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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT CONFERENCE PROCEEDINGS, WA, UPPER WEST REGION, GHANA, OCTOBER 15-17, OCTOBER 2024

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PREFACE

It is with great pride and satisfaction that we present the Refereed Conference Proceedings of the 4th Annual Research and Development Conference of the Simon Diedong Dombo University of Business and Integrated Development Studies (SDD-UBIDS), held from October 15–17, 2024, in Wa, Ghana. This publication marks another significant milestone in our collective efforts to advance scholarly research, foster intellectual exchange, and promote evidence-based policy and practice.

The 2024 conference, convened under the auspices of the Directorate of Research (DoR), brought together academics, researchers, students, and development practitioners from diverse disciplines and institutions, both local and international. The papers accepted for publication in the proceedings, following a thorough double-blind peer-review process, reflect critical insights and empirical evidence across twenty thematic areas, ranging from democratic governance, health, climate change, education, and technology, to sustainable tourism, innovation, and gender equity. The papers compiled in this volume embody the high standards of academic inquiry and originality expected of a refereed publication. We hope that this volume not only serves as a scholarly resource but also as a catalyst for sustained research engagement and development impact.

I would like to acknowledge the invaluable contributions of the Vice-Chancellor, Professor Emmanuel K. Derbile, the Organising Committee of the conference, the editors of these proceedings, the abstract reviewers, session chairs, and rapporteurs. Most importantly, we commend the authors whose research efforts form the core of this publication. We look forward to continued knowledge production and scholarly excellence in future conferences.

Editor-in-Chief

Prof. Frederick Dayour

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Enhancing financial access to healthcare for LEAP beneficiaries: An exploratory study on the perceived effectiveness of the free healthcare policy in Northern Ghana

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LEAP beneficiaries, free health policy, effectiveness, Nadowli-Kaleo District, Ghana

A B S T R A C T

This paper examined the free health policy (FHP) for beneficiaries of the Livelihood Empowerment Against Poverty (LEAP) cash transfer programme in Ghana. The purpose of the paper was to shed light on the extent to which the FHP enhanced LEAP beneficiaries' access to healthcare in the study area, drawing on an exploratory study design, based on 24 purposively selected LEAP beneficiaries. The study found that the FHP increased LEAP beneficiaries' access to healthcare and improved their self-reported health (SRH) status. The findings also revealed that despite the FHP, out-of-pocket payments persist. This situation compelled LEAP beneficiaries to resort to coping strategies such as borrowing, selling assets, and liquidating personal savings to finance healthcare. Remarkably, some LEAP beneficiaries are still not aware of the existence of the FHP. The study recommends that the LEAP Secretariat increase education on the existence of the FHP. The Ministry of Health should also prioritise the health of LEAP beneficiaries by ensuring the availability and adequate supply of drugs and medicines to minimize the need for OOP payments.

INTRODUCTION

Globally, the potential of social protection in addressing poverty, vulnerability and improving health outcomes has been established (Li et al., 2021; Thimmappa et al., 2021). Scholarship reports a positive relationship between social protection interventions, greater use of health services, and improved health outcomes (Li et al., 2021). Because of the positive relationship between social protection interventions and greater use of health services, the Sustainable Development Goals (SDGs) detail a systems approach to dealing with these important issues of human well-being. Specifically, target 3.8 of the SDGs aims to "achieve Universal Health Coverage (UHC), including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all" (United Nations General Assembly, 2015:16).

Consequently, health systems are striving to achieve UHC. UHC describes the process where all people have access to healthcare services and do not suffer financial hardship or impoverishment due to unaffordable healthcare costs, irrespective of their sex, socio-economic status, and age (World Health Organization, 2010). According to Ghana's revised national health policy (Ministry of Health, 2020:18) UHC in Ghana means "all people in Ghana have timely access to high-quality health services irrespective of ability to pay at the point of use". Health insurance is a key instrument in contributing towards the achievement of UHC because it reduces financial barriers to quality essential healthcare, increases the poor's access to care, and reduces the catastrophic effects of out-of-pocket payments. (Aikins et al., 2021; Issahaku et al., 2021). Ghana, in 2004, implemented its flagship National Health Insurance Scheme (NHIS) with the expressed aim of providing accessible, affordable, and good quality health care to all Ghanaians, especially the poor and most vulnerable in society, to quicken the pace towards UHC. (Ministry of Health, 2004; National Health Insurance ACT, 2012, Act 852, 2012, p. 825). Evidence available suggests that the NHIS has increased access to healthcare in Ghana and provided financial risk protection to the poor. (Aikins et al., 2021; Okoroh et al., 2020). One drawback of the NHIS is that the increased utilisation of healthcare services disproportionately benefits the better-off in society because the very poor and vulnerable are not adequately covered. (Alatinga & Williams, 2019). In 2012, as part of efforts to increase LEAP beneficiaries' access to healthcare, an FHP was implemented. The implementation of the FHP automatically qualified LEAP beneficiaries for free healthcare under the NHIS-LEAP. Beneficiaries are exempted from paying annual health insurance premiums, but

are only required to register with the NHIS to have access to free healthcare services at all NHIS-accredited health facilities. (Pouw et al., 2020).

While earlier studies examined other aspects of the LEAP and the NHIS, these did not specifically focus on the FHP and the extent to which it enhanced LEAP beneficiaries' access to healthcare. For example, Alidu et al. (2016) reviewed the LEAP and the NHIS, intending to explore existing legislations and policies that relate to the elderly in Ghana, while (Akweongo et al., 2022) explored community perceptions of enrolment of indigents into the NHIS in Ghana. Amarteifio et al. (2022) examined the mediating role of healthcare utilisation on LEAP beneficiaries and older adults' health security and concluded that the LEAP had made strides in healthcare promotion among the elderly population. However, their study deployed quantitative techniques, which did not capture the context and subjective experiences of people regarding the FHP. According to (Mishler, 1986), qualitative studies provide the opportune platform for individuals to perceive, organise, give meaning to and express their understanding of themselves, their experiences and their worlds within a particular context—something which quantitative techniques are not able to offer. Additionally, while Domapielle et al. (2023) investigating the barriers to health care access and utilisation among aged indigents of the LEAP, their study did not focus on the FHP. For this reason, sparse evidence exists to show the extent to which the FHP enhances LEAP beneficiaries' access to healthcare services or otherwise. An effective FHP would ensure that LEAP beneficiaries have access to the requisite healthcare services without incurring additional costs or out-of-pocket payments. Consequently, this study aimed to fill this knowledge gap. Because in the face of the increasing need for evidence-based policy-making, this evidence is consequential to justify the continuous support for the FHP for LEAP beneficiaries. The purpose of this study was, therefore, to explore the extent to which the FHP enhanced LEAP beneficiaries' financial access to healthcare. Specifically, the study explored whether or not LEAP beneficiaries still experienced out-of-pocket payments for healthcare despite the FHP, and the reasons thereof. The study also explored the coping strategies LEAP beneficiaries adopted to address out-of-pocket healthcare payments. The study further examined the SRH status of LEAP beneficiaries before and after they enrolled in the FHP. Understanding these issues is essential for evidence-based decision-making to improve or reform this important pro-poor policy. Dobrow et al. (2004) argue that public policy decisions, the outcome of which affects larger numbers of the population, require explicit justification for the development of sustainable health and social policy.

THE NHIS AND LEAP IN GHANA: A LITERATURE REVIEW

The NHIS and LEAP form the nucleus of social protection in Ghana. Ghana implemented the NHIS in 2004 following the passage of the National Health Insurance Act of Parliament, ACT 650, in October 2003, to remove financial barriers to accessing healthcare for the poor and most vulnerable in society (Ministry of Health, 2004). The NHIS replaced the hitherto OOP payments for healthcare, referred to as 'Cash and Carry'. The cash and carry system served as a major financial barrier to healthcare access (Ministry of Health, 2004). In 2012, ACT 650 was amended by parliament to ACT 852 with the expressed aim of attaining UHC for all persons living in Ghana (National Health Insurance Act 852, 2012).

The LEAP is the largest cash transfer programme in Ghana, reaching about 34% of the extremely poor. (Pouw et al., 2020). The LEAP provides conditional and unconditional cash transfers to extremely poor households to enable such households to meet their basic needs and empower them to eventually 'LEAP' out of extreme poverty. (Alatinga et al., 2019). However, transfers for caregivers of Orphaned and Vulnerable Children (OVC) and children infected with HIV/AIDS are conditional. Caregivers of children must enrol and retain all children in school, ensure children attend post-natal clinics and immunisation programmes, ensure that children are neither trafficked nor engaged in child labour, register children with the birth and deaths registry, as well as register all members of the household with the NHIS. (Ministry of Manpower, Youth and Employment, 2007, p. 7). The LEAP targets households with one or several elderly persons over the age of 65 years who have no means of support, persons with a severe disability, and orphans and vulnerable children (OVC). The LEAP cash amounts disbursed range from GH₵ 128 (US$8.31) to GH ₵ 212 (US$13.76), depending on the household size (Ministry of Gender, Children and Social Protection, 2024).

The introduction of the FHP for LEAP beneficiaries within the NHIS is aimed at eliminating or reducing OOP payments and providing financial protection for them against the cost of ill-health. In general, available evidence reports that health insurance or exemption policies increased access to healthcare for beneficiaries or policyholders (Alatinga et al., 2024; Kusi et al., 2015; Meda et al., 2019; Owusu-Addo et al., 2018; Pedrazzoli et al., 2021). However, it is also reported that health financing systems in most African countries are often weak to protect individuals and households from health shocks (Leive & Xu, 2008). For example, (Kusi et al., 2015) argue that even where insurance or exemption policies exist for certain categories of people, these policies often do not eliminate OOP payments. Kusi et al. (2015) further report that even though the NHIS covers 95% of disease conditions in Ghana, some insured patients still made OOP payments at NHIS-accredited health facilities. In Burkina Faso, it is reported that about one-third of women still made OOP payments to access healthcare despite the existence of a free maternal healthcare policy (Meda et al., 2019). Relatedly, (Pedrazzoli et al., 2021) report that even though the NHIS in Ghana offers free healthcare to TB patients enrolled on it, some of them still incurred OOP payments, and concluded that the NHIS in its current form is ineffective in reducing TB patient costs. Shortage of essential drugs, stockouts, and supply chain challenges have been cited as major reasons for OOP payments in the presence of health insurance or exemption policies (Abredu et al., 2023; Alatinga et al., 2024; Domapielle et al., 2023). Individuals and households often resort to different strategies to cope with OOP payments, including borrowing, selling productive assets, and liquidating personal savings, among others (Kruk et al., 2009; Leive & Xu, 2008; Murphy et al., 2019). For example, based on empirical evidence from 15 African countries, Leive and Xu (2008) assert that households turn to borrowing and sell

assets to cope with healthcare costs. Using these strategies to cope with OOP payments may impoverish individuals with lower socio-economic status (SES) or poor households, and affect their overall self-rated health status because lower SES has been linked to lower levels of self-rated health (SRH) (Smith et al., 2010). SRH is an accepted health status rating assessment technique that captures information of individuals, and has become increasingly popular because of its simplicity and its well-established links with various health outcomes such as mortality, functional difficulties and chronic diseases (Onadja et al., 2013; Tetteh et al., 2019). SRH is used mostly to assess the health status of adult populations because, as the ageing population increases, the health of the elderly becomes a major issue of policy concern (Fonta et al., 2017). Evidence from Burkina Faso established that poor SRH was associated with chronic diseases and that poor SRH increased with age (Onadja et al., 2013). It is argued that even though SRH is subjective, it is a good predictor of future healthcare use and mortality (Debpuur et al., 2010). Debpuur et al. (2010) found that in the Kasena-Nankana Municipality in Ghana, the majority of older people rated their overall health status as good. On the contrary, another study in Ghana reported that the odds of reporting poor health were 2.5 times higher among the elderly relative to young adults (Fonta et al., 2017). Consequently, notions of good or poor health may be influenced by the individuals' personal experiences and interactions with the healthcare system (Smith et al., 2010). As a result, the relationship between health conditions and the assessment of overall health status may vary among different SES groups (Smith et al., 2010). In this respect, an earlier study established that LEAP beneficiaries are generally poor people or households in need of healthcare but cannot afford the cost of medical treatment (Alatinga et al., 2019). This scenario provides an important rationale to investigate the extent to which the free health policy within the NHIS for LEAP beneficiaries enhances their access to healthcare.

Reflexivity of health systems: conceptual framework

Access to healthcare has been variously conceptualised. Levesque et al. (2013) put forward the following dimensions of access: approachability, acceptability, availability, accommodation, affordability, and appropriateness. Because this work focuses on the extent to which the FHP enhanced LEAP beneficiaries' access to healthcare, only the affordability dimension of access is relevant. Affordability refers to the cost of healthcare, and the capacity of different segments of the population to use health services (Levesque et al., 2013). This dimension of access is particularly appropriate in this study context because it is argued that, despite the existence of the NHIS in Ghana, financial barriers to access to healthcare among vulnerable populations still exist. (Acquah-Hagan et al., 2021).

This dimension of access is analysed in the context of social relations of power and knowledge because society is a structure of *social relations* which affect all human activity, including access to equitable healthcare. The provision or distribution of health resources to ensure free access to healthcare for the poor in society is a political decision. Guba and Lincoln (1989, p. 118) argue that "every act of science is a political act, one that structures power relationships in a particular way and serves to maintain the *status quo*". According to Chilvers (2013), evaluating any social system in terms of social relations, such as the health system (e.g., the financing aspect), in this case, enables us to determine the level of reflexivity. Reflexivity describes the extent to which the health system either enhances or constrains human agency in the pursuit of healthcare. Put differently, reflexivity describes the process that allows individuals to explore or examine situations based on their past experiences to develop new understandings that will influence their actions. (Tremblay et al., 2013). That is, reflexivity allows individuals to evaluate their experiences with a social system to provide feedback on the performance of the system. (Tremblay et al., 2013). Invoking the jurisdiction of the concept of reflexivity in this study is particularly germane because it may allow LEAP beneficiaries to evaluate their unique experiences with the free health policy (FHP) and the health system in general regarding the extent to which the FHP enhanced access to healthcare. It is in this context that. Tsekeris and Katrivesis (2008), describe reflexive engagement as the unfolding of actions and interactions, beginning in the present and orienting to the future, through the study of the relations between various actors—e.g., LEAP beneficiaries' interactions and actions with the health system in their demand for healthcare. In this perspective, reflexivity may be regarded as an essential capacity enabling the actors to adjust to situations or the specific contexts of social phenomena (e.g., LEAP beneficiaries employing coping strategies to finance healthcare in the context of out-of-pocket payments).

Consequently, the level of reflexivity of the social system determines the extent or the degree of human agency within the system (Tsekeris & Katrivesis, 2008). Thus, a social system with high levels of reflexivity may greatly enhance human agency. This type of social system enables people to plan effectively and to make free choices from the human development opportunities available (e.g. using the FHP to access healthcare) to construct their lives. (Elder, 1994; Tsekeris & Katrivesis, 2008). The opposite situation is true: a social system with low levels of reflexivity may limit human agency. Based on the preceding discourse, I propose a conceptual framework that may be used to evaluate the degree or levels of reflexivity of a health system or a social system. For practical reasons, a scale of 1 to 3 is employed—1 representing low levels of reflexivity, 2 representing medium levels, and 3 representing high levels respectively (see Fig. 1).

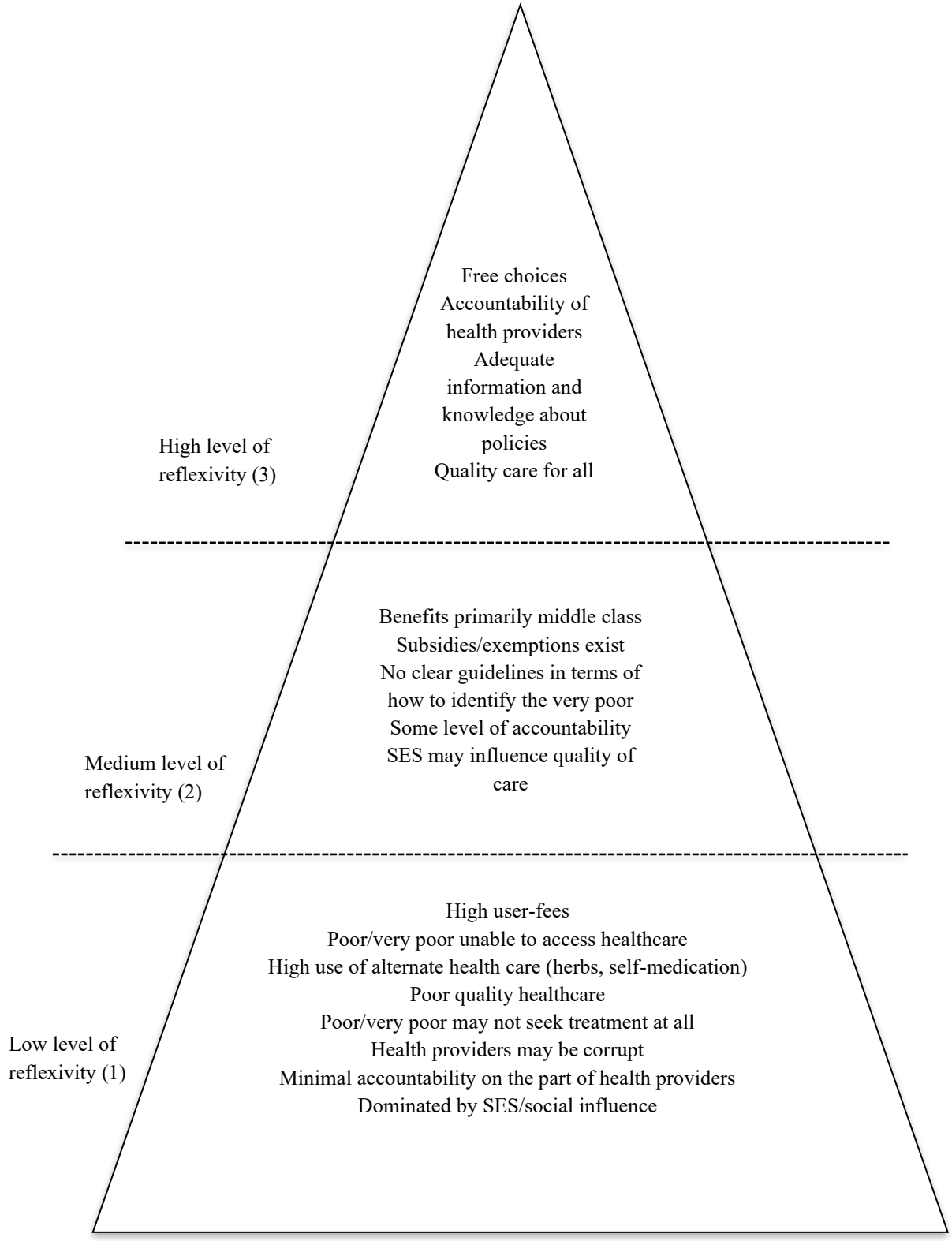


Figure 1: Levels of Reflexivity of Health Systems (Source: Adapted from Alatinga, 2014)

As Figure 1 shows, a health system with high levels of reflexivity enhances human agency and enables people to choose freely regarding access to quality health care. In this type of system, individual may be able to hold health providers accountable for the type of health care they receive because they possess adequate information and knowledge about existing health policy services. Similarly, health systems may also demonstrate low levels of reflexivity. In this case, the high cost of health care may constrain access to healthcare for the poor because access to healthcare is dependent on the socio-economic status (SES) and social influence of the individual. Health providers may even be involved in corrupt practices, yet they may not be accountable to the health-seekers. This situation may result in poor quality of healthcare with the potential of undermining access to healthcare for the poor. In this scenario, the poor may seek other forms of healthcare, including the use of herbs and self-medication. In extreme cases, the poor/very poor may not

seek health care at all. In between these two extremes lie health systems with medium levels of reflexivity. These systems may have subsidies or exemption policies for the very poor. Structural problems, such as the unavailability of supplies, such as drugs, restrain the poor from accessing these policies. Consequently, he middle class and the wealthy in society may benefit more from these policies relative to the poor (Alatinga, 2014).

