, without internet access (Anthony, 2017). In the field of academic writing, though it needs certain investigation before its actual application in a particular learning context, the International English Language Testing Standards (IELTS), Writing Task I test takers’ responses (Note: we used freely available texts for some ethical issues) seem to be a potential resource for future academic writing instruction (Smirnova, 2017). Hence, the current researchers realized that self-compiled corpora can be collected from the IELTS and prepared in line with Anthony (2017) guidelines.

Among various academic writing essays, comparing and contrasting is the most challenging and a daily practice for higher education learners. Compare and contrast academic essay writing needs relatively factual or objective evidence, rational and critical analysis skills over other types of essays (Bailey, 2017). Therefore, due to the objective and authentic nature of Writing Task I test responses, we believe that the compare and contrast essay writing development might benefit more and highlight better insights regarding the use of corpora. Hence, this study aimed to explore how IELTS Writing Task 1 Band 9 responses as a self-compiled corpora affect EFL learners’ development of academic essay writing and their perceptions toward learning with corpora in the context of Woldia University, Ethiopia.

1.2 Statements of the Problem

Research findings indicate that CBI significantly promotes academic writing development of EFL learners and prompts researchers and teachers to explore effective strategies with several inconsistencies. For instance, recent studies (Durrant, 2022; Hu & Deng, 2023) found that CBI enhances lexical diversity and complexity, with learners appreciating these methods regardless of their performance levels. Alsehibany and Abdelhalim (2023) noted significant improvements in vocabulary use among students at a Saudi university who engaged directly with corpora. While students generally favor learning vocabulary through direct corpus interaction (Boulton, 2009; Sinha, 2021; H. Yoon & Hirvela, 2004), high performers appear to benefit more than lower performers (Boulton, 2009; Mostafa et al., 2018). On the contrary, Duan et al. (2022) highlighted that CBI was more important for beginners than advanced learners.

The EFL learners' perceptions toward the teaching methods, materials, and the overall situation would vary and affect their learning outcomes positively or negatively. Most research findings revealed that learners have positive perceptions of CBI. However, researchers Amjadiparvar and Shafie (2021) found that learners had positive perceptions of the collaborative use of CBI, and Boulton (2009) explored that students liked it for autonomous learning. Besides, the research findings of Alsehibany and Abdelhalim (2023), Boulton (2009), Durrant (2022), Hu and Deng (2023), and Sinha (2021) show that EFL learners were interested and had positive perceptions toward corpus-mediated vocabulary learning over grammar items. In addition, Boulton (2009) and Mostafa et al. (2018) revealed that even though all of their targeted EFL learners were positive on their respective corpus-based EFL academic writing learning, high-performing learners benefited more than low-performing ones. Likewise, Tsai (2021) examined the effect of online CBI on business English writing instruction in terms of vocabulary, syntactic structure, and content as a whole was significant, and learners showed positive perceptions toward the intervention.

In the context of Ethiopian universities, local research findings revealed that academic writing has remained as one of the most challenging tasks for EFL learners (Fenta et al., 2018). As a result, Amare (2022) examined the effects of CBI on Bahir Dar University mechanical engineering students' argumentative essay writing development and their perceptions toward learning with corpora. He applied a one-time pre- and post-test for measuring the participants' writing achievements. Then, his findings indicated that CBI resulted in significant writing improvement, and the target students had shown positive perceptions on the intervention. However, a relatively long period of intervention and repeated assessment of tests might have been done to identify the most challenging writing difficulties and significant changes in the participants' writing improvement and perceptions. Assessing the impacts of a relatively prolonged educational intervention using repeated tests can evaluate learners' progress effectively Subedi (2016). As a result, we, the current researchers, have argued that the above Amare (2022) research findings might vary if the frequency of tests were increased for a relatively longer time intervention.

Additionally, before the beginning of the actual intervention of this study, a preliminary assessment we conducted with 150 randomly selected undergraduate students at Woldia University revealed that over 90% (N=136) were incompetent in their writing quality, scoring below 15% on compare-and-contrast essays in their final exams. Based on the preliminary assessment and our real teaching experiences, it can be argued that despite significant academic writing challenges among EFL learners, Ethiopian universities have largely overlooked the potential of self-compiled CBI as a moderate alternative type of instruction to improve writing skills. Based on the assessments we made, there are no significant efforts to utilize IELTS test responses and questions as a written corpus, aided by AntConc software with no internet access.

To sum up, previous research mainly focused on investigating direct use of general and specialized corpora that will not be practical in the absence of an internet access, and getting sustainable internet access for each learner is the most challenging thing for developing countries like Ethiopia. According to the research findings of Mulatu and Mandefro (2021), in most Ethiopian contexts, the dependence on online instruction poses accessibility challenges for learners, especially in environments with limited/no internet access. Besides, even though Ethiopian university students have shown serious academic writ-

ing challenges, we realized that need-based and tailored self-compiled corpora had never been given attention as an alternative way of instruction. On the other hand, studies show that the effect of CBI on academic writing development is not consistent. Some studies revealed that CBI is effective for grammar and others for vocabulary instruction, with diverse perceptions. Most researchers left their focus on text coherence and cohesion, and task achievement development in the target text. Similarly, some research findings indicated CBI is more beneficial for high writing performance level EFL learners, and some others ensured it is useful for low and medium performance level ones.

Therefore, this study aimed to address the identified gaps and offer further insights into a standardized, self-compiled CBI for developing writing of compare-and-contrast essays and learners' perceptions toward their learning with the target corpora.

Based on the purpose of the study, the following research objectives were designed

1. To investigate how corpus-based instruction differentially impact students' writing development across four text quality criteria: grammatical range and accuracy, vocabulary, task achievement, and cohesion & coherence
2. To examine the effect of corpus-based instruction on EFL learners with varying levels of writing performance in enhancing their academic writing skills
3. To assess how students perceive learning to write through corpus-based instruction

1.3 Theoretical Frameworks

In EFL academic writing instruction, the Theory of Constructivism (CT) mainly pays attention to how individuals construct certain knowledge (i.e., a focus on individual cognitive process) through experiences (Jonassen & Rohrer-Murphy, 1999). On the other hand, the Sociocultural Theory (ST) strongly advocates that learning is highly influenced by both individual cognition and social context and interaction (Yaakob, 2014). Besides, Activity Theory (AT) relies on how tools mediate activities and changes learning outcomes with interactions among activity system components like subjects, objects, tools, and community (Engeström, 2009).

Despite their differences of emphasis, the three frameworks shared concepts like the significance of active learning, social interaction, and contextual learning. Besides, for all frameworks, learning is considered a process of constructing knowledge (constructivist approach) through interactions and experiences of learners. However, unlike the concepts of the two theories (constructivism and sociocultural), AT enables to identification of the contradictions among activity system components within the process of writing instruction and enables taking possible actions (Issroff & Scanlon, 2002). It was also proved that AT is supported by the principles of DDL and can serve as a foundation for studying technology-assisted instruction in higher education to address EFL learning challenges, including academic writing (McCarthy & McCarten, 2022; Yaakob, 2014).

In a constructivist learning environment (CLE), context-based human activity and consciousness interaction concern the learning design process and performance (Jonassen & Rohrer-Murphy, 1999). Since, CLE is "a place where learners may work together and support each other as they use a variety of tools and information resources in their pursuit of learning goals and problem-solving activities (Yaakob, 2014), AT fits the principles of DDL and initiates productive interactions between learners and instructional materials in a constructivist and technology-enhanced environment to better learning outcomes (Engeström, 2009). Again, CBI also promotes technology-assisted real language, autonomous, motivation, and activity-based learning (Boulton, 2009; McCarthy, 2001; Yaakob, 2014). Based on the principles of AT, language learning requires a socially constructed formal environment with shared roles, well-designed learning goals, and tools in line with learners' backgrounds (Engeström, 2009; Hardman, 2008).

Therefore, it can be argued that either individually or in groups, EFL learners can interact with the corpus data to find target language inputs from the patterns of concordance lines, edit their draft, cor-

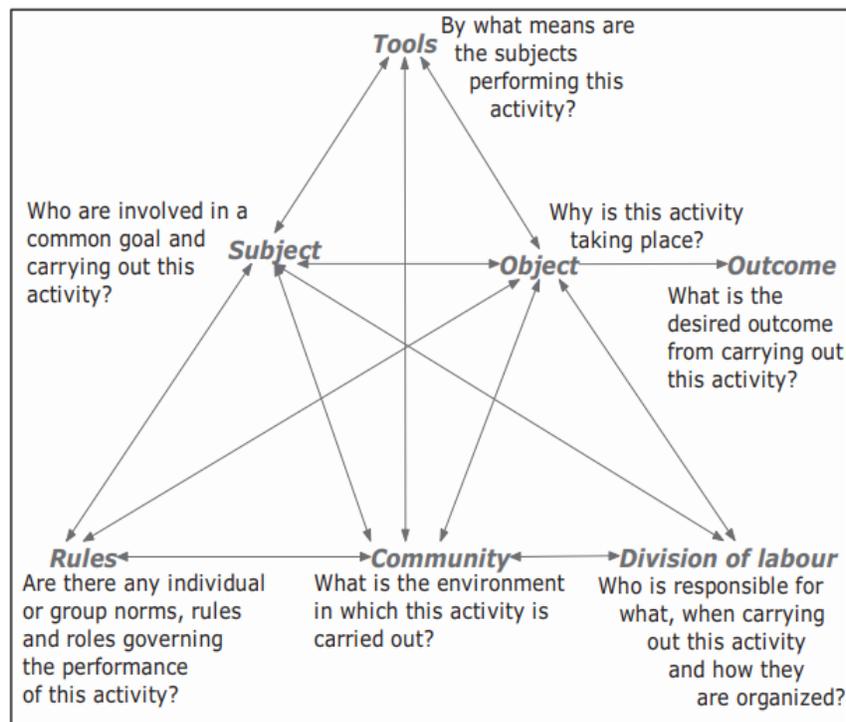


Figure 1: Engeström's (2009) expanded Activity Theory Model used for the present study

rect or revise, and provide feedback to their colleagues using the AntConc software. Since the main objective of this study is investigating effects of CBI (i.e., the tools), it is guided by the principles of AT using Engeström (2009) expanded AT Model based on activity system components, which include tools, subjects, rules, community, division of labor, objects, and outcomes (see the detail in Figure 1). In line with the principles of DDL, AT supports all the analysis of learning environment based on the specific Activity System components, like uses of the tools (AntConc software, self-compiled corpora), subjects (study participant learners, the instructor), community (Woldia University), rules (writing instructions and assessment criteria), division of labor (tasks given to the learners and the instructor), and outcomes (short-term and long-term) of the instruction measured at all levels of tests (i.e., pre-tests, post-tests, and the delayed posttest).

1.4 Conceptual Frameworks

Based on the review of literature, previous research finding, objectives of the current study, and concepts of AT, the following conceptual framework was drawn to clarify both the dependent and the independent variables.

As shown in Figure 2, the CBI is mainly characterized by the use of self-compiled corpora with the assistance of computers and the AntConc software throughout the actual intervention classes. In the classroom intervention, the researcher (i.e., the corresponding author) used both the self-compiled corpora and model printouts (i.e., off-hand materials) under the guidance of the Teaching Learning Cycle (TLC) instructional model. For this intervention, the TLC was selected due to its flexibility and the nature of its genre-oriented approach. A diagnostic test was administered to identify the participants' performance level and to prepare instructional materials accordingly. At the end of each intervention round, the effects of the intervention (i.e., the dependent variables: writing development and perceptions) were investigated in relation to the intervention rounds (i.e., the independent variables: the CBI

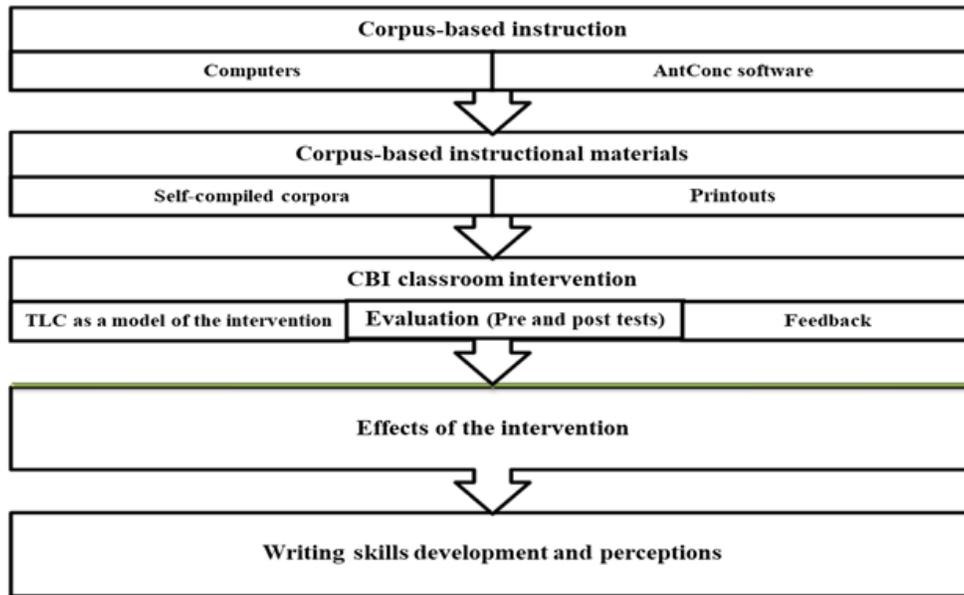


Figure 2: Conceptual framework of the study

given at different time intervals) after the diagnostic/pre-tests: post-tests, and delayed-post-test.

2 METHODOLOGY

2.1 Pedagogical Setting and the Study Participants

Woldia University, a government institution in Ethiopia’s Amhara region, was chosen for this study due to its schedule appropriateness, and availability of computers. After securing permission from the Department of Software Engineering through a formal letter, the researchers met with some instructors a head to explain the study objectives, and the implementation plan. At the very beginning, all the available 55 third-year Software Engineering students (23 females) in the year of 2024 were conveniently selected based on their class schedules appropriateness and availability of adequate number of computers in the department. However, only 50 students (21 females) fully attended the entire intervention classes, and five students withdrawn from the study due to their personal reasons.

2.2 The Study Design

Due to the nature of the research objectives, a pragmatist worldview guided this study. Therefore, a mixed-research method incorporating both quantitative and qualitative data was applied to triangulate the data and increase the validity and reliability of research findings (Morgan, 2007). To investigate the effect of the independent variable (the intervention) on the dependent variable (the participants’ writing development and perceptions) with a set of repeated tests (i.e., two pre-tests, two post-tests, and one delayed post-test), an interrupted time series quasi-experimental research design (ITSQERD) was employed. The ITSQERD advocates that periodically repeated tests are used to examine the progress in students’ writing development (Creswell, 2014).

As a result, the research design for the current study was adapted as shown in Figure 3 below.

$$\underbrace{PT1 - x - PT2}_{APT} - *R1 - CBI \implies PoT1 - **R2 - CBI \implies PoT2 + PI - X \implies DPoT$$

Figure 3: An interrupted time series quasi-experimental research design for a single treatment group (adapted from Chiang et al. 2015)

Where:

PT1 = Pretest one PT2 = Pretest two APT = Average of pretests
PoT1 = Posttest one PoT2 = Posttest two DPT = Delayed posttest

*R1-CBI = First round intervention after pretests
**R2-CBI = Second round intervention after posttest one
PI = Participant interview
x = ten days' time interval between the two pretests
X = Third round intervention (a two-month time interval after posttest two)

2.3 The Intervention: Experimental Work

In the current study, the following five specific phases were employed to ensure the effectiveness of the intervention procedure as stated below:

Phase I-Analyzing students' writing

At the very beginning of the intervention, a diagnostic test (two pretests) was given to the study participants. The raters adapted and used the IELTS Writing Task I assessment criteria for scoring and identification of major writing difficulties.

Phase II-Collection of models

After identifying the major challenges of the participants' writing, the researchers collected 200-model compare-and-contrast Band 9 essays from the IELTS Writing Task I website.

Phase III – Preparation phase

Step one: Preparation of self-compiled corpora and hands-off materials: To prepare the self-compiled corpora, the researchers adapted [Anthony \(2017\)](#) self-compiled corpus preparation guidelines. For academic writing instructional purposes, EFL teachers, researchers, and linguists can collect relevant written texts from published sources like books, websites, essays, newspapers, and online sources ..., and prepare need-based corpora ([Anthony, 2017](#)). After collecting model texts, they were coded and stored separately in a computer for further use (i.e., as a self-compiled corpus). Next, relevant tasks and activities were designed corresponding to the previously identified participants' writing difficulties.

Step two: Train the study participants on how they can exploit corpus data using AntConc software: According to [Anthony \(2017\)](#), utilizing AntConc software is not a difficult task for those who are familiar with basic computer skills. Hence, since Ethiopian secondary and tertiary curricula require students to take introductory computer courses, the researchers found that introducing AntConc to university students was straightforward.

Phase IV-Conducting the classroom intervention

For classroom intervention, the researchers used a total of 36 hours within four months from September to December 2024. For data exploitation, the participants used the AntConc software (version 4.0.11.0) tools, mainly concordance lines of the keyword in context (KWIC), collocates, and N-Grams without internet connections using computers, and model essay printouts manually. The Teaching Learning Cycle (TLC) guided the intervention classes through its five stages: building the context, modeling and deconstructing the text, joint construction, independent construction, and linking related texts similar to the target essay as indicated in Figure 4 below.

According to the research findings of [Singer](#) and [Moscovici \(2008\)](#), teaching and learning cycles in the

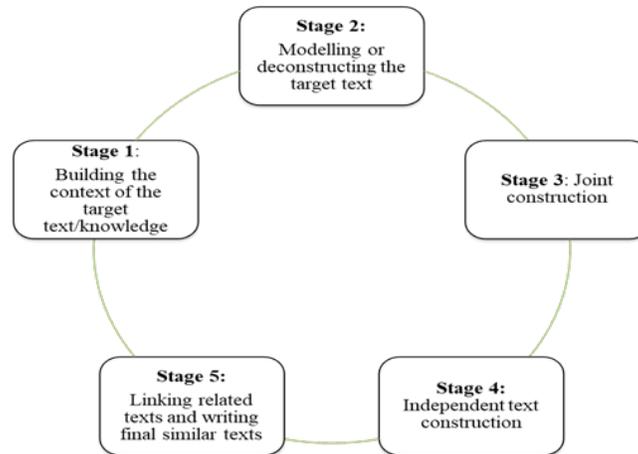


Figure 3: The Teaching and Learning Cycle used in the study intervention: modified from Singer and Moscovici (2008)

DDL approach enhances genre-based academic writing instruction. To explore target language for the target instruction, study participants used concordance lines as shown below. From the concordance line, they investigate word patterns and search alternative word or phrase use.

Phase V: Assessing intervention effects

After the provision of diagnostic tests, two tests (PoTI and PoTII) were administered to investigate the immediate effects of each intervention round within a one-month interval. At the end of each posttest, students' performance was recorded, and major writing difficulties were identified. Besides, a participant interview was conducted on the same day that the PoTII was provided. Then, to assess the relatively long-term intervention effects, a delayed posttest was administered after a two-month time interval from posttest two, which was considered the final activity of the actual classroom intervention.

3 DATA COLLECTION AND ANALYSIS

3.1 Data Collection Instruments

Data collection tools included writing tests, interviews, and a questionnaire. Two pretests were administered within a 10-day interval before the intervention to identify the participants' writing performance level, and common major writing difficulties in terms of the four quality text assessment criteria. Two posttests followed within a month interval, and a delayed posttest was provided two months later. Two raters evaluated each participant's performance using the British Council's IELTS Writing task I descriptors, scoring out of 100% with 25% shared to each criterion.

For this study, three participants were selected for interviews based on their initial performance: a low scorer (PI-1), a medium scorer (PI-2), and a high scorer (PI-3), with scores of 22, 32, and 44, respectively. Using diverse interview participants enhances data reliability and validity (Creswell, 2014). The questionnaire, consisting of 14 five-point Likert scale questions, assessed perceptions of the CBI intervention, focusing on text quality criteria, instructional materials, and teaching methods. Both the questionnaire and the participant interview used to collect data to assess the participants' perceptions.

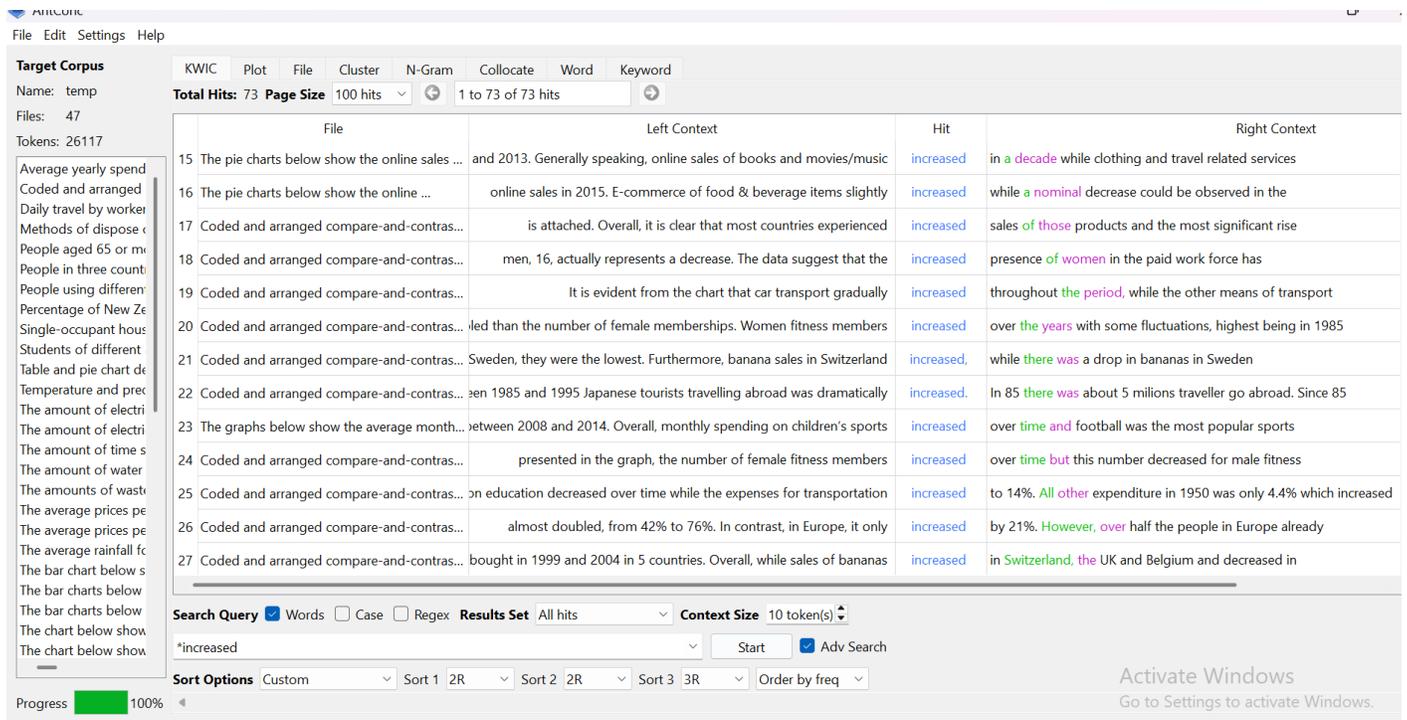


Figure 4: Sample concordance lines to learn the language uses of the word *increase in the KWIC AntConc Tool (Taken from the self-compiled corpora)

3.2 Data Analysis Procedures

Data collection tools included writing tests, interviews and questionnaire. Five adapted tests were used to gather quantitative data on participants’ writing achievements over time. Two pretests were administered within a 10-day interval before the intervention to identify the participants’ writing performance level and common major writing difficulties in terms of the four quality text assessment criteria. Two posttests were also administered within a one-month interval, and a delayed posttest was provided two months later. Two raters evaluated each participant’s performance at all tests.

Mixed method data analysis was employed with an explanatory sequential framework (quan-qual), beginning with quantitative data followed by qualitative analysis. Subedi (2016) notes this design aligns with a pragmatist worldview. The quantitative phase assessed participants’ academic essay scores using two experienced raters, adapting the IELTS criteria. Statistical tools, including paired-samples t-tests and means, evaluated changes in writing development, while qualitative data from interviews were thematically analyzed to assess the major writing difficulties. Pre-evaluations confirmed content validity and test-retest reliability, yielding Cronbach’s alpha values from .797 to .921, with overall test reliability confirmed at .923 before analysis. Participants had been given 1 and ½ hours to complete an essay of 200–250 words for each test.

Here is the LaTeX code to recreate the reliability statistics table from the image. I have used the booktabs style for a clean, professional appearance that matches the layout of the source.

Table 1: Reliability statistics on pairs of pre-tests and post-tests

Cronbach’s Alpha	*N of Items
.923	5

Note: *N indicates the total number of tests given and marked by the two raters.

Similarly, interrater reliability was computed at the individual's text level, and it was found that its average was more than $\alpha > 0.81$ across all tests. Since the alpha value is greater than 0.7, it was considered that all tests were reliable and could be used as a data collection tool (Creswell, 2014). Additionally, the assumptions of normality and homogeneity were assessed before analyzing the statistical significance of the intervention with a paired samples t-test. Normality was evaluated using a Q-Q plot based on the average test scores from the participants' pretests, posttests, and delayed posttests, and the results indicated that the data followed a normal distribution. To assess the homogeneity of variances, Levene's Test was computed, yielding a p-value greater than 0.05, which indicates that the variances were equal..

4 RESULTS AND DISCUSSIONS

4.1 Results

The result of the current study is presented in light of the research objectives which we intended to address:

Research objective 1: To investigate how corpus-based instruction differentially impact students' writing development across four text quality criteria: grammatical range and accuracy, vocabulary, task achievement, and cohesion & coherence. In order to assess the impact of ten days' time interval between the two pretests, a paired samples t-test was computed as resulted in the Table 2 below.

Table 2: A paired samples t-test on the participants' pretests text quality

Text Type	Text Quality Assessment Criteria	Group	N	Mean	SD	T	df	Sig. (p-value)
Compare and contrast essays	Overall text quality	Average pretest I	50	6.9100	1.37559	1.230	49	0.225
		Average pretest II	50	6.825	1.55777			

As shown in Table 2, a paired samples t-test was conducted to assess the effects of the intervention on participants' writing development by comparing pretest and posttest scores. The analysis of the two pretests revealed no significant difference in writing performance, with a p-value of $(t(49) = 1.230, p = .225)$. This indicates that the participants' performances were similar. In contrast, significant differences were observed between the total average pretest and posttest scores: posttest I and posttest II, and posttest II and the delayed posttest, with p-values of $(t(49) = 25.061, p = .000)$, $(t(49) = 21.073, p = .000)$, and $(t(49) = 14.243, p = .000)$, respectively. These results suggest that the corpus-based instruction significantly enhanced the participants' academic writing performance. The mean difference between the average posttest I and the total average pretest was 5.23, indicating improvement due to the intervention. Besides, the paired samples t-test for all tests across the four text quality criteria was statistically significant at a p-value of 0.000 as shown in the Table 3 below.

To examine the impact of each of the intervention rounds on each writing sub-skill, a paired samples t-test was also conducted. Hence, as illustrated in Table 3, statistically significant differences were found in the improvement of participants' writing sub-skills after each of the intervention rounds, with a p-value of .000 for all writing sub-skills: grammar accuracy and range, vocabulary usage, text coherence and cohesion, and task achievements.

For grammar accuracy and range, the mean differences (MD) between average pretest and posttest I, average pretest and posttest II, and average pretest and delayed posttest scores increased as: average pretest and posttest I (MD = 2.62, SD = 0.692), average pretest and posttest II (MD = 3.61, SD = 0.692), average pretest and delayed posttest (MD = 4.36, SD = 0.684) all with a p-value of .000 implies the participants' use of grammar accuracy and range was improved due to the intervention. For vocabulary

Table 3: A paired samples Test based on the four quality text criteria

Pair	Pairs of Tests	Paired Differences						
		Mean	SD	SEM	95% CI		t	Sig.
					Lower	Upper		
1	Pre-Grammar - Post I Grammar	-2.61700	.69218	.09789	-2.81372	-2.42028	-26.734	.000
2	Pre-Grammar - Post II Grammar	-3.61700	.69218	.09789	-3.81372	-3.42028	-36.950	.000
3	Pre-Grammar - Delayed Grammar	-4.35700	.68451	.09680	-4.55153	-4.16247	-45.009	.000
4	Pre-Vocab - Post I Vocab	-2.19440	.88250	.12480	-2.44520	-1.94360	-17.583	.000
5	Pre-Vocab - Post II Vocab	-3.19440	.88250	.12480	-3.44520	-2.94360	-25.595	.000
6	Pre-Vocab - Delayed Vocab	-4.13440	.77141	.10909	-4.35363	-3.91517	-37.898	.000
7	Pre-Cohesion - Post I Cohesion	-2.25480	.46777	.06615	-2.38774	-2.12186	-34.085	.000
8	Pre-Cohesion - Post II Cohesion	-3.25480	.46777	.06615	-3.38774	-3.12186	-49.201	.000
9	Pre-Cohesion - Delayed Cohesion	-4.81480	.44796	.06335	-4.94211	-4.68749	-76.001	.000
10	Pre-Task - Post I Task	-1.29840	.74656	.10558	-1.51057	-1.08623	-12.298	.000
11	Pre-Task - Post II Task	-2.10240	.55542	.07855	-2.26025	-1.94455	-26.766	.000
12	Pre-Task - Delayed Task	-3.08240	.51431	.07273	-3.22856	-2.93624	-43.128	.000

usage, scores increased across the entire intervention rounds as: average pretest and posttest I (MD = 2.19, SD = 0.882), average pretest and posttest II (MD = 3.19, SD = 0.882), average pretest and delayed posttest (MD = 4.13, SD = 0.771) with a value of $p = .000$. This also indicates that participants showed significant improvement in their use of appropriate vocabulary in writing.

Regarding text coherence and cohesion, the mean differences showed a significant improvement at each intervention round as follows: average pretest and posttest I (MD = 2.25, SD = 0.468), average pretest and posttest II (MD = 3.25, SD = 0.468), average pretest and delayed posttest (MD = 4.81, SD = 0.446) with a p-value of .000. This suggests that participants' writing was benefited from the intervention in producing coherent and logically structured texts. Additionally, task achievement scores raised with mean a difference of between pairs of tests: average pretest and posttest I (MD = 1.29, SD = 0.746), average pretest and posttest II (MD = 2.10, SD = 0.555), average pretest and delayed posttest (MD = 3.08, SD = 0.514) with a p-value of .000. This also indicates that participants were more successful in writing texts that fulfilled the required criteria of the target essay. However, comparing to the other three text quality criteria, it was shown that the task achievement was relatively less benefited. Research objective 2: To examine the effect of corpus-based instruction on EFL learners with varying levels of writing performance in enhancing their academic writing skills.

One of the objectives of this study was to investigate how CBI differently impacts EFL learners' academic writing development regarding their initial performance levels. To evaluate the impact of the intervention, the total average pretest score was taken as a baseline achievement. Therefore, the participants' average mean difference between pretests and posttests were computed in line with their initial performance. For the analysis of this study, the two co-authors proposed the average benchmark mean scores for low, medium, and high achievers ranging from 1%-25%, 26%-50%, and 51%-100% respectively (see Table 4).

Table 4: Participants' test achievements average mean differences based on their initial writing performance

Total pretest point scale	N	TAPT (100%)	PoT1 (100%)	PoT2 (100%)	APoT (100%)	Diff TAPT-PoT1	Diff PoT1-PoT2	Diff PoT2-DPoT	AMPoT	AMPoT-TAPT
<25% (*low)	12.00	18.56	42.45	55.63	69.66	23.89	13.18	14.03	55.91	37.35
Avg >25%-<50% (*med)	31.00	28.55	49.32	53.22	71.33	20.77	3.90	18.11	57.96	29.41
>50% (*high)	7.00	51.33	61.23	66.55	70.67	9.90	5.32	4.12	66.15	14.82
Total	50.00	32.81	51.00	58.47	70.55	18.19	7.47	12.09	60.01	27.19

Regarding the participants' initial relative writing performance level, as indicated in Table 4, 12 par-

ticipants obtained a mean score of less than 25%, which was relatively the lowest achievement in the total pretest average. On the same tests, 31 participants scored more than an average of 28%, which was considered an average score for the medium achievers, and seven participants scored greater than 51%, which was a relatively higher initial test achievement. For the low, medium, and high achiever participants, the mean differences between their AMPoT and TAPT were 37.35, 29.41, and 14.82, respectively. However, the mean difference between posttest II and posttest I was 3.6, reflecting a slight decline in their writing performance. In contrast, the difference between posttest II and the delayed posttest showed a positive increment of 2.3. Similarly, the initial scores of three interview participants (22, 32, and 44) rose significantly to 66, 78, and 73 in their PoT2 assessments, demonstrating the effectiveness of the intervention, especially for low and medium achievers.

Research objective 3: To assess how students perceive learning to write through corpus-based instruction. To get an inclusive understanding of participants’ perceptions of academic writing instruction through corpus-based methods, all interview questions, and questionnaire items were developed based on the four quality text criteria, as well as the instructional materials and methodologies associated with the intervention.

Table 5: Summary of participants’ perceptions about the intervention

Items	Level of the Participants’ Agreement in Percent (N=50)									
	Strongly disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly agree (5)	
	No.	%	No.	%	No.	%	No.	%	No.	%
I acknowledge that CBI is essential to improving my grammatical knowledge.	0	0	0	0%	4	8%	4	8%	42	84%
I want to assure you CBI is essential to enhancing my vocabulary knowledge development.	0	0	0	0%	6	12%	4	8%	40	80%
I admit that the CBI is highly significant in improving text coherence and cohesion.	0	0	4	8%	5	10%	5	10%	36	72%
I have learned that the CBI is valuable to improve task achievements/requirements.	0	0	5	10%	5	10%	8	16%	32	64%
Average			5	10%	5	10%	5	10%	37	75%

As shown in Table 5 above, participants rated their agreement on how much the CBI aided their writing development concerning four text quality criteria. About 75% (N = 37) strongly agreed that the intervention was significant for their writing growth, while 10% (N = 5) also agreed on its importance for their essay writing. Overall, 85% (N = 42) of the 50 respondents viewed the intervention as crucial for their writing development. Conversely, 8% (N = 4) disagreed, and 10% (N = 5) were neutral regarding its impact on text coherence and cohesion. Similarly, 10% (N = 5) disagreed, and 8% (N = 5) were neutral about its effectiveness for achieving target essay tasks.

Interviews also supported these findings, with participants noting that the intervention positively influenced their writing. One interviewee (PI-1) stated,

“... corpus-based instruction is highly comfortable for learning grammar, vocabulary, and text coherence in academic writing. I improved my writing performance by obtaining model usages from the corpus.” Another (PI-2) remarked, “This method is crucial for enhancing our grammar and vocabulary knowledge and creating coherent texts.” However, interviewee (PI-3) mentioned challenges in extracting relevant information from concordance lines for grammar and vocabulary.”

The interviewees expressed their perception regarding the uses of the intervention respective to text quality criteria as follows: For me, this instruction was helpful for many things. Especially it is good for vocabulary and grammar learning (PI-2). ... It is important for grammar lessons and essay coherence and cohesion, in addition, it is nice for vocabulary education (PI-1)... according to my understanding, it is essential to learn grammar because the concordance line tells us grammar structures at once with a short time. The AntConc is more suitable for grammar and vocabulary learning (P-3).

This study used various materials, including self-compiled corpora and AntConc software, to assess participants' perceptions.

Table 6: Summary on participants' perceptions on the corpus-based instructional materials

Items	Level of the Participants' Agreement in Percent (N=50)									
	Strongly disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly agree (5)	
	No.	%	No.	%	No.	%	No.	%	No.	%
I recognize that corpus data offers extensive real language input for learning academic essay writing.	0	0%	0	0%	0	0%	2	4%	48	96%
I became motivated by corpus data exploitation using AntConc tools and printouts.	0	0%	0	0%	0	0%	2	4%	48	96%
Using AntConc tools motivated me to explore corpus data, which provides diverse alternatives for language use and text structure.	0	0%	0	0%	0	0%	4	8%	46	92%
I believe that errors can be corrected through individual or group exploitation of corpus data.	0	0%	0	0%	0	0%	6	12%	44	88%
Computer-assisted CBI enhances EFL learners' exposure to updated authentic language sources.	0	0%	0	0%	0	0%	5	10%	45	90%
Average	0	0%	0	0%	0	0%	4	8%	46	92%

Results in Table 6 shows that 4 (8%) agreed and 46 (92%) strongly agreed the materials benefited their academic writing. Notably, 48 participants (96%) found the corpus data valuable, and 90% considered the resources updated and authentic.

While interviewees had varying performance levels in target writing before the intervention, all three reported positive benefits from the materials. Initially, participants expressed concerns about using AntConc and session duration. However, as the intervention progressed, they became more motivated and engaged. One participant remarked, "... as time goes on, everything becomes interesting and encourages better participation." Both PI-2 and PI-3 resounded this sentiment, feeling motivated to explore corpus data for patterns, correct errors, and embrace modern technology in their learning.

Since the interviewees had never used such kinds of instructional materials, they aspired that they would produce quality texts if they could have learned writing in their previous EFL classes. In this regard, PI-1 said, "... let alone my primary education, I suffered getting relevant and authentic teaching materials with better quality and quantity at secondary school and university levels. ... I think even our English teachers did not know this teaching method". Again, the PI-2 explained that this method can motivate the EFL learners and others to use modern technologies in a very simplified way saying "... this approach is very advanced in technology, simple, and helpful to learn writing".

4.2 Discussion

4.2.1 Effects of the intervention on the development of writing and the participants' perceptions

For this study, writing text quality refers to a total average of participants' test results of task achievement, grammatical accuracy and range, vocabulary usage, and text coherence and cohesion in each test given during the intervention and the post-intervention (i.e., the delayed posttest). Therefore, the statistical mean differences between the total average of the two pretests and the first posttest, the first posttest and the second posttest, the second posttest and the delayed posttest were highly significant at a value of (t (49) = -25.061, p = .000), (t (49) = -21.073, p = .000), and (t (49) = -14.243, p = .000) respectively which was over significant than the results of the pretests. This indicates that the intervention was effective and assisted the participants in developing their academic writing consistently. Moreover, the findings of this study revealed that the impact of the corpus-based instruction was reflected even after a two-month time interval since its completion.

Additionally, even though there are certain differences of effect size of the intervention, each of the

four text quality components was shown significant improvements. As a result, grammar accuracy and range, vocabulary usage, text coherence, and cohesion were benefited better than the task achievements. In this regard, several previous research findings support the results of the current study. [Yaakob \(2014\)](#) emphasized that CBI is essential for enhancing genre-based EFL writing skills through lexical bundles and meta-discourse. Moreover, the findings of researchers ([Amare, 2022](#); [Elsherbini & Ali, 2017](#); [Flowerdew, 2010](#); [Vyatkina, 2020](#); [C. Yoon, 2011](#)) confirmed corpus data as effective input for developing vocabulary and grammar across writing genres support the results of this study. In line with the findings of this study, to address the EFL learning challenges in higher education, concepts of Activity Theory: a socially constructed, goal-oriented, and technology-assisted language learning environment study is important ([Issroff & Scanlon, 2002](#)).

Another result of this study indicates that low and medium achievers showed better improvement than high achievers, and this is consistent with [H. Yoon and Hirvela \(2004\)](#), which found that intermediate learners benefited more than advanced learners.

Analysis of the questionnaire and semi-structured interview responses also indicated that participants had a positive perception through out the intervention. However, they expressed varying levels of agreement regarding the significance of corpus data related to the four quality text criteria. The questionnaire results showed the intervention's effectiveness in developing essential writing features, with importance ratings for grammar (92%), vocabulary (88%), coherence and cohesion (82%), and task achievement (80%). This finding also aligns with previous research ([Amare, 2022](#); [Elsherbini & Ali, 2017](#); [H. Yoon & Hirvela, 2004](#)). While participants viewed the intervention positively for learning academic writing features, they primarily focused on using the corpus to enhance grammar and vocabulary knowledge. Similarly, the participant interview responses revealed that the present study participants had a strong interest in using corpus data to learn these aspects of academic writing. Participants were particularly impressed by AntConc features, such as keyword in context, N-gram, and collocates, which helped them explore alternative grammar and vocabulary usage for improved writing performance. For the improvement of the participants' text coherence and cohesion, searching various uses of cohesive devices (i.e., transitional signals) from the self-compiled corpora using the AntConc software played a great role. Furthermore, [Elsherbini and Ali \(2017\)](#) highlighted CBI's significance for grammar and vocabulary development in writing, enhancing learners' perceptions of corpus-based instruction ([Szudarski, 2023](#)).

Similarly, the intervention received positive feedback from both interviewees and questionnaire respondents about their writing experiences, highlighting three key themes: text assessment criteria, instructional materials, and teaching methodologies, along with motivation for learning. Notably, 92% of participants agreed that the materials supported diverse language uses, and 88% felt they aided in error correction. Additionally, 90% of them noted the integration of new technologies is important. Furthermore, interviewees emphasized that instructional materials and methods used increased their interest in essay writing. Overall, participants found CBI beneficial for independent and collaborative learning, supporting earlier findings on the effectiveness of corpus-based instruction which is supported by the principles of Activity Theory. According to Activity Theory, productive interactions between learners and instructional materials in a constructivist and technology-enhanced environment can lead to improved learning outcomes ([Engeström, 2009](#)).

5 CONCLUSIONS AND RECOMMENDATION

5.1 Conclusions

The present study investigated the effect of corpus-based instruction on the academic writing development of target EFL learners, as well as their perceptions of using the corpus (specifically, IELTS Writing Task 1 questions and responses) concerning their initial writing performance levels. The findings indicate that while corpus-based instruction significantly benefited learners across all performance levels, those with relatively low and medium test scores experienced greater improvements compared to high

achievers. The study participants expressed positive perceptions on learning academic writing using corpora, appreciating its moderate approach, flexibility, and extensive range of instructional materials and methodologies that curriculum developers, text writers, and EFL teachers shall consider.

5.2 Recommendation

The sample size of 50 third-year software engineering students is insufficient to represent the broader population. Again, the absence of a control group restricts comparisons between CBI and traditional methods. So, we recommend that future researchers conduct longitudinal studies with larger sample sizes for better understanding across different gener types.

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CONFLICTS OF INTEREST

We authors want to declar that we do not have any conflicts of interest.

References

- Alsehibany, R. A., & Abdelhalim, S. M. (2023). Enhancing academic writing vocabulary use through direct corpus consultation: Saudi English majors' perceptions and experiences. *Arab World English Journal*, 14(1). <https://doi.org/10.24093/awej/vol14no1.11>
- Amare, T. (2022). *Effects of corpus-based instruction on EFL students' academic writing skills, critical thinking skills, engagement, and perception* [Doctoral dissertation, Addis Ababa University] [Retrieved November 22, 2023].
- Amjadiparvar, A., & Shafie, A. (2021). The contribution of collaborative corpus-based practice to writing improvement. *Journal of Language Teaching and Learning*, 11(2), 98–113.
- Anthony, L. (2005). AntConc: Design and develop a freeware corpus analysis tool kit for the technical writing classroom. *Proceedings of the International Professional Communication Conference*, 729–737. <https://doi.org/10.1109/IPCC.2005.1494244>
- Anthony, L. (2017). Corpus linguistics and vocabulary: A commentary on four studies. *Vocabulary Learning and Instruction*, 6(2), 79–87. <https://doi.org/10.7820/vli.v06.2.Anthony>
- Bailey, S. (2017). *Academic writing: A handbook for international students* (5th). Routledge. <https://doi.org/10.4324/9781315169996>

- Bondi, M. (2014). Integrating corpus and genre approaches: Phraseology and voice across EAP genres. In *Corpus analysis for descriptive and pedagogic purposes: English specialised discourse* (pp. 43–62). Peter Lang.
- Boulton, A. (2009). Testing the limits of data-driven learning: Language proficiency and training. *ReCALL*, 21(1), 37–54. <https://doi.org/10.1017/S0958344009000068>
- Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE Publications.
- Duan, G., Jia, L., & Chen, H. (2022). The role of english as a foreign language teachers' technological pedagogical content knowledge on english as a foreign language students' achievement. *Frontiers in Psychology*, 13, Article 946081. <https://doi.org/10.3389/fpsyg.2022.946081>
- Durrant, P. (2022). *Corpus linguistics for writing development: A guide for research*. Taylor & Francis. <https://doi.org/10.4324/9781003152682>
- Elsherbini, S. A. H., & Ali, A. D. (2017). The effects of corpus-based activities on EFL university students' grammar and vocabulary and their attitudes toward corpus. <https://doi.org/10.12816/0036970>
- Engeström, Y. (2009). The future of activity theory: A rough draft. In *Learning and expanding with activity theory* (pp. 303–328). <https://doi.org/10.1017/CBO9780511809989.020>
- Fenta, M., Demissie, A., & Negash, A. (2018). Investigation of university students' writing problems: Two public universities in southwest Ethiopia in focus. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, 42(4), 83–95.
- Flowerdew, L. (2010). Using corpora for writing instruction. In *The routledge handbook of corpus linguistics* (pp. 444–457). Routledge. <https://doi.org/10.4324/9780203856949-32>
- Hardman, J. (2008). New technology, new pedagogy? an activity theory analysis of pedagogical activity with computers [Retrieved August 10, 2023]. <http://hdl.handle.net/11427/10656>
- Hu, K., & Deng, Y. (2023). The effect of corpus-based writing practices on EFL learners' lexical diversity and lexical sophistication. *International Conference on Blended Learning*, 85–96. https://doi.org/10.1007/978-3-031-35731-2_9
- Issroff, K., & Scanlon, E. (2002). Using technology in higher education: An activity theory perspective. *Journal of Computer-Assisted Learning*, 18(1), 77–83. <https://doi.org/10.1046/j.0266-4909.2001.00213.x>
- Jonassen, D. H., & Rohrer-Murphy, L. (1999). Activity theory as a framework for designing constructivist learning environments. *Educational Technology Research and Development*, 47(1), 61–79. <https://doi.org/10.1007/BF02299567>
- Le Foll, E. (2021). Creating corpus-informed materials for the English as a foreign language classroom [Retrieved October 2, 2023]. <https://doi.org/10.5281/zenodo.4992504>
- Leech, G. (2014). Teaching and language corpora: A convergence. In *Teaching and language corpora* (pp. 1–24). Routledge. <https://doi.org/10.4324/9781315842677-1>
- Luo, Q., & Liao, Y. (2015). Using corpora for error correction in EFL learners' writing. *Journal of Language Teaching and Research*, 6(6), 1333–1342. <https://doi.org/10.17507/jltr.0606.22>
- McCarten, J. (2010). Corpus-informed course book design. In *The routledge handbook of corpus linguistics* (pp. 413–427). Routledge. <https://doi.org/10.4324/9780203856949.ch30>
- McCarthy, M., & McCarten, J. (2022). Writing corpus-informed materials. In *The routledge handbook of materials development for language teaching* (pp. 170–184). Routledge. <https://doi.org/10.4324/b22783-15>
- McCarthy, M. (2001). *Issues in applied linguistics*. Cambridge University Press.
- Morgan, D. L. (2007). Paradigms lost and pragmatism regained. *Journal of Mixed Methods Research*, 1(1), 48–76. <https://doi.org/10.1177/2345678906292462>
- Mostafa, A., Khalil, M. I., & Abbas, H. (2018). Emotion recognition by facial features using recurrent neural networks. *Proceedings of the 13th International Conference on Computer Engineering and Systems (ICCES)*, 417–422. <https://doi.org/10.1109/ICCES.2018.8610676>
- Mulatu, M., & Mandefro, E. (2021). ICT-based English language instructions in rural and urban secondary schools: Access, utilization, awareness, and challenges. *Ethioinquiry Journal of Humanities and Social Sciences*, 1(1), 30–43.
- O'Keeffe, A., McCarthy, M., & Carter, R. (2007). *From corpus to classroom: Language use and language teaching*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511497650>
- Oshima, A., & Hogue, A. (2007). *Introduction to academic writing*. Pearson/Longman.

- Singer, F. M., & Moscovici, H. (2008). Teaching and learning cycles in a constructivist approach to instruction [Retrieved November 25, 2023]. *Teaching and Teacher Education*, 24(6), 1613–1634. <https://doi.org/10.1016/j.tate.2007.12.002>
- Sinha, T. S. (2021). Efl learners' perception of and attitude to corpus as a vocabulary learning tool. *The Reading Matrix: An International Online Journal*, 21(2), 106–119. https://www.readingmatrix.com/articles/june_2021/sinha.pdf
- Smirnova, E. A. (2017). Using corpora in EFL classrooms: The case study of IELTS preparation. *RELC Journal*, 48(3), 302–310. <https://doi.org/10.1177/0033688216684280>
- Subedi, D. (2016). Explanatory sequential mixed method design as the third research community of knowledge claim. *American Journal of Educational Research*, 4(7), 570–577.
- Szudarski, P. (2023). Corpora and teaching vocabulary and phraseology. In *The routledge handbook of corpora and english language teaching and learning* (pp. 41–55). Routledge. <https://doi.org/10.4324/9781003002901-5>
- Tribble, C. (2001). Small corpora and teaching writing. In *Small corpus studies and elt: Theory and practice* (pp. 381–408). John Benjamins. <https://doi.org/10.1075/scl.5.22tri>
- Tsai, Y. R. (2021). Exploring the effects of corpus-based business English writing instruction on EFL learners' writing proficiency and perception. *Journal of Computing in Higher Education*, 33(2), 475–498. <https://doi.org/10.1007/s12528-021-09272-4>
- Vyatkina, N. (2020). Corpus-informed pedagogy in a language course: Design, implementation, and evaluation. In *New technological applications for foreign and second language learning and teaching* (pp. 305–334). IGI Global. <https://doi.org/10.4018/978-1-7998-2591-3.ch015>
- Yaakob, S. B. (2014). *A genre analysis and corpus-based study of university lecture introductions* [Doctoral dissertation, University of Birmingham] [Retrieved July 22, 2023].
- Yangın-Ekşi, G., Akayoglu, S., & Anyango, L. (Eds.). (2023). *New directions in technology for writing instruction* (Vol. 30). Springer Nature. <https://doi.org/10.1007/978-3-031-13540-8>
- Yoon, C. (2011). Concordance in L2 writing class: An overview of research and issues. *Journal of English for Academic Purposes*, 10(3), 130–139. <https://doi.org/10.1016/j.jeap.2011.03.003>
- Yoon, H., & Hirvela, A. (2004). ESL student attitudes toward corpus use in L2 writing. *Journal of Second Language Writing*, 13(4), 257–283. <https://doi.org/10.1016/j.jslw.2004.06.002>
- Zhao, L. L. (2015). The application of corpus in English writing and its influence. *Studies in Sociology of Science*, 6(6), 78–82. <https://doi.org/10.3968/8078>



Corruption Crimes in the Commercial and National Banks of Ethiopia: Situating Convicted Cases into Socio-Theoretical Themes

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Abstract

This qualitative study is concerned with 31 banking corruption crimes. It describes the modus operandi of the crimes and situates it into some themes of several sociological theorists. It argues that the crimes were committed as officials of the Commercial and National Banks of Ethiopia and those of other government institutions together with businesspeople competed for livelihood goals. To own or use money/gold that belonged to the banks or customers, they used authority/ qualification and comfortably manipulated methods of bank transactions and transfers which, due to the nature of money, did not require its immediate physical exchanges or deliveries. Other than by purposive/ true contracts having no supernatural power binding force, the criminal acts were further facilitated by charming power of money/ its economy: in money economy, manipulation of illegal means of earning money or owning other valuable assets, and, self-control and minimized ethical concerns. The criminals used/ owned the properties in socially unapproved ways, and the crimes they committed to secure economic assets were not considered economic actions. To minimize banking corruption crimes, there should be stricter control on accounts, genuineness of bank transactions including those involving foreign currencies, transaction instruments (forms), and documents supplied to secure loans or other payments. Gold, even if caught while being trafficked, should be delivered to the National Bank without delay. By way of adjusting salaries regularly to inflation, "secure existence" of bank and non-bank officials and handling money transactions should be ensured. Moreover, corruption controlling coercive laws should, at least partially, be redirected to social sanctions.

Keywords: sociological theory; economy; court cases; banking; corruption crimes

1 INTRODUCTION

Studies done in Ethiopia regarding corruption crimes described the problem at general political, societal perception or other generalizing levels (Arsema, 2010; Federal Ethics and Anti-Corruption Commission of Ethiopia (FEACCE), 2014; Olowu, 2000; Paulos, 2007; Seid, 2017; Shimelis, 2005; Tigabu, 2017).

These studies have a common limitation of not basing on actual crimes dealt at the court of law. However, empirical studies measuring levels of corruption perception do not show the true picture of corruption in a country (Goldsmith, 1999). The general objective of this article is to glimpse reality of corruption crimes in government banks. It describes the modi-operandi of the crimes and analytically situates them into some themes of several sociological theorists. It answers a general question: what is the nature of banking corruption crimes referred to Ethiopian court of law? Specifically, it attempts to give answers to: What were the transgressions observed in the crimes? Who were the transgressors? What crime tools did the criminals use? How could the crimes be situated to socio-theoretical themes?

Corruption is a norm contradicting act in a continuum, from bribery to nepotism/favoritism, acted in private or government institutions for personal or institutional gains. The actor may be an individual, an organization or its unit (Mulinge & Lesetedi, 1998; Olivier de Sardan, 1999; Venard & Hanafi, 2008; Zygliopoulos et al., 2009). A legal definition limits corruption to bribery: “bribe occurs when property or personal advantage is offered without the authority of law to a public official with the intention of getting the public official to act favorably for the briber at any time or fashion in the execution of public official’s duty” (Venard & Hanafi, 2008).

It can be inferred from principle of Ethiopian law providing for crimes of corruption (Federal Democratic Republic of Ethiopia, 2015) that corruption is an act of performing responsibility or duty inappropriately or misusing such or public trust by any public servant or an employee of public organization to accept or solicit undue advantage, directly or indirectly, for oneself or another or to injure the right of another. An act by any person of giving or promising to give undue advantage for such an official for the same reason is also corruption. In this article, corruption is defined as an act for which a public official (together with any other person) had been convicted for using office for personal gains. Nepotism, cronyism and patronage (Villeneuve et al., 2020) and corruption occurring solely in private institutions are not considered here.

Among a host of empirical studies on corruption, several of them associated it with culture of valuing economic success (Lenz & Lenz, 2000), achievement orientation (Osei-Hwedie & Osei-Hwedie, 2000), market and neo-liberal globalization (Clammer, 2012), public policies (Hodgkinson, 1997), laws (Nielsen, 2003) or legal or bureaucratic hindrances (Nas et al., 1986). Corruption is also associated with networks, access to officials, funds availability, knowledge about government work processes and law’s suitability, officials’ over-rationalization, prior socialization, education and personal experience, temporal and spatial distances of ethical consequences of a corrupt act from the actor (Beugré, 2010; Zygliopoulos et al., 2009), dominant and subordinate group members’ feeling (Rosenblatt, 2012), fear to significant others’ social sanctions (Smith et al., 2007), employees’ feeling, bureaucratic roles and expectations upon them (Ashforth & Anand, 2003).

Still other studies associated corruption with multinational organizations (Kwok & Tadesse, 2006; Rodriguez et al., 2005), foreign direct investment (Robertson & Watson, 2004), business competition, “business quality, availability of capital and imitation” (Venard & Hanafi, 2008), “culture of speculation,” preferential/bad bank loans, financing of elections (Carruthers & Espeland, 2002; Khwaja & Mian, 2011; Nielsen, 2003; Satz, 2013), “related lending” (La Porta et al., 2003), powerlessness of property class and dual roles of state agents (Alatas, 1997). Studies also associated corruption to inflated residential housing projects, political support or dissidence (Ocheje, 2007), colonial divide and rule administration and local chiefs’ participation in it, post-independence “new constitutions” (Mulinge & Lesetedi, 1998), coexistence of pre-colonial, colonial and post-colonial laws (Olivier de Sardan, 1999), freedom fighters’ life time lost in struggle (Makumbe, 1994), manners of socializing children (Weisner, 2000), over- monetization, societal expectation upon officials and shamelessness (Olivier de Sardan, 1999). It is also pointed out that pre-colonial Africa had not been corruption free for there existed acts which could explicitly or implicitly be considered corrupt (Igboin, 2016).

Nonetheless, Africa is synonymized with “culture of corruption” (Olivier de Sardan, 1999; Osei-Hwedie & Osei-Hwedie, 2000) and it is claimed the act is “embedded” in Africans or African systems (Beugré, 2010). However, these assertions can be criticized relying on various works. As evidences from a few African countries show, only members of specific (power) group committed shockingly shameful even nakedly criminal corruption crimes including those on popular elections (Erero & Oladoyin, 2000;

Reinikka & Svensson, 2005).

Ethiopia is unexceptional to the rule. In the country, assuming power, owning/running businesses in key economic sectors, accessing loans, social/extension services, benefitting donor/government funded infrastructure investments have been relied on association to a party on power (Paulos, 2007). Donor's money either flew to officials' foreign bank accounts or used to fund safety net/privatization programs or training of judges in all of which supporters of a party on power or those in its net-works benefitted. Public companies were insidiously sold at throw away prices to party affiliates. The judiciary was captured by judges predominantly trained at Civil Service College. Politically motivated poor laws were drafted. Courts passed sentences harassing opponents and journalists. Independently thinking intellectuals were harassed. At the backstage of health extension programs, party owned pharmaceutical factories distributed counterfeited drugs including anti-retroviral drugs. School enrolments exaggerated, examinations cheated, sub-standard schools or universities' buildings constructed, etcetera (Seid, 2017). To regain lost rural support in 2006 election, farmers in a rural locality were categorized into two groups- only members of one group were supported to produce marketable items thereby to make them party members (Lefort, 2012).

2 Data and Method

Ontologically (Montuschi, 2007), corruption is a reality knowable by humans or socially constructed. Accordingly, Ethiopian law, consider corruption as crime (Federal Democratic Republic of Ethiopia, 2004). Socio-ontologically (Andina, 2016), corruption and acts of formally controlling it are social. Corruption perceptively exists as humans observe, justifiably describe and assign social dysfunctions to it or socially create it. Rules of crime they make as they negotiate on societal rules, institutions and procedures constitutively make corruption a reality. Nonetheless, an o-ontology with its formula Object = Written Act (Andina, 2016; Ferraris, 2009) fits for this research: data were collected from objects-archived court case files, institutional "inscriptions."

"Documents restore humanism" (Clarkson, 2003). Researchers used archived court case files as data sources (McIntosh & Prinz, 1993). For corruption criminals remain uncaught (Khwaja & Mian, 2011) or scattered in various prisons or locations after release, survey study on convicted court cases is recommended. For a wider study having research objectives of describing and situating corruption crimes to themes in sociological theories, data were collected between July 2018 and about second week of November 2019 from 202 archived corruption crime court case files having at least a criminal sentenced for two or more years' imprisonment. The principal author closely reviewed the case files at Ethiopian Federal High Court, Addis Ababa. In the cases the Federal Supreme Court changed decisions on appeal, the latter were taken into account. Among crime cases considered in the wider study, 31 cases fell under banking corruption crimes- the concern of this article. The objective of the article is showing a glimpse of corruption crime reality in the Commercial and National Banks of Ethiopia. The modi operandi description of the crimes is analyzed drawing on some themes of sociological theorists. For confidentiality, except the banks, criminals' names were fictionalized and that of victim institutions or individuals' hinted only in broader terms.

3 Result

The Modi-Operandi

The modi-operandi of the crimes presented in this section show corrupt manners of moving banks' money to various directions by means of various crime tools. Between 2006 and 2012, defendants in 31 corruption cases were convicted for crimes they had committed in the Commercial and National Banks of Ethiopia. Excluding the one that involved 38.781 kilo grams of gold, monetary values of the crimes varied: as small as birr 0.02 million and as large as birr 10.36 million. Particularly, in 14 and 9 crime cases, the values were between birr 0.11- 0.46 and birr 0.5- 10.36 million, respectively. By

making the same exclusion, the total and average values of the crimes, respectively, were nearly birr 27.14 million and 0.90 million. The two values would increase if the monetary value of the gold were added.

Transgressions observed in each of these crimes can be wholly or partially categorized under regular bank budget and special expenditures, deposits and withdrawals, treasury, loans, transfers, remittances, certificates, and currency. Pertaining to budget and special expenditures, the criminals put into personal uses money allotted by the Commercial Bank of Ethiopia for administrative expenditures (maintenance, per-diem, petty cash, daily labour, electric and water utility, telephone and telegram, office equipment and transport)- or special expenditures (loans, employees' salaries, interest payables to depositors, taxes on interest incomes, money entrusted for tellers). Misuse of such money was wholly or partially observed in 8 crimes with total monetary value of birr 1,790,292.41 ([Federal High Court \(FHC\), 2012a, 2013c, 2014b, 2015c, 2016e, 2016g](#)). It was from accounts that the bank opened for respective expenditures that the criminals put the money into personal uses. In one case, part of the money abused was generated by sub-renting banks' office for a restaurant operator ([Federal High Court \(FHC\), 2012a](#)).

In crimes regarding deposits and withdrawals, the criminals targeted at saving accounts. The accounts refer neither to current accounts nor to those the criminals used to transfer corruptly earned money. They rather refer to the saving accounts they owned as bank customers or those they opened for criminal purposes. Crime cases that fall under the stated category were only three, but a total money of as large as nearly birr 13.86 million was involved, and 28 saving accounts were targeted. Without knowledge of saving account holders or their applications, lesser amounts of deposits than the actual ones were posted to the accounts, or money was directly withdrawn from the same, or transferred to them as deposits from other accounts, and ultimately withdrawn from there. In one case, the amounts withdrawn were only interests automatically calculated by the bank's computer system for amounts transferred into two saving account ([FHC, 2012a, 2014, 2016a](#))([Federal High Court \(FHC\), 2012a, 2014b, 2016g](#)).

When money was targeted through saving accounts, two processes- decline in account balances and movement of cash money out of the bank- simultaneously occurred. But in the three bank corruption crimes that wholly or partially pertained to treasury, the bank's cash money was directly taken away from cash treasuries and put into the criminals' personal uses. These crimes involved a total value of nearly birr 2.01 million. While in one of the crimes currency notes that were taken out from a treasury included American and Canadian Dollars, Euros, Pound-starlings, and Swedish Kroners, in another case the criminal returned part of the money taken out after 19 days from the day it was taken out ([Federal High Court \(FHC\), 2015c, 2015h, 2016g](#)).

In crimes pertaining to loans, the bank's money was corruptly accessed as loans by making either false credit worthiness or collateral claims. Two such crimes had total value of birr 0.86 million ([Federal High Court \(FHC\), 2014b; Federal High Court of Ethiopia, 2016](#)). In another crime pertaining to certificates (see below) birr 5.05 million by which the bank would have earned interest was taken out of it without having any loan relation and plausibly used as capital for business activities ([Federal High Court \(FHC\), 2015e](#)).

Corruption crimes were also committed in account-to-account money transfers and remittances. Money from source accounts- saving or bank special accounts- was corruptly transferred to other saving accounts, fake accounts or the criminals' personal accounts. The money that was transferred to the first two was again withdrawn corruptly and put into the criminals' personal uses. Crimes in which corrupt account-to-account transfers were partially or wholly observed involved a total money of nearly birr 14.77 million ([Federal High Court \(FHC\), 2012a, 2013c, 2014c, 2016a, 2016e, 2016f](#)).

In remittances, money that customers entrusted to the bank to be remitted, with or without falsifications of amounts, were corruptly paid to or received by unintended beneficiaries; or the bank paid its money for fake remittances and fake refund requests. In two remittance cases, money was transferred to fake accounts opened beforehand for the purpose. In a fake remittance, money was transferred to a current account and withdrawn from there by a check accessed by unknown means. Crimes that wholly or

partially fall under remittances involved a total monetary value of nearly birr 3.80 million ([Federal High Court \(FHC\), 2012b, 2013a, 2015a, 2015b, 2015d, 2015h](#)).

In corruption crimes pertaining to certificates, certified payment orders, checks and a bond were used to corruptly withdraw money out of a fake current account, the actual ones that belonged to government institutions, or business people, or even to a fake organization. To do so, certified payment orders were falsified, inadequately authorized or issued with false confirmation. Checks were fabricated, or authorized by deception or partial or full falsifications, or issued by false confirmation. By false confirmation, a bond was issued for a business person. Money withdrawn from the bank by checks under false confirmation was used to run profitable businesses. A total of nine crimes were committed by means of stated certificates and had a total monetary value of nearly birr 18.13 million ([Federal High Court \(FHC\), 2010, 2011a, 2011b, 2011d, 2014a, 2015e, 2015f, 2015g, 2016h](#)). The following table shows a case in which money withdrawn from the bank by checks issued under false confirmation, number of days the money stayed in the hands of business people and the amount of interest the bank lost ([Federal High Court \(FHC\), 2015e](#)). Similarly, two payment orders and a bond issued again by false confirmation were used further as guarantee for business deals ([Federal High Court \(FHC\), 2014b](#)).