Inherent in the concept of reflexivity lies social relations, which encompass power and knowledge. In deconstructing power and knowledge, Chambers (1997, p. 58) uses the analogy of 'uppers' and 'lowers' in his examination of "hierarchies of power and weakness, of dominance and subordination" in society. In Chamber's view, 'uppers' are people who occupy positions of dominance, whereas 'lowers' are those who occupy positions of subordination or weakness. Chambers contends that 'uppers', such as professionals with power, tend to impose their "realities on the lowers" and devalue the knowledge and experience of the 'lowers'. In this study context, 'lowers' may comprise the LEAP beneficiaries whose access to healthcare may be constrained by social barriers, including the costs of healthcare, for example, and the 'uppers' being health providers.

The study was conducted in the Nadowli-Kaleo district in the Upper West Region of Ghana. The Upper West Region has a total population of 901,502, made up of 48.8% males and 51.2% females. (Ghana Statistical Service, 2021). The Region is situated in the northwestern part of Ghana and is one of the least urbanised and poorest regions in Ghana. (Ghana Statistical Service, 2018).

The Nadowli-Kaleo district is one of the eleven districts in the Upper West Region, located in the central part of the region. It lies between latitudes 11 30' and 10 20' north and longitudes 3 10' and 2'10' west and has a total population of 77,057, made up of 48% males and 52% females. (District Planning Coordinating Unit (DPCU), 2021; Ghana Statistical Service, 2021). Dagaaba constitute the major inhabitants of the Nadowli-Kaleo District. (Abdul-Korah, 2011). According to the DPCU (2021), fifty-three communities currently benefit from the LEAP in the district, covering a total of 4,518 households comprising 36,897 beneficiaries, 60% of whom are females, and 40% males. As illustrated in Figure 2, the study was conducted in two of the beneficiary communities—Kanyinni and Loho, in the Nadowli-Kaleo district. The district was selected for the study because it has one of the highest numbers of LEAP beneficiaries in the region (Alatinga, 2019).

METHODOLOGY

Study setting

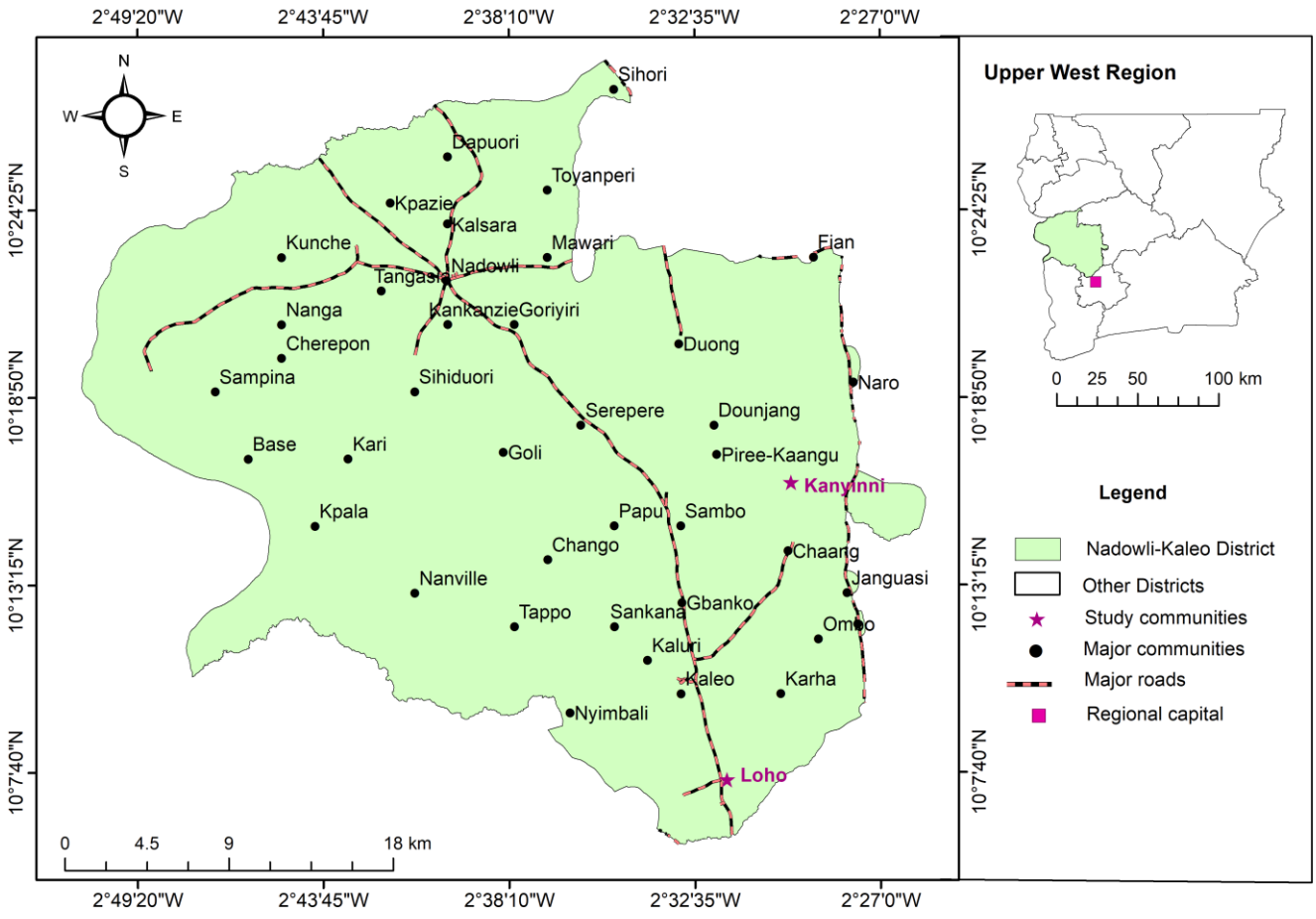


Figure 2: Map of Nadowli-Kaleo District showing the study Communities

Research design

A qualitative research design was used in the study to explore the extent to which the FHP enhanced LEAP beneficiaries' access to healthcare. This research design was germane to allow us to situate the study in a realist epistemology, which gives primacy to the experiences of people and their understanding of reality in great detail regarding the phenomenon and the meaning people make of the phenomenon. (Braun & Clarke, 2006). In this context, the realist epistemology is essential to anchor the analysis of the study and permit LEAP beneficiaries to share their experiences and the meaning they make of the FHP.

Target population and sampling

The target population for this study consisted of a list of 4,049 LEAP beneficiaries and caregivers (District LEAP Secretariat, 2019). This list was obtained from the District LEAP Secretariat in order to access the respondents. With this list, the study targeted only respondents who fell sick and sought healthcare in the last 12 months. To ensure that all the participants met this inclusion criterion, the following filter question was asked at the beginning of each interview: Have you been ill/injured in the last 12 months? Only those who responded in the affirmative to this question were interviewed. Both the study participants and the district were selected purposively. The district was purposively selected because it has one of the highest numbers of LEAP beneficiaries in the region. Because purposive sampling is a practice where study participants are intentionally selected to represent explicit predefined traits or conditions (Luborsky & Runistein, 1995), the study participants were purposively selected because they had been ill/injured and sought healthcare under the FHP. In addition, these study participants were purposively selected because of their capacity to provide richly textured information relevant to the phenomenon under study. (Vasileiou et al., 2018). Specifically, *criterion sampling* was deployed in this study. According to Palinkas et al., (2015)Criterion sampling is a purposive sampling strategy in which individuals are selected based on predetermined characteristics. These individuals are selected based on the assumption that they possess special knowledge and experience regarding the phenomenon of interest, and are thus in the position to provide detailed information about the subject matter (Palinkas et al., 2015). Therefore, in this study, the rationale for targeting LEAP beneficiaries and caregivers was that since they had accessed and used healthcare facilities, they would be capacitated to share their experiences and perceptions and provide relevant and accurate information relating to the extent to which the FHP enhanced their access to healthcare.

A total of 24 in-depth interviews were conducted. The determination of the sample size was guided by two criteria: *saturation.* (Hennink et al., 2017) and *informational redundancy* (Lincoln & Guba, 1985). According to Vasileiou et al., (2018) the principle of saturation is the most widely utilised guarantee of qualitative rigour, and refers to the point in the data collection process where gathering fresh data no longer sparks new insights. In their work, Hennink et al. (2017) reported that 16 to 24 interviews were needed to reach saturation in qualitative studies. Thus, the sample size of 24 in-depth interviews used in this study is consistent with the extant literature. Moreover, informational redundancy describes the stage in the data collection process where sampling ended because no new information was obtained in carrying out additional interviews after reaching the 24th interview.

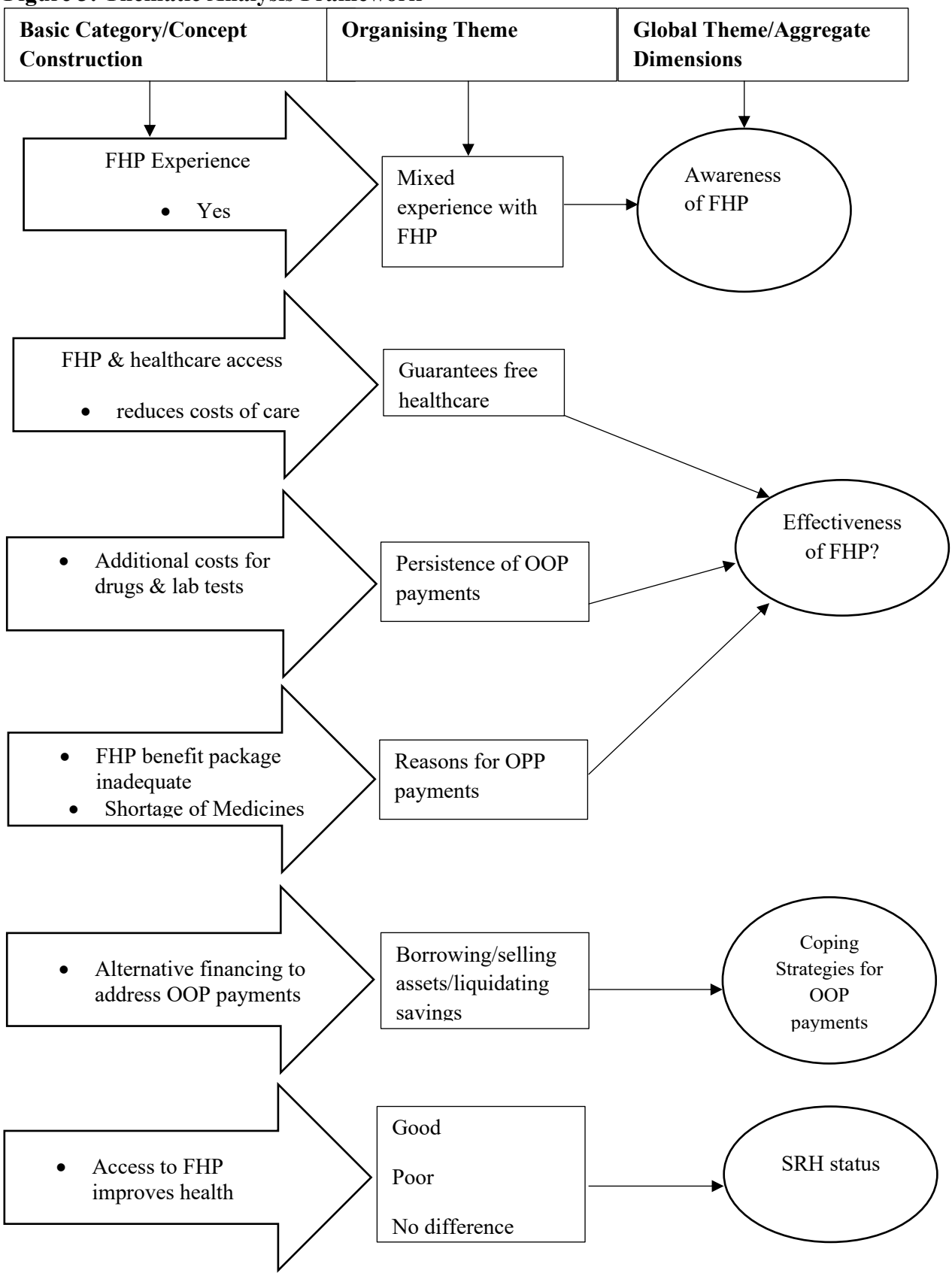
Data collection

A semi-structured interview guide was used to collect data through in-depth interviews (IDIs) over one month. The IDIs obtained information on the basic characteristics of the respondents, including age, sex, educational attainment, their awareness of the free healthcare policy, the extent to which the policy enhanced financial access to healthcare services, coping strategies, and the effect of the policy on the self-reported health status of the participants. On average, the interviews lasted between 45 minutes and an hour and were audio-recorded with the permission of the participants. All the interviews were carried out in the local language (Dagaare) and later translated into English. To ensure the accuracy and consistency of the translation, a language expert—a bilingual in both Dagaare and English- validated the English by back-translating the interview guide in the local dialect into English. The translation was necessary because the author does not speak the local dialect. The recorded interviews were then transcribed and prepared for data analysis.

Data analysis

An inductive thematic analysis technique was used using Qualitative Data Analysis (QDA) Software (Miner), which facilitated comparison and triangulation of participants' views for convergence and divergence (Braun & Clarke, 2006; Creswell & Miller, 2000). Themes are abstract and subtle expressions/patterns/processes that explain a phenomenon (Mishra & Dey, 2022). The analysis followed the framework analysis, which is geared towards generating policy and practice-oriented research findings (Green & Thorogood, 2004). This analytical procedure is akin to Attride-Stirling's (2001) the thematic analysis framework and Gioia et al's (2012) the idea of data structure. According to Gioia et al. (2012), data structure, it not only allows researchers to configure their data into a sensible visual aid, but it also presents a graphic representation of how researchers progress from raw data to terms and themes in conducting the analyses. Data structure represents an important component of demonstrating rigour in qualitative research (Gioia et al., 2012). The thematic analytical framework or data structure followed in this study is illustrated in Figure 3. The right side of Figure 3 details the basic categories/concepts identified, the middle part contains the organising themes, while the right-hand side presents the global themes or aggregate dimensions.

Figure 3: Thematic Analysis Framework



Source: Author's Construct (2025)

The framework procedure allows for a step-by-step analysis of the data to maintain the integrity of participants' narratives. (Green & Thorogood, 2004). The first step in the framework procedure entails *familiarisation* with the data. (Green & Thorogood, 2004). Here, I listened to the audio tapes to understand and appreciate the data very well. This stage is also known as open/initial or axial coding (Gioia et al., 2012; Mishra & Dey, 2022) afforded me the opportunity to begin to identify large categories/concepts or themes from the data relevant to the research questions. In this process, six categories/concepts were identified as illustrated in Figure 3.

The second step in the framework analysis is *thematic coding*. Based on the first-order codes in the first step, a coding frame was developed. Codes were assigned to text segments that appeared relevant to the research questions and then input into the QDA software for analysis. Attride-Stirling (2001) refers to this stage as organising theme. Here, selective coding was done to reduce the initial/open codes to more focused second-order ones. (Mishra & Dey, 2022). Essentially, core categories were systematically selected and compared with the aim of either dropping insignificant categories or merging redundant ones to generate new independent themes. (Mishra & Dey, 2022). Creswell (2014) describes this process as 'winnowing'—the process of focusing in on some of the data and disregarding other parts of it, enabling the researcher to categorise the data incisively and completely (Bryman, 2008). The thematic coding process resulted in six organising themes as shown in Figure 3.

Following is *indexing,* where all the themes in the second stage were recoded to reduce them to a few core dimensions—global themes or aggregate dimensions. (Attride-Stirling, 2001; Gioia et al., 2012; Wæraas, 2022). According to Byrne (2022), themes should be unique and could contradict others, but must work together to create a reasoned and clear representation of the dataset. This idea is depicted in Figure 3, where the persistence of OOP payments and the reasons thereof contradict the view that the FHP guarantees free access to healthcare, and thus question the effectiveness of the FHP. Here, then, with the aid of the QDA software, the codes were methodically applied to the dataset to enable a comparison of the perceptions of the respondents. This process resulted in four global themes or aggregate dimensions, as illustrated in Figure 3, and brought clarity to the data analysis.

Fourth is *charting*, where the data were summarised and rearranged according to the themes. According to (Braun & Clarke, 2006), this process of summarising and re-arranging the data thematically may unpick the surface of 'reality'. The fifth step in the framework analysis is *mapping and interpretation*. Here, I investigated the relationships and connections between the themes to establish differences and similarities, to interpret and give meaning to the data. I presented the findings in the form of a narrative using the direct quotes from participants to support the key points. Thematic analysis offered flexible and useful research, with the potential to provide a rich and detailed, yet complex account of data, particularly on under-researched areas or topics on which research participants' views are not yet known (Braun & Clarke, 2006). Triangulation of participants' and caregivers' views and member checking contributed to the reliability and validity of the analysis (Creswell & Miller, 2000)

RESULTS

Table 1 presents the basic background characteristics of the respondents.

Table 1: Basic information about respondents

Variable	**Kanyini Community**		**Loho Community**		**Total**	
Age	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
20-39	1	8.3	1	8.3	2	8.3
40-59	1	8.3	2	16.7	3	12.5
60-69	2	16.7	3	25.0	5	20.8
70+	8	66.7	6	50.0	14	58.3
Total	12	100	12	100	24	100
Sex						
Male	5	41.7	1	8.3	6	25.0
Female	7	58.3	11	91.7	18	75.0
Total	12	100	12	100	24	100

Level of Education						
None	10	83.3	8	66.7	18	75.0
Basic	1	8.3	4	33.3	5	20.8
Secondary	1	8.3	0	-	1	4.2
Total	12	100	12	100	24	100
Status						
LEAP Beneficiary	8	66.7	8	66.7	16	66.7
Caregiver	4	33.3	4	33.3	8	33.3
Total	12	100	12	100	24	100
Awareness of FHP						
Yes	7	58.3	9	75.0	16	66.7
No	5	41.7	3	25.0	8	33.3
Total	12	100	12	100	24	100

Author's field survey (2025)

As illustrated in Table 1, over half (58%) of the respondents were 70 years and above, and about 21% were between the ages of 60-69 years. About 75% were females, whereas 25% were males. Also, 75% of the respondents had no formal education. In addition, approximately 67% of the respondents were LEAP beneficiaries, while 33% were caregivers.

4.1 Awareness of the FHP for LEAP beneficiaries

To elicit participants' answers regarding their awareness of FHP, the following question was asked: *Are you aware of the free health policy for LEAP beneficiaries?* The responses provided by the participants to the above question were mixed because some reported that they were aware of it, while others responded negatively.
The following quotes illustrate the responses from the participants:

> *"Yes, I know that as LEAP beneficiaries, we are supposed to go to the hospital for free. The LEAP Officers gave us a laminated card, which we always send to the NHIS office to renew our NHIS cards when they expire. That is what I always used to access healthcare for free" (74-year-old man, LEAP beneficiary, Kanyini, community).*

> *"Yes, the LEAP programme authorities once came and collected our NHIS cards and sent them to Nadowli to renew them free for us, but when I sent them to the hospital the nurses told me that it had expired and I was asked to pay Ghs20 for the folder alone"* (65-year-old woman, Beneficiary, Loho Community).

> *"We are not even aware of the free healthcare for LEAP beneficiaries. And because we don't know, anything they ask us to do that's what we do".* (68-year-old female beneficiary, *Kanyini, community*).

The results in Table 1 corroborate these narratives. For example, the majority (67%) of the participants were aware of the existence of the FHP for LEAP beneficiaries. Even so, approximately 33% of the respondents were also not aware of the FHP. Even though most of the participants were aware of the FHP, they lacked knowledge of the expiration dates of their insurance cards due to high levels of illiteracy. For this reason, some LEAP beneficiaries pay out-of-pocket for healthcare, including paying for the hospital folder.

4.2 Effectiveness of FHP in enhancing financial access to healthcare

Under this theme, the participants were asked the following question: *As a LEAP beneficiary, can you briefly explain how easy or difficult it is for you to access healthcare with FHP under the NHIS?* The responses to this question suggested that the participants perceived the FHP to reduce the cost of healthcare, and allowed them to seek early treatment and thus guaranteeing access to free healthcare, as illustrated in the data structure in Figure 3. This information is particularly revealing because the majority of the participants reported that before the implementation of the policy, they relied on herbal medicines to treat their illnesses because of the high cost of orthodox healthcare. Even so, with the implementation

of the FHP, the policy has enabled beneficiaries to seek early treatment from the health facilities. The quotes below illustrate these claims:

> *"Without the free health policy, when you visit the hospital, you pay a lot of money. But with this policy now, we don't pay. This has helped in accessing healthcare early".* (65-year-old, female beneficiary, Loho community).

> *"The free health policy (insurance) has been very helpful to us. Previously, when you fell sick, you had to resort to herbal medicine until you recovered because you could not afford the health services as an elderly person, but now, due to this policy, we can go to the hospital even with minor sicknesses. So, the policy is helping us a lot, and we use the health facility a lot to access health care free of charge"* (70-year-old man, LEAP beneficiary, Kanyini, community).

However, some LEAP beneficiaries reported incurring additional costs, particularly for drugs and laboratory tests, when they sought healthcare in the range of GHS 70.00 (US$ 6.09)[1] and GHS 300.00 (US$26.10) despite the FHP. The following narratives give voice to these claims:

> *"Yes, I paid GHS 70.00 for lab tests. Now, if you are going to the hospital, you must carry some money. Some people call it cash and carry, even though we, the LEAP beneficiaries, are not supposed to pay, but if you are going to the hospital, you must go with some money to enable you to pay for the services that are not covered by the NHIS. We do not even know what is covered and what is not covered by the NHIS" (74-year-old man, Kanyini, community)*.

> *"Aah! They do take some money from us. When we visit the hospital, they collect money from us. As they say, health insurance, health insurance, it is not working; they still take money when we visit the hospital. The first time, I bought the drugs for GHS105 in total, then the second time, the drugs I bought were over GHS 300.00". So, yes, I paid even though I am a LEAP beneficiary.* (80-year-old female, beneficiary, Loho, community).

Inadequate FHP benefit package and shortage of medicines also account for OOP payments. The quote below supports this claim.

> *"They said they don't have those particular drugs in the hospital, so they wrote for me to buy outside".* (38-year-old, female caregiver, Loho community).

> *"They told me that the medicine they are supposed to give me is not covered by the free health policy, so I have to pay for it or I should go and buy it later".* (46-year-old, male caregiver, Kanyini community).

The persistence of OOP payments, and the reasons thereof, are at variance with the view that the FHP guarantees free access to healthcare, which questions the significance of the FHP in enhancing participants' access to healthcare.

4.3 Coping strategies to deal with out-of-pocket payments

Two follow-up questions were asked to elicit participants' experiences on the above theme. The first question was: *Were you asked to pay for anything at the health facility?* For those who answered in the affirmative to this question, a second question then followed: *How did you raise the money to pay for it?* The participants' responses to the second question revealed that essentially, they borrowed from friends and relatives, sold their productive assets such as shea nuts, fowls, and goats, and liquidated their savings in order to cope with OOP payments. The following quotes attest to these claims:

> *"We mostly borrow from friends and relatives, but we don't pay interest on the money we borrow from individual relatives except when you borrow from Susu Groups. For the Susu groups, if you borrow a hundred Ghana cedis you would pay twenty cedis on top of the hundred cedis you have borrowed"* (38-year-old, female caregiver, Kanyini, community).

> *"We sell our goods to support. God has been so good this year, we got shea nuts, so the GHS200 we paid in the hospital was money from the sale of the shea nuts. "We also have fowls and goats, which she bought out of the money she has been receiving as a LEAP beneficiary. We rear these fowls and goats. So, when I went to the hospital and they asked me to pay GHS 400 for the lab tests and drugs, I sold two goats to buy the drugs"* (60-year-old, female beneficiary, Loho Community).

4.4 Self-reported health (SRH) status of LEAP beneficiaries

In order to elicit the appropriate information on the SRH status of participants, the following question was asked: *concerning your health in general, how will you rate your current health status? A follow-up question was: Is there any difference between your current health status as a LEAP beneficiary and the time you were not a LEAP beneficiary?* These questions evoked mixed responses because, as illustrated in the data structure in Figure 3, some respondents indicated that access to the FHP improved their SRH status, while others did not observe any changes in their SRH status. Yet still, other respondents indicated their SRH status had worsened under the FHP. The narrative quotes below give voice to these claims:

> *"My health is good now because I used to have headaches, but now that I have been taking the medications, I do not fall sick like it used to be. And it's because I am on the LEAP programme that's why*

[1] In September 2023, the dollar to cedis exchange rate was US$ 1=GHS 11.493.

I can afford the drugs" (73-year-old, male beneficiary, Kanyini Community).

"As for my current health status, I can say it is now better than before because the help I get as a LEAP beneficiary enables me to buy my drugs when I am not well than when I was not part of the LEAP programme" (70-year-old female beneficiary, Loho Community).

"My current health status is still the same there is no difference. I can even say it is worst because the money my daughter would have used to buy food for me and my grandchildren has been used to pay for my healthcare services. You know, when you are sick and you don't get food to eat, your health cannot improve" (65-year-old, female beneficiary, Loho Community).

The evidence in figure 4 supports these narratives. As Fig. 4 illustrates, fifty percent of the participants indicated that their health status was good. The other twenty-one percent indicated that their health status was very good.

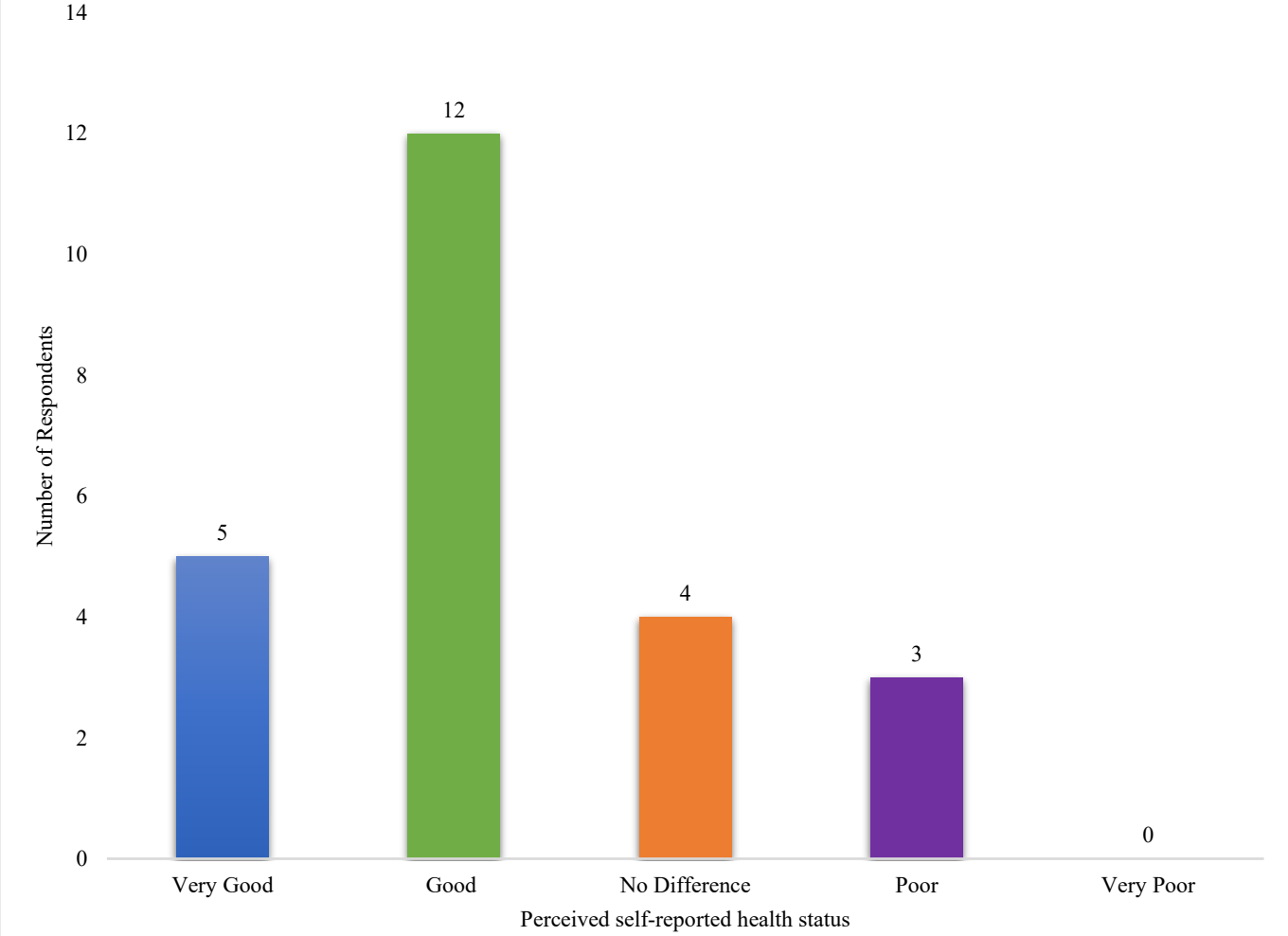


Figure 4: Perceived self-reported health status of LEAP beneficiaries

Source: Author's field survey (2025)

At the same time, Fig. 4 also demonstrates that approximately 17% of respondents reportedly did not observe any differences in their health status, yet another 13% perceived their status to be poor despite the FHP.

DISCUSSION

This paper examined the perceived effectiveness of free health policy (FHP) for LEAP beneficiaries. The FHP is an important milestone in providing financial protection to LEAP beneficiaries, with the aim of contributing to achieving universal health coverage (UHC). This discussion is anchored on the four global themes or aggregate dimensions identified in the process of data analysis, illustrated in Figure 3—awareness of the FHP, perceived effectiveness of the FHP, coping strategies and the SRH status of LEAP beneficiaries, drawing on the concept of reflexivity of health systems. Regarding the first global theme, the results illustrated mixed evidence regarding participants' awareness of the FHP. Remarkably, the majority of the participants were aware of the existence of the FHP and used it to access healthcare. This

high level of awareness of the policy among the beneficiaries is a critical move to improve beneficiaries' access to healthcare and contribute towards achieving the policy objective. For example, studies in Bangladesh that aim to provide free healthcare services and to increase health awareness among extremely poor communities suggested that increased awareness of policies or community services in general improved access to healthcare services (Yaya et al., 2017). Nevertheless, over a third of the beneficiaries were not aware of the existence of the FHP, as illustrated in Table 1. It is imperative for the LEAP Secretariat to embark on vigorous education on FHP for LEAP beneficiaries to increase their awareness about the policy to improve their access to healthcare. Consistent with the concept of reflexivity, the essence of raising LEAP beneficiaries' awareness about the policy is to help empower them to demand their rights and hold health providers accountable. This finding is consistent with similar studies in Africa. For example, in Tanzania, Bilegeya (2025) found that about 70% of respondents were not aware of user fee exemption policies, resulting in low utilisation of maternal healthcare services. Similarly, Dake and van der Wielen (2020) also stated that a low level of knowledge of various health exemption policies may result in low use of services. Remarkably, despite the high levels of knowledge of the FHP, some of the beneficiaries do not know about the expiration dates of their health insurance cards. This finding confirms earlier studies on the subject matter. For example, in their study of unawareness of health insurance expiration status among women of reproductive age in the Upper East, Ghana, Kanmiki et al. (2019) reported that a substantial number of insurance holders were often unaware of the expiration of their cards to have them renewed.

However, the second global theme questions the FHP's effectiveness in guaranteeing beneficiaries' access to healthcare consistent with the FHP's objective in the wake of mixed evidence. On the one hand, the FHP reportedly increased beneficiaries' access to healthcare by reducing the costs of healthcare and enabling them to seek early treatment. These results confirmed earlier studies on the subject matter. For example, (Alatinga et al., 2024; Meda et al., 2019; Owusu-Addo et al., 2018; Pedrazzoli et al., 2021) reported that health insurance or exemption policies provided financial protection to beneficiaries or policyholders. On the other hand, some LEAP beneficiaries still incurred substantial additional costs, particularly for drugs and lab tests, pointing to the persistence of OOP payments. This finding further supports previous related studies. For example, an evaluation of the free maternal healthcare policy revealed that substantial OOP payments persist, and that these costs were not reduced to zero by the policy at the point of demanding healthcare (Alatinga et al., 2024; Witter et al., 2009). What is worrying about the persistence of these substantial OOP payments is that they have the potential to impoverish households because they contributed to a relative increase in poverty headcount in Ghana (Akazili et al., 2017; Alatinga et al., 2022).

This scenario suggests that Ghana's health system is failing to completely protect the poor from the financial risks of seeking healthcare, even though financial risk protection is globally recognised as the main objective of universal health coverage (Kruk et al., 2009; Murphy et al., 2019). Participants largely attributed OOP payments among LEAP beneficiaries to the unavailability or shortage of supplies such as medicines, drugs and an inadequate benefit package under the FHP. Domapielle et al. (2023) found that the costs of drugs not covered under the FHP or not available at the health facilities are the major reasons for OOP payments among LEAP beneficiaries, and these costs are often not affordable to aged LEAP beneficiaries. Similar reasons have been given for the persistence of OOP payments in Ghana. For example, Abredu et al. (2023) and Anafi et al. (2018) reported earlier that a shortage of essential supplies such as drugs constituted the major reason for OOP payments among maternal healthcare seekers in Ghana. More recently, Alatinga et al. (2024b) reported that stockouts and supply chain challenges occasioned OOP payments in Ghana.