Table 1: Money withdrawn from bank accounts without having sufficient deposits: an exemplar criminal case

Merchant's code	Check face Value (birr)	Time, money out of bank	Interest income lost
A	800,000.00	84 days	17,490.00
A	1,000,000.00	14 days	3,643.00
B	750,000.00	33 days	5,856.16
C	500,000.00	27 days	3,513.70
D	1,000,000.00	22 days	5,782.03
D	1,000,000.00	35 days	9,109.59
Total	5,050,000.00	215 days	45,394.48

Compiled from field data

Corruption crimes that fall under currency were thus categorized merely because they pertained to the National Bank of Ethiopia or currency of the country. In two of these crimes, dollars collected from transit passengers or gold caught as being trafficked abroad, instead of being deposited in or submitted to the bank, were put into criminals' personal uses. In another crime, dollars an individual possessed, instead of making them exchanged legally, were robbed under pretext of helping him exchange in a black market. In the last crime, a shining metallic object claimed to be gold was exchanged in birr. The crimes, excluding monetary value of 38.781 kilo grams of gold, had a total value of nearly birr 1.96 million ([Federal High Court \(FHC\), 2011c, 2013b, 2014d, 2016b](#)). To commit banking corruption crimes, the criminals used a tool or a combination of tools that varied between two to nine that could generally be grouped under accounts, bank forms, certificates, confirmation, verification, creation and destruction of documents, properties, time and authority. Accounts included banks' special accounts (see above), tellers' accounts, individuals' saving accounts and businesspeople and government institutions' current accounts. In a few cases ([Federal High Court \(FHC\), 2010, 2012b, 2015h, 2016h](#)), fake current and saving accounts were opened to facilitate criminal acts.

When accounts were used as tools for corrupt acts, they served either as direct sources of money, outlets through which money temporarily possessed, or as its final destinations. Special accounts of the bank or its tellers' accounts, or businesspeople and government institutions current accounts were directly targeted by the criminals as they had sufficient balances. From these source accounts money was corruptly transferred to actual or fake saving accounts, paid out by fake remittances, or withdrawn by falsified checks, if not from those the actual authorizations of which were obtained deceptively ([Federal High Court \(FHC\), 2011b, 2011d, 2012a, 2013c, 2014a, 2015f, 2016a, 2016f, 2016h](#)) (FHC, 2017b). The saving accounts that were directly targeted as sources of money were selected on the criteria of having sufficient balances (one for example had more than 13 million), and being infrequently visited for transactions, partly due to holders' death. Money from such accounts was withdrawn by fabricated direct or transfer withdrawal applications prepared in the account holders' names, or lesser amounts of money than actual deposits was posted in them while the difference was used by the criminals ([Federal](#)

High Court (FHC), 2012a, 2016e).

Accounts particularly saving and current accounts were used as outlet accounts. Through them corruptly earned money was temporarily passed. These actual or fake accounts, having no sufficient balances, increased by money transfers from bank's special accounts, its tellers', or saving accounts, falsified or fake remittances, and certified payment orders, or false confirmation about the existence of sufficient balances in them. Once the balances of these accounts were increased, money was directly withdrawn or transferred further to intended destinations. Money withdrawn from two of such saving accounts was interest automatically calculated by fake deposits of 14 million posted to them (Federal High Court (FHC), 2010, 2012a, 2012b, 2014c, 2015a, 2015e, 2015g, 2016a). Finally, money earned by corrupt means reached to destination accounts- actual or fake saving accounts- in which it either remained as deposit or withdrawn immediately. In a case, the money was deposited in a saving account located in a private bank (Federal High Court (FHC), 2012a, 2012b, 2013a, 2013c, 2014c, 2015c, 2015h, 2016f).

Whether the accounts as crime tools served as sources, outlets or destinations of money, the movement of money out of them was accomplished only by making use of bank forms already prepared for its everyday operations. These included slips of deposit, withdrawal (with/without passbook), account-to-account transfer, remittance, and remittance refund request. As their names suggest, the forms, in the order of list indicted here, were to be used by eligible persons- account holders, remitters or bank employees- to request money deposits, withdrawals, transfers, sending money or refund if such money did not reach to beneficiaries and to execute the requests as per bank rules. However, without such actual requests, the criminals filled in necessary pieces of information in the forms, made them appear authentic or actually filled by eligible persons and moved money out of the bank.

Thus, though no actual applications were made, withdrawal forms and account-to- account forms respectively were used to withdraw money directly from saving accounts and transfer it to outlet accounts, or actual or fake destination saving accounts. Remittance forms and remittance refund request forms were respectively used to send fake remittances and make fake remittance refund payment requests. In both cases, money was either directly paid to fake beneficiaries, or reached to fake saving accounts opened for the purpose. Only in one case fake remittance money reached to an actual outlet current account and withdrawn by a voided check. The criminals used parts of money stated in actual deposit slips by posting lesser amounts to respective saving accounts. In the same way, an actual remittance, by making use of a remittance form, was falsified into a much higher value and paid for a beneficiary not stated in the actual one (Federal High Court (FHC), 2012a, 2012b, 2013a, 2014c, 2015a, 2015b, 2015h, 2016a, 2016b, 2016f, 2016h).

Bank forms used as crime tools and considered here as certificates- certified payment orders, checks and bonds- were thus categorized because, if duly issued either by the bank or current account holders given that the holders had sufficient money or collateral in the bank, the bearers were to use them to receive money payments from the bank or as guarantee for business deals. On the contrary, in banking corruption crimes, falsified and inadequately authorized certified payment orders were respectively used to make fake deposit in a current account and issued to directly use the money applicants paid desiring the amounts appear on these orders. A certified payment order was issued without the bearer having sufficient money in the bank. Checks were used to withdraw money from three sources: actual or fake current accounts to which fake remittances were entered, current accounts that belonged to government institutions, or the bank itself. Checks were also used to withdraw the bank's money through business peoples' current accounts falsely confirmed to have sufficient account balances. Generally, checks that were used as crime tools might be genuine, voided, fabricated, partially or fully falsified ones; genuine ones were issued after being secured by opening a fake current account, or because the criminals had appropriate authorization/ confirmation power or such authorizations were obtained deceptively from appropriate personnel. A genuine bond was also issued by false confirmation (Federal High Court (FHC), 2010, 2011b, 2011d, 2013c, 2014a, 2015a, 2015e, 2015f, 2015g, 2016h).

Authorizations/ confirmations were made by another group of crime tools- signatures, stamps, and words- generally considered here as tools of confirmation. For neither bank forms nor certificates would appear valid and be useful to move money out of the bank without seemingly authorized person-

nel's confirmations made by one or a combination of these tools, the criminals validated or invalidated them. Particularly, withdrawal and account-to-account transfer forms were made appear valid by signing signatures similar to that of the actual account holders. Invalid certified payment orders were issued by purposefully overlooking to sign and put authorized signatures on them. Any of the checks used to corruptly withdrew money from the bank were 'authorized' by those signatures that had resemblances to the respective authorized personnel's signatures. If they were actually authorized by such personnel's signatures, the latter were knowingly signed for corrupt ends or obtained by deception. Checks, a certified payment order and a bond issued without the bearers having sufficient account balances or any collateral were further confirmed orally or by a formal letter ([Federal High Court \(FHC\), 2010, 2011a, 2011b, 2011d, 2012a, 2012b, 2013a, 2013c, 2014a, 2014c, 2015a, 2015e, 2015f, 2015g, 2016a, 2016d, 2016f, 2016h](#)).

To successfully accomplish bank corruption crimes, accounts, bank forms and certificates and the criminals themselves, as deemed necessary, should assume seemingly legal identities by verification tools-identification cards and passwords. Forged identification cards were used to open fake saving/ current accounts, or to collect payments for fake or falsified remittances or a fabricated check. In using such identification cards, the bank's requirement to submit two identification cards for high monetary value payments was ignored. A forged identification card that a broker submitted for a fabricated check payment showed that he was a staff member, a doctor at the Faculty of Medicine, Addis Ababa University. Bank employees used fake, own or colleagues/ supervisors' passwords to take money out of cash treasury security box, or transfer it to outlet or destination accounts ([Federal High Court \(FHC\), 2010, 2011a, 2012b, 2013a, 2014c, 2015a, 2015d, 2016g, 2016h](#)).

The criminals further used creation and destruction of documents as crime tools. These tools, used to facilitate commission or avoid criminal detection, were fabricated, falsified, or produced without having authority and, if necessary, destroyed. Fabricated receipts for supplying coffee at national market and payment vouchers prepared in the names of individuals which had no business deals with a government institution were respectively used as criterion fulfilment to secure bank loan and to pay money by check to these individuals. By means of fabricated deposit vouchers, lesser amount of dollars were deposited at the National Bank of Ethiopia than that actually collected as entry visa income. A fabricated site plan of a residential house and a forged agency certificate were respectively used as collateral for a bank loan and to carry out the process. A fabricated document of establishment and letter of introduction about a fake non-government organization were used to open a fake current account in the name of that organization. A police member used a fabricated warrant in robbing dollars that belonged to an individual ([Federal High Court \(FHC\), 2010, 2014b, 2014d, 2015f](#)).

By falsification, a copy of a receipt issued for collecting money in dollars was made to bear an amount less than that actually collected. By the same means, other documents pertaining to this income were made consistent to the amount stated on the carbon copy. On property registration form at police station, "gold like rectangular objects" were written to deny that 38.781 kg 18 carat gold caught as being trafficked abroad and delivered to the station was gold ([Federal High Court \(FHC\), 2011c, 2014d](#)). To avoid crime detection, copies of inadequately authorized certified payment orders, series of fake remittances, a fake account opened to transfer falsified remittance were destroyed ([Federal High Court \(FHC\), 2012b, 2013c, 2015b](#)).

Items categorized under properties were also used as crime tools. Money was taken out of the bank's cash treasuries. Without its permission, one of the rooms it hired for office services was sub-rented out to generate money put into personal use. Its computer system was used to accomplish most, if not all, criminal acts including making corrupt transactions invisible and automatically calculating interests for fake deposits. Objects possessing no quality of gold, by making such claims, were exchanged for money, or entered into the National Bank of Ethiopia as replacement for huge amount of gold put into personal use. Police automobile was used to rob dollars that belonged to an individual. Relying on prior knowledge and by means of telephone, an ex-employee of the bank accessed pieces of information on actual remittances and falsified the latter ([Federal High Court \(FHC\), 2011c, 2013d, 2014b, 2014c, 2015a, 2015c, 2015d, 2016a, 2016b, 2016f, 2016g](#)).

Suitable times- hours after closing a day's accounts or a day on which bank's computer system automat-

ically added interests on deposits- were used as tools to commit crimes (Federal High Court (FHC), 2012a, 2014c). Excluding corruption criminals that did not hold government offices, those who did so, in most cases, used actual authority as crime tools. But in some cases, their authority was partial or non-existing. Authority was partial when criminals used as tools own officially authorized pass-words together with stolen colleagues' passwords, or own officially authorized personnel signatures together with copied co-authorized personnel' signatures (Federal High Court (FHC), 2011d, 2013a). Under condition the officials had no authority at all, the bank's office, without higher body's permission, was sub-rented, colleagues' passwords or copied signatures of authorized personnel were used to commit respective crimes, amounts of money more than the maximum legally permitted limit was paid out or, for such amounts, certified payment orders and a bond was issued (Federal High Court (FHC), 2011b, 2014a, 2014c, 2014d, 2015g, 2015h, 2016a, 2016g). The following table summarizes sources of money used corruptly, across total monetary values involved in each sources, actual harms done and categories of crime tools. Differences in values of crime and respective harm imply that the criminals were partially successful in accomplishing the crimes, or after using the money for business purposes or generating interests they abused, they returned it back to the bank.

Table 2: Summary of key issues in banking corruption crimes

Money pooled from/by	Categories of crime tools used	Crimes' value (birr)	Actual harm (birr)
Certified payment orders, checks and bonds	accounts, certificates, creation and destruction of documents, confirmation, verification	18,237,010.33	13,199,404.81
Bank and its teller's accounts	accounts, bank forms, creation and destruction of documents, properties, verification	15,109,328.77	939,349.56
Dollars and gold	creation and destruction of documents, properties	172,250 + 38.781 kg. gold	172,250 + 38.781 kg. gold
Remittances	accounts, bank forms, creation and destruction of documents, properties, verification	2,902,849.00	1,502,849.00
Saving/current accounts	accounts, bank forms, creation and destruction of documents, confirmation	2,242,110.00	2,242,110.00
Cash treasury	properties, verification	1,000,009.06	1,000,009.06
Remittances and cash treasury	accounts, bank forms, certificates, properties, verification	901,235.00	901,235.00
Administrative budget, room sub-renting and cash treasury	accounts, creation and destruction of documents, properties	113,327.85	113,327.85
Saving accounts and administrative budget	accounts, bank forms, time	21,500.00	21,500.00
Total crime value		40,699,620.86 + 38.781 kg. gold	20,092,035.28 + 38.781 kg. gold

Source: compiled from field data

Other than the National and Commercial Banks of Ethiopia, several institutions either of Addis Ababa City Administration or Federal Government particularly those which had current accounts at the Commercial Bank of Ethiopia were affected by banking corruption crimes. The institutions were engaged in official activities of education, HIV/AIDS prevention and control, national defence, data provision and standardization, tire trees development, and cement production (Federal High Court (FHC), 2011a, 2011b, 2011d, 2014a, 2015f, 2016h). The criminals were either employee of the banks (branch/customers' managers, a currency management head, customer officers, clerks, cash treasurers) or government institutions stated here (heads/officers pertaining to administration, finance, accounting, budget and revenues, (junior) accountants and cash collectors), bank customer businessmen, or complete out-

siders to the three (police members, the self-employed of known (e.g. a broker) or unknown occupations).

In sentencing a total of 62 bank corruption criminals for imprisonment or fines or both, specific articles mostly of criminal code (414/2004) and in a few instances proclamation providing corruption crime types (881/2015) were referred. Accordingly, the criminals were found guilty of forging public documents and using them, falsification or suppression of commercial instruments, (aggravated) fraudulent misrepresentation, aggravated breach of trust, abuse of power, maladministration, dereliction of duty, harbouring or aiding corruption criminals.

By excluding fine as sole or combined (with imprisonment) method of punishment, 52 (88.87 per cent) of the criminals were sentenced for imprisonment for varying years: a few as small as less than two years, and several between 10 and 13 years, taking into account the respective punishment attenuation criteria, but most were sentenced for greater than two and less than or equal to nine years. Over all, the imprisonment for the 20 (36.46 per cent) criminals was not executed because they were absent during court proceedings and even were not caught later.

4 Discussion

In this section, facts established in the previous section about banking corruption crimes are situated into some themes in sociological themes. In so doing, interpretive arguments are developed in light of the themes. Among the themes to which the crimes could be situated are Weber's "economic" and "economically oriented" actions (Weber, 1978e). Except in a few cases, the criminals were either employees of public banks or other government institutions, or current account holding businessmen. As economic actors, the public employees and the businessmen should have, respectively, limited themselves to exchanging labour for salary and bank services for fees. In other words, both public employees and current bank account holders should not have committed the crimes. Contrary to these economic expectations, they committed the crimes. The latter though committed for economic gain, but not stated in the contracts, could not be considered economic actions. They rather were economically oriented actions. By targeting the bank's administrative budget, its special/ tellers' accounts and treasuries, customers' current and saving accounts, or by failing to exchange dollars at the Commercial Bank of Ethiopia or depositing the same at the National Bank of Ethiopia, replacing fake gold units for real ones at the latter or selling fake gold, the criminals owned money or gold. However, none of the stated ways was attributable to Durkheim's socially approved ways of owning property: labour, exchange, inheritance or donation. By owning property in socially unapproved ways, the criminals alienated the original owners from inalienable property right (Durkheim, 1957c) and created new property ownership relations. By targeting money in loan and saving accounts, they further alienated respective account holders from rights of making and using fruits of properties (Durkheim, 1957b)- maturing interests from loans or savings, government taxes from such incomes.

Money/gold that had been targeted in all banking corruption crimes belonged to government banks, saving or current account holders and remitters. Nonetheless, the overall crime harms ultimately would go to the banks. The latter, apart from losing own properties, would, be liable for customers' money lost or interests and interest taxes accrued on it. As result of this liability and subsequently through these public banks, the public was ultimately alienated from rights of owning and using its property while the rights were corruptly transferred to the criminals. To illicitly own money/gold, other properties of the banks- an office, treasuries and their keys, security box codes, computer system, user names and passwords- meant to offer genuine bank services or protect properties were put into unintended uses. This would indicate the exclusive use right of property (Durkheim, 1957b) as it pertained to the banks' properties was transgressed.

The illicit owning or using the banks' or their customers' money/gold by banking corruption criminals could be situated to another theoretical theme in sociology, that is, competition for livelihood goals/markets. According to Weber, to fulfil livelihood goals, humans compete for "offices, clients and other remunerative opportunities" (Weber, 1978b). If one follows him, the targeting of money/gold by

banking corruption criminals could be considered pursuit for remunerative opportunities. By owning these properties and ultimately using them for either consumer/durable goods or even for profit making, the criminals more effectively competed for livelihood goals/market than individuals who did not commit the crimes.

For most banking corruption crime cases, the exact purposes the illicitly secured money/gold had been used for were unstated. But an amount of more than birr 15.97 million accessed in three crimes was used to generate profits, in one without paying interest ([Federal High Court \(FHC\), 2015e, 2015g](#)). The criminals used this much money as capital but without entering into and competing in capital market. They, therefore, became competitive in two ways. First, they easily accessed capital. Second, they paid no interest which could have been accrued for the Commercial Bank of Ethiopia if the money was granted as loan. The criminals therefore reduced cost of capital, increased its amount and consequently secured increased profit. The latter would increase because, as Weber argues, amount of money used as capital determines the amount of profit earned ([Weber, 1978c](#)). The criminals and the profits they earned could in light of Weber be considered “free employees” and “source of income”, respectively ([Weber, 1978a](#)). The latter plausibly enabled the former to be more competitive than public employees.

Even if the purposes money/gold corruptly secured put for had not been stated, the assertion that the criminals became more competitive regarding livelihood/market can be maintained by taking values of these items. Except in six cases ([Federal High Court \(FHC\), 2011a, 2012a, 2013d, 2014a, 2015d, 2015h](#)), the values, excluding that of gold, were relatively large- varying nearly between birr 0.09 and 2.01 million. By using these large amounts of money for either immediate consumption or capital formation, it can be maintained that the criminals became more competitive in achieving livelihood goals. Particularly, public officials would protect themselves from inflation as salaries paid in the form of money would expose them to inflation ([Durkheim, 1957a; Marx, 1887; Weber, 1978a](#)).

Illicit ways of securing money/gold could also be related to another theme in sociological theories. Weber asserts that conflicts regarding price to be paid and winning the market are respectively resolved by “bargaining” and “competitive bidding and offering” ([Weber, 1978b](#)). This had not been observed when, as stated, several businesspeople illicitly accessed the Bank’s money and used it for profit making, even without paying a single cent as interest. This was meant that capital was secured without entering and competing in market.

Weber further argues that as humans compete for livelihood goals/market, they use competitors’ specific characteristics to win in the competition ([Weber, 1978b](#)). Nonetheless, banking corruption criminals went beyond this. To win competitors and access money/gold, they chose co-conspirators on the basis of some characteristics. For example, businesspeople, who illicitly accessed a total of nearly birr 5.05 million that belonged to the Commercial Bank of Ethiopia, had chosen a branch manager who falsely confirmed that they had sufficient amount of money in respective current accounts. This confirmation made them withdraw the stated amount. In another corruption crime, 38.781 kilograms authentic gold belonging to the public disappeared. Instead of the gold, shining gold-like metallic objects were delivered to the National Bank of Ethiopia. The principal criminal delivered the objects by conspiring with the Bank’s officials. The latter, it can be deduced, were chosen as co-conspirators for their specific willingness to make the delivery possible. Therefore, the criminals in the stated exemplar cases were not limited only to competing against the ‘opponents’ but chose co-conspirators on the basis of some characteristics and worked co-operatively to successfully accomplish the crimes.

Banking corruption criminals targeted money and gold. The former is valuable. It could be readily put into use, hoarded or deposited in bank. Gold could be hoarded or, more than any other object could easily be, for that matter appreciatorily, converted into money. The acts of targeting on these assets by the criminals would indicate the luring power money had over the criminals. This would hold true even in crimes cases in which crime values were small: whatever its amount may be, money has luring power over humans. But it could be more luring when its amount is high. In fact, as noted earlier, except for the seven ([Federal High Court \(FHC\), 2011a, 2012a, 2013b, 2013d, 2014a, 2015d, 2015h](#)), for the remaining 24 cases the monetary values were large enough, varied nearly between birr 0.11 and 13.33 million. Among the latter group, for the seven crimes, the values were much greater, varied between birr 0.46 and nearly 13.33 million ([Federal High Court \(FHC\), 2012b, 2014c, 2014d, 2015a,](#)

2015e, 2015g, 2016a, 2016e, 2016g, 2016h). To this should be added 38.781 kg gold which disappeared instead of being delivered to the National Bank of Ethiopia and total of nearly birr 5.05 million that belonged to the Commercial Bank of Ethiopia but illicitly used as capital for profit making.

Generally, it could be said that money/gold lured banking corruption criminals whether the amounts secured were large or small. The acts of the criminals who secured larger amount of money can be related to another theme in sociological theory- that of Simmel who asserts that bribe recipients deny to accept bribes of small amount to keep dignity, appear strict, or to ensure what they receive could counterbalance possible “degradation[s]” if they were caught (Weber, 1978d). Like Simmel’s bribe recipient, banking corruption criminals, who secured large amounts of money and gold, might be unwilling to engage in crime that would not generate large amounts of money or they were considering the amounts got would be sufficient enough to counterbalance “degradations” if they were caught. This would mean that criminals would rationally evaluate the crimes in relation to benefits they would reap.

It can also be maintained that proximity to money/gold facilitated to criminality. As they executed duties as public employees, individuals who committed banking corruption crimes had been too near to these objects and would easily be tempted by them. As part of his duty, a policeman was entrusted 38.781 kg gold until a court case about its trafficking would be concluded. Given the proximity thus created between the policeman and this huge amount of gold, one can guess how the latter could tempt the former. In other crimes too - due to the same reason of executing duties - mainly receiving, paying and supplying money, bank employees holding various managerial, clerkish, cash store keeper positions were near to money. The same could be said for other public institutions’ employees who had somewhat similar duties and positions: heads of administration and finance, revenues, budgetary or accountancy professionals, cash collectors, etcetera. The businesspeople were also near to money as its manipulators as well as bank customers.

The luring power of money/gold over the criminals can indirectly be inferred from impressively creative crafts used to access these objects. The crafts included issuing unauthorized criteria lacking certified payment orders, checks or bonds (even to payees having no business deals), withdrawing money from saving account with large balances and/or infrequently transacted ones, partly because the holders were dead, posting fake deposits to such accounts ultimately to withdraw maturing interests, collecting money by fake or falsified remittances, exchanging money and gold-like metallic substances or replacing the latter for genuine gold, sub-renting an office, etcetera (Federal High Court (FHC), 2011b, 2011c, 2012b, 2013c, 2014b, 2014c, 2015a, 2015b, 2015c, 2015e, 2016b, 2016c, 2016e). The criminals used these impressive crafts for no other reason than to possess the objects. Comfortably using the crafts, it may be argued, was facilitated by the nature of money. Money is representable by instruments of payment (Weber, 1978c)- certified payment orders, checks and bonds. Without carrying it physically, money is transferrable from owners’ accounts to intended destinations. The same could be done not in the least by using slips of deposit, withdrawal or remittance. As due to use of money profit from a property can be transferred to the owner located at far distance away from the property (Simmel, 1978), banking corruption criminals easily moved money by using instruments of payment and other banking forms stated here. Moreover, because money is divisible and multipliable (Weber, 1978e), it can be suspected, in a few corruption crimes (Federal High Court (FHC), 2015a, 2015c, 2016g) higher valued currencies supposedly 50 and 100 birr notes were physically taken out of bank treasuries.

Given that banking corruption criminals were individuals into whose minds morality of the society had somehow been instilled, how could the morality fail to inhibit them from committing the crimes? How could money/gold helplessly lure them and make them devise the creative crafts stated earlier? These questions could be answered by taking note of the influence of money on human morality. As Simmel asserts, money makes human beings not to question the morality of means of earning it (Weber, 1978e). Therefore, banking corruption criminals might not have felt guilty conscience as they accessed money from saving, current and special accounts or exchanged a shining metallic object for money claiming that the former was genuine gold or replaced the latter by shining metallic objects.

Criminals’ lack of guilt could also be analogically related to another assertion of Simmel: in money economy, there is no morally binding emotional attachment between producers and consumers as the latter do not know the former (Weber, 1978e). As this is applied to banking corruption crimes, it

could be said that public officials who committed the crimes had no emotional or kin type relations with the employers. They rather had distant and transient relations. The same would hold true for current account holder businesspeople and the banks. Moreover, the contracts that individuals who committed the crimes had entered with the other parties were only “purposive” ones for which the guarantee for conformity was only secular law but not fear of some form supernatural power (Weber, 1978c). Therefore, having less fear for secular law or absence of fear of some supernatural power might have encouraged the individuals to commit the crimes.

Apart from absence of some fearful supernatural power in relation to contracts, the general society characterized by loose common concern and social control was conducive to commit the crimes without guilty of conscience. As Engels asserts, money economy lacks “common concern” (in Appelrouth and Edles (2015)). His assertion is also supported by Marx: money turned societal-individual or individual-individual bond upside down (Marx, 1988a). It could therefore be maintained that the individuals comfortably committed the crimes in the context in which common concern and societal fabrics of attachment had been eroded. In such society, money would be more important than fellow humans for it, as useful object, satisfies needs created to collect it (Marx, 1988b) or buy “infinite number of objects” (Simmel, 1978). Furthermore, in money economy, material success is valued (Clammer, 2012) which is unachievable without it. Generally, money/gold lured the criminals because they were valuable. On the other hand, money economy encysted the criminals from guilty of immorality when they corruptly secured it as well as gold. As the result, they might not have felt pity for the harm they were doing to the public. Even they might not immediately sensed the harms because bureaucratic arrangements put the harms and the criminals at far spatial and temporal distances as Zyglidopoulos and Fleming (2008) argue.

On the one hand, bureaucratic arrangements had the impact of making the criminals not to sense criminal harms on the public. On the other hand, the crimes they committed could be considered transgressions of bureaucratic rules that Weber identifies. Banking corruption criminals corruptly owned gold/money or used the latter for profit making. Though part of the objects that had been used as stated here were properties of individual savers or remitters or businesspeople, by virtue of liability, they belonged to the Commercial/ National Bank of Ethiopia. Therefore, all money and gold the criminals put into personal uses belonged to the public. To put the properties into personal uses, the criminals used office files: forms of certified payment order, check, bond, deposit, withdrawal, account-to-account transfer, remittance, contract. In so doing, public officials failed to observe Weber’s bureaucratic rules: making distinction between public (office) property and private property or official life and private life, public files and equipment and those of private (Weber, 1978a).

To commit the crimes, bank employees who participated in corruption crimes also used qualifications or expertise knowledge and skills meant exclusively to execute duties of receiving, paying or letting use money/gold that belonged to the public. In other word, qualifications or expertise knowledge and skills pertaining to banking operation enabled them commit the crimes by letting them know government’s work processes. In this regard, Nice asserts that power and knowledge about government work process influence individuals’ chances to act corruptly (1986:288). And it was by carefully manipulating trained qualifications that the employees identified banks/tellers and customers’ accounts where money that could be illicitly owned had been located. They even created it in such locations as fake deposits, interests or remittances. By using the same, they accessed to money locations, chose paths and means to effectively move it in such manners that the movement appeared legal (and thus would reduce chance of discovery).

Bureaucratic rules that Weber has identified not only guide bureaucrats’ action but also control them. Foucault further notes that bureaucracy can ‘panoptically’ control workers including supervisors (Foucault, 1995b). However, this had not been proved true because public officials holding higher and middle level managerial position both in bank and other public institutions participated in banking corruption crimes. These officials were expected not only to observe bureaucratic rules but also supervise subordinates. They however became transgressors of bureaucratic rules. Instead of being traps against rule breakers, they became the rats. Therefore, bureaucracy had not ‘panoptically’ controlled the officials not to commit the crimes. It did not control them as prison’s supervisor would do inmates. Given that they failed to observe the rules and banking bureaucracy lacked panoptic control, it can

be asserted that banks' authority of securely keeping and circulating customers' entrusted money/gold became doubtful or distrustful to some extent. From this, it is possible to challenge Simmel's assertion that in money economy standard goods [services] are exchanged with trust (Weber, 1978e).

As noted in the previous section, defendants of banking corruption crimes were found guilty by referring to specific articles mostly of criminal code (414/2004) and in a few instances proclamation providing corruption crime types (881/2015). Durkheim argues that acts are considered crimes not because of their essential nature but because the society did not tolerate them (Durkheim, 1957a). Accordingly, the defendants' acts were considered crimes for the same reason. If one follows Weber's assertion that the state enacts laws to achieve the goal of avoiding the "constant recurrence" of the crimes as societal customary and conventional sanctions were not sufficient to protect important norms (Weber, 1978d), it can be maintained that laws referred in finding the defendants guilty of banking corruption crimes were enacted for the same purpose. They were important in achieving the goals because, as Durkheim argues, in modern societies, rules had not been instilled in minds of the public and the latter would not be shocked if professionals transgress occupational ethical rules (Durkheim, 1957a).

In order to achieve the goal of avoiding constant occurrence of crimes, the criminal law, as Weber argues, should be coercive without being vengeful (Weber, 1978d). In the same way, laws referred regarding banking corruption crimes were coercive because punishments sentenced- imprisonment, fine or both- were binding. At the same time, the laws were not vengeful because punishments were attenuated according to criteria applicable to every criminal. The attenuation resulted in variations in punishment pointing to Durkheim's assertion that society has varying tolerance to crimes (Durkheim, 1957a). The criteria upon which punishment were based,, according to Foucault, could be considered ethnographic knowledge created about each criminal (Foucault, 1995a). By individualizing punishment, Foucault further asserts, the state is making indirect effort so that the criminals accept its coercive power with some level of pleasure (Foucault, 2001c). The state might be hinting that the punishment would have been more serious had it not been for its mercy to reduce part of it.

No banking corruption criminal was sentenced for life imprisonment or death. This shows the consistency of the laws referred regarding the crimes to another assertion of Foucault: laws that exempt life imprisonment or death as forms of punishment are based on the perception that the criminals are "corrigible" (Foucault, 2001a). Therefore, it could be said that banking corruption criminals would be corrigible after execution of respective punishments. Regardless of this 'positive' perception about the criminals, the punishments- imprisonments or fines as sole ones- according to Michel Foucault, would be limiting, therefore, alternative ways of treating criminals should be devised (Foucault, 2001b**ibid**).

5 Conclusions and recommendations

Situating banking corruption crimes into themes in sociological theories hinted the existence in Ethiopia of corruption sprouting conditions discussed here. It has been argued that the criminals in socially unapproved ways owned or used public or individuals' money/gold for immediate consumption or capital formation and thus enhanced their livelihoods. Money lured them to comfortably commit the crimes without much fear of social sanction or criminal detection. As they engaged in the crimes, they further took advantages of money's nature and its economy: divisible and multipliable bank notes, instruments of payments representing money, secular law bound purposive/true contracts, money transactions and transfers in banking operation that did not involve its immediate exchanges or deliveries. The banking bureaucracy, instead of controlling concerned officials in panoptic manner, equipped them with authority, power and knowledge which they corruptly used. By their corrupt acts, the criminals not only harmed the public/individuals, but also endangered the banks' entrusted authority of securely keeping and circulating customers' money/gold. Though they targeted money/gold, their criminal acts could not be considered economic, but only "economically oriented action(s)." Upon the downfall of Derg regime, which was characterized by command economy and limiting capital for business operation, Ethiopia embraced 'free' market economy and fell in the hands of regional/ethnic fighters who became corrupt, maybe, to compensate what they lost in two/three decades struggle. Hence, the country became structurally corrupt which might have served as template for micro level banking corruption

crimes.