The third global theme—coping strategies highlighted alternative financing mechanisms that beneficiaries employed to address OOP payments. As the thematic analysis framework revealed in Figure 3, participants mainly used three coping strategies— borrowing, liquidating their savings, and selling their productive assets to deal with OOP payments. These results are consistent with earlier studies. For example, Murphy et al. (2019) argued that most households in developing countries rely on alternative strategies such as borrowing money or selling assets to pay for healthcare. While these strategies allow beneficiaries to cope with OOP payments, they represent "hardship financing" and have the potential to push this already poor and vulnerable population into deeper depths of poverty. (Kruk et al., 2009, p.1056; Murphy et al., 2019). Kruk et al. (2009, p.1056) reported that one in four households in forty developing countries resorted to "hardship financing" to pay for health care. Kruk et al's (2009, p.1056) study further revealed that approximately 25% of households borrowed money at exorbitant interest rates or sold items to pay for healthcare.

The fourth global theme from the data was the self-reported health (SRH) status of participants. Given that lower SES has been linked to lower levels of SRH (Smith et al., 2010), it was essential to examine the SRH status of LEAP beneficiaries who are already aged and a vulnerable category of people with lower SES. Interestingly, the data established that, largely, LEAP beneficiaries perceived their self-reported health status as "good or very good". This perceived good health status is linked to their ability to use the LEAP cash income to buy routine drugs or medicines to meet their health needs. Consistent with earlier research, Debpuur et al. (2010) reported that in the Kasena-Nankana Municipality in Ghana, the majority of older people rated their overall health status as good. Following earlier scholarship in sub-Saharan Africa, Owusu-Addo et al. (2018) also found the effects of cash transfers on health outcomes to include a reduction in illness rates and improvements in physical health. In general, the FHP increased beneficiaries' use of healthcare services (Owusu-Addo et al., 2018) as they sought early treatment, and no longer depended on herbal medicines. Note that some beneficiaries also narrated that they did not notice any changes in their SRH status, while others observed their SRH status to have deteriorated. Perhaps, this situation could be attributed to the impoverishing effects of the OOP payments, especially for families that borrowed or sold assets to finance healthcare, thereby resulting in long-term indebtedness. In

such circumstances, the burden of ill-health may be worsened when family resources become depleted, such that families may no longer be able to afford the required treatment, and may make compromises on drugs and medications (Murphy et al., 2019). Fonta et al. (2017) reported that in Ghana, the elderly were more likely to report poor health status relative to the young population (Fonta et al., 2017). The discourse on the fourth global theme suggests that the degree to which access to the FHP improves LEAP beneficiaries' SRH status is inconclusive.

Situating the above discussion within the conceptual framework of the reflexivity of health systems, Ghana's health system appears to exhibit medium levels of reflexivity. While the majority of LEAP beneficiaries are aware of the existence of the FHP, some of them are not. While in theory the FHP is expected to guarantee universal access to healthcare for LEAP beneficiaries, practically, structural problems—the unavailability of supplies such as drugs and OOP expenditures, form roadblocks to the full operationalisation of the FHP.

CONCLUSION AND POLICY IMPLICATIONS

The FHP for LEAP beneficiaries holds promise to contribute to the achievement of universal health coverage in Ghana. The FHP has mainly increased LEAP beneficiaries' access to healthcare and improved their perceived health status. Nonetheless, some LEAP beneficiaries are still not aware of the existence of FHP, while others lack knowledge of the expiration dates of their health insurance cards. Importantly, considerable OOP expenses persist despite the FHP. These OOP expenditures force LEAP beneficiaries to resort to coping strategies such as borrowing, selling assets and liquidating personal savings in order to finance healthcare. Because of these specific challenges, Ghana's health system demonstrates medium levels of reflexivity. Consequently, it is recommended that the LEAP Secretariat increase education on the existence of the FHP to enable LEAP beneficiaries to access it for healthcare. The LEAP Secretariat at the local level should reach out to LEAP beneficiaries annually to renew their health insurance cards for them to avoid situations where cards expire. Additionally, the Ministry of Health should prioritise the health of LEAP beneficiaries to ensure the availability and adequate supply of drugs and medicines for them to minimise the need for OOP payments. These recommendations hold promise to ensure that the FHP fully achieves its objective. Fully achieving the objective of the FHP may catapult Ghana's health system to high levels of reflexivity and contribute to the achievement of universal health coverage and SDG three.

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The effects of conflict management mechanisms on employee agility among MSMEs in Wa Municipality: The mediation effect of superior-subordinate relationships

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A B S T R A C T

The study examined the effect of conflict management mechanisms (CMMs) on employee agility through the superior-subordinate relationship (QSSR) as a mediator. The study approached the data collection process with a quantitative perspective by collecting cross-sectional data from 380 Micro, Small and Medium-sized Enterprises (MSMEs) in the Wa Municipality of Ghana. The data was analysed using Smart PLS in the form of a Structural Equation Modelling. The study findings showed that CMMs positively and significantly improved employee agility by 20.8%. Also, the study revealed that CMMs positively and significantly improved the relationship between superiors and their subordinates by 26.6%. Similarly, the study findings demonstrated that the relationship between CMMs and employee agility was increased by the presence of high-quality SSRs (30.1%). The study adds to existing literature by demonstrating the essence of CMMs on employee agility in organisations. The study further validates the importance of the quality of QSSR on employee agility among MSMEs. The study provides managers with practical implications for increasing employee agility through enhancing the quality of QSSR. By focusing on cross-sectional data, the study findings do not provide a deeper understanding of the effect of SSR on employee agility and which could be strengthened through longitudinal studies.

INTRODUCTION

Adopting the right conflict management mechanism plays a major role in determining employee agility and organisational performance. Researchers in the field to effectively resolve conflicts have applied numerous strategies, including communication techniques as well as mediating variables. The application of the right conflict management mechanisms has the potential to increase the agile nature of employees. Also, the existence of quality superior-subordinate relationships plays a key role in influencing employee capacity to acclimatise, innovate and respond quickly to changes.

Many scholars view conflict differently, and it is often seen as a disagreement emerging from divergent perspectives. In some instances, conflict is perceived as a form of communication usually emanating from disagreement, disparity, or disharmony. In the view of Deutsch (1973) conflict refers to a situation where there is perceived or actual risk between two or more individuals in terms of their goals, ideas, views, as well as attitudes or behaviours. Conflict in an organisation may take place within a specific group or occur among several groups. Conflict in an organisation is where one employee perceives another employee's objectives as being negatively affected or obstructed. Therefore, identifying the root cause of conflict to effectively manage disagreements arising within the organisation is paramount.

Over the past ten to fifteen years, the amount of time managers spend handling employee disagreements has nearly doubled to 18% (Muthumani & Kumar, 2023). The existence of inappropriately managed conflicts in organisations has the potential to influence employee agility, which can in turn impact organisational performance. Evidence from scholars such as Vapiwala, Rastogi, and Pandita (2025) revealed that properly managed conflicts improved collaborations, problem solving and employee agility. If not managed appropriately, conflict may dramatically damage employee morale, turnover rates, and even result in litigation, eventually affecting the overall health of the organisation (Maniendaran et al., 2025).

A crucial component of running any business, even micro, small and medium-sized enterprises (MSMEs), is resolving conflicts. By encouraging a collaborative team atmosphere, better communication, and a healthy work environment, effective conflict resolution techniques can improve the

performance of small and medium-sized enterprises (Thilakarathne et al., 2023). Managers of MSMEs must acknowledge the increasing demand for better conflict management techniques because these businesses are subject to constant internal change and are becoming more diverse and complicated. Because of the increasing complexity and the rise in cross-border and multicultural interactions with MSMEs, it is even more crucial, necessitating the need for management competencies to handle organisational changes, a diverse workforce, and diverse clients. Therefore, adopting the appropriate conflict management mechanisms can significantly impact an employee's ability to navigate challenges, adapt to change, and demonstrate agility in the workplace, which can positively influence MSMEs' sustainability.

More importantly, because MSMEs play a major role in Ghana's economic growth and the creation of many job opportunities, managers must take a more proactive approach to handling conflict in MSMEs (Thompson Agyapong, Mmieh, & Mordi, 2018). It has been estimated that MSMEs account for over 85% of jobs in Ghana's manufacturing sector (Abor & Quartey, 2010). It is also reported that 92% of Ghanaian enterprises are MSMEs, and they generate roughly 70% of the country's GDP.

The occurrences of aggressive competition among firms have necessitated the need to achieve sustained increased performance of MSMEs through agile employees and appropriate conflict management mechanisms (CMMs) supported by the quality of superior-subordinate relationships. Although legion factors such as CMMs appear to contribute to determining employee agility (Prieto & Talukder, 2023), the intervening factor of the quality of superior-subordinate relationships is very important in assessing and understanding the determinants of employee agility. Open communication and clearly defined roles and responsibilities help minimise misunderstandings among employees and foster a positive organisational culture that values diversity, inclusion, and respect (Kwofie et al., 2023). CMMs also recognise and reward positive behaviours and team contributions. These are just a few examples of conflict management strategies. Good connections between superiors and subordinates, characterised by honest and efficient communication, have been demonstrated to facilitate early conflict resolution and hence lower the risk of escalation (Huo, He, & Tian, 2023). Again, the presence of positive relationships between superiors and subordinates has led to mutual respect and trust, which facilitates the resolution of conflicts and increases the likelihood that team members will trust their superiors' judgement when settling disagreements (Redmond, Jameson, & Binder, 2016). Power is not abused in a harmonious relationship between a superior and a subordinate. Effective use of authority by superiors and the freedom of subordinates to voice concerns without fear of reprisal improve MSMEs' ability to handle conflicts (Weider-Hatfield & Hatfield, 1996). The fact that a healthy superior-subordinate dynamic fosters a positive organisational culture in which disagreements are viewed as chances for growth and resolved amicably is equally important.

Due to the MSMEs sector being more customer-focused and also characterised by a high level of stress, issues of workplace conflict are often more pronounced. It is noticed that employees in MSMEs are usually burdened with varied interpersonal exchanges. When these issues are left unattended to and unresolved, they often serve as a breeding ground for interpersonal conflicts, thereby nurturing a toxic work environment. Prior researchers have concentrated on investigating the direct effects of superior-subordinate interactions on various outcomes (Gaur & Ebrahimi, 2013), such as job satisfaction (Golden & Veiga, 2008), organisational effectiveness (Horan, Chory, & Raposo, 2022), group commitment (Han, Ni, Hou, & Zhang, 2023), external customer satisfaction (Gao, Liu, & Sun, 2022) and organisational commitment, (Gupta & Agrawal, 2023). Also, earlier research has concentrated on the direct impacts of CMMs on outcomes, including perceptions of intragroup conflict, organisational performance, corporate governance, employee performance, and efficacy and performance. However, little attention has been paid to their combined and chronological interplay. Equally missing in many of these studies is the overlooked aspect of the mediating effect of superior-subordinate relationships on conflict management mechanisms and thriving employee agility. This study is important because it addresses this gap in the literature and organisational issues by providing a model that explains employee agility through CMMs and QSSR in MSMEs. Although several prior studies demonstrated strong direct correlations in MSMEs (Ramdan et al., 2022), CMMs (Huo et al., 2023), employee agility (Sun, Mengyi, & Jeyaraj, 2023) and QSSR (Kassing, 2000), further empirical investigations on the mediating effect of superior-subordinate relationships on CMMs and employee agility are crucial. By using a cohesive model that integrates the various latent variables, the study further enhances our understanding of workplace dynamics. Again, the study provides MSMEs with a framework that allows these MSMEs to take steps to ease conflict behaviours, thereby improving employee productivity, increasing employee satisfaction and resilience. Additionally, there is scant comparable research on employee agility among SMEs in Ghana. In light of CMMs and superior-subordinate relationships, this empirical research would broaden the understanding of employee agility in MSMEs.

Furthermore, this study is timely since it focuses on the MSMEs sector and underscores the importance of interpersonal relationships to the competitiveness and sustainability of MSMEs. Thus, this study sought to provide answers to two critical questions: 1. Do conflict management mechanisms influence employee agility? 2. Does the superior-subordinate relationship mediate the relationship between conflict management mechanisms and employee agility?

The remaining sections of the paper focus on the literature review, the research methodology, results and discussions.

THEORETICAL BACKGROUND AND CONCEPTUAL FRAMEWORK

Conflicts in organisations

Over the past few decades, there has been a rise in research on conflict, especially in the fields of management and organisational studies (Applefield, Huber, & Moallem, 2000; Mayer, 2008). Researchers, scholars, and business professionals have all defined conflict in different ways over time. Early definitions present a pessimistic picture of conflict. Confrontational battle (Jehn, 2014), the disintegration of conventional decision-making processes (Pondy, 1967), transgressions of typical expected behaviour (Schmidt & Kochan, 1972), dangers to collaboration (Karadakal, Goud, & Thomas, 2015), and the slow progression towards disorder (Pondy, 1967), among other definitions of conflict. Conflict can thus be defined as a feeling, a disagreement, a real or perceived incompatibility of interests, an inconsistent worldview, or a set of behaviours (Mayer, 2008).

Certain scholars have held an unbiased perspective on conflict since the early 1970s. Conflict situations can be characterised as members acting in a way that is contradictory to those within their network (Afzalur Rahim, 2002; Rahim, 2023). Schmidt and Kochan (1972) define conflict as overt behaviour that happens when a unit tries to advance its interests in connection with other units. According to Barki and Hartwick (2004), conflict is an evolving event that happens between parties that rely on one another. It happens when people feel adverse emotions in response to arguments and when problems get in the way of reaching goals.

The way and manner conflicts are managed in organisations have the potential to affect employee performance. It is, therefore, important for managers to always opt for the appropriate management mechanisms (Haryanto, Suprapti, Taufik, & Maminirina Fenitra, 2022). Research has shown that human resource (HR) professionals deal with workplace conflict for three to four hours a week on average. Most times, the owners of MSMEs are not HR specialists and therefore, if these conflicts are not treated seriously, the company will suffer from decreased motivation, staff turnover, antagonism, and low productivity (Singh & Bodhi, 2025).

In a study on managing conflict and employee performance, it was revealed that employees favoured the use of compromising, accommodating, competing and collaborating as conflict management mechanisms in managing conflicts in different situations and enhancing employee performance (Lundy, Collette, & Downs, 2022). Also, other kinds of CMMs have been the subject of prior studies; for example, resignation, isolation, withdrawal, and cover-up in avoidance procedures and struggle, compromise, arbitration, and negotiation in functional strategies. Of these, some researchers opined that in terms of managing conflicts among employees, mechanisms such as collaborating and accommodating are considered to enhance employee performance rewards (Afzalur Rahim, 2002; X. a. Zhang, Cao, & Tjosvold, 2011). Therefore, managers of MSMEs need to select avoiding, collaborating, accommodating and compromising as specific conflict management mechanisms which have the potential of enhancing employee performance (Jiang, Zhao, & Ni, 2017). Conflict management mechanisms that managers employ in managing conflicts impact the performance of employees (Agwu, 2013).

Conflict in organisations has been identified as influencing employee agility, especially when the conflict is not addressed appropriately. Studies have shown that organisational conflicts reduce employee agility through distrust and hostility, which prevent employees from sharing information and cooperating (Vapiwala et al., 2025). Also, evidence from research has revealed that conflicts increase workplace stress, which usually causes employees to become mentally exhausted as well as reduce their morale (Naim, Sahai, & Elembilassery, 2024). This implies that the existence of conflicts within MSMEs has the potential to reduce employee agility, which can further affect the competitive and sustainable nature of these MSMEs.

Employee agility

Employee agility refers to an individual's ability to adapt, learn, and thrive in rapidly changing and uncertain work environments (Salmen & Festing, 2022). It can further be seen as a person's ability to take advantage of changes and turn these changes into opportunities to be able to develop new concepts as well as learn emerging technologies (Lai, Pitafi, Hasany, & Islam, 2021). In the context of the modern workplace, characterised by constant technological advancements, evolving job roles, and dynamic market conditions, employee agility has become a crucial attribute for personal and organisational success. Many prior studies have highlighted learning, customer service improvements and product quality as some of the advantages associated with employee agility (Lai et al., 2021; Panda & Rath, 2021; Pitafi, Masood, & Pitafi, 2025). Other scholars have opined that agile employees are open to change, flexible in their thinking, and responsive to shifting priorities, including having a positive attitude toward uncertainty and are willing to experiment with new approaches (Doeze Jager, Born, & van der Molen, 2022; Ulrich & Yeung, 2019). Employee agility is closely linked to a commitment to continuous learning and skill development. It involves the proactive pursuit of knowledge and the ability to acquire new skills to meet evolving job requirements. Agile employees view learning as a continuous and integral part of their professional journey. They are motivated to upskill and reskill, staying relevant in a rapidly changing landscape (Kim, 2025).

Employee agility includes the ability to effectively analyse and solve problems, especially in novel or unfamiliar situations. It involves critical thinking, creativity, and a solutions-oriented mindset. Agile employees approach challenges with a problem-solving mindset that involves adapting and iterating solutions based on feedback and changing circumstances (Athamneh & Jais, 2023).

Employee agility incorporates resilience in the face of setbacks, failures, or unexpected changes. It involves the capacity to bounce back from challenges, maintain a positive outlook, and continue performing effectively. Agile employees develop coping mechanisms to deal with stress, setbacks, and uncertainties. They focus on learning from experiences and using challenges as opportunities for growth (Dries, Vantilborgh, & Pepermans, 2012).

Conflict management mechanisms

Conflict is inevitable in any workplace. Employee performance may suffer, collapse, or become incompetent due to conflict (Hon & Chan, 2013). Organisational conflict management is the practice of identifying sources of tension and intervening effectively to bring about mutually agreeable outcomes (Olekalns, 1997). This is the art of resolving conflicts proactively and positively. Managing conflicts is more about resolving existing conflicts than trying to eradicate them thus addresses the more practical issues of managing conflict, namely how to deal with conflict constructively; how to bring opposing parties together in a collaborative process; and how to design a practical and achievable collaborative systems to constructively manage differences (Luqman & Fatmawati, 2024; Rahim, 2023). Hence, managing conflicts is not the same as preventing, lessening, or ending them. Instead, it aids in the development of efficient methods for reducing dysfunctional and maximising the positive aspects of conflict, which in turn boosts efficiency and knowledge acquisition (Rahim, 2023). Academics agree that healthy competition is important to fostering innovation, warding against complacency, and maximising productivity in the workplace. Depending on the nature of the conflict itself, there are different types of conflicts such as manifest conflict, perceived conflict, latent conflict, linear conflict and personnel conflict, organised conflict and unorganised conflict (Muthumani & Kumar, 2023). Also, when it comes to the connection between teamwork among workers and organisational dedication, evidence indicates that CMMs is a major player. Organisations achieve success when they aim for conflict that is helpful instead of harmful. CMM is crucial in conflict management and preventing them from turning into destructive conflicts (Thilakarathne, Rathnasinghe, Kulatunga, Thurairajah, & Weerasinghe, 2023).

Adopting the appropriate CMM is beneficial to the employees as well as the organisation. When taking steps to address conflicts in the organisation, studies have shown that applying collaborative mechanisms in resolving conflicts improved employee innovative capacity, adaptability and trust, thereby positioning these employees to be more agile and contributing positively towards achieving organisational goals (Aghaei, Haghani, & Limunga, 2022). A recent study in the SMEs sector revealed that owners and managers who adopted a compromising conflict mechanism in resolving conflicts in the companies experienced improved functional performance of work teams and adaptability among employees (Li, Malik, Ijaz, & Irfan, 2023).

In the event of a dispute, some businesses' agreements provide for the appointment of a third party to mediate the negotiations. They involve an outside party and transfer control to them in this instance. Independent entities are more reliable than collaborating partnerships since they do not have a financial stake in the outcome (Conlon & Sullivan, 1999; Fousiani, De Jonge, & Michelakis, 2025). Despite conflicting self-interest, situations may usually be stable if the common method for dispute resolution is embraced. Therefore, arbitration can improve rules and processes for interacting with partners, as well as legal fairness (Kumar & Van Dissel, 1996). Studies on procedural justice have shown that it beneficially influences higher-order attitudes. When members have a positive impression of procedural fairness, they are more likely to cooperate willingly out of a sense of dedication and confidence (Kim & Mauborgne, 1996). Afzalur Rahim (2002) states that litigants typically seek to manage disputes involving unequal power distribution through arbitration. Although this type of mediation can be useful in achieving positive results (Celuch, Bantham, & Kasouf, 2011), internal resolution often offers better long-term prospects. However, mediation has the potential to enhance communication pathways and foster the growth of internal mechanisms in certain instances. Thus, mediation can be seen as a positive way to manage conflicts.

Hypotheses development

CMMs and employee agility

Conflict management mechanisms that prioritise open communication and transparency contribute to an environment where employees feel more informed and involved. When conflicts are addressed transparently, employees gain a clearer understanding of the reasons behind conflicts, fostering a learning environment that supports agility (Pitafi, Liu, & Cai, 2018). Research evidence shows that effective conflict management encourages learning from conflict experiences. The findings posit that when conflicts are treated as opportunities for growth and improvement, employees develop a mindset of continuous learning and that employees that were exposed to conflicts that were managed constructively are more likely to develop adaptive skills, enhancing their ability to navigate future challenges with agility (Salmen & Festing, 2022; Üçok & Torlak, 2024).

In this study, we argue that conflict management mechanisms that empower employees and involve them in decision-making processes will contribute to a sense of ownership and accountability among the employees. Empowered employees are more likely to engage in proactive problem-solving and take initiative, aligning with the agile mindset of adapting to changes and finding innovative solutions. Again, the researchers are of the view that the timely resolution of conflicts prevents prolonged uncertainty and stress, allowing employees to focus on their work and adapt to changing circumstances. Swift conflict management minimises disruptions to work processes, enabling employees to maintain their agility and responsiveness to evolving situations. The researchers are of the view that CMMs do influence employee agility.

H1: CMMs positively and significantly associate with Employee Agility

The mediating role of quality of superior-subordinate relationships on CMMs and employee agility

The nature of the relationship between superiors and subordinates plays a crucial role in how conflict management strategies impact employees' ability to navigate challenges and demonstrate agility in the workplace (Redmond et al., 2016). Studies have shown that effective conflict management mechanisms promote open communication and trust in addressing workplace issues (Ayoko & Pekerti, 2008). Therefore, the quality of superior-subordinate relationships will influence how well open communication and trust are established. High-quality relationships would facilitate the effectiveness of conflict management mechanisms,

contributing to employee agility, whilst low-quality relationships are likely to negatively influence employee agility (Majeed, Kayani, & Haider, 2021; L. Zhang, Fu, Lu, & Liu, 2023).

Empirical evidence revealed that constructive conflict management fosters a learning culture where conflicts become opportunities for growth and improvement. (Min et al., 2020; Rahim & Katz, 2020). As a result, we argue that relationships that are characterised by high-quality relationships encourage a culture of continuous learning and adaptation, supporting employees' agility in dealing with challenges. Also, the quality of superior-subordinate relationships influences the extent to which employees feel empowered and involved in decision-making. High-quality relationships between superiors and subordinates will enhance the effectiveness of conflict management outcomes, contributing to employee agility. These relationships exist among the various constructs and can be seen in the conceptual framework presented in Figure 1.

H2: CMMs positively link with QSSR
H3: QSSR positively and significantly influences agility
H4: The relationship between CMMs and Employee Agility is enhanced through QSSR

The conceptual framework demonstrates how the various constructs of the study are linked in the model, and by extension shows the hypothesised relationship among the constructs. Thus, from Figure 1, the conflict management mechanisms are directly measured or associated with competing, avoiding, accommodating, compromising and collaborating as second-order constructs. Also, the framework points out that CMMs are directly related to employee agility, whilst at the same time, CMMS is directly associated with superior-subordinate relationships. Finally, from Figure 1, superior-subordinate exchanges serve as a mediating variable seeking to enhance the relationship between CMMs and employee agility.

METHODOLOGY

Study area

This study was conducted in the Wa Municipality of the Upper West Region. The choice of Wa Municipality in the Region is based on the fact that there is quite substantial number of businesses as compared to the rest of the districts (GSS, 2023). Over the years, the economy of Wa has gradually grown in terms of several businesses in the Municipality. For instance, the 2010 PHC reported that the services sector of the economy of the Municipality had overtaken the agriculture sector by employing about 51.3 percent of the active labour force. Also, the GSS (2016) indicated that there were about 5,370 businesses present in the Municipality, with 4,409 of these businesses classified as micro enterprises, 43 enterprises were categorised as medium, whilst 14 businesses were listed as large enterprises. The continuous expansion of the MSMEs sector makes it more appropriate and timelier to focus on understanding the dynamics of conflict management mechanisms, interpersonal exchanges and employee agility in the Wa Municipality.

Research design, sample selection and questionnaire development

Cross cross-sectional survey design was used in this study. The need for using the design is grounded on the fact that the researchers aimed at soliciting and analysing information from a population at a given point in time (Saunders et al., 2007). Using the cross-sectional survey design makes it possible for researchers to outline how they will quantitatively or numerically describe trends, attitudes or opinions of a population by studying a sample of that population (Creswell, 2014). Therefore, the researchers relied on a cross-sectional design to assess and understand CMMs within the MSMEs sector and how these mechanisms relate to employee agility. The use of this design type further enhances the researchers' potential in examining the mediating role of superior-subordinate relationships on CMMs and employee agility.

The study population is made up of employees of MSMEs in the Wa Municipality. The researchers chose 380 respondents using simple random sampling from a total of 190 MSMEs. Two employees each were sampled from MSMEs that had five employees or above, whilst one employee each was chosen from MSMEs with less than five employees. The study had a response rate of 81.3 percent (312 respondents), being questionnaires that were fully completed and returned to the researchers.

A five-point Likert scale ranging from "strongly disagree" to "strongly agree" questionnaire was developed for the data collection. All the study constructs were measured by indicators using a five-point Likert scale. The questionnaires were personally administered to the respondents at their convenience times. The use of questionnaires in collecting data from respondents in the behavioural discipline has been documented in prior studies (Bakalikwira, Bananuka, Kaawaase Kigongo, Musimenta, & Mukyala, 2017). Although Sudman and Bradburn (1982) emphasised that open-ended questionnaires motivate respondents to offer their views fully, including nuances, the researchers instead used closed-ended questionnaires since the study aims at establishing relationships among the variables.

The researchers measured all the constructs by adopting existing measurement scales in the literature. For instance, the study relied on Min et al., (2020) measurement items to measure twenty-one CMM indicators. Employee agility was measured by adapting the existing measurement scale by Lee and Song (2022) whereby four indicators were used in measuring the construct, whilst the Quality Superior-Subordinate Relationship (QSSR) construct was measured by modifying Kpinpuo, Akolgo, and Naimi (2023) measurement items such that three indicators were used to measure the construct.

Data analysis

To analyse the data, the researchers used Smart PLS. The use of PLS-SEM in this study makes the study more unique since most of the previous studies in the field rarely relied on the PLS-SEM method for analysing research data. By using SEM, which is a statistical tool that can easily and effectively display complicated correlations (StatSoft, 2013), it allowed for the integration of the latent variables (employee agility,

CMMs and superior-subordinate relationships) through the observed indicators, thereby improving the accuracy of the measurement model and accounting for the measurement errors in the measurement indicators. Therefore, the development of PLS path modelling provided the researchers with an appropriate framework for examining the relationships among CMMs, employee agility and superior-subordinate relationships.

RESULTS

Descriptive statistics

The study presents the results of demographic information of the respondents in Table 1. The results revealed 59.9 percent of the respondents were males, whilst 40.1 percent represented females. In terms of educational level, 60.9 percent being the majority of respondents had a Bachelor's degree. Also, under this section, the researchers presented the results of mean values, standard deviation and correlation as found in Table 2. It is evident from Table 2 how the different constructs are linked with one another. The results showed that CMMs positively and significantly correlated with employee agility and QSSR.

***T*able 1: Demographic characteristics of the respondents**

Variable	Labels	Frequencies	Percentages
Sex	Male	187	59.9
	Female	125	40.1
	Total	312	100
Age of Respondents	20 – 29 years	68	21.8
	30 – 39 years	138	44.2
	40 – 49 years	95	30.4
	50 years and above	11	3.5
	Total	312	100
Educational level	SHS/Diploma	107	34.3
	Bachelor's Degree	190	60.9
	Master's Degree	15	4.8
	Total	312	100
Years of work experience	Less than 5 years	122	39.1
	6 to 10 years	81	26.0
	11 to 15 years	67	21.5
	Over 15 years	42	13.5
	Total	312	100

Researchers' Compilation, 2024

Table 2: Correlation among the Variables

Variable	Mean	Std Deviation	1	2
CMM	16.024	3.049		
QSSR	15.710	2.193	0.724**	
Agility	17.185	1.827	0.581**	0.631**

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

Reliability, validity and factor loadings

To assess the reliability and validity of the data, the researchers resorted to the content validity index and Cronbach's (1951) α to determine the validity and reliability of the measurement scale for the different constructs. Researchers such as Field (2013) and Gunuc and Kuzu (2015) viewed reliability as the ability of a measurement instrument to produce consistent results when the same variables are measured under diverse circumstances. In the view of Gliem and Gliem (2003), a Cronbach's alpha above 0.70 shows the measurement instrument is reliable. Using 0.70 as a benchmark, the results of the Cronbach alpha coefficients for the study constructs range from 0.721 to 0.912, which are higher than the acceptable value of 0.70, as shown in Table 3, demonstrating reliable data. Also, prior studies have used an individual outer loadings threshold of 0.70 and above as a standard for measuring the reliability of measurement instruments, where outer loadings of 0.7 and above are acceptable (Hair, Hollingsworth, Randolph, & Chong, 2017).

The researchers further assessed the validity of the items measured. Validity in this study assesses convergent and discriminant validity. Validity determines whether the research measures the content to be measured or the authenticity of the research results (Golafshani, 2003). Field (2013) categorises validity into standard validity and content validity. To ensure its validity, the questionnaires were given to three professors, four bankers and two knowledgeable people to assess their ability to measure the expected indicators. The overall content effectiveness index is 0.95, indicating that our method is effective. Validity was further checked based on the results of Average Variance Extracted (AVE), where all the values of AVE for the variables are

above 0.70, as seen in Table 3, reflecting the achievement of validity. To further ensure that the reliability and validity of the data were achieved, results on construct reliability and validity, as well as discriminant validity, were extracted and presented in Tables 3 and 4.

From Tables 3 and 4, it is clear that validity and reliability were achieved since all the values met both validity and reliability criteria. Discriminant validity was achieved as the indicators loaded well on their construct than they loaded on other constructs, as can be seen in Table 4.

Assessment of the structural model

The structural model of the study was assessed after establishing that the study met both validity and reliability requirements. In assessing the model, the researchers particularly focused on how the prediction of the model relates to the structure. To evaluate the internal structure of the model, the researchers relied on key indices such as the coefficient of determination (R2), path coefficient (beta values) and T-statistics as well as the goodness of fit. The researchers equally focused on assessing the collinearity of the structural model. To do this, the researchers compared the VIF values of all the constructs of the study with the acceptable VIF values of equal to or less than 3.30 (Hair et al., 2011). The study results revealed that all the VIF values of the variables were lower than the 3.30 threshold, as indicated in Table 5; therefore, confirming the non-availability of collinearity issues.

Moreover, the value of the coefficient of determination (R^2) was used to assess the structural model by highlighting the fact that the R^2 evaluates the whole effect size and variance explained in the endogenous variable of the structural model, and hence, has predictive power of the model's accuracy. Scholars such as Henseler, Ringle, and Sinkovics (2009) and Hair Jr, Sarstedt, Hopkins, and Kuppelwieser (2014) opined that a 0.75 value of an R^2 is sufficient, a reasonable R^2 has a value of 0.50, and a relatively weak R^2 has a value of 0.26. Therefore, the R^2 values in this study are quite impressive. Our study results showed an R^2 value of 0.823 as indicated in Table 4.6, which means that both conflict management mechanisms (CMM) and quality of superior-subordinate relationship (QSSR) explained 82.3 percent variance in agility (AGIL); hence, our R^2 value is sufficient.

The researchers assessed the model fitness with the value of Standardised Root Mean Square Residual (SRMR). We relied on Hu and Bentler (1998) assertion that an SRMR value of 0.08 or less shows a good degree of fitness of the research model, whilst a lower value of SRMR is an indication of a better degree of fitness. The study's SRMR value of 0.074 signifies that the model was fit.

Table 5: Collinearity statistics of the model

Collinearity Statistics	**VIF**
CMM -> AGIL	2.369
CMM -> QSSR	2.072
QSSR -> AGIL	1.978
CMM -> QSSR -> AGIL	2.765

Table 6: Saturated model results

Construct	**R^2**	**Adj. R^2**	**F^2**	**SRMR**
Agility	0.823	0.841	0.486	0.032
Superior-Subordinate			0.477	

Path Coefficients assessment

The Smart PLS path coefficient assessment, just like a regression analysis, relies on the standard coefficient values. The coefficient values are used for testing the hypotheses, which is very important to the study. The coefficient (β) signifies the predictable change in the dependent variable about a unit change in the independent variable. The coefficient values (β) were calculated for each path in the hypothesised model. Higher coefficient values are indicative of a substantial impact on the endogenous latent variable. Nonetheless, the T-statistics were used to assess the significance level of the coefficient values. In line with Chin (1998), the researchers performed a bootstrap to ascertain the importance of the assumptions through the significance level. The results of Table 7 represent the path coefficient values and the T-statistics revealing the significance of the path coefficients.

Table 7 Path Coefficients

Hypotheses		β	T-Statistics	P-Values	Decision
H1: CMMs positively and significantly associate with Employee Agility	CMM->AGIL	0.208	10.210	0.000	Supported
H2: CMMs positively link with QSSR	CMM->QSSR	0.226	6.193	0.000	Supported
H3: QSSR positively and significantly influences agility	QSSR->AGIL	0.451	12.430	0.000	Supported
H4: The relationship between CMMs and Employee Agility is enhanced through QSSR	CMM->QSSR->AGIL	0.301	9.753	0.000	Supported

In assessing the relationships among the constructs (see Table 7), the results revealed that conflict management mechanisms significantly influenced employee agility, where the coefficient value of 0.208 was statistically significant with a p-value of 0.000. This implies that a unit change or improvement in CMMs will lead to about a 20.8 percent change in employee agility. The result is in line with the researcher's hypothesised relationship between conflict management mechanisms and employee agility, therefore confirming H1.

The coefficient value of 0.226 (refer to Table 7) shows that conflict management mechanisms are positively related to the quality of the superior-subordinate relationship in an organisation. The coefficient value of 0.226 means that any unit change in CMMs will result in a 26.6 percent change in superior-subordinate relationships. This result confirms our prediction that conflict management mechanisms could influence the quality of the relationship that exists between a superior and a subordinate. The impact of conflict management mechanisms was significant at a p-value of 0.000, as shown in Table 7. This means that H2 was equally supported by the study results.

With regard to the mediation effect that the quality of the superior-subordinate relationship has on conflict management mechanisms and employee agility, the results from Table 7 show that there is a positive mediation effect. The coefficient value (β= 0.301) reveals that the quality superior-subordinate relationship enhances the relationships between conflict management mechanisms and employee agility, which was significant with a T-statistic value of 9.753. This finding supports the prediction that the quality of the superior-subordinate relationship could boost how the conflict management mechanisms influence employee agility in MSMEs.