The country's birr has been depreciating at an alarming rate in the last three decades, inevitably exposing officials to inflation. Corruption crimes that have been considered in this article might be part of livelihood strategies to counter the inflation or win capital. In order that officials in panoptic manners control themselves and execute duties without being corrupt, they should be provided with "secure existence" that effectively counters inflation. The banks should strictly control monetary transactions and transfers including those involving foreign currencies and loans, transaction instruments (forms), and gold deliveries to the National Bank. Coercive/criminal laws put in place to control corruption have to be contextualized to the finding of Smith and his research group: top managers' engagement in unethical and illegal corporate act is much influenced by social factors. This article solely relied on formally court endorsed banking corruption crimes. Researches focusing on actual criminals and criminal justice system agents' perspectives are desirable.

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References

- Alatas, S. F. (1997). The post-colonial state: Dual functions in the public sphere. *Humboldt Journal of Social Relations*, 23(1/2), 285–307.
- Andina, T. (2016). *An ontology for social reality*. Palgrave Macmillan.
- Appelrouth, S., & Edles, L. D. (2015). [from *The Origin of the Family, Private Property and the State* (1884)] friedrich engels. In *Sociological theory in the classical era: Text and readings* (pp. 135–140). SAGE Publications, Inc.
- Arsema, T. (2010). *A review of the effectiveness of the federal ethics and anti-corruption commission of ethiopia* [Master's thesis]. Addis Ababa University.
- Ashforth, B. E., & Anand, V. (2003). The normalization of corruption in organizations. *Research in Organizational Behavior*, 25, 1–52.
- Beugré, C. D. (2010). Resistance to socialization into organizational corruption: A model of deontic justice. *Journal of Business and Psychology*, 25(3), 533–541.
- Carruthers, B. G., & Espeland, W. N. (2002). Money, meaning, and morality. In *Readings in economic sociology* (pp. 292–314). Blackwell Publishers Ltd.
- Clammer, J. (2012). Corruption, development, chaos and social disorganization: Sociological reflections on corruption and its social basis. In *Corruption: Expanding the focus*. ANU Press.
- Clarkson, L. (2003). Documentary sources. In *The a-z of social research: A dictionary of key social science concepts* (pp. 80–83). TJ International.
- Durkheim, E. (1957a). Professional ethics. In *Professional ethics and civic morals* (pp. 1–41). Taylor; Francis Group.

- Durkheim, E. (1957b). The right of property (continued). In *Professional ethics and civic morals* (pp. 133–170). Taylor; Francis Group.
- Durkheim, E. (1957c). Rules prohibiting attacks on property. In *Professional ethics and civic morals* (pp. 121–132). Taylor; Francis Group.
- Erero, B. J., & Oladoyin, T. (2000). Tackling the corruption epidemic in nigeria. In *Corruption and development in africa: Lessons from country case studies* (pp. 280–287). McMillan Press Ltd.
- The Criminal Code of Federal Democratic Republic of Ethiopia, 2004.
- A Proclamation to Provide for the Crimes of Corruption, 2015.
- Federal Ethics and Anti-Corruption Commission of Ethiopia (FEACCE). (2014). *Survey on perception of the level of corruption by foreign investors in ethiopia* (Final report). FEACCE. Addis Ababa.
- Federal High Court (FHC). (2010). FEACCE vs w/ro adey sulayman and others [File No. 191].
- Federal High Court (FHC). (2011a). FEACCE vs ahmed kelifa [File No. 5].
- Federal High Court (FHC). (2011b). FEACCE vs girum dagim [File No. 19].
- Federal High Court (FHC). (2011c). FEACCE vs lisanework seul and others [File No. 134].
- Federal High Court (FHC). (2011d). FEACCE vs wossenachew zewdie [File No. 86].
- Federal High Court (FHC). (2012a). FEACCE vs neway mizanu [File No. 133].
- Federal High Court (FHC). (2012b). FEACCE vs nigirtu zuber [File No. 193].
- Federal High Court (FHC). (2013a). FEACCE vs amsalu getaye [File No. 63].
- Federal High Court (FHC). (2013b). FEACCE vs gizachew sewselam [File No. 41].
- Federal High Court (FHC). (2013c). FEACCE vs kelbesa mekuanent [File No. 42].
- Federal High Court (FHC). (2013d). FEACCE vs yohannes mistiru and awol ahmedin [File No. 143].
- Federal High Court (FHC). (2014a). FEACCE vs dagne lijalem [File No. 75].
- Federal High Court (FHC). (2014b). FEACCE vs h/michael sankura and others [File No. 121].
- Federal High Court (FHC). (2014c). FEACCE vs michael mekoya [File No. 30].
- Federal High Court (FHC). (2014d). FEACCE vs worknesh genzebu and others [File No. 203].
- Federal High Court (FHC). (2015a). FEACCE vs lewnet bonger and others [File No. 149].
- Federal High Court (FHC). (2015b). FEACCE vs luelalem godana [File No. 80].
- Federal High Court (FHC). (2015c). FEACCE vs matiyos nigussie [File No. 215].
- Federal High Court (FHC). (2015d). FEACCE vs melikteamlak keranyo [File No. 91].
- Federal High Court (FHC). (2015e). FEACCE vs miskir aschenaki and others [File No. 202].
- Federal High Court (FHC). (2015f). FEACCE vs selerisu gizachew and others [File No. 197].
- Federal High Court (FHC). (2015g). FEACCE vs seyoum tebeje and others [File No. 169].
- Federal High Court (FHC). (2015h). FEACCE vs tibebe sulamo [File No. 82].
- Federal High Court (FHC). (2016a). FEACCE vs aragaw abdella [File No. 107].
- Federal High Court (FHC). (2016b). FEACCE vs elias w/michael [File No. 112].
- Federal High Court (FHC). (2016c). FEACCE vs lingerh zero and others [File No. 189].
- Federal High Court (FHC). (2016d). FEACCE vs samson teklay [File No. 101].
- Federal High Court (FHC). (2016e). FEACCE vs simachew digafeneh [File No. 105].
- Federal High Court (FHC). (2016f). FEACCE vs solomon nageso and others [File No. 201].
- Federal High Court (FHC). (2016g). FEACCE vs soresa feyera and solomon shilimu [File No. 131].
- Federal High Court (FHC). (2016h). FEACCE vs tesgabebril zemedie and others [File No. 129].
- FEACCE vs Simachew Digafeneh.
- Ferraris, M. (2009). Documentality, or europe. *The Monist*, 92(2), 286–314.
- Foucault, M. (1995a). Complete and austere institutions. In *Discipline and punish: The birth of the prison* (pp. 231–256). Vintage Books.
- Foucault, M. (1995b). Panopticism. In *Discipline and punish: The birth of the prison* (pp. 195–228). Vintage Books.
- Foucault, M. (2001a). Against replacement penalties. In *Essential works of foucault 1954-1984: Power* (pp. 459–461).
- Foucault, M. (2001b). To punish is the most difficult thing there is. In *Essential works of foucault 1954-1984: Power* (pp. 462–464).
- Foucault, M. (2001c). Truth and power. In *Essential works of foucault 1954-1984: Power* (pp. 111–133).
- Goldsmith, A. A. (1999). Slapping the grasping hand: Correlates of political corruption in emerging markets. *The American Journal of Economics and Sociology*, 58(4), 865–883.
- Hodgkinson, P. (1997). The sociology of corruption- some themes and issues. *Sociology*, 30(1), 17–35.

- Igboin, B. O. (2016). Traditional leadership and corruption in pre-colonial africa: How the past affects the present. *Studia Historiae Ecclesasticae*, 42(3), 142–160.
- Khwaja, A. I., & Mian, A. (2011). Rent seeking and corruption in financial markets. *Annual Review of Economics*, 3, 579–600.
- Kwok, C. C. Y., & Tadesse, S. (2006). The mnc as an agent of change for host-country institutions: FDI and corruption. *Journal of International Business Studies*, 37(6), 767–785.
- La Porta, R., Lopez-de-Silanes, F., & Zamarripa, G. (2003). Related lending. *The Quarterly Journal of Economics*, 118(1), 231–268.
- Lefort, R. (2012). Free market economy, ‘developmental state’ and party-state hegemony in ethiopia: The case of the ‘model farmers’. *Journal of Modern African Studies*, 50(4), 681–706.
- Lenz, S. M. L., & Lenz, G. S. (2000). Corruption, culture, and markets. In *Culture matters: How values shape human progress* (pp. 112–124). Basic Books.
- Makumbe, J. (1994). Bureaucratic corruption in zimbabwe: Causes and magnitude of the problem. *Africa Development*, 19(3), 45–60.
- Marx, K. (1887). Commodities and money. In *Capital: The process of production of capital* (pp. 8–92). Progress Publishers.
- Marx, K. (1988a). [the power of money in bourgeois society]. In *Economic and philosophic manuscripts of 1844* (pp. 135–140). Prometheus Books.
- Marx, K. (1988b). The meaning of human requirements where there is private property and under socialism. the difference between extravagant wealth and the industrial wealth. division of labour in bourgeois society. In *Economic and philosophic manuscripts of 1844* (pp. 115–134). Prometheus Books.
- McIntosh, J. A., & Prinz, R. J. (1993). The incidence of alleged sexual abuse in 603 family court cases. *Law and Human Behavior*, 17(1), 95–101.
- Mulinge, M. M., & Lesetedi, G. N. (1998). Interrogating our past: Colonialism and corruption in sub-saharan africa. *African Journal of Political Science*, 3(2), 15–28.
- Nas, T. F., Price, A. C., & Weber, C. T. (1986). A policy-oriented theory of corruption. *The American Political Science Review*, 80(1), 107–119.
- Nielsen, R. P. (2003). Corruption networks and implications for ethical corruption reform. *Journal of Business Ethics*, 42(2), 125–149.
- Ocheje, P. D. (2007). ‘in the public interest’: Forced evictions, land rights and human development in africa. *Journal of African Law*, 51(2), 173–214.
- Olivier de Sardan, J. P. (1999). A moral economy of corruption in africa? *The Journal of Modern African Studies*, 37(1), 25–52.
- Olowu, B. (2000). Governmental reforms and control of corruption in ethiopia. In *Corruption and development in africa: Lessons from country case studies* (pp. 261–279). McMillan Press Ltd.
- Osei-Hwedie, B. Z., & Osei-Hwedie, K. (2000). The political, economic, and cultural bases of corruption in africa. In *Corruption and development in africa: Lesson from country case-studies* (pp. 40–56). McMillan Press Ltd.
- Paulos, C. (2007). Clientelism and ethiopia’s post-1991 decentralisation. *Journal of Modern African Studies*, 45(3), 355–384.
- Reinikka, R., & Svensson, J. (2005). Using micro-surveys to measure and explain corruption. *World Development*, 34(2), 359–370.
- Robertson, C. J., & Watson, A. (2004). Corruption and change: The impact of foreign direct investment. *Strategic Management Journal*, 25(4), 385–396.
- Rodriguez, P., Uhlenbruck, K., & Eden, L. (2005). Government corruption and the entry strategies of multinationals. *The Academy of Management Review*, 30(2), 383–396.
- Rosenblatt, V. (2012). Hierarchies, power inequalities, and organizational corruption. *Journal of Business Ethics*, 111(2), 237–251.
- Satz, D. (2013). Markets, privatization, and corruption. *Social Research*, 80(4), 993–1008.
- Seid, H. (2017). Aid, predation and state capture: The role of development aid in fueling corruption and undermining governance: The case of ethiopia. *ResearchGate*, 1–47.
- Shimelis, A. (2005). *Corruption and anti-corruption in ethiopia: A case study of ethiopian customs authority* [Master’s thesis]. Addis Ababa University.
- Simmel, G. (1978). Individual freedom. In *The philosophy of money* (pp. 283–356). Routledge.

- Smith, N. C., Simpson, S. S., & Huang, C.-Y. (2007). Why managers fail to do the right thing: An empirical study of unethical and illegal conduct. *Business Ethics Quarterly*, 17(4), 633–667.
- Tigabu, L. (2017). Urban land acquisition and social justice in ethiopia. *ResearchGate*, 129–141.
- Venard, B., & Hanafi, M. (2008). Organizational isomorphism and corruption in financial institutions: Empirical research in emerging countries. *Journal of Business Ethics*, 81(2), 481–498.
- Villeneuve, J.-P., Mugellini, G., & Heide, M. (2020). International anti-corruption initiatives: A classification of policy interventions. *European Journal on Criminal Policy and Research*, 26, 431–445.
- Weber, M. (1978a). Bureaucracy. In *Economy and society* (pp. 956–1005). University of California Press.
- Weber, M. (1978b). The economic relationships of organized groups. In *Economy and society* (pp. 338–355). University of California Press.
- Weber, M. (1978c). Economy and law (sociology of law). In *Economy and society* (pp. 641–900). University of California Press.
- Weber, M. (1978d). The economy and social norms. In *Economy and society* (pp. 311–338). University of California Press.
- Weber, M. (1978e). Sociological categories of economic action. In *Economy and society* (pp. 63–211). University of California Press.
- Weisner, T. S. (2000). Culture, childhood, and progress in sub-saharan africa. In *Culture matters: How values shape human progress* (pp. 141–151). Basic Books.
- Zyglidopoulos, S. C., & Fleming, P. J. (2008). Ethical distance in corrupt firms: How do innocent bystanders become guilty perpetrators? *Journal of Business Ethics*, 78(1/2), 265–274.
- Zyglidopoulos, S. C., Fleming, P. J., & Rothenberg, S. (2009). Rationalization, overcompensation and the escalation of corruption in organizations. *Journal of Business Ethics*, 84(Supplement 1), 65–73.



Effects of EFL Teachers' Scaffolding Strategies on Motivation and Grammatical Achievement: Pawi Secondary and Preparatory School, Grade 11 in focus

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Abstract

The main objective of this study was to examine the effects of EFL teachers' Scaffolding strategies on students' motivation towards grammar learning and grammar achievement: Pawi Secondary and Preparatory School, Grade 11 in focus. To this end, the study employed a quasi-experimental research design with a quantitative approach. The school was selected using convenient sampling technique among six Secondary and Preparatory Schools in Pawi woreda. Two data collection instruments were used and piloted in the study. Participant students were selected using purposive sampling technique. In this study pre-test were given (for baseline) for all six sections and purposely selected two intact groups out of six which have homogenous pre-test results from grade 11 students, creating comparison and experimental groups. Each group consisted of 51 students, resulting in a total of 102 participants. Data were collected through pre- and post-tests for grammar achievement and motivation towards learning grammar questionnaire test for students. The findings analyzed using independent sample t-tests, and the results indicated that the treatment had a significant and noteworthy influence on both students' motivation towards learning grammar and grammatical achievement. This shows that the implementation of scaffolding strategies by EFL teachers positively affected students' motivation towards learning grammar and their ability to improve their grammatical achievement. Based on the results, the study provides valuable evidence supporting the effectiveness of EFL teachers' scaffolding strategies in enhancing students' motivation towards learning grammar and grammar achievement in the Ethiopian educational setting.

Keywords: Grammar achievement; Students' motivation; Scaffolding Strategies

1 INTRODUCTION

The teaching of grammar in language learning has been a topic of ongoing debate among scholars and researchers in the worldwide. Over the years, there have been various approaches to grammar instruction, ranging from explicit teaching to more implicit, inductive and deductive methods (R. Ellis, 2007; Long, 2015). Grammar is seen as crucial for language proficiency, as it gives the rules that govern the construction and use of meaningful units in a language (Batstone, 1994).

While the communicative approach in language teaching downplayed the role of grammar instruction in the late 1970s, however, in recent research has emphasized the importance of formal instruction to achieve high levels of accuracy in language teaching-learning (Cook, 2001; Nassaji & Fotos, 2004). Grammar is the central aspect of language that bonds other language components such as pronunciation, vocabulary, and skills like speaking, writing, reading, and listening (Cook, 2001). Therefore, effective grammar instruction is essential and should be approached with engaging teaching-learning methodologies (Richards, 2001). However, there has been a dispute regarding the teaching of grammar over the past few decades. Traditional methods based on formal grammar instruction have often been criticized for their limited success in helping learners communicate effectively in a second or foreign language (N. C. Ellis, 2002).

Students' motivation to wards learning grammar plays a significant part in learners' learning and academic achievement. Motivation can be defined in various ways by different researchers. For instances, Gardner (1985) defines it as the willingness and satisfaction experienced by individuals in their efforts to learn a language. Brown (1994) describes motivation as the choices individuals make regarding their approach or avoidance of certain experiences or goals and the level of effort, they exert in pursuing them. The term "motivation" is derived from the Latin word "mover," which means to put into action or move towards something (Kumar, 2005). It involves activating learners' physiological or psychological processes to help them achieve their desires and goals in life (Abdulrasoul, 2012). In addition, humans are primarily motivated to improve their own competence, ability, and creativity; to change the world rather than respond to it; and to both influence by their environment. Moreover, motives are learned; they are affectively toned associative networks arranged in a hierarchy of strength within a given individual (McClelland, 1965; Winslow, 1990). Hence, motivated students can apply their efforts to learn grammar and can achieve better than students who are not motivated to wards learning.

In Ethiopian schools, English is serves as the medium of instruction predominantly from high school to university level (Ministry of Education (MoE), 1994). However, it is as a subject in primary school and a medium of instruction in secondary schools and in some regions like Benishangul Gumuz region, it is a medium of instruction beginning from grade five. Studies have indicated that the teaching methodologies and instructional techniques employed by teachers have had a detrimental impact on English learning in the country. These poor teaching methodologies have resulted in a decline in students' English language proficiency, despite their exposure to the language for an extended period of time (Teshome, 2001).

Based on the researchers experience in English language teaching at high school and higher education levels, have observed challenges among students in discourse activities and communicative grammar skills. These challenges are reflected in low scores on grammar tests. On the other hand, some students want to learn only grammar forms. A main problem in EFL classrooms is the occurrence of non-interactive learners who avoid to engage with their teachers and peers. By adopting the Scaffolding Strategies, teachers can create a more interactive and engaging learning environment. This strategies encourages active students' participation, peer interaction, and the development of language skills in meaningful contexts. The gradual support provided through scaffolding assists students in building their language proficiency and confidence (Ur, 1988).

In addition, the teaching methodology employed in English language instruction in Ethiopian schools has a significant impact on students' language development. Implementing alternative strategies, such as the Scaffolding Strategies, can enhance the teaching and learning process, improve language skills, and promote interactive learning in EFL/ESL classrooms (Ministry of Education (MoE), 1994; Teshome, 2001; Ur, 1988).

Moreover, the researchers' experiences revealed that tests set by teachers primarily focus on assessing learners' factual knowledge of grammatical forms and structures. Many colleagues of the researchers have expressed concerns about the English language deficiencies of their students. Nevertheless, without scientific investigation, these concerns remain rumors and require in-depth research to be substantiated. It is vital to conduct research at all levels to study this issue meticulously.

Numerous research findings indicate the declining effect of grammar teaching in Ethiopia. The teach-

ing of grammar relies on the integration of all skills that teachers should acquire during their training, yet many teachers exhibit low proficiency in teaching grammar (Smith et al., 2012). Additionally, studies examining the usefulness of inductive and deductive approaches to grammar instruction have not consistently favored either approach for classroom application (Freeman, 2015). Therefore, having challenges in teaching grammar needs to explore alternative teaching and learning methods is necessary.

Based on the researchers' experiential knowledge, it has been observed that many students lack motivation when it comes to learning grammar communicatively, they are motivated to learn grammar forms. Dörnyei (2001) emphasizes that without motivation, learners struggle to perform well in their language learning endeavors, leading to potential failure in their academic achievement. According to Vygotsky (1978), by demonstrating, and other suitable procedures, the educator can explain and give guidance when the novice is confused. Vygotsky saw the instructor comprehensively; a friend or even an apparatus could serve in the part of the educator. Motivated students incline to have a positive attitude and a clear understanding of their goals and how to achieve them.

On the other hand, unmotivated students may become pessimistic and struggle to involve actively in the learning process. Elliott et al. (2005) defines motivation as an internal state that stimulates individuals to take action, encourages specific behaviors, and sustains their involvement in classroom activities for example, in learning grammar authentically. Moreover, Slavin et al. (2009) notes that highly motivated students are more likely to actively plan and participate in their learning. Motivation plays essential role in the learning process, and it has long been a concern for language teachers and researchers, particularly in the context of learning English language.

Scaffolding is a means to which teachers can build upon a student's strengths and support based on their weakness or needs. Support should be contextual, social, and temporary frameworks used to support successful learning with a specific academic domain and it is a way of giving guidance from a more experienced partner or adult interaction (Vygotsky, 1987; Wood et al., 1976). Scaffolding is thought of as using steps in a process, modeling the steps, and then giving students the opportunity to try it themselves. As the researchers adopt the Social Cognitive Theory (SCT), which encompasses various aspects of teachers' roles in the teaching and learning process, for instance, modeling, bridging, feedback and giving explanation. Numerous scholars have explored the effects of scaffolding strategies on students' language achievement, while others have focused on students' motivation in grammar learning. Both international and local research studies have been conducted in this field (Addisu, 2019; Al-Muhamed & Nagaratnam, 2011; Bilew, 2022; Mukhtar, 2017; Tadesse, 2001).

In recent times, there has been a global concern regarding scaffolding students to enhance their academic achievements, particularly in English language research. This has prompted the researchers to pay close attention to studying the effects of EFL teachers' scaffolding strategies on students' motivation towards grammar learning and grammatical achievement. Relevant studies have been conducted within the context of foreign language teaching, specifically focusing on scaffolding strategies.

The studies provide valuable insights of the effectiveness of English grammar teaching and learning in various contexts. Al-Muhamed and Nagaratnam (2011) examined the difficulties in teaching and learning grammar in an EFL context. The study showed that teachers supposed communicative activities, both written and spoken, to be challenging for students in terms of learning grammar and improving grammatical accuracy. The study highlighted the need for improvement in grammar teaching methods, including accurate descriptions of grammar and its role in making meaning in context. Related with this, Abdul Kareem (2020) explored the problems in teaching and learning grammar in an EFL context. The study shows various types of grammar instruction and highlighted challenges such as the lack of encouragement, difficulties in understanding grammatical concepts, and problems faced by EFL teachers, for instance, including beliefs about teaching grammar, handling large classes size, and time limitations.

In the local context, Tadesse (2001) explored students' beliefs about EFL grammar teaching and learning, the finding show that students often held a static view of grammar as a set of rules, neglecting its meaning and use in communication setting. In addition, Addisu (2019) investigated the effects of

peer scaffolding strategies on students' grammar proficiency development. The results shows that peer scaffolding strategy has a positive effect on students' grammar proficiency. In the same vein, [Gelaneh \(2021\)](#) examined grammar teaching practices and challenges faced by EFL teachers in Ethiopia. Therefore, one possible reason for this discrepancy is could be lack of instruction on how to scaffold learners in teaching grammar.

Furthermore, the researchers conducted baseline study classroom observation on grade 11 students in K2V2 Secondary School. This school was selected using simple random sampling technique. In this school, there were four sections of in 2022/23 academic year. Among these sections, the researchers observed two sections using simple random sampling technique. The researchers observed that in teaching grammar, the teacher asked about the answer of each question students raise their hands and give answer one by one. The teacher didn't use grammar teaching methodology except question and answer. Without using knowing their ZPD and scaffolding. This means, scaffolding strategies were not employed in teaching grammar.

In terms of motivation, [Mukhtar \(2017\)](#) investigated students' motivation in English language learning among eighth graders in Palangkaraya in Indonesia. The findings showed moderate levels of motivation, with students attributing their motivation to factors such as a pleasant learning atmosphere, well conveyed teaching materials, and ease of understanding. In addition, [Latif R. \(2021\)](#) conducted a study on students' motivation toward English language learning among students of different fields of study in Iraq high schools. The results indicated that students were primarily motivated in learning language.

Motivation in the local context, [Bilew \(2022\)](#) studied the level of motivation among students and teachers in an EFL setting in Ethiopia. The findings emphasized the role of motivation in improving English language learning and teaching processes. Similarly, [Getachew \(2020\)](#) investigated the effects of motivational techniques on students' EFL achievement, suggesting that selected motivational techniques can enhance students' language learning outcomes. Overall, these studies emphasize the significance of effective grammar teaching methods, integration of grammar with other language skills, and the role of motivation in promoting successful language learning. They provide valuable insights for educators and researchers aiming to enhance grammar instruction and motivate learners in different contexts. Even if the Ethiopian education system emphasizes grammar teaching in the curriculum, there are challenges in terms of methodology, content, and the amount of time allocated to grammar instruction. Overall, poor teaching methodologies and inadequate treatment of grammar can be considered the least successful aspect of the curriculum in the country ([Heugh et al., 2007](#)).

Despite the high demand for foreign language teaching in Ethiopia, the quality of grammar instruction requires significant improvement. Enhancing teachers' knowledge of grammar teaching methodologies and strategies should be prioritized in the curriculum to meet the demand for quality foreign language education in Ethiopia. Although researches conducted on international and local levels, researchers didn't try to conduct on effects of Scaffolding strategies on students' grammatical achievement at all levels. The researchers believe that employing scaffolding strategies in teaching grammar is essential. [Addisu \(2019\)](#) published an article on effects of peer scaffolding on students grammar proficiency development is the only article published on the same title. As a result, the researchers initiated to fill the gap on this topic. Therefore, this study aimed to investigate the impact of the Scaffolding strategies on students' motivation towards grammar learning and grammatical achievement. To this end, the following research questions are formulated:

2 Research Questions

The study seeks to answers the following research questions:

1. What is the effect of scaffolding strategies on EFL students' motivation to learn grammar?
2. How do scaffolding strategies influence EFL students' grammatical achievement?

3 Methods and Techniques

To achieve this objective, a quasi-experimental pretest-posttest design was employed. This design was chosen due to the constraints of the natural school setting, which made random assignment of students into groups impractical. Instead, intact groups were used as they naturally existed within the school (Creswell (2012) and Pallant (2010)). Furthermore, a quantitative approach was employed using motivation questionnaire and grammar test. The tests measured students' grammar achievement before and after the intervention, while the questionnaire assessed their motivation towards grammar learning. The experimental group received the intervention, while the comparison group did not. This design allows for examining the effects of the intervention on grammar skills and motivation levels, although it lacks random assignment of participants of both groups.

3.1 Participants, Setting, and Sampling

Pawi Secondary and Preparatory School was selected using convenient sampling technique among six Secondary and Preparatory Schools in Pawi woreda. Convenient sampling is a technique in which a sample is drawn from that part of the population that is close to hand, readily available, or convenient for the researchers (Bhattacharjee, 2012). The participants of the study were grade eleven students in Pawi Preparatory school. Sample students were selected among six sections (A, B, C, D, E and F) by purposive sampling technique, the two intact groups participated in the study, with section B serving as the comparison group and section E as the experimental group from Pawi General Secondary and preparatory School at Pawi woreda in the 2022/23. They each containing 51 students. The experimental group received the intervention, which involved scaffolding strategies for learning grammar, while the comparison group was taught using the usual methods which is teaching grammar forms and meanings without taking consideration of students' gap in learning grammar.

3.2 Data Collection Instruments

To achieve the study's objectives, two assessment tools were employed: a grammar test and a motivation questionnaire. The grammar test consisted of 25 multiple-choice items adapted from Adugna (2021) "Worldwide English Grammar." The questionnaire, on the other hand, comprised 20 objective-type scaled items designed to measure students' motivation towards grammar learning. The Likert scale used in the questionnaire had six levels, ranging from "Definitely true of me" to "Definitely not true of me" (6 to 1).

The researchers ensured the validity of the instruments by looking for feedback from their advisors and colleagues, making necessary adjustments based on their comments five grammar achievement test were removed and two were corrected by avoiding some indispensable distractors. As for reliability, the motivation questionnaire and the grammar test exhibited high levels of reliability, with coefficients of .8195 and .939, respectively.

Cohen (1988) has presented some guidelines for Effect Size (ES) as the following levels: small = .01, medium = .09 and large = .25 Based on Cohen effect size for motivational questionnaire (ES = 0.39) suggests that the difference in motivation posttest scores between the comparison and experimental groups was large, further supporting the effectiveness of the scaffolding Strategies with the experimental group. In addition, the effect size (ES = 0.45) suggests that the difference in grammar achievement posttest scores between the comparison and experimental groups was large, further supporting the effectiveness of the scaffolding Strategies with the experimental group.

3.3 Treatment of the Study

In this study, the data analysis involved the use of inferential statistics, specifically the independent sample t-test, to examine the mean differences between the comparison and experimental groups in terms of their motivation towards grammar learning and grammar achievement. The data was processed using the Statistical Package for the Social Sciences IBM (SPSS) version 23. Before conducting the analysis, several assumptions of the independent sample t-test were assessed to ensure their fulfillment. These assumptions included normality, homogeneity, Levene's test, and linearity. The normality assumption refers to the distribution of data being approximately normally distributed. Homogeneity assumes that the variances of the two groups being compared are equal. Levene's test is used to assess the equality of variances between groups. Linearity examines the relationship between the independent variable (scaffolding strategies) and the dependent variables (motivation and grammar achievement). To satisfy these assumptions, a thorough evaluation of parametric test assumptions was performed prior to conducting the data analysis. Additionally, the data obtained through the instruments used in the study were checked for their appropriateness and fit for analysis.

Prior to commencing the intervention, the researchers and teacher provided the experimental group students with information about the study's objectives. The intervention took place within the regular classroom setting of the school, using scaffolding strategies over a period of ten weeks. Training were given for the teacher for 21 hours based on the training manual. After taking the training, the teacher employed various resources to support the intervention.

The trained teacher used the following scaffolding strategies while teaching the experimental group students. The researchers adapted models from [Van Lier \(2004\)](#) principles of scaffolding Strategies and [Van de Pol et al. \(2015\)](#) conceptual model of scaffolding strategies. The scaffolding strategies that were employed during the entire intervention are summarized. These strategies might vary from lesson to lesson depending on the content, the nature of the task, and the background and needs of the learners as well as changing it from period to period makes it fashion for students.

1. Contextual scaffolding strategy was implemented to create a supportive learning environment during the teaching-learning processes. It also used to promote access to resources and goals. In this study, the researchers assessed students' grammar levels through pretests and the trained teacher provided contextual support tailored to address their individual gaps during the intervention.
2. Hints were given by the teacher to offer clues, suggestions, or guidance to assist students in developing their grammar in teaching tenses. The trained teacher provided hints to help students determine the correct ways to apply correct tenses during the lesson.
3. Modeling strategy involved the teacher demonstrating specific skills or showcasing how to perform certain activities related to grammar tenses form, meaning and function different tenses. And giving examples how to perform the activities.
4. The teachers' explanation occurred as he moved around the classroom, identifying actual difficulties students encountered and providing detailed information and clarifications about the ongoing activities in the lessons regarding grammar.
5. Inter-subjectivity was promoted by encouraging collaboration and active engagement among students, creating a non-threatening and participatory learning atmosphere.
6. Bridging was employed by the teacher to activate students' prior knowledge in order to facilitate their achievement of specific tasks in learning grammar (tenses).
7. Feedback was provided to students regarding their performance. In this study, the teacher scaffolded students' grammar by providing assistance to help them complete grammar tasks while learning tenses. The teacher monitored students' progress and offered corrective feedback regarding the appropriateness of the grammar lessons in general.
8. Handover involved the gradually increasing learners' autonomy and responsibility as their skills and confidence grew up. The teacher gradually reduced their supportive role, allowing learners to work independently when they demonstrated the ability to do so. The teacher withdrew support when learners became autonomous. In contrast, the comparison group students received

the same content and workload as the experimental group but were taught using conventional grammar instruction methods, without the use of scaffolding strategies both groups were taught by the same teacher. Giving explanation and giving feedback were also used by the teacher in teaching comparison group.

3.4 Ethical Considerations

Ethical considerations were taken into account during this study. The researchers obtained a consent letter from the English Language and Literature Department to ensure the study's compliance with ethical guidelines. Subsequently, permission was sought from the selected school to conduct the study on its premises. Following approval from the school, the researchers obtained informed consent from the participants involved in the study to take test and questionnaire. The participants were assured that their participation was voluntary and that any information they provided would be treated as confidential. This confidentiality measure was implemented to protect the privacy and anonymity of the participants of the study.