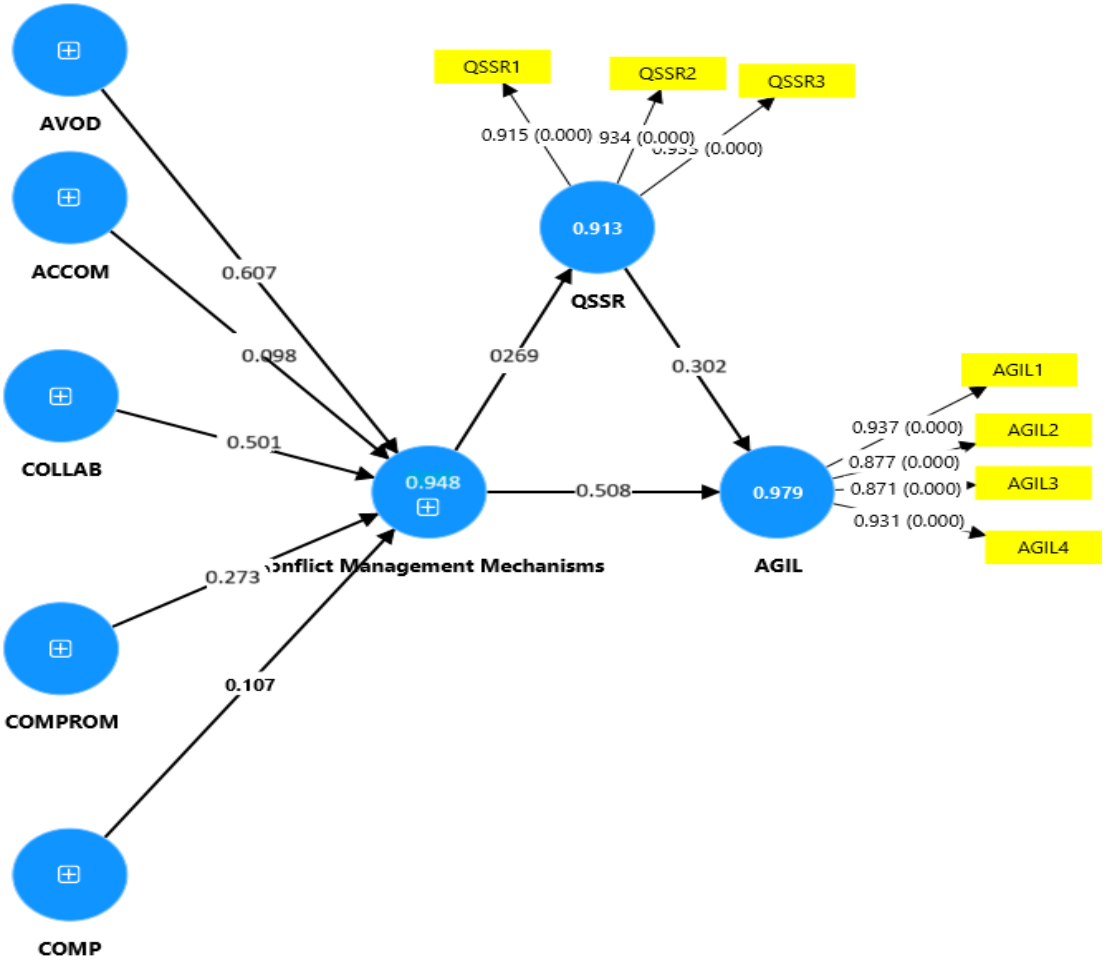

Figure 2: Structural equation model

DISCUSSION

The study sought to understand the effect of conflict management mechanisms on employee agility among MSMEs. The study again intended to ascertain the role of the quality of the superior-subordinate relationship in how conflict management mechanisms relate to employee agility. In doing so, the researchers used Smart PLS version 4 in the form of structural equation modelling to determine the relationships among the constructs as well as the mediation effect of QSSR.

Conflict management mechanisms are important in creating a peaceful work environment where employees feel valued and respected, thereby reducing stress and anxiety among employees. From the study, it is obvious that conflict management mechanisms in the form of avoiding, accommodating, competing, compromising and collaborating are very crucial factors in reducing as well as solving conflicts in the work environment. The findings of the study revealed that addressing conflict among employees using various mechanisms such as avoiding, competing, compromising, accommodating and collaborating significantly affected employee agility. This means that when conflicts between leaders and their followers are managed properly through effective mechanisms, it will build a culture of collaboration and teamwork in the workplace among MSMEs. This finding is in line with previous studies that established that conflict management strategies positively affected employee agility. (S. Kim, 2025; Pitafi et al., 2018).

Also, effective CMMs stimulate an open and candid communication between superiors and subordinates in MSMEs, whereby such transparency aids in clarifying expectations, reducing misunderstandings, and fostering a culture of trust and mutual respect. The findings established that conflict management mechanisms positively and significantly impacted superior-subordinate relationships in the MSMEs. The findings imply that any effort toward employing effective conflict management mechanisms such as competing, collaborating, avoiding, compromising and accommodating will result in high-quality relationships among superiors and subordinates in the workplace. This finding buttresses earlier researchers, such as Redmond et al. (2016), findings that conflict management mechanisms positively influence the relationship between superiors and their subordinates. The finding is in tandem with other scholars such as Labrague, Al Hamdan, and McEnroe-Petitte (2018) findings of conflict management strategies positively affecting the relationship between superiors and subordinates.

Last but not least, the use of effective CMMs fosters higher-quality relationships between superiors and their subordinates by building trust, fairness, and open communication. The high-quality relationships nurture an environment where employees feel supported, valued, and empowered to adapt and respond to changes rapidly, thereby enhancing their agility. The findings of this study revealed that the relationship between CMMs and employee agility was boosted by the mediation effect of the quality of superior-subordinate relationships, thereby supporting hypothesis H3. This finding will help owners and management of MSMEs to

aspire to create open communications among employees as well as employ fair and equitable ways of addressing conflicts in their organisations. The finding is in tandem with prior studies (Qiang, Xiaohong, & Qianru, 2023) establishing how the quality of superior-subordinate exchanges enhances the relationship between employee agility and CMMs.

CONCLUSIONS AND IMPLICATIONS

Conflicts within organisations are inevitable, and therefore, there is a need to constantly explore appropriate mechanisms to address these conflicts to enable employees to become more agile in today's ever-changing business environment. In dealing with conflicts, it is equally important to focus on the quality of relationships between leaders and their followers since that has the potential to influence behaviours in terms of agility. This study examined the mediation effect of the quality superior-subordinate relationship on the conflict management mechanisms and employee agility among MSMEs. The study results were indicative of a positive and significant effect of CMMs on employee agility. The study further established that superior-subordinate relationships enhanced how CMMs influence employee agility. From the above, the researchers are of the strong view that there is a need for MSMEs to focus on building quality relationships among superiors and subordinates as a way to enhance employee adaptability capabilities, especially in turbulent business environments. The study further concludes that the owners and managers of SMEs should employ appropriate CMMs to address emerging conflicts among staff of MSMEs.

Findings of the study have both practical and theoretical implications. Practically, the study findings convey several implications. Firstly, the findings will aid owners of MSMEs to endeavour to invest in training programs for themselves and their managers on effective conflict management techniques, which will go a long way to enhance the quality of relationships between leaders and their followers (superior-subordinate relationships). The training of managers and owners of MSMEs will equip them with the requisite knowledge in selecting appropriate conflict management mechanisms to address conflicts in their businesses. Also, the findings imply that managers and owners of MSMEs would be fair and consistent in their approach towards conflict management to build trust among employees. Again, the study findings will help owners and managers of MSMEs to create a culture of openness and supportive leadership to increase transparency and perceived fairness among employees, thereby building supportive and empathetic relationships with teams.

The study also has theoretical implications. By establishing the links between conflict management mechanisms, quality of superior-subordinate exchanges and employee agility, the study contributes to how leadership styles and conflict management approaches can positively influence the relationships between leaders and their members. Also, whilst prior studies have acknowledged the importance of conflict management strategies on MSMEs sustainable performance, this study contributes in a small way to employee agility by providing insightful and deeper knowledge of how the quality of members' exchanges improve the relationship between conflict management mechanisms and employee agility.

LIMITATIONS AND AREAS FOR FURTHER RESEARCH

The researchers encountered a few challenges during the study. Time constraint was one of the challenges the researchers faced since they had to collect the data within a time frame due to a lack of financial resources to spend more time collecting the data. This study also focused on cross-sectional data, which was collected on a snapshot basis. This study, however, suggests that future researchers should focus on expanding the coverage of the study to include public institutions as well as using a qualitative approach to provide a deeper understanding of specific behaviour changes among employees.

Declarations
The authors did not receive any funding for this study. There is no competing interest among the authors of this work.

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APPENDIX

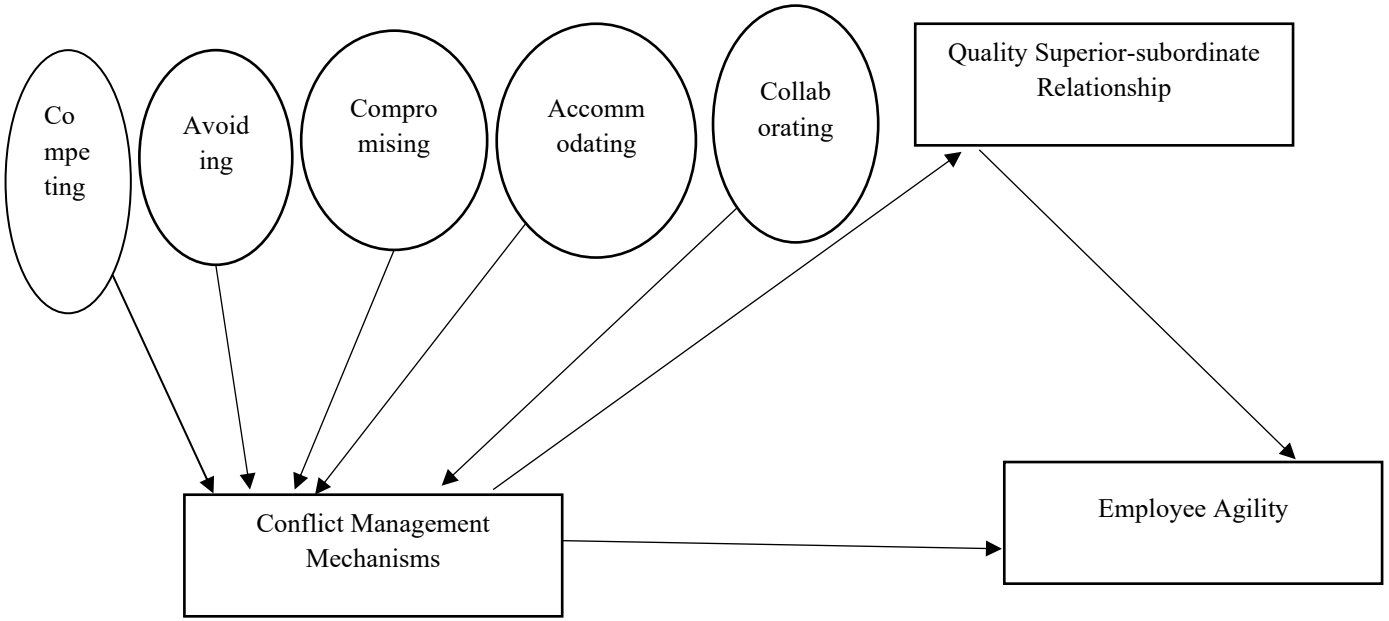

Figure 1: Conceptual framework of the study

Table 3: Reliability and validity

Construct	Indicators	Factor loadings	AVE	rho A	Cronbach's Alpha	Composite Reliability
Agility	AGIL1	0.907	0.818	0.9.26	0.935	0.947
	AGIL2	0.877				
	AGIL3	0.872				
	AGIL4	0.902				
Accommodating	ACCOM1	0.874	0.812	0.925	0.923	0.904
	ACCOM2	0.894				
	ACCOM3	0.917				
	ACCOM4	0.919				
Avoiding	AVOD1	0.892	0.797	0.918	0.873	0.896
	AVOD2	0.910				
	AVOD3	0.894				
	AVOD4	0.902				
Collaborating	COLLAB1	0.910	0.828	0.933	0.898	0.912
	COLLAB2	0.917				
	COLLAB3	0.889				
	COLLAB4	0.922				
Competing	COMP1	0.905	0.903	0.876	0.885	0.787
	COMP2	0.918				
	COMP3	0.902				
Compromising	COMPROM1	0.887	0.808	0.895	0.915	0.892
	COMPROM2	0.898				
	COMPROM3	0.895				
	COMPROM4	0.919				
	COMPROM5	0.880				
Quality of Superior - Subordinate relationship	QSSR1	0.913	0.859	0.808	0.809	0.910
	QSSR2	0.935				
	QSSR3	0.934				

Table 4 Discriminant Validity-Cross Loadings

	Accommodating	Agility	Avoiding	Collaborating	Competing	Compromising	Quality of Superior-Subordinate Relationship
ACCOM1	**0.874**	0.600	0.704	0.384	0.170	0.201	0.384
ACCOM2	**0.894**	0.434	0.766	0.485	0.177	0.579	0.566
ACCOM3	**0.917**	0.508	0.436	0.698	0.227	0.492	0.665
ACCOM4	**0.919**	0.750	0.356	0.493	0.247	0.448	0.565
AGIL1	0.573	**0.937**	0.438	0.522	0.212	0.728	0.135
AGIL2	0.474	**0.877**	0.761	0.613	0.216	0.383	0.234
AGIL3	0.223	**0.872**	0.696	0.110	0.132	0.687	0.788
AGIL4	0.339	**0.932**	0.483	0.417	0.177	0.897	0.402
AVOD1	0.694	0.778	**0.892**	0.471	0.121	0.275	0.231
AVOD22	0.769	0.511	**0.892**	0.581	0.122	0.102	0.572
AVOD3	0.521	0.437	**0.893**	0.375	0.139	0.452	0.361
AVOD4	0.638	0.601	**0.894**	0.587	0.193	0.566	0.175
COLLAB1	0.823	0.372	0.496	**0.910**	0.132	0.587	0.788
COLLAB2	0.439	0.132	0.783	**0.917**	0.177	0.797	0.602
COLLAB3	0.562	0.440	0.667	**0.889**	0.163	0.794	0.513
COLLAB4	0.273	0.637	0.738	**0.922**	0.212	0.528	0.335
COMP1	0.201	0.173	0.144	0.159	**0.916**	0.169	0.181
COMP2	0.223	0.203	0.157	0.190	**0.939**	0.200	0.213
COMP3	0.301	0.002	0.145	0.019	**0.812**	0.008	0.024
COMPROM1	0.423	0.172	0.396	0.310	0.132	**0.887**	0.788
COMPROM2	0.339	0.732	0.483	0.117	0.177	**0.897**	0.302
COMPROM3	0.262	0.540	0.467	0.689	0.163	**0.894**	0.713
COMPROM4	0.573	0.637	0.438	0.722	0.212	**0.928**	0.735
COMPROM5	0.374	0.177	0.461	0.613	0.216	**0.883**	0.034
COMPROM6	0.031	0.096	0.103	0.059	0.026	**0.912**	0.097
QSSR1	0.262	0.540	0.567	0.589	0.163	0.894	**0.913**
QSSR2	0.473	0.537	0.338	0.522	0.212	0.528	**0.935**
QSSR3	0.674	0.677	0.661	0.513	0.216	0.483	**0.934**

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT CONFERENCE PROCEEDINGS

An application of the Theory of Planned Behaviour on acceptance of insects as food in Wa Municipality, Ghana

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Ghana, insects; food neophobia, behavioural intention

ABSTRACT

This study investigated how food neophobia moderates subjective norms, attitude and perceived behavioural control on behavioural intention to accept insects as food. A structured questionnaire was distributed to adult Ghanaian users of WhatsApp and Messenger residents in four selected communities, namely; Mangu, Sombo, Kpaguri and Kambali in the Wa Municipality. The results were examined using Partial Least Squares-Structural Equation Modelling (PLS-SEM) technique. The findings demonstrated that food neophobia directly and significantly ($p < 0.05$) increased respondents' behavioural intention to accept insects as food. Also, food neophobia significantly moderated the association between attitude and behavioural intention to accept insects as food ($p < 0.05$). It further had a positive association between attitude, subjective norms and behavioural intention to accept insects as food. However, it moderated a negative relationship between perceived behavioural control and behavioural intention to accept insects as food. The findings demonstrated that food neophobia has a significant impact on the acceptability of edible insects. Because many people may be afraid of insects and refrain from eating them, the results suggest that the Wa Municipality has a major challenge accepting insects as food. This study recommends that researchers in Ghana employ the Theory of Planned Behaviour (TPB), relying on in-depth empirical studies aimed at actual and potential consumers using both surveys and sensory evaluations, to assess important behavioural considerations across different regions and socio-economic levels concerning entomophagy. The findings can help inform approaches for product development, consumer education, and policy frameworks to promote insects as sustainable protein alternatives.

INTRODUCTION

Insects have drawn more attention as a substitute food source in recent years, and it is anticipated that in the future, edible insects will account for a larger portion of the world's food supply (Huis, 2013; Huis & Dunkel, 2017). Studies have also demonstrated that insects contain high levels of micronutrients and protein (Anaduaka et al., 2021; Huis, 2016). Approximately 80% of all animals are classified as insects, and over 2000 edible insect species are a staple of many menus globally (Huis, 2016). A significant number of people have been using insects as food for several thousands of years worldwide (Adeoye et al., 2014). Globally, edible insects that are generally consumed include beetles, caterpillars, bees, ants, wasps, locusts, grasshoppers, true bugs, termites and flies (Huis, 2016).

Since a variety of factors can influence a person's decision-making process, individual eating behaviour is complex (Yazdanpanah & Forouzani, 2015). It is relatively unknown how and why people select the items that make up their diets or how to effectively influence their decisions. Many of those involved in food production and deliveries, as well as those who are interested in nutrition and health education, are worried about food choices (Al-Swidi et al., 2014). The variables affecting dietary decisions are many, including the food itself, the individual who makes the decision, as well as the external social and economic context from which the decision is made (Wang et al., 2019).

While eating insects is becoming more popular in North American nations like Mexico (Ramos-Elorduy, 1997) and Asian nations like China (Feng et al., 2018), insect eating in Africa has seen a steady decline in traditional diets due to the negative impact of Western civilisation (Manditsera et al., 2018). All the same, studies show that the locals in Ghana still rely heavily on edible insects for food and sustenance, especially during the rainy season, which is the

peak period for most insects (Anankware et al., 2016). In Ghana, nine insects are eaten nationwide (Anankware et al., 2016), including the Upper West region of Ghana (Anankware et al., 2016; Dery et al., 2022). The findings from studies (Anankware et al., 2016; Dery et al., 2022) further indicated that about 83% of their study participants had experience eating insects. Moreover, the report by Dery et al. (2022) demonstrated that the majority of study participants said insect food was too strange to eat (expression of food neophobia) when they were asked about their negative impression of eating insects. This could interfere with wider adoption or the intention to accept edible insects in the region. Despite these few studies indicating entomophagy in the region, there exists no empirical evidence about the behavioural intention to accept and eat insects. Consumer acceptance and behavioural intention are necessary for the economic, social, and environmental advantages of entomophagy to materialise. Acceptance in this context suggests that edible insects become a standard part of family meals and that the value chains containing edible insects create significant prospects for livelihood among the groups that are intended to benefit.