4 Results

The results and analysis of the study, guided by the research questions, are presented in this section. The study aimed to address two research questions and tested them at a 0.05 level of significance, with the ultimate goal of examining the effects of teachers' scaffolding strategies on students' motivation towards learning grammar.

The first research question focused on the effects of EFL teachers' scaffolding strategies on students' motivation towards learning grammar. To investigate this, an independent sample t-test was conducted to examine the mean score difference between the comparison and experimental groups' students in the pre- and post-score test results.

The independent sample t-test analysis aimed to determine if there was a significant difference in the mean scores of the two groups, indicating the effect of the scaffolding strategies on students' motivation. The pre-test scores were compared to establish a baseline, and the post-test scores were compared to assess the effects of the scaffolding strategies on motivation.

By analyzing the mean score differences between the comparison and experimental groups, the researchers could determine the extent to which the scaffolding strategies influenced students' motivation towards learning grammar. The significance level of 0.05 was used to assess whether any observed differences were statistically significant.

4.1 Effect of Scaffolding Strategies on Students' Motivation towards Learning Grammar

These findings demonstrate the effectiveness of the intervention in enhancing students' motivation towards learning grammar. The results suggest that employing scaffolding strategies positively impacted students' motivation, leading to increased engagement and interest in grammar learning.

Table 1: Students Motivation towards learning Grammar Questionnaire (Pre- Intervention)

Group of students	N	Mean	SD	T	Df	P
Comparison Group	51	4.247	.880	1.075	100	.285
Experimental Group	51	4.06	.835	1.075	99.73	

As can be observed in table1, there was no a significant difference in the comparison and experimental

groups students' motivation towards grammar learning. The mean score difference between the comparison and experimental groups in the pretest was 0.187, favoring the comparison group. However, the independent sample t-test results indicated that this difference was not statistically significant ($t = 1.075$, $p = 0.285$, $p > \alpha$ at $\alpha = 0.05$). This suggests that, before the intervention, the participants in both groups had similar levels of motivation towards learning grammar, indicating a homogeneity of background.

Accordingly, it can be inferred that students' background did not significantly influence the findings of this study. This establishes a solid foundation for comparing the effects of the scaffolding strategies on students' motivation to wards grammar learning.

Table 2: Motivation Questionnaire Post- Intervention

Group of students	N	Mean	SD	T	Df	P
Comparison Group	51	4.155	.624	3.568	100	.001
Experimental Group	51	4.639	.744	3.568	97.065	

There was a significant effect of scaffolding strategies on students motivation towards grammar learning and as evidenced by their achievements throughout tests. As can be observed in table2, there was a significant effect of scaffolding strategies on students' motivation towards grammar learning.

After the implementation of the treatment, a significant mean score difference was observed between the comparison and experimental groups in the posttest. The mean score difference between the two groups in the posttest was 0.484, favoring the experimental group. The t-test yielded a t-value of 3.568 and a p-value of 0.001 ($p < \alpha$ at $\alpha = 0.05$). This indicates that the experimental group, which received the intervention involving scaffolding strategies, exhibited a higher level of motivation towards learning grammar compared to the comparison group.

4.2 Effects of Scaffolding Strategies on Students' Grammar Achievement

These findings demonstrate the effectiveness of the intervention in enhancing students' grammar achievement. The results suggest that employing scaffolding strategies positively impacted students' learning outcomes, leading to improved grammar skills.

Table 3: Students' Grammar Achievement

Test	Group of students	N	Mean	SD	T	Df	P
Pre-test	Comparison Group	51	13.54	1.847	-.746	100	.458
	Experimental Group	51	13.92	3.05			

Based on Table 3, the mean score difference between the comparison and experimental groups in the pretest was 0.38, favoring the experimental group. However, the independent sample t-test results indicated that this difference was not statistically significant ($t = -0.746$, $p = 0.458$, $p > \alpha$ at $\alpha = 0.05$). This suggests that, before the intervention, the participants in both groups had similar levels of grammar knowledge, indicating a homogeneity of background of students.

Hence, it can be concluded that students' background knowledge did not significantly impact the findings of this study. This sets the stage for evaluating how scaffolding strategies influence students' grammar achievement.

Table 4: Post test results using independent sample t-test

Test	Group of students	N	Mean	SD	T	Df	P
Post	Comparison Group	51	13.90	1.835	6.317	100	0.000
	Experimental Group	51	16.76	2.66			

There was a significant effect of scaffolding strategies on students' grammar achievement. As evidenced

by their achievements throughout tests. As can be observed in table 4, there was a significant effect of scaffolding strategies on students' grammar achievement.

After the implementation of the treatment, a significant mean score difference was observed between the comparison and experimental groups in the posttest. The mean score difference between the two groups in the posttest was 2.86, favoring the experimental group. The t-test yielded a t-value of 6.317 and a p-value of 0.000 ($p < \alpha$ at $\alpha = 0.05$). This indicates that the experimental group, which received the intervention involving scaffolding strategies, exhibited a higher level of grammar achievement compared to the comparison group.

Therefore, it can be concluded that students' background knowledge did not significantly impact the findings of this study. This sets the stage for evaluating how scaffolding strategies influence students' grammar achievement.

5 Discussion

This study was designed to see the effects of scaffolding strategies on students' motivation and grammar achievement. After the implementation of the treatment, a significant mean score difference was observed between the comparison and experimental groups in the posttest. The mean score difference between the two groups in the posttest was 0.484, favoring the experimental group. The t-test yielded a t-value of 3.568 and a p-value of 0.001 ($p < \alpha$ at $\alpha = 0.05$). This indicates that the experimental group, which received the intervention involving scaffolding strategies, exhibited a higher level of motivation towards learning grammar compared to the comparison group.

The findings of this study demonstrated the effectiveness of the intervention in enhancing students' motivation towards learning grammar. The result of this study aligns with the findings of the studies (Boris, 2022; Erdil, 2019; Mukhtar, 2017) (Martinez et al., 2020), whose findings in their published articles showed that motivations positively affect student learning effectiveness in grammar learning. In the same vein, Maulizar (2019) published article on Students' motivation in learning English language. The results of this study indicate that students are highly motivated in learning English language. The findings of the study is also consistent with the existing local studies. For example, Bilew (2022) studied the level of motivation among students and teachers in an EFL setting in Ethiopia. The findings emphasized the role of motivation in improving English language learning and teaching processes. Likewise, Getachew (2020) investigated the effects of motivational techniques on students' EFL achievement, suggesting that selected motivational techniques can enhance students' language learning outcomes. Overall, these studies emphasize the significance of effective motivation towards learning. Therefore, scaffolding must continue and adopted to our context since it improves the quality of motivation towards academic achievement.

The findings of this study demonstrated the effectiveness of the intervention in enhancing students' grammar achievement. After the implementation of the treatment, a significant mean score difference was observed between the comparison and experimental groups in the posttest. The mean score difference between the two groups in the posttest was 2.86, favoring the experimental group. The t-test yielded a t-value of 6.317 and a p-value of 0.000 ($p < \alpha$ at $\alpha = 0.05$). This indicates that the experimental group, which received the intervention involving scaffolding strategies, exhibited a higher level of grammar achievement compared to the comparison group.

The results of this study similar with the findings of studies (Ameri & Seyyed Rezaei, 2016; Rezaee et al., 2018)(Lamhot, 2019). Additionally, Vonna et al. (2015), whose findings in their published article showed that scaffolding strategies can significantly improve students' writing achievement.

This result supports Vonna et al. (2015) whose result shows that low contingent support was more effective in promoting students' achievement and task effort than high contingent support in situations where independent working time was low. The findings of the study is consistent with the existing local study, Addisu (2019) and Simachew G. and Belihu M.(2021) whose findings in their published

articles indicated that scaffolding strategies have positive effect on students learning in EFL classroom in Ethiopian context.

However, this result is in contrary to Oletić and Ilić (2014). Their results obtained from the study show that there are generally low levels of motivation present among both high school and university students. This finding could also be coinciding with the light of literature such as Wells (1999) stresses that the outcome of successful scaffolding constructs for learners the ability to do the task they have done, or similar types of tasks, on their own. In addition, Hartman (2002) emphasizes these and mentions that the unique property of scaffolding as a teaching strategy is to make learners self-regulated and independent learners. Furthermore, Capellio and Moss (2010) noted that scaffolding helps students to cope with difficulties of tasks in an authentic manner. The way that scaffolding is carried out in the classroom depends on the students' level or abilities. Therefore, teachers should consider the students level knowledge and should support accordingly.

However, the finding of this research is contradictory to Shayer and Adey (2002). According to Shayer, the application of the ZPD in practice is more problematic. Shayer stressed that Vygotsky failed to provide much about the effective use of ZPD in classrooms. In addition, (Piaget, 1995), suggests that participation in the activity for which a child is not ready with a more knowledgeable other, leads primarily to imposing the partner's views and will not affect the structures of the child's actions.

6 Conclusions and Recommendations

6.1 Conclusions

The study's findings provide encouraging evidence that the implementation of scaffolding strategies in the EFL classroom positively influenced the motivation and grammar achievement of grade 11 students. The results indicate that the use of scaffolding strategies effectively enhanced students' motivation levels and contributed to improved performance in grammar. In other words, the scaffolding strategies employed in the study successfully boosted students' motivation and facilitated their progress in mastering grammatical concepts. These findings advocate that incorporating scaffolding strategies into EFL instruction can be a valuable approach for promoting students' motivation and enhancing their overall grammar learning outcomes.

6.2 Recommendations

Based on the study's findings, the researchers recommend that curriculum designers expand the range of grammar teaching strategies beyond the traditional deductive and inductive approaches. The researchers suggest that newly trained teachers should be equipped with various options for teaching grammar, and all teachers should receive short training sessions on effective grammar teaching instructions. The implication of the study's findings shows that the use of scaffolding strategies has a positive impact on students' motivation and grammar achievement. Therefore, teachers are encouraged to incorporate scaffolding strategies in their grammar teaching practices. The study also revealed a statistically significant difference between the experimental and comparison groups, favoring the experimental group. This suggests that the consistent use of scaffolding strategies throughout the teaching process yields more effective results in terms of students' grammar learning and achievement.

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Conflict of Interests

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References

- Abdulrasoul, I. A. (2012). Analyzing the motivation of iraqi students for joining departments of english. *Proceedings of the 1st Conference at Kerbala University*, 3(5), 607–625. <https://doi.org/10.24093/awej/vol12no1.10>
- Addisu, A. (2019). Effects of peer scaffolding on students' grammar proficiency development. *International Journal of English, Literature and Culture*, 7(5), 105–120. <https://doi.org/10.14662/IJELC2019.081>
- Adujna, G. (2021). *Advanced worldwide english: Euee questions and their answer with detailed explanation*. Mega Printing Press.
- Al-Muhamed, A., & Nagaratnam, R. P. (2011). Difficulties in teaching and learning grammar in an EFL context. *International Journal of Instruction*, 4(2).
- Ameri, M. A., & Seyyed Rezaei, S. H. (2016). Scaffolding: An indispensable technique in language teaching. *Journal of Iranian English Branch (JIEB)*. <https://doi.org/10.5281/zenodo.#>
- Batstone, R. (1994). *Grammar*. Oxford University Press.
- Bhattacharjee, A. (2012). *Social science research: Principles, methods, and practices*. University of South Florida.
- Bilew, G. (2022). Investigation of the level of motivation on students' learning and teachers' teaching english as a foreign language focusing on grade nine at menkorer general secondary school in debre markos town. *Journal of Humanities and Social Sciences*, 5(3), 269–274.
- Boris, A. K. (2022). *The effects of intrinsic and extrinsic motivation on student learning effectiveness: Case study of international students of estonian entrepreneurship university of applied sciences* [Master's thesis, Estonian Entrepreneurship University of Applied Sciences]. <https://www.researchgate.net/publication/335266726>
- Brown, H. D. (1994). *Principles of language learning and teaching* (3rd). Prentice-Hall Regents.
- Capellio, M., & Moss, B. (2010). *Contemporary reading in literary education*. Sage.
- Cook, V. (2001). *Second language learning and language teaching*. Arnold.
- Creswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th). Pearson.
- Dörnyei, Z. (2001). *Motivational strategies in the foreign language classroom*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511667343>
- Elliott, J., Hufton, N., Willis, W., & Illushin, L. (2005). *Motivation, engagement and educational performance: International perspectives on the contexts for learning*. Springer.
- Ellis, N. C. (2002). Frequency effects in language processing: A review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition*, 24(2), 143–188. <https://doi.org/10.1017/S0272263102002024>
- Ellis, R. (2007). Corrective feedback in theory, research and practice. *Proceedings of the 5th International Conference on ELT in China & the 1st Congress of Chinese Applied Linguistics*. <https://doi.org/10.5070/L2.V1I1.9054>
- Erdil, N. O. (2019). Motivating students for learning using scaffolding and a variety of assignments and activities. *2019 ASEE Annual Conference & Exposition*. <https://doi.org/10.22373/ej.v121.22840>
- Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitude and motivation*. Edward Arnold. <https://doi.org/10.1037/h0083787>
- Gelaneh, M. (2021). Exploring teachers' grammar teaching practices in efl classrooms: Grade 9 in focus. *Ethiopian Renaissance Journal of Social Sciences and Humanities*, 8(2). <https://doi.org/10.20372/erjssh.2022.0802.03>

- Hartman, H. (2002). Scaffolding & cooperative learning. In *Human learning and instruction*. City College of City University of New York.
- Heugh, K., Benson, C., Bogale, B., & Yohannes, M. A. G. (2007). *Study on medium of instruction in primary schools in ethiopia* (Final Report). Ministry of Education. Addis Ababa, Ethiopia.
- Kumar, M. (2005). *Modern teaching of educational psychology*. Anmol Publications Pvt. Ltd.
- Long, M. H. (2015). *Second language acquisition and task-based language teaching*. Wiley-Blackwell.
- McClelland, D. C. (1965). Toward a theory of motive acquisition. *American Psychologist*, 20(5), 321–333. <https://doi.org/10.1037/h0022225>
- Ministry of Education (MoE). (1994). *The new education and training policy* (tech. rep.). Government of Ethiopia. Addis Ababa, Ethiopia.
- Mukhtar, F. (2017). *The students motivation in english language learning of eight graders at mts darul amin palangkaraya* [Master's thesis, IAIN Palangkaraya].
- Nassaji, H., & Fotos, S. (2004). Current developments in research on the teaching of grammar. *Annual Review of Applied Linguistics*, 24, 126–145. <https://doi.org/10.1017/S0267190504000066>
- Oletić, A., & Ilić, N. (2014). Intrinsic and extrinsic motivation for learning english as a foreign language. *ELTA Journal*, 2(2), 23–38.
- Pallant, J. (2010). *Spss survival manual: A step-by-step guide to data analysis using the spss program* (4th). McGraw-Hill/Open University Press.
- Piaget, J. (1995). *Sociological studies* (L. Smith, Ed.; Brown et al., Trans.). Routledge.
- Rezaee, A. A., Khomeijani Farahani, A. A., & Abdulameer Mubarak, L. (2018). Scaffolding and efl learners' use of language learning strategies in the iraqi language teaching context. *Teaching English Language*, 12(2), 89–116. <https://doi.org/10.22132/TEL.2018.75382>
- Richards, J. C. (2001). *Approaches and methods in language teaching* (2nd). Cambridge University Press. <https://doi.org/10.1017/CBO9780511667305>
- Shayer, M., & Adey, P. (2002). *Learning intelligence: Cognitive acceleration across the curriculum from 5 to 15 years*. Open University Press.
- Slavin, R. E., Lake, C., Chambers, B., Cheung, A., & Davis, S. (2009). Effective reading programs for the elementary grades: A best-evidence synthesis. *Review of Educational Research*, 79(4), 1391–1466.
- Smith, C., Stone, R., & Comings, J. (2012). *Literacy policy and practice in ethiopia: Building on the tell program and egra results* (tech. rep.). Center for International Education, University of Massachusetts. Amherst, MA.
- Tadesse, D. (2001). *An exploration of students' beliefs about EFL grammar teaching and learning, and strategy use* [Master's Thesis]. Addis Ababa University [Unpublished].
- Teshome, D. (2001). Assessment of pupils achievements in the teaching of english training and practice in focus. *The Ethiopian Journal of Education*, 21(1), 25–47.
- Ur, P. (1988). *Grammar practice activities*. Cambridge University Press.
- Van de Pol, J., Volman, M., Oort, F., & Beishuizen, J. (2015). The effects of scaffolding in the classroom: Support contingency and student independent working time in relation to student achievement, task effort and appreciation of support. *Instructional Science*, 43(5), 615–641.
- Van Lier, L. (2004). The semiotics and ecology of language learning-perception, voice, identity and democracy. *Utbildning & Demokrati – tidskrift för didaktik och utbildningspolitik*, 13(3), 79–103.
- Vonna, Y., Mukminatien, N., & Laksmi, E. D. (2015). The effect of scaffolding techniques on students' writing achievement. *Jurnal Pendidikan Humaniora*, 3(3), 227–233.
- Vygotsky, L. S. (1987). *The collected works of L.S. vygotsky: Problems of the theory and history of psychology* (Vol. 3). Springer Science & Business Media.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wells, G. (1999). Language and education: Reconceptualizing education as dialogue. *Annual Review of Applied Linguistics*, 19, 135–155.
- Winslow, E. K. (1990). The issue of motivating entrepreneurial behavior. *The Journal of Creative Behavior*, 24(4), 256–262. <https://doi.org/10.1002/j.2162-6057.1990.tb00546.x>
- Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17(2), 89–100. <https://doi.org/10.1111/j.1469-7610.1976.tb00381.x>



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Impact of Urban Expansion on the Asset and Food Security Status of Peri-urban Farmers in Injibara Town, Amhara Region, Ethiopia

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Abstract

Both city administrators and academics studying urban and regional affairs have serious concerns about the issue of unchecked urban expansion and its inexorable effects on the peri-urban and rural areas, particularly in developing nations. Scientific studies that measure the actual impact of such expansion and provide national and local governments and other stakeholders with information are essential at least to limit the negative consequences. In order to estimate and quantify the impact of urban expansion on the asset and food security of peri-urban families, we, selected 283 households (130 displaced and 153 non-displaced) from Injibara Town, one of the fastest-expanding townships in the Amhara region. We employed an endogenous switching regression approach, which is one of the increasingly popular techniques for resolving the selection bias issue in impact studies. Our findings show that urban expansion has a significant negative impact on the asset and food security status of peri-urban farmers and makes them worst off for being displaced. The adaptation of context-specific urban development and planning models by town administrations, including major stakeholders is therefore necessary in order to create win-win scenarios and improve the livelihoods of both urban people and peri-urban farmers.

Keywords: Endogenous switching regression; food security; livelihood assets; Injibara Town; peri-urban farmers; urban expansion

1 INTRODUCTION

The incidents and processes of urban expansion are everywhere in the world and are accelerating in developing nations. Particularly, Africa is fast becoming one of the most urbanized continents in the world, with some of the fastest rates of urban growth seen in its cities (United Nations Economic Commission for Africa (UNECA), 2014). Even though Ethiopia has low level of urbanization (21%) (World Bank, 2023), the country is undergoing a fast urbanization growth (Ayele & Tarekegn, 2020). Urban growth has taken a colossal amount (millions of ha) of farmland and forestland around the world, and the pattern will continue as towns persist to multiply (Van Vliet, 2019). However, there have been intense debates, both theoretically and empirically, over the direction and magnitude of the impact of urban growth on rural development generally and the welfare and livelihoods of peri-urban communities in particular (Parnell & Walawege, 2011).

At the theoretical level, the arguments fall into two extreme continuums: pro-urban and pro-rural. Pro-urbanists embrace urban expansion because, according to them, it is a necessary shift from a backward agricultural society and economy to a modern industrial society and economy capable of mass production, mainly food, and because it allows for the avoidance of potential losses to the environment and agro ecosystems (Debela, 2016). They contend that the logical outcome of urban development is the conversion of land, and that by utilizing capital-intensive production methods and contemporary technologies, the reduction in agricultural output may be offset in the food production networks (Debela, 2016; Zhang et al., 2020). Contrariwise, proponents of rural contend that conversion of agricultural land has detrimental effects on rural to urban migration, agricultural employments, and agro-ecosystems. As a result, it would have a major adverse impact on community livelihood schemes, agricultural production, and food security (Nguyen et al., 2019). They go on arguing that urbanization is always harmful, that it needs to be stopped immediately, and that farmlands should be preserved to ensure agricultural output (mainly food) and the welfare of rural communities (Azadi et al., 2012).

At the empirical level, the results are consistent with theoretical discussions, in which both positive and negative effects have been documented. For example, several scholars have reported the devastating impact of development-induced displacement, such as urban expansion on farmland and other natural resources (Cernea, 2021) and livelihoods of peri-urban communities (Alamneh et al., 2023; Argae et al., 2022). The increased vulnerability of affected communities to various socioeconomic shocks (Busho et al., 2021; Mohammed et al., 2020), widened income inequality (Oyvat, 2016), and reduced farm production (Dedewanou & Kpekou Tossou, 2022) are also found to be adverse impacts of urban expansion. In contrast, numerous studies have documented the positive effects of urban expansion on peri-urban communities' standard of living. The reported benefits include, for instance, increased income, living standards, and food security (Crush & Caesar, 2018; Kankwamba & Kornher, 2019; Tadesse et al., 2018), as well as enhanced food production (Wang, 2018). Others have reported the positive impact of urban expansion on labor productivity and agricultural value chain (Tadesse et al., 2018) and human capital (Allen, 2009; Andersson, 2015).

As noted by Alamneh et al. (2023), most of previous studies in Ethiopia have, however, focused on big cities (national and regional capital cities) and underestimated the dynamisms of urban expansions and their impacts on peri-urban farming community around small and medium-sized cities. Besides, some studies have utilized suitable impact estimation methods (such as endogenous switching regression) but concentrated on a single outcome (income) in their attempts to understand the issue of urban enlargement and its effects on peri-urban agriculturalists in small and medium-sized cities (Alamneh et al., 2023). Some of them addressed the impacts on some of the components of livelihood assets and food production through descriptive or qualitative analysis (Belay, 2014; Debela, 2016). Further, most of studies mentioned above (and beyond) except Alamneh et al. (2023) have used propensity score matching (PSM) to examine the impact of urban expansion on peri-urban agriculturalists, which is often criticized for its inability to address endogeneity and selection bias issues (Alamneh et al., 2023). Therefore, this study is initiated to fill these gaps. Putting it simply, the main objective of our research is to quantify the impact of urban expansion on various components of assets (natural, financial, physical, and human) as well as food security (availability and access) of peri-urban farmers. The remaining parts of the manuscript are structured in the following ways: Section 2 articulates the conceptual and theoretical sketches. Research methods, data gathering, and scrutiny methods are described in Section 3. Section 4 describes the main findings and discussions. The last section presents the conclusion and policy suggestions of the results.

2 Theoretical and Conceptual Framework

2.1 Theoretical framework

There are various pro-rural, pro-urban, and middle path/integrative theories that explain urban growth. Pro-urban theorists generally view the urbanization process and its effects as beneficial and favorable for rural and pre-urban farmers. The "growth pole model" and the Lewis two-sector model (of the

1950s and 1960s) are the most widely discussed models in this category. Conversely, pro-rural thinkers consider urban areas as remote or parasitic to rural interests and always have a harmful effect on rural and peri-urban expanses. The “core-periphery” and “spatial polarization” theories of the 1970s could be mentioned here. However, in the 1980s, it was realized that the pro-rural-pro-urban continuum development models had failed to produce the expected economic development. Consequently, a new model of development known as “rural-urban linkages” or “network model” emerged. This model underscores the reciprocal progress of both rural and urban areas by supposing that the two areas are mutually dependent environs characterized by the movement of capital, resources, services, and other ties (Douglass, 1998; Unwin, 2017). This new model proposed by Douglass considers rural and urban relations as mutually reinforcing, promotes cooperation rather than strife, focuses on rural-urban dynamics rather than urban nodes, and considers the multi-sectoral and spatial nature of local development rather than promoting a single-minded (either industry or agriculture, urban or rural) approach (Douglass, 1998). We found this theory to be relevant to our research because it could guide us in determining if urban expansion is improving the impacted farmers’ standard of living.

However, scholars like Cernea contend that social inequities and persistent inadequacies in policies and planning approached caused forced displacement as a result of development initiatives like urban growth (Cernea, 2000). He observed how forced displacement ostracizes and exaggerates multifaceted destitution in developing countries. Cernea developed a model known as “Impoverishment Risks and Reconstruction” (IRR), a theoretical exemplar of threat and renovation, to address the injustices brought by displacement and allow impacted communities to benefit from development (Cernea, 2000). According to Cernea (2000), some degree of population displacement is sometimes unavoidable, but an unfair distribution of profits, losses, and pains is not inevitable nor justified. He contends that it is both feasible and essential, on economic and moral bases, to address the threats and injustices brought up by displacement and to provide impacted communities with opportunities to benefit (Cernea, 2000, 2021). We have observed forced displacement in the study area, where reconstruction programs are either inadequate or nonexistent. We therefore found this theoretical model relevant to our study.

2.2 Conceptual Framework

The channels through which peri-urban agriculturalists are impacted by urban expansion and the anticipated results of such expansion are depicted in Figure 1. The explanation of network theory is used to describe the factors (flows) that connect rural and urban areas on the left side of the framework. We argue that urban expansion can only result in win-win situations (beneficial outcomes that increase the standard of living for both rural and urban communities) if high-quality institutions are in place and spatial development planning is done correctly.

Conversely, the IRR model is used to illustrate the possibility of involuntary displacement and the associated unfavorable effects on the right side of the framework. The argument is that urban expansion invariably results in the forced and excessive displacement of peri-urban farmers, negatively affecting their livelihoods, if social injustices are widespread, if government and market failures (poor institutions) are extensive, and if spatial planning is inadequate or nonexistent. Thus, the framework implies that factors like development strategy, planning approach, institutional quality, urbanization size, and proximity to urban centers (Gutu, 2023), and socioeconomic and infrastructure (Dorosh & Thurlow, 2012) conditions determine the extent and direction of the impacts of urban expansion.

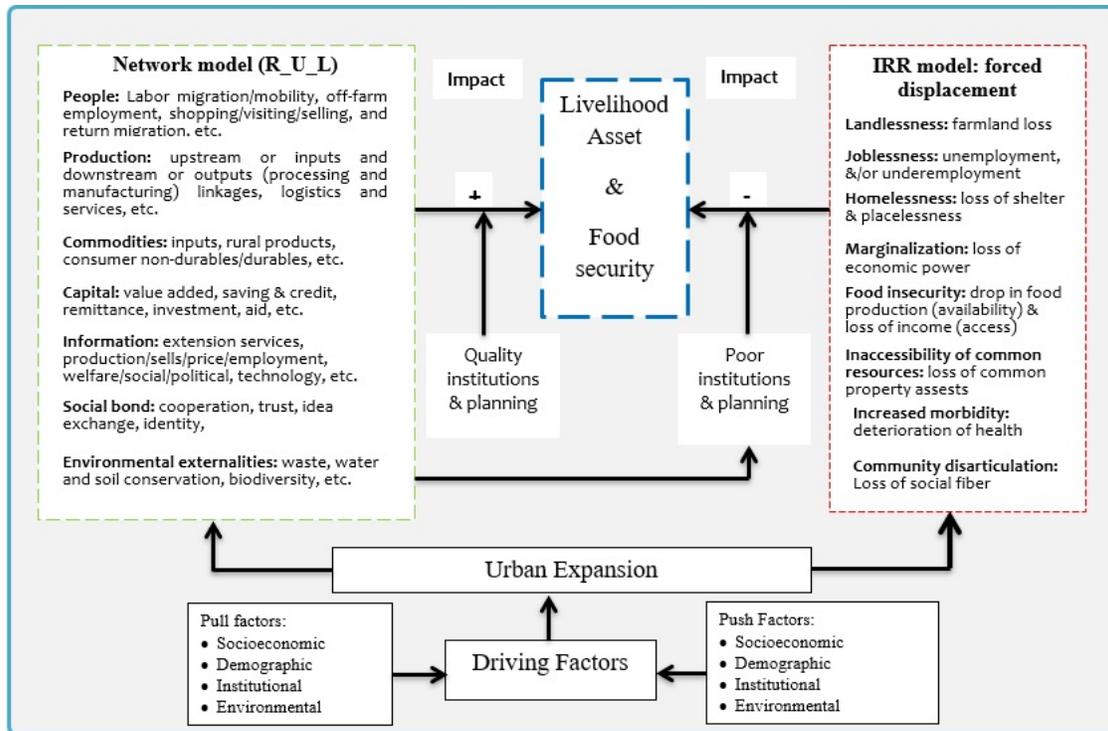


Figure 1: Conceptual Framework
 [Source: Own construction based on the literature]

3 Materials and Methods

3.1 Brief Account of the Research Site

Injibara Town is situated 135 kilometers south-west of Bahir Dar, the headquarters of the Amhara region, and 420 miles northwest of Addis Ababa, the capital city of Ethiopia. The town serves as the administrative hub of the Awi Zone in the Amhara Region. Injibara’s overall population was 21,065 based on the 2007 census, with 10,596 men and 10,469 women. However, in 2023, that number is expected to have increased to 56,723—a more than twofold rise in just 15 years. The town is among the fastest urbanizing towns in Amhara region with 7.41 annual growth rates (Alamneh et al., 2023).

3.2 Sampling technique and sample size

We used a step-by-step sampling strategy to choose study participants. First, we purposefully selected Injibara Town due to the high pace of urban expansion observed in the town. As mentioned above, the town is among the top three fastest-urbanizing towns in the Amahara region. Then, we purposefully selected four peri-urban Kebeles (Basa, Akayta, Bata, and Chabana Gissa). These kebeles were selected because of the high level of displacement owing to urban expansion. The town is expanding towards these Kebeles from all directions and swallowing them. Due to this, the loss of farmland, other properties, and displacement remained high in these kebeles. Thirdly, based on the sampling frame obtained from the concerned administrative bodies, households were categorized into displaced and non-non-displaced. Finally, 283 households (130 displaced and 153 non-displaced) were chosen using a systematic sampling technique. To determine the required sample size, we used (Yamane, 1967)

technique, described as follows:

$$n = \frac{N}{1 + N(e)^2}, = \frac{969}{1 + 969(0.05)^2} = 283 \quad (1)$$

where n indicates size of sample, N denotes our target populace (viz., 969 households), e is the precision level (0.05), and 1 is the likelihood of the occurrence of an episode. The proportional of sample that we took from each kebele (village) is presented in Table 1.

Table 1: Target Population and Sample size

No	Kebele	Total No. of HH	Total displaced HH	Sample size	Total non-displaced HH	Sample size
1	Bata 5	258	118	34	140	41
2	Akayta 4	192	83	24	109	31
3	Basa 1	221	105	30	116	33
4	Chabana Gissa 02	298	145	42	153	48
	Total	969	451	130	518	153

Source: Own calculation constructed on evidence acquired from *Injibara Municipality office & Banja woreda office, 2023*.

3.3 Data sources and collection instrument

We gathered data from both primary and secondary sources. Primary data were gathered from the selected households using an interview schedule survey questionnaire. The survey was initially developed in English. It then translated to Amharic language to facilitate the data collection process and understanding. Secondary data were obtained from pertinent materials as well as published and unpublished journal articles.

3.4 Empirical Framework

To measure the impact of urbanization on the livelihoods of peri-urban farmers, we employed natural, physical, human, and financial capital to capture asset base and total production and Household Food Insecurity Access Scale (HFIAS) to address food security. However, identifying and estimating the causal impacts of urbanization is not straight-forward; rather, it is very complex. The main problem could arise from the endogeneity problem, and it is hard to identify the counterfactual (Kumar et al., 2021). Besides, since displacement is a forced intervention, those farmers who are displaced are expected to be different from those who do not. Therefore, to correctly evaluate the impacts, it is required to use a random selection of pre-urban farmers for treatment to account for both observable and unobservable characteristics. This study uses the endogenous switching regression (ERS) approach, which frequently employs the full information maximum likelihood (FIML) technique to simultaneously determine the selection and outcome equations to resolve the endogeneity problem (Lark et al., 2020).