The above discussions highlight the lack of data in the literature to predict the region's sustainable consumption intentions with regard to entomophagy. One way to attempt to comprehend the functions of some of these elements is through the concept of planned behaviour (Arvola et al., 2008). Following this assertion, investigating the main factors that influence consumers' intention to embrace entomophagy is relevant for insect production, consumption and improved dietary practices. Thus, the Theory of Planned Behaviour serves as the foundation for the debate in this paper (TPB), one of the prevailing theories in consumer behaviour. More specifically, the objectives are to analyse the impact of food 'neophobia' on (1) 'subjective norms', (2) 'perceived behavioural control', (3) 'attitude', and the 'behavioural intention' toward entomophagy. Responding to these objectives would help expand the TPB and improve our knowledge of the causes that impact the successful adoption of eating edible insects for better nutrition and livelihood.

LITERATURE REVIEW

Understanding the Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) is widely used to explain human behaviour. It explains the relationships between a person's beliefs, attitudes, and behavioural intentions (Conner, 2020). The TPB is thought to be a more thorough framework, and numerous studies in a variety of industries have confirmed its greater ability to predict consumer behaviour (Chen & Hung 2016; Kim & Hwang 2020). Despite its wider application in predicting human behaviour, some researchers have questioned whether attitudes, subjective norms, and perceived behavioural control are sufficient to predict intentions and behaviour. For example, some academics contend that the TPB model solely considers cognitive and reasoning factors, sometimes ignoring affective aspects of attitude (Bagozzi & Yi, 1988; Spence & Townsend, 2006). Several moderating variables were added to the theory as a result of numerous researchers' efforts to improve the TPB's ability to predict consumer behaviour (Akbar et al. 2019a; Bae & Choi 2021; Wan et al., Choi 2018).

Key Components of the Theory of Planned Behaviour

According to studies (Chen & Hung, 2016; Conner, 2020; Hwang & Kim, 2021), the TPB consists of several key components. One of the elements that distinguishes this theory from the Theory of Reasoned Action is perceived behavioural control. Perceived behavioural control describes how someone feels about their capacity to act and how much control they have over it. Consumers' actual control over the behaviour in issue has been shown to have a positive impact on the behaviour (Mancini et al., 2019; Pambo et al., 2018; Sabbagh et al., 2023). Subjective norm is another crucial element of the Theory. It describes how societal standards and external influences shape a person's behaviour. These social norms can be shaped by friends, parents, or important others and have a big impact on determining one's behavioural intentions (Teo & Beng-Lee, 2010). Previous literature confirmed a positive correlation between subjective norms and behavioural intention (Bae & Choi, 2021; Sabbagh et al., 2023; Wan et al., 2018). Furthermore, another essential element of the theory is attitude concerning the behaviour (Teo & Beng-Lee, 2010). Attitude is the positive or negative assessment of a specific behaviour of an individual (Zhang et al., 2023). This assessment is impacted by a number of things, including the person's values, beliefs, and perception of the repercussions of the behaviour. An individual's intention to perform a particular behaviour is significantly influenced by their attitude toward the behaviour. A favourable attitude toward a product, for example, will boost the individual's intention to adopt it (Kim et al., 2014; Menozzi et al., 2017a). Other studies (Sogari et al., 2017; Videbaek & Grunert, 2020) found attitude and behavioural intention inversely related.

Food neophobia

Better knowledge of food selection and food neophobia's tendency has been a major problem for marketers and developers, as food neophobia might affect preferences for unfamiliar foods (Aqueveque, 2015; Siddiqui et al., 2024; Subramaniam & Muthusamy, 2024). Prior research has demonstrated that food neophobia prevents people from consuming novel food (Rioux, 2019) and other non-traditional diets (Choe & Cho, 2011). Several studies (Akbar et al., 2019; Sabbagh et al., 2023; Santisi et al., 2021) have demonstrated a negative and significant association between food neophobia and behavioural intention. Additionally, research on food neophobia has been done to ascertain tourists' eating preferences (Wu et al., 2016) and organic food eating behaviour (Akbar et al., 2019; Kashif et al., 2023). The readiness to try new foods is a good indicator of food neophobia, and there are variations in this phobia depending on some characteristics, including age, gender, educational level, and others (Gómez-Luciano et al., 2019; Sahrin et al., 2023). One study showed that the more first-hand experience study participants had of eating fast food, the better equipped they were to comprehend the repercussions of their actions, including the threats to their health (Russell & Buhrau, 2015). Also, the sensations (flavour, texture, colour, taste and other visual aspects of

food) consumers have about food cause uncertainties about their consumption (Alley & Potter, 2011) which could result in food neophobia (Siddiqui et al., 2023)

Model Conceptualisation

Through a thorough literature search, the following model was conceptualised (Figure 1). The original TPB model includes three variables (left) that are moderated by behavioural intention. Food neophobia was introduced to evaluate its moderating impact on the intention to eat insects as food. The assumptions are that individuals with greater food neophobia have greater perceived behavioural control difficulty in accepting insects as food, are less influenced by subjective norms, and are less likely to develop a positive behavioural intention toward entomophagy. The potential impact of food neophobia on the interactions being studied between consumers in the Upper West Region is unknown. To evaluate each of the relationships, three hypotheses were stated as follows.

Hypothesis 1 (H1): The association between Behavioural Intention (BI) for the acceptance of insects as food and Perceived Behavioural Control (PBC) is negatively moderated by Food Neophobia (FN).
Hypothesis 2 (H2): The association between subjective norms and Behavioural Intention for the acceptance of insects as food is negatively moderated by Food Neophobia (FN).
Hypothesis 3 (H3): The association between Attitude (ATT) and Behavioural Intention (BI) for the acceptance of insects as food is negatively moderated by Food Neophobia (FN).

MATERIALS AND METHODS

Study area and context

From October 2023 to February 2024, this study was conducted in the Wa Municipality in the Upper West Region, Ghana (Figure 2). With a landmass of roughly 234.74 square kilometres, the Wa Municipality is located between latitudes 1º40'N to 2º45'N and longitudes 9º32' to 10º20'W of the equator (Ghana Statistical Service, 2021 [GSS, 2021]). The Wa Municipal natural features are generally undulating, with an average height between 160–300 meters above sea level (Wa Municipal Assembly, 2023 [WMA, 2023]). Crop cultivation is not supported between November and April as rainfall stops in late October; however, animal rearing is common during this period. Over 200,672 people are living in the Wa Municipality, including 143,358 urban dwellers (GSS, 2021). Additionally, just 30.2% are direct producers of food crops and animals, although roughly 70% work in agriculture (WMA, 2023). Commonly grown food crops include millet, rice, maize, sorghum, cowpea, groundnuts, bambara beans, yams, cassava, pepper, pumpkin, kenaf, and okra (WMA, 2023). Additionally, trees such as dawadawa, baobab, rosewood, neem, mango and shea are common, and their trunks, leaves and fruits serve as sources of households' livelihoods either by direct consumption or sales for income. All the crops are rain-fed between May and October. There is therefore an extended dry season of six months from November to April. Livestock that are reared by many households are cattle, sheep and goats, including poultry, which are mainly kept under an extensive system.

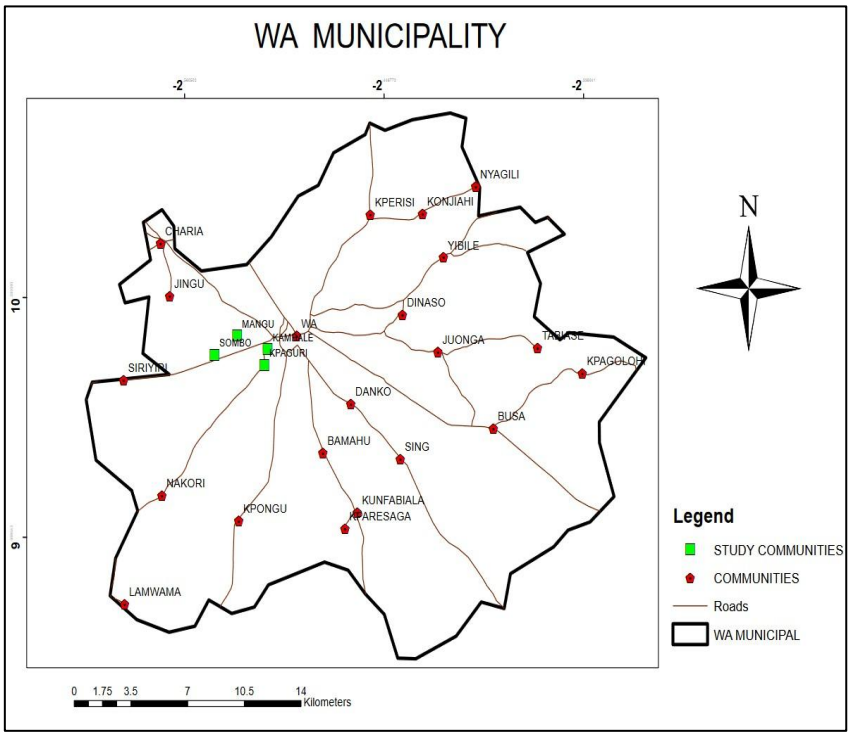

Figure 2: A Map showing Study Locations of Wa Municipality

Research Design

The study used a cross-sectional design and a quantitative methodology. Multi-staged sampling techniques were used to recruit the study participants. Firstly, community walk observations in Charia, Kperesi, Sombo, Kpaguri, Kambale and Mangu showed that edible insects are traded in local food stores and traders confirmed patronage by the residents for meal preparations (Plate 1). We conveniently selected four of the communities in the Wa Municipal. The 2016 projected adult population of Wa Municipal was about 87,800 (GSS, 2010). The adult population in the study communities constituted 18,258 (about 21%) of the total adult population of Wa Municipal. We calculated the sample size using these data with the presumptions of a z score of 1.96 and a 95% confidence interval that corresponds to a 5% level of significance. The minimal acceptable likelihood of averting type II mistakes was 0.05, according to the test's power, which corresponded to a 5% error (Florença et al., 2021; Guiné et al., 2023). The calculation yielded 384 participants, which is the minimum number required for the study to have statistical significance.

After indicating their residency in the chosen communities and their readiness to engage in the online study, literate social media users conveniently chosen in the selected communities were given a structured questionnaire to fill. We asked about the preferred channel through which a respondent wishes to receive the questionnaire. While a few of them preferred to answer the questionnaire through Messenger, the majority of them preferred to answer through WhatsApp. Respondents were also encouraged to share the survey link with their friends and family who lived in the same community. It has been demonstrated that this approach is more successful than gathering data from multiple sites (Leighton et al., 2021). A restrictive option was included as the first question so that those who were outside the selected communities could not have access to the questionnaire. The participants included natives and non-natives who have permanent residential status in the selected communities. The questionnaire included questions on the demographics of respondents. These variables: 'Behavioural Intention' (BI), 'Subjective Norms' (SN), 'Perceived Behavioural Control' (PBC), 'Attitude' (ATT) and 'Food Neophobia' (FN) were rated using a 7-point Likert scale with 1 denoting strongly agree to 7 denoting strongly disagree. Questions on BI consisted of three items and were adopted from the study (Hartmann & Siegrist, 2017). The PBC and SN questions were taken from Menozzi et al. (2015) and had four and three items, respectively. FN consisted of four items that were taken from Arvola et al. (2008) and Piha et al. (2018). Table 1 presents the measurement items for the study. The link was sent to participants from September 2023 to January 2024. Three reminders were sent to participants who could not answer the questions promptly. The first reminder was at the end of September, the second at the end of November and the final reminder at the end of December. We resent the survey link to some participants who lost it and asked for the link during the period. Though the minimum sample size calculated was 384, 397 participants answered the questionnaire and the data was cleaned to 392 responses which constituted the sample population for data analysis.

Plate 1: Caterpillar in a local store at Kambale for sale

Data Analysis Techniques

The data was imported into Microsoft Excel version 13 for Windows and cleaned. Smart PLS 4 software (Ringle et al., 2022) was utilised for measurements and structural models'

assessments. Partial Least Squares-Structural Equation Modelling (PLS-SEM) technique was used (Nitzl et al., 2016). This technique is used because it describes the relationships between a group of variables, some of which may be independent (exogenous) or dependent (endogenous) to evaluate how the set of observed variables defines unobservable ones (constructs), and how these constructs relate to each other (Amorim et al., 2010). A descriptive analysis of demographic variables was also performed, and the results were presented in means, standard deviation and frequencies. A 5.0% level of significance was used in testing the hypotheses.

RESULTS

Measurement items for the study

In Table 1, all the measurement items for perceived behavioural control, food neophobia and behavioural intention were above the neutral value, while mixed results were found for measurement items for subjective norm and attitude. The results show that respondents perceived behavioural control to accept insects as food fell between neutral and slightly disagree for the measured items. This means that respondents generally disagree with the items on their perceived behavioural control to accept insects as food. On the contrary, respondents' ranking of the items measuring subjective norms showed that they slightly agreed on the positive influence of the measured items on their behavioural intention to accept insects as food. The means of the items under food neophobia revealed that respondents' ranking falls between neutral and slightly agree, and therefore, those items individually do not indicate a neophobic trait for their behavioural intention to accept insects. The means of the measured items under respondents' attitude revealed that respondents slightly agreed to accept insects as food due to good health, and revealed neutral to slightly agree opinions on their acceptance of insects as food. The measured items under behavioural intention revealed a neutral to slightly agree ranking for respondents' acceptance of insects as food.

Table 1: Measurement items for the study

Construct	Measurement item	Mean ± SD
Perceived Behavioural Control	Edible insects are hard to find, so I don't eat them	4.72 ± 1.94
	Some people find edible insects repulsive so I also avoid eating them	4.57 ± 2.05
	I will not eat insects because other people do not eat them	4.47 ± 2.23
	Edible insects are costly, so I do not eat them	4.25 ± 2.18
Subjective Norms	If my parents eat insects, I will also eat them.	3.78 ± 2.20
	If my friends eat edible insects, then I will also eat them	3.70 ± 1.20
	If I see celebrities eating insects on TV, then I will also eat	3.87 ± 2.06
Food Neophobia	I am willing to try new and unusual foods	4.19 ± 2.11
	I will try insect food in specific instances	4.16 ± 1.98
	I am terrified to consume insect food that I have not eaten before	4.50 ± 2.06
	Insect food is too bizarre to eat	4.45 ± 2.25
Attitude	Edible insects are important for good health	3.67 ± 1.70
	In general, I am happy eating edible insects	4.62 ± 1.95
	I feel attracted to edible insects	4.63 ± 2.17
Behavioural Intention	I will use edible insects to prepare my regular meals	5.03 ± 2.05
	If edible insects are available in grocery stores, I will buy	4.24 ± 2.21
	If grocery stores sell edible insects, I will urge others to buy them	4.13 ± 2.11

Demographic Characteristics of Respondents

The results of the respondents' demographic characteristics are shown in Table 2. The findings indicate that men made up the majority of respondents (61.22%). The Dagaaba ethnic group accounted for almost 53% of the respondents, with the Waala ethnic group coming in second at 20%. The Fulani, Kasina, and Mosi were the least numerous ethnic groups, each accounting for around 1.0%. The findings further showed that the North East and Upper East Regions had the fewest responses, while the Upper West Region had the largest (82.14%). The study also revealed that about 78.0% of the respondents were married, while about 20% were never married. The study also found that the majority (about 60.0%) were employed by the government of Ghana, followed by others (about 19.0%) such as students, pensioners, religious, receptionists, etc. The majority (about 79.0%) of participants obtained a tertiary education, while the rest had a secondary education. In terms of religion, the majority (about 73.0%) belonged to Christianity, while the rest practised the Islamic faith.

Table 3 also displays continuous variables of some demographic characteristics. The average age of respondents was approximately 39 years. While the average household size was found to be about 5 for each respondent, the average number of dependents for each respondent was 6.

Table 2: Demographic Characteristics of the Respondents

Variable	Respondents	Percent (%)
	Male	61.22
Sex	Female	38.78
	Dagaaba	53.06
	Waala	20.15
	Akan	9.18
	Sissala	6.12
	Dagomba	4.85
Ethnicity	Ewe	1.53
	Ga	1.53
	Gursi	1.28
	Fulani	0.77
	Kasina	0.77
	Mosi	0.77
	Upper West	82.14
Home Region	Northern	4.85
	Ashanti	4.38
	Central	4.38
	Volta	1.53
	Greater Accra	1.02
	Bono East	0.77

	North East	0.51
	Upper East	0.51
Marital status	Married	77.81
	Never married	19.64
	Divorced	1.53
	Separated	1.02
Occupation	Government Work	59.95
	Other work	19.39
	Trading	11.99
	Farming	5.10
	Technical Expert	3.57
Educational Qualification	Tertiary Education	78.83
	Senior High School	21.17
Religion of respondents	Christianity	73.21
	Islam	26.79

Table 3: Descriptive Characteristics of the Respondents

Variable	Min.	Max.	Mean	Std. Dev.
Age in years	21	87	38.67	11.50
Household size	1	12	4.60	2.36
Number of dependents	1	22	6.38	3.19

Eating Experience, Acceptance and Preferred Cooking Method for Edible Insects

In Table 4, the study found that about 76.0% of the participants had eaten edible insects before. The result revealed three preferred cooking methods for edible insects. Respondents ate roasted insects the most (about 62.0%), and roasting was also the preferred cooking method, while the least number of respondents (about 17.0%) ate fresh boiled insects as the preferred cooking method. Of those who had the eating experience of insects, about 68% were willing to still accept insects as food.