We assessed the impact of urban expansion on asset and food security in two phases: the first phase specifies the selection equation (the chance to be displaced) (Eq. 2), and the second stage specifies two regimes that explain the outcome of our interest: one for displaced households and another for non-displaced ones (Eqs. 3 & 4). The selection equation for displaced household is modeled as:

$$D_i^* = X_i + \epsilon_i; \text{ with } D_i = \begin{cases} 1 & \text{if } D_i^* > 0 \\ 0 & \text{otherwise} \end{cases} \quad (2)$$

where $D_i = 1$ if a household is displaced and $D_i = 0$ otherwise; X_i denotes a vector of variables that influence peri-urban household displacement, including demographic, socioeconomic, and institutional factors; α is a coefficient to be estimated; and ϵ_i is an error term, which is supposed to be normally dispersed with a zero mean. As shown below, we estimated the outcome equation independently for individual regime of displacement based on the results of

Eq. 2. The association between covariates, X_i and the outcome variable, Y_i , can be denoted by $Y_i = f(X)$. Following this, the two regimes can be specified as:

$$\text{Regime1} : Y_{1i} = \beta_1 X_i + 1iif D_i = 1(\text{Displaced}) \quad (3)$$

$$\text{Regime2} : Y_{2i} = \beta_2 X_i + 2iif M_i = 0(\text{non} - \text{displaced}), \quad (4)$$

where Y_1 and Y_2 are the outcomes of interest for displaced (in regime 1) and non-displaced (in regime 2), respectively; X_i denotes the set of covariates as explained previously; β_1 and β_2 are coefficients to be measured; and $1i$ and $2i$ are error terms associated to the asset and food security. The full information maximum likelihood (FIML) approach was used to get reliable estimations (Greene, 2008; Lokshin Sajaia, 2004). Thus, the outcome equations are re-modeled as:

$$Y_{1i} = \beta_1 X_i + \sigma_{1\epsilon} \gamma_{1i} + 1iif D_i = 1(\text{Displaced}) \quad (5)$$

$$Y_{2i} = \beta_2 X_i + \sigma_{2\epsilon} \gamma_{2i} + 2iif D_i = 0(\text{Non} - \text{displaced}), \quad (6)$$

where $1i$ and $2i$ are error terms with conditional zero means.

It is frequently advised to employ a minimum of one instrumental variable in order to correctly determine and use the ESR model. The instrumental variable(s) need to have a direct impact on the displacement selection variable, but not the asset and food security outcome variables (Kumar et al., 2021). This study employs three instrumental variables (IVs): geographic proximity (proximity of the farmland to the town) (Alamneh et al., 2023), legal proximity (land use right legal document or land tenure system) (Fitawek & Hendriks, 2021), and knowledge proximity (pre-urban farmer's awareness about how to acclimate to the conditions of town life style or livelihood system).

The first instrument is supported by the presumption that farmers own lands near to the town are more vulnerable to being displaced by urban expansions. Being near to an urban area is thought to be connected with the displacement of households but not likely to directly influence the asset and dietary security variables, as being close to an urban area does not directly enhance farmers' asset and food security status (Alamneh et al., 2023). The intuition for the choice of the second instrumental variable is that having a land rights certificate may have affected the displacement choice of the pre-urban farmers. The core point is that pre-urban farmers who lack a legal document that ensures their land rights are more likely to be completely displaced and excluded from compensation packages (if any). Particularly, those farmers who either rented farmland and/or acquired it through informal land transactions could be victims of urban expansion. Therefore, the chance of farmers suffering the loss of their farmland rights and displacement could be higher for those who lack legal documents for land use rights (Fitawek & Hendriks, 2021). However, mere possession of a legal document might not directly affect the asset and food security, but it can indirectly affect them through displacement. The third instrument variable is knowledge proximity. Proactive farmers are aware of urban livelihood systems and are therefore less likely to be displaced because they are more likely to adapt and engage in urban and market-oriented production and marketing activities. Studies have also shown that most pre-urban populations lack the knowledge and experience needed to adapt to the conditions of urban life (Mohammed et al., 2020). These farmers' livelihood strategies could, therefore, be exposed to the destructive effects of urban expansion that result in destitution. Nevertheless, mere awareness about urban life styles and livelihood systems could not directly influence the asset and food security, though they could indirectly influence them through displacement.

To check the level of statistical significance of IVs for each equation, we independently ran the logit regression model for selection equation (2) and the OLS model for outcome Eqs. (3 and 4). The findings indicate that the coefficients of the three instruments are statistically significant for the selection Eq. 2, but insignificant for most of the outcomes for non-displaced households. For the purpose of succinctness, the results are not shown here, although they are available upon request. This confirms the expectation that farmers with farmland far from the town, who lack awareness about urban life styles, and lack farmland use rights are more likely to be displaced.

We employed the coefficients generated via the ESR technique to estimate the actual and counterfactual outcomes. Following Adjin et al. (2020), the actual observed and concealed counterfactual outcomes for displaced and non-displaced pre-urban peri-urban farming households can be expressed as:

$$E(Y_{1i}|D = 1) = \beta_1 X_i + \sigma_{1\epsilon} \lambda_{1i} \quad (7)$$

$$E(Y_{2i}|D = 0) = \beta_2 X_i + \sigma_{2\epsilon} \lambda_{2i} \quad (8)$$

$$E(Y_{2i}|D = 1) = \beta_2 X_i + \sigma_{2\epsilon} \lambda_{1i} \quad (9)$$

$$E(Y_{1i}|D = 0) = \beta_1 X_i + \sigma_{1\epsilon} \lambda_{2i} \quad (10)$$

Based on the results, we calculated the observed outcome (a) for displaced farmers using Eq. 7 and the observed outcome (b) for non-displaced farmers employing Eq. 8. Eq. 9 calculates the anticipated outcome (c) to address the counterfactual for the observed outcome (a) in Eq. 7. Likewise, Eq. 10 computes the counterfactual outcome (d) for the revealed outcome (b) in Eq. 8. After that, we calculated two treatment effects: (1) the average treatment effect on treated (displaced) households (ATT), which is calculated by taking the difference between Eqs. 7 and 9 or cell(a)–cell(c) and (2) the average treatment effect on untreated non-displaced households (ATU), which is computed by taking the difference between Eqs. 10 and 8 or cell(d)–cell(b) (See Table 2).

Table 2: Heterogeneity and Treatment Effect

Groups	Decision stage		Treatment effect
	Displaced	Non-displaced	
Displaced	(a) $E(Y_{1i} D_i = 1)$	(c) $E(Y_{2i} D_i = 1)$	ATT
Non-displaced	(d) $E(Y_{1i} D_i = 0)$	(b) $E(Y_{2i} D_i = 0)$	ATU
Heterogeneity effects	BH^1	BH^2	TH

Notes: cells (a) and (b) exemplify actual anticipated outcomes; cells (c) and (d) are counterfactual anticipated outcomes. D_i , Y_{1i} , and Y_{2i} as stated before; Treatment effect on treated farmers (that is, the impact of urban expansion on displaced households) is denoted by TT; treatment effect on untreated farmers (that is, the impact of urban expansion on non-displaced households) is denoted by TU; base heterogeneity effect for displaced farmers ($D_i = 1$) and non-displaced farmers ($D_i = 0$) is represented by BH_i; and transitional heterogeneity (i.e., TT - TU) is denoted by TH.

Thus, the estimated change in the level of asset and food security status for displaced farmers (ATT) can be modeled as:

$$ATT = E[Y_{1i}|D_i = 1] - E[Y_{0i}|D_i = 1] \quad (11)$$

Correspondingly, the anticipated change in the level of asset and food security status for non-displaced farmers (ATU) can be specified as:

$$ATU = E[Y_{1i}|D_i = 0] - E[Y_{0i}|D_i = 0] \quad (12)$$

Following this, we computed the base heterogeneity effects (BH_1) for displaced farmers as the differences between (a) and (d), while we calculated them for non-displaced farmers (BH_2) as the differences between (c) and (b). Lastly, we estimated the transitional heterogeneity (TH) as the difference between ATT and ATU ($ATT - ATU$) to comprehend if the impact of farmers' displacement is larger or smaller for those that were displaced.

3.5 Asset indicators

In this study, we operationalized assets as resources such as natural, financial, physical, and human owned or possessed by peri-urban farmers. Natural capital is operationalized as the natural resource base of peri-urban farmers and is measured in terms of land size and the ownership or planting of

perennial trees such as eucalyptus and bamboo (which have high commercial and construction values). Financial capital in the context of this study is the total amount of earnings that flow into a peri-urban farmer's account from all sources. It is measured by cash flows from all sources, including remittances, savings, and the monetary value of in-kind materials. Physical capital is operationalized as tangible farm implements, equipment, tools, and properties owned by peri-urban farmers. Ownership of farming tools, TVs, and houses were used as indicators to capture this category of asset. Likewise, human capital is conceptualized as a peri-urban farmer's educational level and health status. It is measured by the peri-urban farming households' educational level, access to training, and self-reported health status. We employed principal component analysis (PCA) method to create an index for each category of capital. The findings are presented in Table 3.

Table 3: PCA requirement tests

Asset category	No of variables	Eigenvalue	% of Variance explained	Components retained	KMO & Bartlett's Test (Sig.)
Natural capital	3	2.146	71.531	1	0.675(0.000)
Physical capital	3	2.395	79.832	1	0.667(0.000)
Human capital	3	1.225	70.585	1	0.553(0.018)

Source: own survey, 2023

Food security indicators

We conceptualized household food security as the ability of a household to adequately meet dietary needs of the family through internal production and some market purchases (Degaga, 2005). Food availability is conceptualized as the actual availability of diet in the neighborhood or for the family from every single source. Besides, we operationalized access to diet as a household's capacity (resources) to obtain the amount of food required to live a healthy lifestyle. Thus, we measured availability dimension in terms of yearly total farm production and food from other sources in Kilograms. To capture access to food, we used household food insecurity access scale (HFIAS). HFIAS often assesses the level of food insecurity brought on by limited access to resources (Coates et al., 2007).

4 Results and Discussion

4.1 Descriptive statistics

The results of descriptive statistics of major variables are presented Table 4. The finding shows that displaced peri-urban households constituted 45.9% of the total sample. The pooled averages of natural, financial, physical and human assets were found to be 36.1%, 45,547 Birr, 27.8%, and 40.6%, respectively. Likewise, the average farm production and HFIAS values were 1503 kg per year and 9.08, respectively. The comparison of mean values and their corresponding tests showed the presence of statistically significant differences in outcome variables among displaced and non-displaced households. The findings revealed that all asset components and farm production values of displaced ménages are considerably lower than those of their counterparts. Of the total displaced sample households, 73% were men, while non-displaced sample men represented about 63%. The mean age of the sampled ménages was found to be 46.9 years, showing that most peri-urban households were in their productive years. Besides, about 88% of households were married, with an average family size of 5 members and 3.52 mean years of schooling.

Regarding institutional variables, about 56%, 42%, 59%, and 51% of peri-urban farm households have credit, farm inputs, extension services, and information access, respectively. The sample households, on average, own 4.75 tropical livestock units and travel 3.23 km to get to a nearby market. The level of network work among the sampled households is found to be moderate (with a mean value of 1.1), which is relatively good among displaced households (1.34) compared to their counterparts (0.82).

About 33%, 73.5%, and 34% of the households reported that their farmland is very close to the town, have land use right legal document, and are aware of urban life style, respectively.

Table 4: Definition of demographic, socio-economic, and institutional variables and their mean differences

Variables	Description and measurement	Pooled (1)	Displaced (2)	Non-displaced (3)	Diff. (4)
Dependent variable					
Treatment	Displacement due to urbanization (1=yes, 0=no)	0.459(0.499)			
Outcome variables					
Natural capital	Natural capital index (continuous)	36.1(1.83)	16.55(1.87)	52.7(2.24)	-36.15***
Financial capital	Total annual income in Birr (continuous)	45547.8(31058.6)	17861.56(9599.5)	69071.95(22334.6)	-51210.39***
Physical capital	Physical capital index (continuous)	27.81(25.94)	11.3(8.2)	41.84(27.6)	-30.5***
Human capital	Human capital index (continuous)	40.59(27.58)	23.65(19.95)	54.97(24.89)	-31.32***
Farm production	Total annual production of major crops(Cont.)	1503.18(2211.56)	478.04(429.62)	2374.22(2693.49)	-1896.18***
HFLAS	HFLAS score (continues)	9.08(5.35)	13.78(2.86)	5.09(3.34)	8.69***
Covariates					
Gender	Household head is a man, dummy (1=yes)	0.675(0.47)	0.73(0.44)	0.63(0.48)	-0.103*
Age	Age of ménage head (years)	46.88(12.74)	46.38(10.53)	47.30(14.38)	-0.92
Marital status	Household is married, dummy (1=yes)	0.88(0.325)	0.92(0.267)	0.84(0.36)	0.08**
Education	Schooling (years), continuous	3.52(3.76)	3.88(3.68)	3.21(3.81)	0.67
Household size	Number of persons residing in household, continuous	5.04(1.57)	5.18(1.64)	4.92(1.49)	0.26
Credit access	Credit access, dummy (1=yes)	0.56(0.5)	0.35(0.48)	0.73(0.44)	-0.38***
Farm input	Access to farm input use, dummy (1=yes)	0.42(0.49)	0.24(0.43)	0.58(0.50)	-0.34***
Ext. access	Access to ext. service, dummy (1=yes)	0.592(0.49)	0.777(0.42)	0.43(0.497)	0.35***
TLU	Livestock (Tropical Livestock Unit), continuous	4.75(2.92)	4.33(2.47)	5.09(3.22)	-0.76**
Market distance	Distance to Market from home (km)	3.23(0.597)	3.35(0.51)	3.14(0.65)	0.21**
Access to info.	Access to information, dummy (1=yes)	0.51(0.50)	0.40(0.49)	0.61(0.49)	-0.21***
Networks	Networks, ordinal (0=weak, 1=moderate, 2=strong)	1.1(0.93)	1.34(0.88)	0.82(0.911)	0.52***
Instrumental variables					
Farm proxy	Proximity of the farm to the town, dummy (1=yes)	0.33(0.47)	0.56(0.50)	0.12(0.33)	0.44***
Legal_R	Legal land use rights, dummy (1=yes)	0.735(0.44)	0.7310.44)	0.739(0.44)	-0.008
Aware_UL	Awareness about urban life style(1=yes)	0.34(0.47)	0.33(0.47)	0.35(0.48)	-0.02
N		283	130	153	

Source: own survey, 2023. Note: Standard deviations are in parenthesis.

In general, the results presented in Table 4 show that displaced and non-displaced peri-urban households are methodically dissimilar in studied demographic, socioeconomic, and institutional features. Nonetheless, since households are forced to displace, the differences are inconclusive and inadequate with respect to comprehending the impact of urban expansion on livelihood assets and the dietary security status of the displaced households. Put another way, without accounting for additional confounding variables, it is not possible to draw conclusions about how urban expansion affected the assets and dietary security status of peri-urban households based solely on the results of the descriptive statistics. We therefore, used ESR model.

4.2 Econometrics (ESR) Results

Tables 5, 6, and 7 present the coefficient estimations of the ESR model. The second and fifth columns in all tables report the outputs of the selection equation that show factors that influence displacement. The results indicate that variables, for instance, marital status, credit and farm input access, livestock ownership, and distance to markets, and networks influence displacement. Besides, all the three instrumentals are statistically significant, though the signs of the coefficients are different. The coefficient is positive for the proximity of the farm to the town, implying that peri-urban farmers whose farmland is closer to the town are more likely to be displaced. For legal land use rights document and awareness about urban life styles, the coefficients are negative. That is, households that have legal documents are less likely to be fully affected due to the possibility of getting replacement land and/or compensation packages that may be unavailable for those who lack such documents.

Besides, peri-urban farmers who are aware of and try to adapt their livelihood activities to urban life styles are less likely to be affected by urban expansion. These confirm our expectations and justifications for employing the variables as instruments. Additionally, columns 3, 4, 6, and 7 of Tables 5, 7, and 7, present the second stage of the estimations, reporting the results of the separate outcome equations for displaced and non-displaced ménages for natural, financial, physical, human, food production, and

HFIAS outcomes, respectively.

The probability ratio test for independence is statistically significant at either 5% or 10% for almost all of the models, implying that the equations are jointly dependent (see the lower part of Tables 5, 6, and 7). This result provides proof for an endogeneity issue that has to be curbed through the ESR method. Likewise, differences were also observed between the outcome variable coefficients of displaced and non-displaced ménages in regimes 1 and 2, showing the existence of heterogeneity in the sample. All these results justify the application of proper impact evaluation methods (such as ESR) to generate valid and unbiased results.

At the bottom of tables mentioned above, the results of correlation figures (ρ_1 and ρ_2) of covariance tags among error terms of the choice equation and that of the outcome equations are also presented. As can be seen from the tables, the estimated coefficients are negative and statistically significant for the natural, financial, human, and farm production of displaced households (regime 1) (ρ_1) but insignificant for non-members (regime 2) (ρ_2). However, the coefficients are positive and significant for physical capita and negative and significant for HFIAS in regime 2 (ρ_2) but insignificant for displaced households (regime 1) (ρ_1). The results show the existence of selection bias owing to invisible factors that could bias the impact of urban enlargement on the asset and dietary security status of the displaced households if the correct impact estimation method is not used.

In addition, the negative sign for natural, financial, human, and farm production models in regime 1 shows a positive choice bias, that is, displaced households are in an absolute disadvantage position due to displacement. Conversely, the positive sign of ρ_2 for physical capital in regime 2 shows a negative selection bias; implying non-displaced households are in an advantage position. Likewise, the negative sign of ρ_2 for HFIAS in regime 2 shows a negative selection bias, implying that non-displaced households are in an advantage position (a higher HFIAS value is an indication of food insecurity). The results in either case show that displaced peri-urban farmers are worst off for being displaced.

Table 5: ESR Estimation of asset outcome variables (natural and financial capital)

Variables	Natural capital (outcome 1)			Financial capital (outcome 2)		
	Sel. equ. (1)	Displaced	Non-displaced	Sel. equ. (2)	Displaced	Non-displaced
Gender	0.06(0.21)	-9.64(4.42)**	3.29(4.46)	0.44(0.21)	-1668.8(1995.3)	-3179.1(3680.8)
Age	0.01(0.01)	0.13(0.18)	0.26(0.16)	0.01(0.01)	-34.6(83.4)	-6.05(136.4)
Education	0.03(0.03)	1.27(0.50)**	0.30(0.66)	0.04(0.03)	-155.3(226.0)	377.1(532.5)
Marital status	0.57(0.29)**	-3.75(6.89)	6.94(6.05)	0.62(0.29)**	-551.7(3099.2)	11706.4(4951.9)**
Family size	0.002(0.06)	-1.39(1.20)	0.05(1.5)	-0.01(0.06)	-114.8(544.3)	1776.7(1255.3)
Credit access	-0.80(0.20)**	-4.32(4.32)	6.07(5.94)	-0.82(0.21)**	-1159.6(1924.3)	6983.1(4728.9)
Farm input	-0.73(0.22)**	3.04(4.63)	-7.42(5.35)	-0.68(0.22)**	-1694.8(2070.7)	-33.8(4222.1)
Ext. access	-0.07(0.21)	-3.65(4.13)	10.94(4.89)**	0.04(0.21)	-2949.3(1874.0)	2094.8(4040.7)
TLU	-0.07(0.36)**	0.81(3.72)	-0.96(0.70)	-0.08(0.03)**	136.3(338.4)	-569.6(574.1)
Dist. market	0.35(0.16)**	-0.002(3.72)	-5.84(3.62)	0.35(0.16)	-1156.4(1670.8)	-3929.8(2931.5)
Info access	-0.24(0.19)	-5.42(3.89)	4.84(4.58)	-0.23(0.19)	-2028.8(1764.3)	-462.1(3720.7)
Network	0.66(0.13)**	-3.36(2.49)	1.88(2.86)	0.68(0.13)**	-3646.1(1068.4)**	-2926.4(2244.0)
Proxy(IV1)	1.06(0.22)**			1.13(0.21)**		
Legal_R(IV2)	-0.73(0.27)**			-0.76(0.27)**		
Aware_UL(IV3)	-0.69(0.22)**			-0.59(0.21)**		
Constant	-1.74(0.87)**	34.96(21.18)*	47.15(17.55)**	-1.71(0.88)**	3648(9321.8)**	62595.8(14450.1)**
σ_1		3.02(0.07)**			9.14(0.07)**	
σ_2			3.26(0.06)**			9.97(0.06)**
ρ_1		-0.50(0.26)**			-0.49(0.20)**	
ρ_2			0.26(0.32)			-0.07(0.23)
Log Likelihood	-1405.27			-3228.17		
Wald χ^2	19.58*			18.82		
LR test χ^2	3.43*			4.60**		
Observations	283	130	153	283	130	153

Source: own survey, 2023

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; IV_i – instrumental variables; ρ_i – (rho); σ_i – sigma

Table 8 presents the treatment effect of urban expansion under actual and counterfactual conditions on the assets (natural, financial, physical, and human) and food security (production and HFIAS). The predicted values of the outcome variables are indicated in cells (a) and (b), while the counterfactuals are shown in cells (c) and (d). Based on ESR model results, we computed ATU (the final variation between actual average outcomes of non-displaced farmers and their corresponding counterfactuals) and ATT (the final variation between the actual average outcomes of displaced households and their

corresponding counterfactuals). The expected values for natural (16.53), financial (17837.01), physical (11.29), human (23.6), and production (477.65) for displaced peri-urban farmers (a) were lower than those of non-displaced farmers natural (52.68), financial (69071.1), physical (41.79), human (62.32), and production (2373.82) (c), while the expected value of HFIAS for displaced farmers (13.77) (a) was higher than that for non-displaced ones (5.08) (c).

However, just simple comparisons of these values could be misleading in attributing the effect of urban enlargement to the outcome variables of displaced and non-displaced peri-urban farmers. Columns 5 and 6 in Table 8, therefore, present the treatment effect and the resultant percentage changes. In counterfactual scenario (c), the displaced peri-urban farmers would have a natural capital stock of about 61.8 if they had not been displaced. That is, urban expansion has reduced the natural capital of displaced peri-urban farmers by 45.28, or 73.26%. Likewise, the financial capital of the displaced peri-urban farmers, on average, is declining by 47134.3 birr, or 72.5%, due to urban expansion. Putting it simply, the financial capital of displaced farmers would have been 64971.3 birr if they had not been displaced.

Moreover, physical capital, human capital, and agricultural production of the displaced peri-urban farmers are shrunk by 45.13, 18.02, and 1997 kg, or by 79.9%, 43.2%, and 80.7%, respectively, due to urban expansion. In other words, the physical capital, human capital, and agricultural production of displaced farmers would have been 56.42, 41.62%, and 2474.85 kg, respectively, had they not been displaced. In terms of HFIAS, the coefficient is positive (that is, 11.7), implying that urban expansion has increased the food insecurity status of displaced households by about 85%. Explicitly, the HFIAS value of displaced households would have been 2.06 had they not been displaced.

In counterfactual circumstance (d), peri-urban households that did not displace would have natural, financial, physical, and human capital of about 24.77 (47.02%), 45494 birr (65.9%), 32.23 (77.1%), and 10.9 (17.5%) less than if they had displaced. In terms of food security, had non-displaced peri-urban farmers been forced to be displaced, their mean annual farm production would have been reduced by 1676.9 kg, or 70.6%. Likewise, had non-displaced peri-urban farmers been forced to be displaced, their food insecurity level would have increased by a HFIAS value of 6.95, or 57%. Therewithal, the TH effect results are presented in the third row of each outcome variable in Table 8. The results are negative for all outcome variables except HFIAS. The negative TH effects indicate that the negative impact of urban expansion on natural, financial, physical, human, and farm production are significantly higher for peri-urban farmers that are displaced compared to their counterpart. That is, urban expansion has significantly reduced the asset base and food production of displaced farmers. Besides, the positive TH effect for HFIAS shows that the effect of urban expansion on this variable is significantly higher for peri-urban farming ménages that are displaced compared with non-displaced farmers, implying that urban expansion has increased the food insecurity level of displaced farmers. The results of HT effects further strengthen the validity and significant negative impacts of urban amplification on peri-urban farming households.

Overall, the findings of our study are in line with the arguments of the Impoverishment Risks and Reconstruction (IRR) theory, which argues poor institutions and planning approaches, social injustices, and weak or absence of reconstruction initiatives often lead to forced displacement that eventually destroys the livelihoods of displaced individuals and pushes them into a vicious cycle of poverty. Several studies have also reported results that support this model. For example, inadequate compensation to rehabilitate displaced peri-urban farmers (Abdo, 2016; Adam, 2014; Ambaye, 2015; Belay, 2014; Mohammed et al., 2020; Wubneh, 2018) and poor spatial planning, implementation, and non-integrative approaches (Bulti & Abebe, 2020; Haregeweyn et al., 2012; Mohammed et al., 2020; Zewdie et al., 2018) are reported as reasons for the deterioration of displaced peri-urban farmers livelihoods. Factors such as unlawful and extra-legal land tracts and dealings (Ayele & Tarekegn, 2020) and a lack of proper controlling and coordination mechanisms for urban expansion (Addis, 2020; Artmann et al., 2019; Ayele & Tarekegn, 2020; Johnson et al., 2014) are also reported as major factors for the deterioration of the livelihoods of displaced peri-urban farmers. Besides, non-participatory and supportive methods (Gebreyhannes et al., 2022), low attention to the circumstances of peri-urban people (Argaie et al., 2022; Lark et al., 2020; Mohammed et al., 2020), inadequate implementation of the existing policies and regulations, and lack of stakeholders' involvement (Argaie et al., 2022) are also among the reasons for poor

Table 6: ESR Estimation of asset outcome variables (physical and human capital)

Variables	Physical capital (outcome 3)			Human capital (outcome 4)		
	Sel. equ. (3)	Displaced	Non-displaced	Sel. equ. (4)	Displaced	Non-displaced
Gender	0.03(0.02)	-1.68(1.72)	-0.17(4.63)	0.09(0.20)	11.17(4.19)***	-4.85(3.91)
Age	0.01(0.01)	0.03(0.07)	0.06(0.17)	0.003(0.08)	-0.37(0.17)**	-0.43(0.13)***
Education	0.03(0.03)	0.23(0.19)	0.156(0.67)	NA	NA	NA
Marital status	0.57(0.29)**	-0.04(3.07)	8.41(6.28)	0.63(0.29)**	3.18(6.51)	-8.21(5.23)
Family size	-0.01(0.06)	-0.001(0.47)	1.77(1.58)	-0.03(0.06)	-0.75(1.19)	-1.70(1.33)
Credit access	-0.82(0.20)***	-2.32(2.1)	-0.21(5.95)	-0.84(0.20)***	-0.69(4.27)	8.89(5.36)*
Farm input	-0.71(0.22)***	-2.20(2.24)	-5.59(5.26)	-0.74(0.21)***	-8.26(4.59)	-4.83(4.81)
Ext. access	0.03(0.21)	-2.39(1.63)	-1.10(5.09)	0.01(0.21)	-0.068(3.94)	6.41(4.27)
TLU	-0.08(0.04)**	-0.37(0.30)	-0.52(0.73)	-0.07(0.03)**	-0.22(0.74)	0.49(0.61)
Dist. market	0.38(0.16)**	-0.64(1.68)	-4.19(3.68)	0.39(0.15)**	-3.31(3.49)	-9.27(3.27)***
Info access	-0.22(0.19)	-2.56(1.6)	7.15(4.65)	-0.17(0.19)	1.22(3.82)	-2.59(3.93)
Network	0.69(0.14)***	-0.68(1.22)	3.56(2.85)	0.62(0.14)***	3.76(2.71)	-4.06(2.64)
Proxy(IV1)	1.04(0.22)***			0.96(0.24)***		
Legal_R(IV2)	-0.89(0.27)**			-0.73(0.29)***		
Aware_UL(IV3)	-0.57(0.22)**			-0.64(0.21)***		
Constant	-1.59(0.89)*	18.69(10.52)*	40.5(18.3)**	-1.42(0.83)*	34.73(20.17)*	114.58(14.68)***
σ_1		2.05(0.06)***			3.02(0.09)***	
σ_2			3.31(0.07)***			3.14(0.07)***
ρ_1		0.04(0.50)			-0.87(0.44)**	
ρ_2			0.48(0.26)*			-0.36(0.29)
Log Likelihood	-1288.4			-1376.08		
Wald χ^2	12.93			18.41*		
LR test χ^2	2.76*			5.92**		
Observations	283	130	153	283	130	153

Source: own survey, 2023

Note: * p<0.10, ** p<0.05, ***p<0.01; IV_i – instrumental variables; ρ_i - (rho); σ_i - sigma

NA stands for 'not applicable'. Since education is used as one of the indicators to compute human capital, it is excluded as a covariate for this variable.

urban expansion management and the resultant displacement. Some scholars mentioned problems of land tenure (state ownership of land) (Gebreyehannes et al., 2022) and lack of awareness and alternative livelihoods for peri-urban farmers (Gebreyehannes et al., 2022; Mohammed et al., 2020; Weldearegay et al., 2021) as reasons for displacement.

The rapid process of urban expansion is changing the way land is used in peri-urban expanses to suit the demands of urban areas and their growth (Gebreyehannes et al., 2022). Peri-urban farmers, in particular, are compelled to move and lose their farms, which are their sole source of money, resources, and food. The practice of being displaced owing to urban expansion is widespread in Injibara Town, as it is in Ethiopia's peri-urban expanses. Based on the aforementioned patterns, practices, and explanations, we discovered that urban growth had a negative impact on every metric used to assess the peri-urban farmers' asset and food security status.

Our findings are, therefore, in agreement with (and validate) the existing empirical studies carried out in developing countries, including Ethiopia, which reported the negative impacts of urbanization on peri-urban farmers' welfare and dietary security (Alamneh et al., 2023; Andrade et al., 2022; Belay, 2014; Bereket, 2020; Bren d'Amour et al., 2017; Cernea, 2021; Dadi et al., 2016; Gebreyehannes et al., 2022; Huang et al., 2018; Jiang et al., 2013; Labiso, 2020; Mohammed et al., 2020; Tassie & Duan, 2018; Weldearegay et al., 2021). However, our results are at odds with the ones that reported the opposite (please see the introduction and literature review section above).

5 Conclusions and policy implications

In this study, we have estimated the impact of urban expansion on the livelihood assets and food security of the peri-urban farming ménages in Enjibara Town. We employed an ESR model that address the issues of endogeneity, selection bias, and heterogeneity and capture the differential impacts of urban expansion on displaced and non-displaced peri-urban. We found that urban expansion declines the asset (natural, financial, physical, and human capital) and food security status of peri-urban farmers. When we disaggregate our results for displaced and non-displaced farmers, a remarkable pattern begin to emerge. That is, displaced peri-urban farmers inclined to have lower asset (natural, financial, phys-

Table 7: ESR Estimation of food security outcome variables (farm production and HFIAS)

Variables	Farm production (outcome 5)			HFIAS (outcome 6)		
	Sel. equ. (5)	Displaced	Non-displaced	Sel. equ. (6)	Displaced	Non-displaced
Gender	0.02(0.21)	-81.9(92.05)	-479.60(451.45)	0.11(0.20)	0.09(0.59)	-0.05(0.57)
Age	0.01(0.01)	-4.81(3.83)	15.45(16.74)	0.01(0.01)	0.04(0.02)	-0.01(0.02)
Education	0.04(0.03)	-3.52(10.4)	64.91(66.25)	0.03(0.02)	0.16(0.07)**	-0.08(0.08)
Marital status	0.59(0.29)**	131.69(143.7)	876.92(609.4)	0.51(0.29)*	-1.07(0.93)	-0.21(0.78)
Family size	0.05(0.06)	-23.62(25.0)	192.9(154.14)	0.01(0.06)	0.28(0.16)*	-0.34(0.19)*
Credit access	-0.83(0.20)***	-5.54(88.33)	399.03(593.8)	-0.90(0.20)***	-1.61(0.61)***	1.04(0.73)
Farm input	-0.72(0.22)***	-46.68(95.46)	378.79(531.59)	-0.67(0.22)***	0.19(0.65)	-0.55(0.69)
Ext. access	0.03(0.21)	-25.77(86.4)	263.67(495.85)	-0.01(0.21)	0.16(0.55)	-1.16(0.62)*
TLU	-0.08(0.035)**	15.11(15.64)	-21.83(71.37)	-0.07(0.04)**	-0.09(0.10)	0.12(0.09)
Dist. market	0.34(0.16)**	-81.58(77.47)	-208.34(362.92)	0.33(0.16)**	-0.08(0.52)	-0.27(0.47)
Info access	-0.19(0.19)	-70.42(81.27)	94.25(461.9)	-0.14(0.19)	0.47(0.52)	0.21(0.09)
Network	0.68(0.13)***	-77.16(49.59)	-72.14(285.64)	0.71(0.13)***	0.26(0.35)	-0.08(0.36)
Proxy(IV1)	1.10(0.21)***			0.91(0.25)***		
Legal_R(IV2)	-0.79(0.28)***			-0.89(0.26)***		
Aware_UL(IV3)	-0.59(0.21)***			-0.52(0.21)***		
Constant	-1.70(0.88)***	1241.4(436.03)***	305.91(1777.15)	-1.65(0.88)**	10.84(3.04)***	6.87(2.27)***
σ_1		6.06(0.07)***			0.99(0.07)***	
σ_2			7.87(0.06)***			1.24(0.09)***
ρ_1		-0.46(0.17)**			0.39(0.32)	
ρ_2			0.13(0.29)			-0.78(0.42)*
Log Likelihood	-2507.35			-824.05		
Wald χ^2	8.84			22.09**		
LR test χ^2	3.68*			3.64*		
Observations	283	130	153	283	130	153

Source: own survey, 2023

Note: * p<0.10, ** p<0.05, ***p<0.01; IV_i - instrumental variables; ρ_i - (rho); σ_i - sigma

ical, and human capital) and food availability (production) and higher HFIAS value than those non-displaced ones in the counterfactual scenario. Besides loss of farmland, displaced peri-urban farmers might lost some unobserved traits (such as knowledge and skills, emotional intelligence, naturalistic intelligence, etc.) that make them less productive, poor, and food insecure. We also found that the negative impact of urban enlargement on asset and dietary security is higher for displaced peri-urban farmers than the impact would have been for non-displaced ones, in the counterfactual scenario, if they had had such experiences. That is, displaced peri-urban farmers are worst off for being displaced. Therefore, it is safe to conclude that urban expansion in the study has a significant harmful impact on the asset and dietary security status of displaced farmers and puts them in an absolute disadvantageous position.

The town administrations, therefore, need to adapt context-specific urban development and planning models such as network or rural-urban linkage, which could properly address and balance the livelihoods of both peri-urban farmers and urban dwellers and generate win-win situations for both. Given the fast rate of urban growth and expansion in Enjibara Town, concerned bodies need to think about shifting their approach from horizontal expansion to a more compressed and vertical development pattern that could at least limit the pace of expansion and displacement. Besides, a well-functioning land management and socially inclusive governance system needs to be established to address the existing unrestrained and chaotic pattern of urban expansion. Since urban expansion is an unavoidable phenomenon, the town administration and concerned stakeholders should prepare and capacitate peri-urban agriculturalists proactively to acclimate themselves to urban life styles and livelihood systems. Furthermore, designing adequate displacement rehabilitation and reconstruction packages that ensure sustainability of displaced farmers' livelihoods is indispensable. Finally, concerned government bodies (at national and regional levels) should consider revising the land tenure system to the extent that guarantees peri-urban agriculturalists the right to own, intercede, and vend their land at fair market value and invest their money in alternative livelihoods.

This study has a few limitations and offers intuition for further research. It is a cross-sectional study. That is, it did not address the dynamic features of urban expansion and the resultant displacement over time. Therefore, longitudinal studies that analyze and address the long-term impacts of urban enlargement on peri-urban livelihoods are required. This study is limited to one town. Hence, comparative studies that analyze the situation of successful urban areas (generate positive impacts) and identify

Table 8: Impact of urban expansion on the asset and food security

Outcome variable	Subsample	Decision stage		Treatment effect	% change
		Displaced	Not-displaced		
Natural capital	N	3	4	5	6
Displaced	130	(a) 16.53(0.73)	(c) 61.81(0.75)	ATT= -45.28(1.05)***	-73.26
Not-displaced	153	(d) 27.91(0.80)	(b) 52.68(0.78)	ATU= -24.77(1.11)***	-47.02
Heterogeneity effects		BH ¹ = -11.38	BH ² = 9.13	TH= -20.51***	
Financial capital					
Displaced	130	(a) 17837.01(307.5)	(c) 64971.3(630.2)	ATT= -47134.3(701.6)***	-72.5
Not-displaced	153	(d) 23576.2(328.2)	(b) 69071.1(498.3)	ATU= -45494.9(596.7)***	-65.9
Heterogeneity effects		BH ¹ = -5739.19	BH ² = -4099.8	TH= -1639.39***	
Physical capital					
Displaced	130	(a) 11.29(0.22)	(c) 56.42(0.67)	ATT= -45.13(0.70)***	-79.9
Not-displaced	153	(d) 9.56(0.23)	(b) 41.79(0.64)	ATU= -32.23(0.68)***	-77.1
Heterogeneity effects		BH ¹ = 1.73	BH ² = 14.63	TH= -12.9***	
Human capital					
Displaced	130	(a) 23.60(0.70)	(c) 41.62(0.82)	ATT= -18.02(1.08)***	-43.32
Not-displaced	153	(d) 51.42(0.62)	(b) 62.32(0.71)	ATU= -10.9(0.94)***	-17.5
Heterogeneity effects		BH ¹ = -18.73	BH ² = 19.19	TH= -37.92***	
Farm production					
Displaced	130	(a) 477.65(10.78)	(c) 2474.85(58.3)	ATT= -1997.2(59.29)***	-80.7
Not-displaced	153	(d) 696.92(12.56)	(b) 2373.82	ATU= -1676.9(48.52)***	-70.6
Heterogeneity effects		BH ¹ = -219.27	BH ² = 101.02	TH= -320.29***	
HFIAS					
Displaced	130	(a) 13.77(0.09)	(c) 2.06(0.09)	ATT= 11.71(10.13)***	85
Not-displaced	153	(d) 12.03(0.08)	(b) 5.08(0.09)	ATU= 6.95(0.12)***	57.8
Heterogeneity effects		BH ¹ = 1.74	BH ² = -3.02	TH= 4.76***	

Standard errors in brackets; *p<0.10, **p<0.05, ***p<0.01; Source: own survey, 2023.

success factors and those of failure (negative outcomes) are needed.

Authors' contributions

Dr. Amanuel designed the study, analyzed, and interpreted the data. He also developed the draft manuscript. Mr. Yeshiwas collected and entered the data into SPSS software.

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The authors declare that there are no conflicts of interest

References

Abdo, M. (2016). Reforming ethiopia's expropriation law. *Mizan Law Review*, 9(2), 301. <https://doi.org/10.4314/mlr.v9i2.3>

Adam, A. G. (2014). Land tenure in the changing peri-urban areas of ethiopia: The case of bahir dar city. *International Journal of Urban and Regional Research*, 38(6), 1970–1984. <https://doi.org/10.1111/1468-2427.12123>

Addis, T. L. (2020). Environmental sustainability of squatter settlements in yeka sub city, addis ababa, ethiopia. *Journal of Urban Development Studies*, 1(1), 1–19.

- Alamneh, T., Mada, M., & Abebe, T. (2023). Impact of urban expansion on income of evicted farmers in the peri-urban areas of amhara regional state, ethiopia: Endogenous switching regression approach. *Cogent Economics & Finance*, 11(1), 2199596. <https://doi.org/10.1080/23322039.2023.2199596>
- Allen, R. C. (2009). *The british industrial revolution in global perspective* (1st). Cambridge University Press. <https://doi.org/10.1017/CBO9780511816680>
- Ambaye, D. W. (2015). Land rights and expropriation in ethiopia. In *Land rights and expropriation in ethiopia* (pp. 1–26). Springer International Publishing. https://doi.org/10.1007/978-3-319-14639-3_1
- Andersson, D. A. (2015). Urbanization and linkages to smallholder farming in sub-saharan africa: Implications for food security. *Global Food Security*, 4, 1–7. <https://doi.org/10.1016/j.gfs.2014.08.002>
- Andrade, J. F., Cassman, K. G., Rattalino Edreira, J. I., Agus, F., Bala, A., Deng, N., & Grassini, P. (2022). Impact of urbanization trends on production of key staple crops. *Ambio*, 51(5), 1158–1167. <https://doi.org/10.1007/s13280-021-01674-z>
- Argaie, S. T., Wang, K. X., Abdullah, M., & Lan, J. (2022). Assessment of the impacts of urban expansion on agricultural land-use intensity in ethiopia: The case of addis ababa. *Applied Ecology and Environmental Research*, 20(4), 3223–3244. https://doi.org/10.15666/aeer/2004_32233244
- Artmann, M., Kohler, M., Meinel, G., Gan, J., & Ioja, I.-C. (2019). How smart growth and green infrastructure can mutually support each other—a conceptual framework for compact and green cities. *Ecological Indicators*, 96, 10–22. <https://doi.org/10.1016/j.ecolind.2017.07.001>
- Ayele, A., & Tarekegn, K. (2020). The impact of urbanization expansion on agricultural land in ethiopia: A review. *Environmental & Socio-Economic Studies*, 8(4), 73–80. <https://doi.org/10.2478/enviro-2020-0024>
- Azadi, H., Van Acker, V., Zarafshani, K., & Witlox, F. (2012). Food systems: New-ruralism versus new-urbanism. *Journal of the Science of Food and Agriculture*, 92(11), 2224–2226. <https://doi.org/10.1002/jsfa.5694>
- Belay, M. Z. (2014). *An assessment of livelihood and food security of farmers displaced due to urban expansion: The case of kombolcha town in amhara national regional state* [Master's thesis]. Mekelle University.
- Bereket, G. K. (2020). Socio-cultural and economic impacts of development induced displacement on resettled people: The case of welkayt sugar factory in tigray region, ethiopia. *International Journal of Sociology and Anthropology*, 12(4), 94–103. <https://doi.org/10.5897/IJSA2020.0875>
- Bren d'Amour, C., Reitsma, F., Baiocchi, G., Barthel, S., Güneralp, B., Erb, K.-H., Haberl, H., Creutzig, F., & Seto, K. C. (2017). Future urban land expansion and implications for global croplands. *Proceedings of the National Academy of Sciences*, 114(34), 8939–8944. <https://doi.org/10.1073/pnas.1606036114>
- Bulti, D. T., & Abebe, B. G. (2020). Analyzing the impacts of urbanization on runoff characteristics in adama city, ethiopia. *SN Applied Sciences*, 2(7), 1151. <https://doi.org/10.1007/s42452-020-2961-3>
- Busho, S. W., Wendimagegn, G. T., & Muleta, A. T. (2021). Quantifying spatial patterns of urbanization: Growth types, rates, and changes in addis ababa city from 1990 to 2020. *Spatial Information Research*, 29(5), 699–713. <https://doi.org/10.1007/s41324-021-00388-4>
- Cernea, M. M. (2000). The risks and reconstruction model for resettling displaced populations. *Economic and Political Weekly*, 35(35), 3659–3678.
- Cernea, M. M. (2021). The risks and reconstruction model for resettling displaced populations. In M. Koch-Weser & S. Guggenheim (Eds.), *Social development in the world bank* (pp. 235–264). Springer International Publishing. https://doi.org/10.1007/978-3-030-57426-0_16
- Coates, J., Swindale, A., & Bilinsky, P. (2007). *Household food insecurity access scale (hfias) for measurement of food access: Indicator guide* (tech. rep. No. 3). Food and Nutrition Technical Assistance Project (FANTA).
- Crush, J. S., & Caesar, M. (2018). Food remittances and food security: A review. *Migration and Development*, 7(2), 180–200. <https://doi.org/10.1080/21632324.2017.1410977>
- Dadi, D., Azadi, H., Senbeta, F., Abebe, K., Taheri, F., & Stellmacher, T. (2016). Urban sprawl and its impacts on land use change in central ethiopia. *Urban Forestry & Urban Greening*, 16, 132–141. <https://doi.org/10.1016/j.ufug.2016.02.005>

- Debela, D. D. (2016). *The impacts of industrialization on farmer's livelihoods land use and the environment in ethiopia: The cases of gelan and dukem towns* [Ph.D. dissertation]. Addis Ababa University.
- Dedewanou, F. A., & Kpekou Tossou, R. C. B. (2022). Remittances and agricultural productivity in burkina faso. *Applied Economic Perspectives and Policy*, 44(3), 1573–1590. <https://doi.org/10.1002/aep.13188>
- Degaga, D. T. (2005). *Rural livelihoods, poverty and food insecurity in ethiopia: A case study at erenssa and garbi communities in oromiya zone, amhara national regional state* [Master's thesis]. Norwegian University of Science and Technology.
- Dorosh, P., & Thurlow, J. (2012). Agglomeration, growth and regional equity: An analysis of agriculture-versus urban-led development in uganda. *Journal of African Economies*, 21(1), 94–123. <https://doi.org/10.1093/jae/ejr033>
- Douglass, M. (1998). A regional network strategy for reciprocal rural-urban linkages: An agenda for policy research with reference to indonesia. *Third World Planning Review*, 20(1), 1. <https://doi.org/10.3828/twpr.20.1.f2827602h503k5j6>
- Fitawek, W., & Hendriks, S. (2021). Evaluating the impact of large-scale agricultural investments on household food security using an endogenous switching regression model. *Land*, 10(3), 323. <https://doi.org/10.3390/land10030323>
- Gebreyehannes, Z., Haji, J., Berihun, T., & Molla, A. (2022). Urban expansion impact on peri-urban farm households welfare in metropolitan cities of amhara national regional state, ethiopia. *Ecology, Environment and Conservation*, 33–44. <https://doi.org/10.53550/EEC.2022.v28i01.005>
- Gutu, T. S. (2023). Urbanisation and rural development in sub-saharan africa: A review of pathways and impacts. *Research in Globalization*, 6, 100133. <https://doi.org/10.1016/j.resglo.2023.100133>
- Haregeweyn, N., Fikadu, G., Tsunekawa, A., Tsubo, M., & Meshesha, D. T. (2012). The dynamics of urban expansion and its impacts on land use/land cover change and small-scale farmers living near the urban fringe: A case study of bahir dar, ethiopia. *Landscape and Urban Planning*, 106(2), 149–157. <https://doi.org/10.1016/j.landurbplan.2012.02.016>
- Huang, Y., Lin, W., Li, S., & Ning, Y. (2018). Social impacts of dam-induced displacement and resettlement: A comparative case study in china. *Sustainability*, 10(11), 4018. <https://doi.org/10.3390/su10114018>
- Jiang, L., Deng, X., & Seto, K. C. (2013). The impact of urban expansion on agricultural land use intensity in china. *Land Use Policy*, 35, 33–39. <https://doi.org/10.1016/j.landusepol.2013.04.011>
- Johnson, J. A., Runge, C. F., Senauer, B., Foley, J., & Polasky, S. (2014). Global agriculture and carbon trade-offs. *Proceedings of the National Academy of Sciences*, 111(34), 12342–12347. <https://doi.org/10.1073/pnas.1412835111>
- Kankwamba, H., & Kornher, L. (2019). Performance, behaviour and organization of maize trading in malawi. *Agricultural and Food Economics*, 7(1), 14. <https://doi.org/10.1186/s40100-019-0136-6>
- Kumar, A., Saroj, S., & Mishra, A. K. (2021). *Crop insurance and crop productivity evidence from rice farmers in eastern india* (tech. rep. No. 01996). International Food Policy Research Institute (IFPRI). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3771268
- Labiso, T. T. (2020). Urban expansion and its impact on the livelihood of peripheral farming communities: The case of assosa town, benishangul gumuz region, ethiopia. *Business and Management Horizons*, 8(2), 21. <https://doi.org/10.5296/bmh.v8i2.18109>
- Lark, T. J., Spawn, S. A., Bougie, M., & Gibbs, H. K. (2020). Cropland expansion in the united states produces marginal yields at high costs to wildlife. *Nature Communications*, 11(1), 4295. <https://doi.org/10.1038/s41467-020-18045-z>
- Mohammed, I., Kosa, A., & Juhar, N. (2020). Economic linkage between urban development and livelihood of peri-urban farming communities in ethiopia (policies and practices). *Agricultural and Food Economics*, 8(1), 21. <https://doi.org/10.1186/s40100-020-00164-2>
- Nguyen, T. T., Hegedűs, G., & Nguyen, T. L. H. (2019). Effect of land acquisition and compensation on the livelihoods of people in quang ninh district, quang binh province: Labor and income. *Land*, 8(6), 91. <https://doi.org/10.3390/land8060091>
- Oyvat, C. (2016). Agrarian structures, urbanization, and inequality. *World Development*, 83, 207–230. <https://doi.org/10.1016/j.worlddev.2016.01.019>

- Parnell, S., & Walawege, R. (2011). Sub-saharan african urbanisation and global environmental change. *Global Environmental Change*, 21(Supplement 1), S12–S20. <https://doi.org/10.1016/j.gloenvcha.2011.09.014>
- Tadesse, S. T., Oenema, O., Van Beek, C., & Ocho, F. L. (2018). Diversity and nutrient balances of urban and peri-urban farms in ethiopia. *Nutrient Cycling in Agroecosystems*, 111(1), 1–18. <https://doi.org/10.1007/s10705-018-9911-0>
- Tassie, W. K., & Duan, X. (2018). Determinants of peri-urban households' livelihood strategy choices: An empirical study of bahir dar city, ethiopia. *Cogent Social Sciences*, 4(1), 1562508. <https://doi.org/10.1080/23311886.2018.1562508>
- United Nations Economic Commission for Africa (UNECA). (2014). *Meeting of the committee of experts of the seventh joint annual meetings of the eca conference of african ministers of finance, planning and economic development and au conference of ministers of economy and finance* (tech. rep.). United Nations Economic Commission for Africa. <https://repository.uneca.org/bitstream/handle/10855/22189/b10736207.pdf?sequence=1&isAllowed=y>
- Unwin, T. (2017). Urban-rural interaction in developing countries: A theoretical perspective. In R. B. Potter & T. Unwin (Eds.), *The geography of urban-rural interaction in developing countries* (pp. 11–32). Routledge. <https://doi.org/10.4324/9781351215381-1>
- Van Vliet, J. (2019). Direct and indirect loss of natural area from urban expansion. *Nature Sustainability*, 2(8), 755–763. <https://doi.org/10.1038/s41893-019-0340-0>
- Wang, C. (2018). An analysis of rural household livelihood change and the regional effect in a western impoverished mountainous area of china. *Sustainability*, 10(6), 1738. <https://doi.org/10.3390/su10061738>
- Weldearegay, S. K., Tefera, M. M., & Feleke, S. T. (2021). Impact of urban expansion to peri-urban smallholder farmers' poverty in tigray, north ethiopia. *Heliyon*, 7(6), e07303. <https://doi.org/10.1016/j.heliyon.2021.e07303>
- World Bank. (2023). Ethiopia—urban population growth (annual %) [Accessed: 2023]. <https://data.worldbank.org/indicator/SP.URB.GROW?locations=ET>
- Wubneh, M. (2018). Policies and praxis of land acquisition, use, and development in ethiopia. *Land Use Policy*, 73, 170–183. <https://doi.org/10.1016/j.landusepol.2018.01.017>
- Yamane, T. (1967). *Elementary sampling theory*. Prentice-Hall.
- Zewdie, M., Worku, H., & Bantider, A. (2018). Temporal dynamics of the driving factors of urban landscape change of addis ababa during the past three decades. *Environmental Management*, 61(1), 132–146. <https://doi.org/10.1007/s00267-017-0953-x>
- Zhang, L., Chen, F., & Lei, Y. (2020). Climate change and shifts in cropping systems together exacerbate china's water scarcity. *Environmental Research Letters*, 15(10), 104060. <https://doi.org/10.1088/1748-9326/abb1f2>



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Media Framing of Illegal Migration and Human Trafficking in the Ethiopian Broadcasting Corporation

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Abstract

This study examines how the Ethiopian Broadcasting Corporation (EBC) covers illegal migration and human trafficking. The study employed qualitative content analysis of news reports spanning January 1 to December 30, 2023. Following a qualitative methodology and exploratory design, the study utilized comprehensive sampling to select 58 news stories for analysis. Theoretical frameworks such as agenda-setting and framing theories were applied to interpret and elucidate the findings. The research findings revealed that the dominant frames used were the responsibility frame, humanitarian frame, security frame, economic frame, conflict frame, and sociocultural frame. EBC portrayed illegal migration and human trafficking positively while using a negative tone for emigrants. The EBC consistently uses "illegal" instead of "undocumented" and aligns its reporting with the Ethiopian government's perspectives, raising concerns about adherence to journalism ethics.

Keywords: media framing; illegal migration; human trafficking; broadcast media

1 INTRODUCTION

1.1 Background

Human trafficking and illegal migration (HTIM) are significant global phenomena that continue to challenge societies worldwide. HTIM is a critical problem and an urgent issue that Ethiopia is facing. It is causing huge human, social, and economic problems to the migrants, Ethiopia, and migrants hosting countries. As the problem of HTIM increases, the role of media, particularly state-owned media such as the EBC, becomes critical in shaping public understanding as well as responses.

Media framing is not only about what is reported, but it is also about how it is reported. The language, the tone, and the focus of the media coverage all influence the way audiences perceive migrants, human traffickers, the victims, and the possible solutions to the problems. This study aims to examine how EBC frames stories related to HTIM by exploring the narrative media constructs, the priorities it sets, and the impact of those choices on national discourse and media, and migration policies.

1.2 Objective and significance of the study

The objective of this study is to examine how the EBC addressed illegal migration and human trafficking in 2023. Focusing on news stories and audiovisual content, the study aims to uncover how the media shapes public perceptions and contributes to the broader discourse on these global issues. The research poses three key questions:

1. What are the dominant frames used by EBC in broadcasting illegal migration and human trafficking?
2. How did EBC portray these issues in their news coverage?
3. How did EBC exercise journalistic ethics when framing illegal migration and human trafficking?

The scope of the study is limited to the news covered from January 1 to December 30, 2023.

The finding will be significant to address the problems of migrants and tackle human trafficking challenges in Ethiopia and beyond. It will also be important for EBC to shape and reflect on its media coverage approaches on illegal migration and human trafficking.

1.3 Literature review

Despite their global nature, there is a clear definition of human trafficking and illegal migration. According to the [International Organization for Migration \(IOM\) \(2024\)](#), migration refers to the movement of people from their usual residence, either across international borders or within a state, underscoring the complexity of human mobility and the diverse factors driving migration [International Organization for Migration \(IOM\) \(2024\)](#).

Illegal migration and human trafficking have become increasingly prominent topics in global media, and are framed and portrayed differently across nations. [Fotopoulos et al. \(2022\)](#) highlight the considerable influence of the media on public perceptions of illegal migration. The portrayal of illegal migration varies from country to country, with differing degrees of coverage and media framing approaches. Understanding the intersection of these issues that are global in scale but shaped by local, regional, and international factors is essential for crafting comprehensive strategies to address the challenges of illegal migration and human trafficking.

While the scope of these issues is global, they are often driven by specific socioeconomic conditions and regional dynamics. According to [International Organization for Migration \(IOM\) \(2017\)](#), illegal migration occurs outside the laws, regulations, or international agreements governing entry and exit between states. Migration conditions in regions such as Eastern Africa present unique challenges. The [International Organization for Migration \(IOM\) \(2017\)](#) identifies three primary migration routes from Eastern Africa, including Sudan to Europe, Yemen & Saudi Arabia, and South Africa. These routes reflect the complex and varied migratory patterns that shape the migration experience in this region.

The media plays a crucial role in educating the public and shaping the discourse surrounding illegal migration and human trafficking. In Ethiopia, the increasing number of broadcast TV stations has allowed both governmental and non-governmental organizations to raise awareness about the severe consequences of these issues. Media coverage of migration often centers on humanitarian and economic factors, while reporting on issues such as smuggling and trafficking is typically framed within a security context ([Fotopoulos et al., 2022](#)).

Media framing, as defined by ([Entman, 2010](#)), refers to the way certain aspects of reality are selected and emphasized to promote a particular interpretation of an issue. [Jung and Jung \(2021\)](#) argue that media coverage of illegal migration and human trafficking frequently emphasizes the criminality and dangers associated with these phenomena, often portraying migrants and trafficked individuals as victims or perpetrators. While such coverage can contribute to stigmatization, it can raise awareness and mobilize support for policy change by highlighting human rights violations and exploitation.

In Ethiopia, illegal migration has long been a challenge, with many migrants heading to Saudi Arabia and other Gulf states. Ethiopian migrants often face severe difficulties in these destination countries, with many detained and repatriated under harsh conditions (Getachew, 2019). As a result, the media must adopt a more nuanced approach to reporting on migration, moving beyond sensationalism and offering deeper insights into the complexities of these issues. According to Fotopoulos et al. (2022), media coverage plays a significant role in shaping public opinion and influencing policymakers in both origin and destination countries. Similarly, (Caviedes, 2018) emphasizes that the media's ideological stance can greatly impact how audiences perceive migration and human trafficking.

In Ethiopia, poverty and governance challenges are key drivers of migration, with Saudi Arabia being a primary destination for East African migrants (Schewel, 2022). Despite the growing scale of illegal migration, Ethiopian media coverage remains limited. International media outlets have reported on the heavy toll of unlawful migration, such as the tragic deaths of migrants attempting to cross the Mediterranean and the Red Sea, but the coverage focuses on the difficulties faced by migrants in transit or at their destinations, without offering concrete solutions (Getachew, 2019).

1.4 Theoretical framework and methodology

1.4.1 Theoretical framework

The theoretical framework is essential for understanding media analysis because it allows researchers to situate their findings within broader academic discussions. Bertrand and Hughes (2017) emphasize that media research must consider theoretical underpinnings to achieve a full understanding of the methodologies and approaches employed. Onwubere (2021) adds that a theoretical framework acts as a mirror that reflects the theory-based discovery process. This study applies media framing theories, linking them to agenda-setting and framing theories, which provide a foundation for analyzing how HTIM are framed in the media and the implications of such framing for public discourse and policy.

1.4.2 Methodology

This study employed an exploratory design, which was chosen for its flexibility, allowing themes to emerge from the data rather than relying on predefined categories. This design is particularly suitable for qualitative research that utilizes online data sources and content analysis (Mukherjee, 2019), making it an ideal fit for examining illegal migration and human trafficking.

A qualitative research method was used to conduct content analysis, focusing on understanding the perspectives of the EBC on these issues. Given the limited prior research on this topic, an inductive content analysis approach enables concepts to emerge directly from the collected data. This is particularly valuable when research on the issue is either scarce or fragmented, as it helps derive meaningful insights from the data itself (Flick, 2022). Inductive content analysis is essential for understanding the nuances of how individuals or institutions frame and interpret experiences, especially in the context of migration and human trafficking.

1.4.3 Sampling

A comprehensive sampling strategy was applied to ensure that the selected news stories were relevant to the topics of illegal migration and human trafficking. The researchers analyzed 58 news stories from the EBC over a year, that is, from January to December 2023. Content analysis was used to identify recurring patterns, themes, and messages across the stories. Data were collected using an electronic database search engine, with keywords related to illegal migration and human trafficking, to ensure validity and reliability in the sampling process.

1.4.4 Data analysis method

Both textual and visual analyses are employed in the study. Textual analysis involves various research methods to examine the narrative and language used in the stories, while visual analysis focuses on the imagery presented in the news reports (Davies, 2020). The inductive approach facilitated the emergence of key themes from the data, allowing for a deeper interpretation of the narratives in each news story and related content. This approach was relevant to understand the motivations, attitudes, and behaviors surrounding migration and human trafficking issues, as reflected in the media coverage, and to explore how EBC frames these complex social challenges. In the reporting of the results, the researchers used both verbatim, where the actual stories are directly quoted, and themes, in which the main content of the stories from the news is summarized.

2 PRESENTATION OF RESULTS

2.1 The dominant frame in EBC on HTIM News

Regarding the types of frames used for illegal migration, it is found that EBC has utilized six prominent frames: the responsibility frame, the humanitarian frame, the security frame, the economic frame, the conflict frame, and the sociocultural frame.

2.1.1 Responsibility frame

The responsibility frame emphasizes assigning responsibility and blame to the suitable organizations or individuals for issues, causes, and solutions. In the context of illegal migration, this frame often involves blaming a nation, government, NGO, or other groups for migration-related problems, their causes, and possible solutions. For example, on December 19, 2023, EBC at 8 p.m., reported:

The Ethiopian Ambassador to Bahrain, Shiferawu Genete, discussed with the country's Secretary-General, Siraj Mohammed, the protection of Ethiopian workers' rights in Bahrain. The conversation also addressed the possibility of issuing legal work permits for Ethiopian migrants who are currently working illegally.

This news story highlights the proactive role of Ethiopian diplomats in Bahrain, emphasizing their focus on safeguarding the rights of Ethiopian workers, particularly those in illegal employment. By showcasing the ambassador's discussions with Bahraini officials, the broadcast underscores Ethiopia's diplomatic efforts to protect its citizens abroad. Another example comes from the August 25, 2023, news report of EBC:

The Ethiopian Embassy in Djibouti had announced plans to facilitate the return of nearly 3,000 Ethiopian migrants by 2022. This return program is being coordinated in collaboration with the International Organization for Migration (IOM), ensuring that the migrants return with their dignity preserved.

The coverage emphasized Ethiopia's responsibility to support its citizens stranded abroad, highlighting the cooperation with the IOM as a key element in this effort. The embassy's initiative aligns with Ethiopia's commitment to assisting its nationals in distress and providing avenues for safe and dignified repatriation. Similarly, on October 30, 2023, at 6 a.m., EBC reported:

Ethiopia and Djibouti signed an agreement to create a joint criminal investigation team aimed at combating human trafficking and preventing illegal border crossings. In the signing ceremony, Ethiopia's State Minister of Justice, Alem Anteagdewu, emphasized that Ethiopia is

taking comprehensive measures to address crimes related to human trafficking and illegal migration.

The news frame portrays the Ethiopian government's active role in preventing such crimes and highlights the need for strengthened law enforcement to ensure traffickers are prosecuted. These examples illustrate the use of the responsibility frame, emphasizing Ethiopia's role in addressing migration challenges, protecting its citizens abroad, and taking action against illegal migration and human trafficking.

2.1.2 Humanitarian frame

This framing can lead to calls for more compassionate immigration policies and greater support for migrants (Entman, 1993). Advocates argue that individuals who are forced to migrate or trafficked are victims of human rights violations and, therefore, should be treated with compassion and respect. Concerning this frame, on October 17, 2023, at 7 p.m., EBC reported:

Ethiopia has become the first African country to provide a welcoming environment for immigrants and refugees from various nations. Currently, Ethiopia hosts over 100,000 refugees, including many who have fled recent conflicts in Sudan. These refugees reside in temporary camps, particularly in the Benishangul-Gumuz region. According to Gudu Nasir Atayu Dia, the United Nations High Commissioner for Refugees, these refugees have formed positive relationships with the local communities, showcasing the harmonious coexistence between the two groups.

The coverage highlights Ethiopia's commitment to protecting migrants, with the country's constitution guaranteeing the rights of refugees and implementing policies to support them, including access to education, healthcare, and employment opportunities. The news emphasizes the urgent humanitarian needs of displaced women and children living in the camps. The footage portrays the severity of their situation, urging compassion and the need for immediate assistance. It underscores Ethiopia's dedication to protecting refugees and asylum seekers, showcasing the country's leadership in refugee care. A similar call for support was made on March 5, 2023, when EBC reported:

More than 98,000 refugees had entered Ethiopia due to the ongoing conflict in the Gessam area of Somaliland. Among these refugees are pregnant women, lactating mothers, elderly individuals requiring medical attention, and people with disabilities. Tesfahun Gobzai, the Director-General of Refugees and Returnees Services, emphasized that Ethiopians have been providing the little support they can, but international aid has been slow to arrive. This lack of external support is a significant concern for both the refugees and the Ethiopian government, which is struggling to provide for their basic needs.

The coverage portrays the Ethiopian government's efforts to care for the refugees but also highlights the critical gap in international assistance. The refugees, living in makeshift camps, are in dire need of food, water, medical care, and other essential resources, further stressing the need for increased international cooperation.

2.1.3 Security frame

The media often utilizes a security framework to amplify its argument on illegal migration, frequently focusing on topics like national security, border control, and crime prevention. This approach highlights the perceived threats linked to illegal migration, emphasizing notions of state authority and sovereignty. For instance, EBC's broadcast on September 14, 2023, at 8 p.m., presented an example of this security-centric framing.

Italy's declaration of a state of emergency in the Lampedusa Island region: The state of emergency was prompted by a surge in illegal migration, with nearly 7,000 refugees entering the country within the last two days. This dramatic increase in arrivals raised concerns over national security and overwhelmed local resources. The Italian government implemented a state of emergency to provide additional resources to Lampedusa, a region struggling to manage the influx. The state of emergency also enabled the government to expedite the processing of migrants and their subsequent resettlement in other parts of Italy.

The news report featured audio-visual footage showing dozens of migrants attempting to cross the Mediterranean Sea to reach Europe, while border security forces worked to block their entry. The footage underscored the heightened security concerns and the pressure placed on European nations to control their borders. A further broadcast by EBC on April 12, 2023, at 7 p.m., reported:

The United Nations reported a significant rise in the number of migrants arriving in Europe by sea, especially from North African countries like Tunisia. The Italian port of Lampedusa alone handles over 3,000 boats carrying refugees within three days. However, the Mediterranean Sea has become a deadly route, with approximately 1,000 migrants reported to have died at sea in recent years.

EBC highlighted the increasing strain on European countries due to the growing number of migrants. Many nations, including Italy, have responded by implementing stricter border controls in an attempt to manage the flow of migrants. The report described the situation in the Mediterranean as a humanitarian crisis, but it also reflected the divided opinions within Europe regarding the handling of the migrant influx. Some critics argued that the Italian government was not doing enough to assist migrants, while others believed that its policies were too lenient and encouraged further immigration.

2.1.4 Economic frame

The emphasis of messaging in an economic context is on the possible benefits and drawbacks of illegal immigration as it relates to the economy. In broadcast news on EBC, the theme of the story focused on improving the economy of migrants, job opportunities for migrants, housing supplies, medical benefits, and other financial advantages, as well as obstacles faced by illegal migrants, which are classified under the economic framework. For instance, on December 15, 2023, at midnight, EBC broadcast:

Ethiopians, who migrate illegally, when they return to Ethiopia from various international countries, find it difficult to establish a new life. As a result, they choose migration after they have escaped from harassment. For example, Marta Yohannes, who went to Italy illegally to live a better life, was only 14 years old. However, when she returned home, she had neither a welcoming nor a supportive family.

The article highlights the difficulties of Ethiopians who illegally migrate to other countries, and the problems they face upon returning to their home country. Marta Yohannes, a 14-year-old Ethiopian girl who left for Italy, found her family unsupportive upon her return. This is a frequent reality for Ethiopians returning from migration, driven by the pursuit of improved prospects abroad amid widespread unemployment and poverty in their homeland. The article uses audio-visual footage to highlight the socioeconomic factors driving migration and the economic implications of such journeys. The challenges faced by Ethiopians during their return can negatively impact their mental and physical health, leading to stress, anxiety, depression, malnutrition, fatigue, and substance abuse. It was, for instance, reported by EBC on December 16, 2023, at 7 p.m. regarding such abuses:

Ethiopian citizens migrate to various countries worldwide in pursuit of improved living conditions. However, many face harm due to a lack of essential training before their departure. Efforts are now underway to provide the required training and to address and report such mistreatment.

The issue of Ethiopian citizens traveling abroad for better opportunities but facing harm due to inadequate training is a significant concern. Many may migrate without understanding the associated risks or the need for proper preparation to work safely in certain sectors. Raising awareness about these dangers and ensuring that individuals receive the necessary training is crucial to safeguarding their well-being.

2.1.5 Conflict frame

Conflict frames depict illegal migration and human trafficking through the lens of conflict, insecurity, and disagreements among individuals, parties, institutions, or groups. The EBC highlights these issues by focusing on conflicts or the struggles of refugees, emphasizing their severe and harmful effects on individuals and communities. In its June 23, 2023, 7 p.m. broadcast, EBC News analysed the root causes of these challenges to propose effective solutions:

As the conflict in Sudan escalates, migration to neighbouring countries persists. The violation of a three-day cease-fire agreement has led to a surge in refugee numbers. Data from the United Nations Refugee Agency indicates that over 2.5 million individuals have been displaced from their homes, seeking refuge in neighbouring nations.

The news often magnifies the conflict's impact, rather than its solution and core cause. This has caused discontent among people. Similarly, the news aired on June 14, 2023, at 2 p.m. highlights the impacts of conflict, which forced a dozen individuals to leave their homes unwillingly.

The United Nations Refugee Agency announced that more than 110 million people were displaced from countries experiencing instability. According to the refugee agency, the crises in Ukraine, Sudan, and Afghanistan have contributed significantly to the increase in the number of displaced people. The head of the United Nations refugee agency, Filippo Grandi, said in a press conference in Geneva that climate change is one of the reasons for displacement. The number of displaced persons, which was 40 million before the start of the Syrian War in 2011, has now risen to 110 million. In 2022, more than 339,000 displaced people returned to their country, and more than 114,000 were resettled in third countries.

The report emphasizes the growing number of displaced individuals due to crises in Ukraine, Sudan, and Afghanistan. Through audio-visual footage, it portrays women, children, and elderly people in camps, notably without the presence of soldiers. The international community struggles to provide essential services such as food, water, and shelter to those affected.

2.1.6 Sociocultural frame

The sociocultural frame highlights the opportunities and challenges encountered by illegal immigrants within the sociocultural realm. This perspective may emphasize concerns about preserving cultural identity or sustaining social harmony. It may also address the ease with which immigrants adapt to the community, acquire the language, and embrace local traditions. Based on these criteria, this study categorizes broadcast media stories under the sociocultural framework. In this context, the news aired on October 8, 2023, at midnight reports:

Ethiopia stands as Africa's leading nation in hosting refugees from various countries, providing them with a supportive living environment. Over 100,000 refugees, including those displaced by the recent Sudanese conflict, are sheltered in camps across the Benishangul Gumuz region. Sudanese refugees in the Sore camp report harmonious relations with the local community, built on shared cultural values. They describe their bond as equal, participating in mutual celebrations like weddings and supporting one another during life events such as marriage and death.

The news underscores the harmonious relationship between Sudanese refugees in the Sore refugee camp and the local Ethiopian community. Testimonies from the refugees highlight progress in integration and the establishment of peaceful coexistence. Audio-visual footage, depicting women, children, and elderly individuals, illustrates collaboration and cultural exchange. Adopting a sociocultural lens, the story emphasizes the value of cultural interaction and unity between migrant and host communities. Ethiopia's experience showcases its capacity to create a safe and inclusive environment fostering successful integration for refugees.

News aired by EBC on June 24, 2023, at 1 p.m. also demonstrates the call for solidarity to support refugees: Margaret Itman, the United Nations Refugee Agency's representative in Ethiopia, urged the international community and longstanding institutions in the country to unite in ensuring that development efforts benefit both refugees and residents in refugee-hosting areas. As part of Refugee Day celebrations in the AFR region, she plans to join an auction supporting income-generating initiatives for self-sufficient refugees. Meanwhile, Osman Ali, a resident of the Asayta refugee shelter, along with local community member Isaac Umar, shared that they established an association and gained from fishing in the Awash River, utilizing training that benefited both refugees and residents.

The study emphasizes the importance of international support and the positive impact of allowing refugees to participate in development. The audio-visual footage showcases fishery workers harvesting fish and the collaboration between the resident society and migrants.

2.2 EBC Portrayal of the News about HTIM issues

EBC portrays illegal migration and human trafficking with contrasting tones: it adopts a more positive approach toward immigrants while displaying a negative stance toward emigrants. The term "illegal migrant" is commonly assigned to those leaving Ethiopia or moving to Western countries, whereas "refugee" is occasionally used for individuals entering Ethiopia or fleeing conflicts internationally. EBC partially focuses on solution-driven and informative content related to illegal migration and human trafficking. Furthermore, the term "illegal" is consistently preferred over "undocumented" in its descriptions of migrants.

2.2.1 Immigrants versus emigrants

The EBC emphasizes sharing migrant narratives and amplifying their voices to foster empathy and break stereotypes. Exploring the socioeconomic and political effects of migration, such as impacts on labor markets, education, and social cohesion, encourages more insightful discussions on migration within Ethiopia. EBC on July 10, 2023, at 1 P.m., reported:

Among the one million migrants Ethiopia has accommodated, over 383,000 reside in the Gambella region, receiving protection and essential services. Mr. Woldesew Nguse, Head of the Gambella Branch of the Refugee and Returnees Service, confirmed that refugees in the area are benefiting from comprehensive social and humanitarian services.

The story portrays Ethiopia as a welcoming country that offers protection and basic services to refugees, emphasizing the importance of providing social and humanitarian services to help them rebuild their lives and integrate into their new communities. The audio-visual footage primarily features destitute women, children, and poorly dressed migrants, emphasizing the need for compassion and assistance. Another news report on October 17, 2023, at 7 p.m., by EBC states: Ethiopia stands out as the first country in Africa to welcome immigrants from various nations and provide a welcoming environment for refugees. Among the more than 100,000 refugees currently hosted by the country, including those who have escaped recent conflicts in Sudan, many reside in temporary camps located in the Benshanegul Gumz region. The United Nations High Commissioner for Refugees, Gudu Nasir Atayu Dia, has noted

that these refugees have established positive relationships with the local community, highlighting the harmonious coexistence between the two groups.

The news story about Ethiopia's efforts to assist refugees serves as a positive example of immigration, standing in stark contrast to the negative portrayals often seen in the media. The Ethiopian government's policy of welcoming refugees and providing them with essential resources has fostered a supportive environment, especially when compared to many other countries where refugees frequently encounter hostility and discrimination.

The audio-visual footage accompanying the report captures the realities faced by displaced women and children in camps, effectively illustrating the challenging living conditions they endure. However, the narrative goes beyond mere hardship; it emphasizes the importance of community support for refugees.

In this context, media framing plays a crucial role in shaping public perception. By highlighting Ethiopia's compassionate approach to refugee support, the media can promote positive agendas, raise awareness about the needs of displaced individuals, and inspire action on important humanitarian issues. This balanced portrayal not only informs the public but also encourages a more empathetic understanding of immigration and its complexities.

2.2.2 Solution-oriented versus information-delivery based

EBC has approached illegal migration and human trafficking in a solution-oriented manner by showcasing personal stories of those impacted by these issues. This approach helps to humanize the topic and make it more relatable to its audience. For example, during the news broadcast on December 15, 2020, at midnight, specific narratives were shared to emphasize the human aspects of the challenges surrounding migration and trafficking. This strategy aims to foster a deeper understanding and empathy among viewers.

Ethiopians who migrate illegally often face significant challenges upon their return to the country, struggling to rebuild their lives. Many end up choosing migration as a means of escape from harassment. For instance, Marta Yohannes, who attempted to migrate to Italy at the age of 14 in search of a better life, found herself returning to Ethiopia only to encounter an unwelcoming and unsupportive family environment.

The news piece sheds light on the difficulties faced by Ethiopians who migrate illegally and face challenges reintegrating into their home country. It emphasizes the human aspect by narrating Marta Yohannes' experience, who sought illegal migration at a young age. Through audio-visual footage, the story explores the economic effects of migration and the absence of supportive environments for returning migrants. By addressing the root causes, it invites readers to think about solutions and establish support mechanisms to aid returnees in rebuilding their lives. Additionally, it urges consideration of the wider impacts of illegal migration and the importance of assisting those affected. News on challenges of returnees was also reported by EBC on March 4, 2023, at 7 p.m. as follows:

The Ministry of Women and Social Affairs emphasized the need to mobilize society in efforts to prevent and address the human trafficking that has brought suffering to many citizens. Reports indicate that over 100,000 citizens have returned to Ethiopia in the past year. However, many of those rescued from illegal human trafficking are returning in even greater distress. To combat this issue effectively, it is crucial to address and eliminate the root causes in affected areas and to regulate internal human trafficking, which serves as a primary driver of illegal migration.

The news report highlights the issue of human trafficking and the initiatives undertaken by the Ministry of Women and Social Affairs to address it. It emphasizes the severity of the problem, noting that more than 100,000 citizens have returned to Ethiopia in the past year due to trafficking. The report stresses the importance of eliminating trafficking hotspots and curbing internal trafficking to deter illegal migration. However, it provides limited insight into the specific strategies or measures being applied to

tackle human trafficking effectively.

2.2.3 Positive versus negative tone

The tone employed varies depending on the migration context, with distinct approaches for immigrant and emigrant news reports. A positive tone is more likely to be applied to emigrants or migrants, particularly when highlighting the challenges they face and overcome during their migration journey. For example, in a news broadcast aired on October 8, 2023, at midnight, specific instances were cited to illustrate these dynamics and address the complexities of migration experiences as follows:

Ethiopia is recognized as Africa's top country in welcoming refugees from various nations and providing them with supportive living conditions. Over 100,000 refugees, including those fleeing the recent conflict in Sudan, are accommodated in camps within the Benishangul Gumuz region. Sudanese refugees residing in the Sore refugee camp report positive relations with the local community, sharing cultural values and participating in life events such as weddings and funerals. This mutual interaction fosters equality and unity, contributing to a harmonious coexistence.

The narrative adopts an optimistic tone, utilizing words like "leading," "comfortable," "good relations," "sharing," "equal," "celebrate," and "good" to portray Ethiopia as a welcoming and secure haven for refugees. Testimonies from refugees, including expressions of gratitude for the support they have received, further reinforce this positive outlook, highlighting their contentment with their new lives in the country. An additional news story broadcast on February 8, 2023, at 1 p.m. exemplified this perspective.

It was announced that we should work together to improve the living conditions of Eritrean refugees living in the Alemwacho refugee shelter in the Dabat district of the Amhara region. The United Nations High Commissioner for Refugees, Flipogrande, visited the Eritrean refugees in the Alemai Refugee Camp in the Dabat District, Amhara Region. He thanked the Ethiopian government for the support it provided for refugees. The High Commissioner, who spoke to the representative of the refugees, said that the United Nations Commission on Refugees will do its part to provide basic services to them.

The news story is well-written and informative, providing crucial information about the refugee situation in Ethiopia and the efforts made to help them. The positive tone of the story demonstrates Ethiopia's commitment to helping those in need and the importance of cultural exchange. However, the EBC used a negative tone in reporting immigrant issues and about the interaction among Ethiopian citizens, international migrants, and Europeans on December 14, 2023 seven p.m. as follows:

Ethiopians travel abroad to various countries seeking improved living conditions. However, many face harm due to a lack of adequate training before their departure. Efforts are now being made to provide the required training to address and report the abuses experienced by these citizens.

The story could adopt a more positive tone by emphasizing the proactive steps taken by the Ethiopian government to provide training for citizens, equipping them to prevent injuries and challenges during migration. Additionally, it could highlight success stories of Ethiopian migrants who have secured stable jobs abroad, enabling them to support their families by sending money back home, thus contributing to both personal and national economic growth.

2.2.4 Migrants versus refugees

EBC predominantly uses migrants rather than refugees in its news reports. This is especially true for migration in Europe and the Middle East, as well as to the USA. For instance, on September 22, 2023, at 8 p.m., EBC reported: “*The state of Texas has declared a state of emergency following an increase in the number of migrants crossing the Mexican border into the United States*”. The news story highlights the complex issue of migration, particularly the distinction between migrants and refugees. The declaration of a state of emergency in Texas suggests a crisis due to the influx of migrants crossing the Mexican border. However, not all individuals crossing the border may be classified as migrants, and the focus on migrants may overlook the humanitarian aspect of the situation. The portrayal of the issue as a state of emergency may fuel political debates about immigration policies, border security, and international relations. EBC on April 12, 2023, at 7 p.m., reports:

Italy has announced that it is going to implement a state of emergency due to the increasing number of migrants crossing the Mediterranean Sea. The United Nations has reported that the number of migrants arriving in Europe by sea from North America has increased significantly over the last 5 years. There are a large number of immigrants from sub-Saharan African countries, especially Tunisia. The organization’s report, which mentioned that the Italian port of Lampedusa alone handles more than 3 thousand boats with refugees in three days, indicated that approximately one thousand of these migrants died at sea.

By framing the issue in terms of migrants versus refugees, the news story highlights the complexities and humanitarian aspects of the situation. This finding underscores the need for a nuanced understanding of migration and refugee flows, as well as the importance of addressing the root causes driving people to undertake such risky journeys.

2.3 Ethics in News reports about HTIM in the EBC

In the context of journalistic ethics, principles such as neutrality, balanced tone, objectivity, and truthfulness are essential for reliable news dissemination. However, the Ethiopian EBC has been found to fall short of these standards in its reporting on illegal migration and human trafficking. Specifically, its lack of neutrality raises concerns, as the content appears to align closely with the viewpoints and priorities of the Ethiopian government.

3 DISCUSSION, CONCLUSION, AND RECOMMENDATION

3.1 Discussion

The media’s framing of topics such as illegal migration and human trafficking plays a significant role in shaping public opinion and influencing policy decisions. By emphasizing particular aspects of these issues, media outlets can affect the discourse and outcomes of policymaking. According to Jung and Jung (2021), such portrayals can lead to stigmatization, discrimination, and further marginalization of those affected. Tukachinsky et al. (2023) argue that media coverage often highlights the criminal activities of migrants, fostering negative perceptions. Conversely, another common framing depicts illegal migration as a humanitarian crisis, focusing on the hardships faced by migrants fleeing poverty or violence. This narrative tends to evoke calls for more compassionate immigration policies and increased support for migrants. As Entman (1993) observed, emphasizing the suffering of migrants in media coverage can garner public support for immigration reform.

The first research question aimed to identify the dominant frames used by EBC News in its coverage of illegal migration and human trafficking. The investigation revealed that EBC presented these issues

through multiple lenses, employing six prominent frames during the sampling period: the responsibility frame, the humanitarian frame, the security frame, the economic frame, the conflict frame, and the sociocultural frame.

A key reason for the prominence of the responsibility and humanitarian frames—particularly the latter—is to raise awareness for aid, garner foreign currency, and cultivate a positive national image. Many stories framed under the humanitarian lens actively call for donations and support for migrants in Ethiopia. Conversely, the responsibility and economic frames often depict Ethiopia as fulfilling its duty to safeguard migrants and mitigate illegal migration. These frames highlight the dangers associated with migration, especially perilous ocean crossings, while also addressing the efforts of Western countries to restrict migrant movement across their borders.

The socio-cultural frame further emphasizes Ethiopia's national image and societal attitudes towards immigrants, portraying the government as committed to creating safe zones and employment opportunities for migrants. Supporting studies, such as those by [Getachew \(2019\)](#) and [Addishiwot \(2017\)](#), indicate that the responsibility frame serves to attribute accountability to the government and relevant authorities. Content analysis of EBC's coverage reveals a tendency for the media to prioritize the nation's image over the specific circumstances surrounding migration, aligning closely with governmental perspectives. This suggests that EBC's narrative is significantly shaped by state interests.

These varied frames are consistent with media framing theory, which posits that media outlets selectively choose, emphasize, and interpret aspects of reality to construct narratives that align with their goals ([Entman, 1993](#)). According to this theory, the frames utilized by media organizations can shape public opinion and influence policy decisions ([Dillman, 2014](#)). In this context, EBC News employs frames that underscore Ethiopia's efforts to assist migrants while simultaneously drawing attention to the challenges of migration—particularly towards the West—and publicizing international donations for related initiatives. To mobilize international support, EBC frequently utilizes humanitarian, responsibility, and economic frames.

Agenda-setting theory offers a useful perspective for examining EBC News' framing strategies. This theory, as explained by [McCombs \(2016\)](#), posits that media outlets influence public priorities by focusing on particular issues. EBC News has given considerable attention to migration and human trafficking, with a strong emphasis on humanitarian efforts, international responsibilities, and security concerns. However, this coverage often adopts a negative framing, using terms like “flooding” “threat,” “death,” “illegal,” and “displacement,” which has led to coalition efforts to address these challenges.

Moreover, EBC has positioned the Ethiopian government as a responsible actor in this narrative, emphasizing Ethiopia's legitimacy as a destination for refugees. Phrases like “*Ethiopia is home to refugees*,” “Ethiopia has fulfilled its promise to benefit refugees,” and “Creating a favorable environment for refugees” are commonly used to portray a positive image of Ethiopia's role in assisting migrants. Through these strategic framing techniques, EBC News not only informs its audience but also shapes perceptions of migration and Ethiopia's involvement in addressing these complex issues.

The analysis of EBC News' portrayal of illegal migration and human trafficking highlights its alignment with the Ethiopian government's perspective. The tone of reporting is generally positive when covering immigrants entering Ethiopia, while a more negative approach is adopted for emigrants. The term “illegal migrant” is predominantly used to describe Ethiopians migrating to Western nations, whereas those entering Ethiopia are more often referred to as “refugees,” particularly those fleeing conflicts. Although EBC occasionally includes solution-focused and informative coverage, it consistently prefers the term “illegal” over “undocumented” when referring to migrants.

The analysis extended to the audio-visual content used in EBC's coverage. Stories about migration into Ethiopia often feature footage of displaced women and children in crowded refugee camps, emphasizing their dire living conditions and the urgent need for humanitarian aid. In contrast, reports on Ethiopian emigrants, particularly those attempting to reach Europe, utilize imagery of migrants traveling by boat across the Mediterranean, border security measures, and rescue operations for distressed migrants at sea. These visuals serve to highlight the perilous nature of migration and underscore the urgency of

addressing these issues.

Previous studies have suggested that media coverage of illegal migration and human trafficking often heavily relies on government perspectives. Research by Wallinger (2010) and Virkus (2014) indicates that media narratives frequently fail to capture the full scope and severity of human trafficking, with government officials serving as primary sources. Consistent with these findings, EBC News often attributes responsibility for managing migrant populations to government officials and ambassadors, thereby amplifying Ethiopia's role in protecting and managing both incoming refugees and outgoing emigrants.

The application of media framing theory helps elucidate how EBC News selectively highlights and interprets aspects of reality to construct narratives aligned with its interests (Entman, 1993). The coverage emphasizes Ethiopia's humanitarian efforts while simultaneously focusing on the risks faced by Ethiopian emigrants heading to Western countries. Agenda-setting theory further explains the influence of EBC News on public opinion by prioritizing issues such as the perceived threats posed by illegal migration, often employing negative terminology like "illegal," "flooding," and "abuse" to accentuate these dangers.

The third research question focused on how EBC incorporates journalism ethics in its coverage of illegal migration and human trafficking. Journalism ethics, which emphasize truthful reporting and credibility, serve as vital guidelines for professional journalism. However, EBC's reporting raises significant concerns regarding adherence to these principles. The news stories and audio-visual content frequently lack impartiality, appearing closely aligned with the Ethiopian government's viewpoints and priorities. This lack of neutrality suggests that the coverage may be driven more by political agendas than by an objective examination of migration issues.

While some previous research supports these findings, other studies have reached different conclusions. For instance, Getachew (2019) and Thomas (2016) discussed the influence of government control and limited media freedom on migration coverage but did not explicitly consider journalism ethics in their analyses. In contrast, this study provides a more comprehensive examination by focusing on both the ethical dimensions of media reporting and the portrayal of migration issues. This dual focus allows for a deeper understanding of how political interests shape media narratives surrounding illegal migration and human trafficking in Ethiopia.

3.2 Conclusion

The media holds considerable power in shaping opinions and narratives, with framing serving as one of its most influential tools. Due to the close connection between media and society, the portrayal of groups, communities, and nations can either enhance or reduce their visibility, ultimately shaping public perception. This study examined how illegal migration and human trafficking were represented in Ethiopian broadcast media, specifically focusing on the EBC between January 1 and December 30, 2023.

The findings revealed that EBC News frames these issues in ways that align with the Ethiopian government's priorities. Frames such as responsibility, humanitarian, economic, and sociocultural reflect the impact of political agendas and media editorial policies on the narratives presented. The study emphasized the need for critical analysis of media framing to better understand its role in influencing public opinion and policy decisions concerning migration-related topics.

3.3 Recommendation

Framing in media significantly influences public perception and understanding of issues such as illegal migration and human trafficking. Broadcast media such as EBC, in particular, should enhance their coverage of these matters by focusing on raising public awareness and incorporating a variety of sources.

Journalists bear the responsibility of reporting on illegal migration from diverse viewpoints, examining its broad impacts on different facets of human life.

To achieve this, investing in journalist training is crucial, enabling them to address illegal migration and human trafficking from multiple perspectives. Furthermore, ensuring media freedom is vital for delivering thorough and impartial coverage. Ethiopian governments should avoid exerting control over media organizations and journalists, while also providing financial support to facilitate unrestricted reporting on illegal migration.

IOM has played a key role in tackling global migration challenges, with a strong focus on preventive measures against illegal migration and human trafficking. The IOM has also introduced media guidelines to promote ethical reporting and framing of migration issues, offering journalists valuable tools to address these complex topics. The organization has to continue playing its positive role in tackling migration challenges and promoting ethical and framing issues.

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Conflict of Interests

The authors declare that there are no conflicts of interest

References

- Addishiwot, T. (2017). *Media framing of human trafficking: A comparative study of addis zemen and the reporter* [Master's thesis]. Addis Ababa University.
- Bertrand, I., & Hughes, P. (2017). *Media research methods: Audiences, institutions, texts*. Bloomsbury Publishing.
- Caviedes, A. (2018). An emerging "european" news portrayal of immigration? In *Migrants, minorities, and the media* (pp. 49–69). Routledge.
- Davies, R. S. (2020). *Designing surveys for evaluations and research*. EdTech Books. https://edtechbooks.org/designing_surveys
- Dillman, C. F. R. (2014). Agenda setting and priming effects based on information presentation: Revisiting accessibility as a mechanism explaining agenda setting and priming. *Mass Communication and Society*, 17(4), 531–552.
- Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51–58.
- Entman, R. M. (2010). Media framing biases and political power: Explaining slant in news of campaign 2008. *Journalism*, 11(4), 389–408.
- Fotopoulos, N., Masini, A., & Fotopoulos, S. (2022). The refugee issue in the greek, german, and british press during the COVID-19 pandemic. *Media and Communication*, 10(2), 241–252.
- Getachew, A. (2019). *Ethiopians abused on gulf migration route*. Human Rights Watch.
- International Organization for Migration (IOM). (2017). *Media coverage on migration: Promoting balanced reporting*. International Organization for Migration.

- International Organization for Migration (IOM). (2024). *Fundamentals of migration: An introduction to some of the key terms, definitions and concepts related to migration and displacement*. Retrieved April 5, 2025, from <https://www.iom.int/fundamentals-migration>
- Jung, K., & Jung, Y. M. (2021). Framing young south korean working holidaymakers in australia: A longitudinal analysis of south korean newspapers from 2000 to 2018. *Asian and Pacific Migration Journal*, 30(3), 257–281.
- Mukherjee, S. P. (2019). *A guide to research methodology: An overview of research problems, tasks, and methods*. CRC Press.
- Onwubere, C. (2021). Framing of africans' migration to europe by selected news media: The untold truth and need for media and information literacy. *International Journal of Migration and Global Studies*, 27.
- Schewel, K. (2022). Aspiring for change: Ethiopian women's labor migration to the middle east. *Social Forces*, 100(4), 1619–1641.
- Thomas, K. (2016). *Practices of electronic media stations in supporting prevention against human trafficking in ethiopia (the case on etv, fana fm, and facebook)* [Master's thesis]. Addis Ababa University [Unpublished].
- Tukachinsky, R., Mastro, D., & Dragojevic, M. (2023). Linguistic characteristics of interracial interactions on primetime tv: A quantitative content analysis. *Western Journal of Communication*, 87(5), 751–775.
- Virkus, B. L. (2014). *Human trafficking and the media: Comparing newspapers' portrayal of victims and offenders* [Master's thesis]. University of Northern Iowa. <https://scholarworks.uni.edu/etd/78>
- Wallinger, C. S. (2010). Media representation and human trafficking: How anti-trafficking discourse affects trafficked persons [Paper 4]. *Proceedings of the Second Annual Interdisciplinary Conference on Human Trafficking*.

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- Present/permanent address. If an author has moved since the work described in your article was carried out, or the author was visiting during that time, a "present address" (or "permanent address") can be indicated by a footnote to the author's name. The address where the author carried out the work must be retained as their main affiliation address. Use superscript Arabic numerals for such footnotes.

Abstract

You are required to provide a concise and factual abstract which does not exceed 250 words. The abstract should briefly state the purpose of your research, principal results and major conclusions. Some guidelines:

- Abstracts must be able to stand alone as abstracts are often presented separately from the article.
- Avoid references. If any are essential to include, ensure that you cite the author(s) and year(s).
- Avoid non-standard or uncommon abbreviations. If any are essential to include, ensure they are defined within your abstract at first mention.

Keywords

- You are required to provide 3 to 5 keywords for indexing purposes. Keywords should be written in English. Please try to avoid keywords consisting of multiple words (using "and" or "of").
- We recommend that you only use abbreviations in keywords if they are firmly established in the field.

Introduction

The introduction should clearly state the objectives of your work. We recommend that you provide an adequate background to your work but avoid writing a detailed literature overview or summary of your results.

Methods

The methods section should provide sufficient details about your materials and methods to allow your work to be reproduced by an independent researcher. Some guidelines:

- If the method you used has already been published, provide a summary and reference the originally published method.
- If you are quoting directly from a previously published method, use quotation marks and cite the source.
- Describe any modifications that you have made to existing methods.

Results

Results should be clear and concise. We advise you to read the sections in this guide on supplying tables, figures, supplementary material and sharing research data.

Discussions

The discussion section should explore the significance of your results but not repeat them. You may combine your results and discussion sections into one section, if appropriate. We recommend that you avoid the use of extensive citations and discussion of published literature in the discussion section.

Conclusions

The conclusion section should present the main conclusions of your study. You may have a stand-alone conclusions section or include your conclusions in a subsection of your discussion or results and discussion section.

Abbreviations

- Abbreviations which are not standard in the field should be defined in a footnote on the first page of your article.
- Abbreviations which are essential to include in your abstract should be defined at first mention in your abstract, as well as in a footnote on the first page of your article.
- Before submission we recommend that you review your use of abbreviations throughout your article to ensure that it is consistent.

Appendices

- We ask you to use the following format for appendices:
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- Give separate numbering to formulae and equations within appendices using formats such as Eq. (A.1), Eq. (A.2), etc. and in subsequent appendices, Eq. (B.1), Eq. (B. 2) etc. In a similar way, give separate numbering to tables and figures using formats such as Table A.1; Fig. A.1, etc.

Acknowledgements (if any)

Include any individuals who provided you with help during your research, such as help with language, writing or proof reading, in the acknowledgements section. Include acknowledgements **only** in the **title page** since this journal follows a double anonymized peer review process. Do not add it as a footnote to your title.

Funding sources

Authors must disclose any funding sources who provided financial support for the conduct of the research and/or preparation of the article. The role of sponsors, if any, should be declared in relation to the study design, collection, analysis and interpretation of data, writing of the report and decision to submit the article for publication. If funding sources had no such involvement this should be stated in your submission.

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- *This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.*

References

References within text

Any references cited within your article should also be present in your reference list and vice versa. Some guidelines:

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- We recommend that you do not include unpublished results and personal communications in your reference list, though you may mention them in the text of your article.
- Any unpublished results and personal communications included in your reference list must follow the standard reference style of the journal. In substitution of the publication date add “unpublished results” or “personal communication.”
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This journal does not set strict requirements on reference formatting at submission. Some guidelines:

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Reference to a book:

Strunk, W., Jr., & White, E. B. (2000). *The elements of style* (4th ed.). Longman (Chapter 4).

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Mettam, G. R., & Adams, L. B. (2020). How to prepare an electronic version of your article. In B. S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281–304). E-Publishing Inc.

Reference to a website:

Powertech Systems. (2022). Lithium-ion vs lead-acid cost analysis. Retrieved from <http://www.powertechsystems.eu/home/tech-corner/lithium-ion-vs-lead-acid-cost-analysis/>. Accessed January 6, 2022.

Reference to a dataset:

Oguro, M., Imahiro, S., Saito, S., & Nakashizuka, T. (2015). Mortality data for Japanese oak wilt disease and surrounding forest compositions [dataset]. Mendeley Data, v1. <https://doi.org/10.17632/xwj98nb39r.1>.

Reference to a conference paper or poster presentation:

Engle, E.K., Cash, T.F., & Jarry, J.L. (2019, November). The Body Image Behaviours Inventory-3: Development and validation of the Body Image Compulsive Actions and Body Image Avoidance Scales. Poster session presentation at the meeting of the Association for Behavioural and Cognitive Therapies, New York, NY.

Reference to software:

Coon, E., Berndt, M., Jan, A., Svyatsky, D., Atchley, A., Kikinzon, E., Harp, D., Manzini, G., Shelef, E., Lipnikov, K., Garimella, R., Xu, C., Moulton, D., Karra, S., Painter, S., Jafarov, E., & Molins, S. (2020). Advanced Terrestrial Simulator (ATS) (Version 0.88) [Computer software]. Zenodo. <https://doi.org/10.5281/zenodo.3727209>.

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