Table 4: Eating experience, preferred cooking method and Acceptance for edible insects

Question	Response	Percent (%)
Have you ever eaten any kind of edible insects such as termites, bee larvae, caterpillars, cow ticks etc.?	Yes	75.77
	No	24.23
Which is your preferred cooking method for edible insects that you have eaten before?	Roasted	61.62
	Dried boiled	21.55
	Fresh boiled	16.84
Do you still accept and consume edible insects presently?	Yes	68.37
	No	31.63

Construct Reliability and Validity (Measurement Model Assessment)

In order to determine whether the multi-measurement items used for each latent construct were internally consistent and whether construct validity was well established, the measurement model was assessed (Table 5). Average variance extracted (AVE) measures convergent validity, composite reliability measures inter-consistency reliability, and outer loading measures item reliability. Table 5 demonstrates that all of the loading of every item was higher than the suggested threshold value of 0.5 (Osborne et al., 2011). Additionally, all of the composite reliability values fell between 0.826 and 0.948, which was greater than the proposed value of 0.5 (Gerbing & Anderson, 1988). This indicated that the constructs in this study had a high degree of internal consistency and reliability. Furthermore, since the average variance extracted (AVE) values for each construct ranged from 0.544 to 0.858 and were greater than the generally recognised cut-off value of 0.50 (Barati et al., 2019), convergent validity was confirmed. Additionally, the loading values (0.646–0.947) exceeded the suggested range (Hair et al., 2009). According to the fit indices, the normalised fit index (NFI = 0.736) was below the suggested value of 0.9, while the Standardised Root Mean Squared Residual (SRMR) = 0.078 suggests a good fit (Singh, 2009). The findings in this study demonstrated high reliability as indicated by the Cronbach's alpha coefficient values, which are all larger than the 0.70 recommended cut-off point by Fornell and Larcker (1981).

Table 5: Factor loadings of observed variables, construct reliability and validity

Construct and scale items	**Cronbach's Alpha**	**Factor Loadings**	**σ**	**CR**	**AVF**
Perceived behavioural Control	0.731		0.751	0.826	0.544
Edible insects are hard to find, so I don't eat them		0.725			
Some people find edible insects repulsive so I also avoid eating them		0.736			
I will not eat insects because other people do not eat them		0.832			
Edible insects are costly, so I do not eat		0.646			

them				
Subjective Norms	0.876		0.972	0.919	0.792
If my parents eat insects, I will also eat them.		0.854			
If my friends eat edible insects, then I will also eat them		0.911			
If I see celebrities eating insects on TV, then I will also eat		0.903			
Food Neophobia	0.781		0.828	0.852	0.592
I am willing to try new and unusual foods		0.845			
I will try insect food in specific instances		0.799			
I am terrified to consume insect food that I have not eaten before		0.738			
Insect food is too bizarre to eat		0.688			
Attitude	0.817		0.845	0.892	0.734
Edible insects are important for good health		0.770			
In general, I am happy eating edible insects		0.866			
I feel attracted to edible insects		0.927			
Behavioural Intention	0.731		0.919	0.948	0.858
I will use edible insects to prepare my regular meals		0.895			
If edible insects are available in grocery stores, I will buy		0.947			
If grocery stores sell edible insects, I will urge others to buy them		0.936			

Discriminant Validity

Kline (2018) stated that the Heterotrait Ratio of Correlations (HTMT) value should be less than 0.85, however, Gold et al. (2001) previously stated that to verify discriminant validity, the number should be less than 0.90. All the HTMT values were below the recommended value stated Gold et al. (2001) as seen in Table 6

Table 6: Heterotrait-monotrait ratio (HTMT) – Matrix

	ATT	BI	FN	PBC	SN
ATT					
BI	0.882				
FN	0.248	0.264			
PBC	0.105	0.125	0.081		
SN	0.301	0.189	0.099	0.138	

Structural Model Assessment

Path coefficients (β values), t values, effect size (f^2), and coefficient of determination (R^2) were used to further evaluate the structural model. The bootstrapping technique (5000 re-sample) was used to evaluate the path coefficient's significance. The results indicate that one hypothesis is accepted while two hypotheses are rejected (see Table 7, Figure 3). The R^2 value for food neophobia is 0.06 and for behavioural intention is 0.07. According to Cohen (2009), the f^2 value is evaluated and shows that small, medium, and large effects are represented by f^2 values of 0.02, 0.15, and 0.35, respectively. The values of f^2 in this study revealed a small effect size for attitude (0.044), perceived behavioural control (0.003) and subjective norms (0.001) in producing the R^2 for consumers' insect neophobia to accept insects as food. The f^2 for food neophobia was also 0.06 in producing the R^2 for consumers' acceptance of insects as food.

Standardised Indirect and Total Effects of Variables on Behavioural Intention to accept insects as food

The standardised indirect and total effects of the independent variables are displayed in Table 7. These effects are the effects of the mediating role of food neophobia on behavioural intention. The attitude toward food neophobia contributed significantly to explaining the variance in respondents' behavioural intention toward accepting edible insects ($\beta = 0.052$, $p < 0.011$; total effect = 0.052). Subjective norm had a positive and no significant mediating (indirect) effect on behavioural intention through food neophobia ($\beta = 0.007$, $p = 0.602$; total effect = 0.007). However, perceived behavioural control had a negative and no significant mediating (indirect effect on behavioural intention through food neophobia ($\beta = -0.013$, $p = 0.520$; total effect = -0.013).

Table 7: Standardised indirect and total effects of variables on behavioural intention toward acceptance of edible insects

Variable	Indirect effect	Total effect	p-value	R^2	f^2
ATT	0.052	0.052	0.011		0.044
PBC	-0.013	-0.013	0.520		0.003
SN	0.007	0.007	0.602		0.001
FN			0.001	0.04	0.063

Attitude (ATT), Perceived behavioural control (PBC), Subject Norm (SN), Food Neophobia (FN), Coefficient of Determination (R^2), Effect Size (f^2)

The Moderating Effects of Food Neophobia on Behavioural Intention to Accept Insects as Food

Figure 3 displays the direct impact of food neophobia on the behavioural intention to accept insects as food, as well as the results of the SEM for attitude, perceived behavioural control, and subjective norms moderated by food neophobia. The attitude to accept insects as food on behavioural intention moderated by neophobia was found to be significant [($p < 0.001$), see Table 7], thus, the hypothesis was supported. On the other hand, there was no significant association between perceived behavioural control and this intention as mediated by food neophobia, therefore, the hypothesis was rejected. The respondents' behavioural intention to accept insects as food was also not significantly correlated with subjective norms, as mediated by food neophobia.

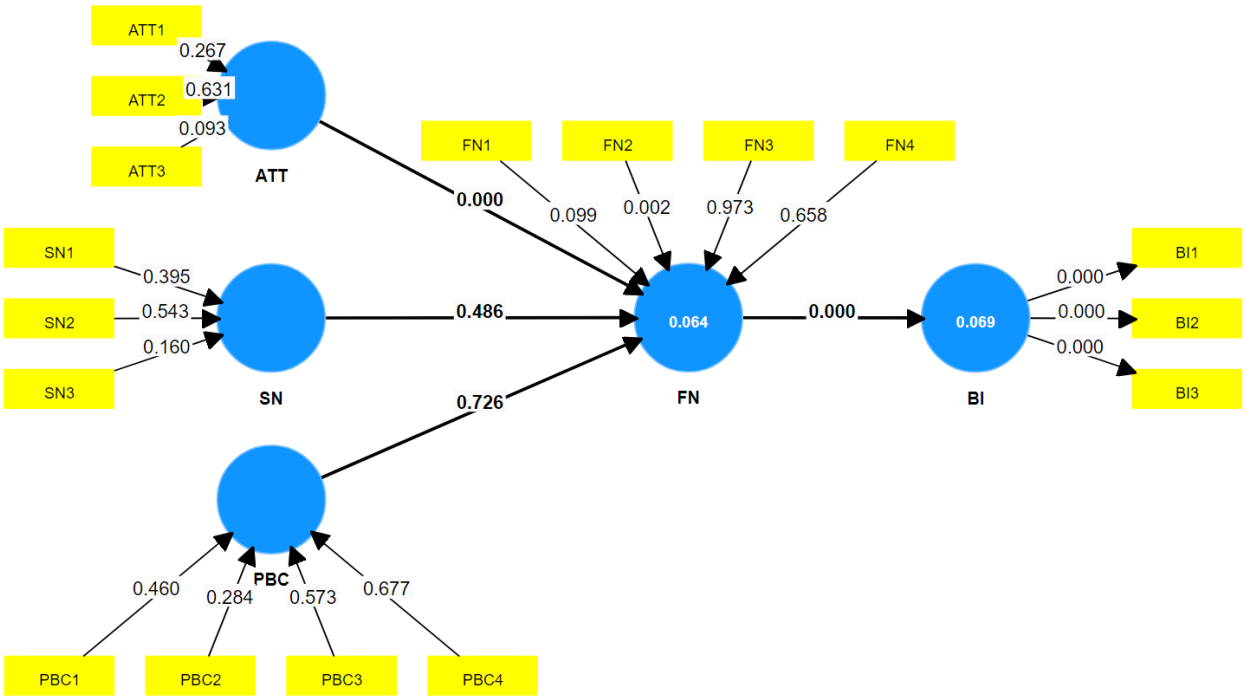

Figure 3: Structural Model Evaluation (bootstrap)

Model fit: χ^2 = 1000.509; Normalized Fit Index (NFI) = 0.736; (The Squared Euclidean Distance (d_ULS) = 0.938; The Geodesic Distance (d_G) = 0.437; Standardized Root Mean Squared Residual (SRMR) = 0.078

DISCUSSION

The results revealed that male participants had more experience with entomophagy than their female counterparts. This result corroborates the study by Dery et al. (2022), who found that male consumers were more involved in the collection of insects than females. The results on the ethnicity of respondents showed that the majority (about 53.0%) were the Dagaaba, while the Fulani, Kasina and Mosi were the least minority ethnic groups. This is corroborated by an earlier finding by Dery et al. (2022). Similarly, the results on the home region (Upper West, 82.14%), marital status (married, 77.81%), and religion (Christianity, 73.21) support the findings of Dery et al. (2022) while education (tertiary level, 78.83%) supports the studies of Dery et al. (2022) among Ghanaian consumers and Aung et al. (2023) Myanmar consumers. The respondents revealed that the majority of them were government workers. This may be because the questionnaire was administered to literate participants who are likely to have obtained government jobs. It is possible that the result could be different if the participants were cut across the educational level, including those without formal education. This finding is contrary to the result of Dery et al. (2022), who reported that the majority of insect consumers were farmers. The study also revealed a youthful mean age (38.67) of consumers, which is similar to those of previous studies (Bae & Choi, 2021; Dery et al, 2022). The average household size was 4.60, indicating that about five people share the same pot of food in the respondents' home, while the average number of dependents was 6.38, indicating that each respondent was taking care of about six people.

The results demonstrated that about 76.0% of the participants had experience eating edible insects. This finding is consistent with previous reports (Bae & Choi, 2021; Dery et al, 2022). The result also revealed three preferred cooking methods for edible insects. Roasted edible insects were the most eaten (about 62.0%), which supports our earlier study (Dery et al., 2022). Of those who had the experience of eating insects, about 68% were willing to still accept eating insects.

The study's findings demonstrated satisfactory construct validity and reliability. The loading values for the items were above the 0.5 threshold (Osborne et al., 2011). High levels of reliability and internal consistency for the construct measures were obtained in this study by the composite reliability values, which varied from 0.826 to 0.948 and were greater than the required value of 0.5 (Gerbing & Anderson, 1988). Because the average variance extracted (AVE) values exceeded the cutoff value of 0.50 (Hair et al., 2009), the convergent validity was also verified. The loadings' values (0.646 to 0.947) exceeded the suggested threshold (Hair et al., 2009). A satisfactory model fit was indicated by the fit index, which shows that the SRMR was 0.078. According to the recommended cut-off point, strong reliability was indicated by Cronbach's alpha coefficient values, which were larger than 0.70 (Fornell & Larcker, 1981). The discriminant validity was evaluated using the HTMT test. The HTMT values in this study fell within the range suggested by Gold et al. (2001), who claimed that when the HTMT values are less than 0.90, discriminant validity is verified.

The results on the attitude to accept insects as food on behavioural intention moderated by Neophobia were found to be significant ($p < 0.001$), thereby supporting the hypothesis that the relationship between Attitude (ATT) and Behavioural Intention (BI) to accept edible insects as food is moderated by Food Neophobia (FN). This relationship was further revealed by the indirect and total effects of 'attitude', which contributed to the entire model. The inclusion of attitude contributed positively and significantly to explain the variance in respondents' behavioural intention to accept edible insects as food ($\beta = 0.052$, $p < 0.011$; total effect = 0.052). While the results agree with some previous studies (Kim et al., 2014; Menozzi et al., 2017b), other previous studies (Sogari et al., 2019; Videbæk & Grunert, 2020) reported contrary results. The findings also showed that respondents' behavioural intention to accept insects, which was moderated by food neophobia, was negatively impacted by food neophobia ($\beta = -0.013$, $p = 0.520$; total effect = -0.013). The relationship between perceived behavioural control and behavioural intention was not significant. Therefore, the hypothesis was rejected. The results of this study showed a negative and indirect significant relationship between perceived behavioural control and behavioural intention, indicating the influence of food neophobia on the relationship between these variables, even though Sabbagh et al. (2023) found a significant and positive direct relationship between perceived behavioural control and behavioural intention to consume beef offal. When food neophobia was taken into account, there was a positive indirect effect even though there was no significant correlation between respondents' behavioural intention to accept insects as food and subjective norms ($\beta = 0.007$, $p = 0.602$; total effect = 0.007). Subjective norms and behavioural intention are positively and significantly correlated in numerous studies (Bae & Choi, 2021; Sabbagh et al., 2023; Wan et al., 2018). This suggests that food neophobia has a positive effect on the relationship between behavioural intention and subjective norms.

CONCLUSIONS

Examining the effects of food neophobia on the associations between subjective norm, attitude, perceived behavioural control, and entomophagy-related behavioural intentions was the aim of the study. The study concludes that food neophobia did not significantly moderate the relationship between behavioural intention and perceived behavioural control or between behavioural intention and subjective norm to accept insects as food. Nonetheless, it had a positive moderating effect on the association between behavioural intention to accept insects as food and attitude. The findings imply that insect-eating neophobia limits consumers' acceptance of entomophagy in the Wa Municipality.

IMPLICATIONS OF THE STUDY

The findings imply that it is a big challenge for the people in Wa Municipality to largely adopt edible insects as food, since many people may not think about including them in their diet because they are afraid of insects. The study suggests more research on the application of the Theory of Planned Behaviour to have a better understanding of entomophaghy. Therefore, the study offers helpful information on how to invest in insect production and promotion to reduce neophobia among consumers, and draw interest from organisations and government agencies to invest in the sector for livelihood improvement. The study recommends that policymakers should incorporate edible insects as a substitute animal protein source in Ghana's dietary policies with the aim of reducing the neophobia trait associated with insects. Also, further research on consumer behaviour on entomophagy should be encouraged in order to understand more about food neophobia and develop innovative approaches to motivate the consumption of insects as food. The study further recommends that public awareness should be created by leveraging the impact of social media and health professionals on the benefits of eating insects, so as to lessen insect neophobia among people.

LIMITATIONS OF THE STUDY

The study's limitations include the fact that it was limited to four communities within the Wa Municipality. Consumers from different cultures in Ghana may have different attitudes, subjective norms, perceived behavioural control, and behavioural intentions to eat insects, all of which are influenced by food neophobia. Also, the sample was drawn from a literate class regarding their behavioural intention to accept insects as food. Different results could have been obtained if the study sampled the respondents across different educational levels, including respondents without formal education.

CONFLICT OF INTEREST

The authors of this paper declare that they have no conflicts of interest with any organisations.

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Correlates of intimate partner violence among tertiary institutions' students in Ghana: Evidence from the Wa Municipality in the Upper West Region

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A B S T R A C T

Intimate partner violence (IPV) is a public health and economic problem globally, resulting in increased morbidity and mortality. IPV is costly and poses short and long-term effects on the physical, mental and social well-being of people. Nevertheless, there is little focus on its prevalence and associated factors among students in tertiary institutions in Ghana, particularly those from low-resource settings such as the Upper West region. This paper examines the knowledge, beliefs and awareness of IPV, and the factors associated with its perpetration among students in tertiary institutions. A cross-sectional study design was employed, and students from three tertiary institutions were randomly selected for the study. The logistic regression was used to analyse the factors influencing IPV perpetration. Even though the prevalence of IPV perpetration, in general, was 16.61%, the same as physical and psychological violence perpetration, some still believed in violent behaviour towards intimate partners. Respondents' age, level of education, mother's and father's employment type, mother's and father's level of education, gender, residence, and work experience in the past 12 months significantly influenced various forms of IPV perpetration. The study found that tertiary students in Wa perpetrate IPV. Therefore, authorities should implement codes of conduct policies and intensify counselling services.

INTRODUCTION

Intimate partner violence (IPV) has become a public health and economic problem in many countries, leading to an increase in morbidity, homicides, and mortality. The WHO defines IPV as a tension between intimate partners or non-partners that leads to physical, psychological, or sexual harm to a partner (WHO, 2012). Thus, IPV does not involve only married or dating individuals, as it can occur in the workplace, at schools, or at social gatherings among coworkers, students, relatives, and those in non-romantic relationships. The factors associated with IPV have been classified into micro- and macro-level factors. The micro-level factors emanate from individual traits such as level of education, drug and alcohol use, and experience of abuse or violence during childhood and the early years. In contrast, those at the macro level include community and societal factors such as socio-economic development, gender inequality, social norms, and beliefs (WHO, 2012). In general, women experience IPV more than men due to a lack of power, access to cash and credit, economic dependence, decision-making, autonomy and acceptance of social norms (Kebede et al., 2022; Tenkorang, 2019; Dery & Diedong, 2014), usually inflicting physical injuries, psychological disorders and sexually-related issues and leading to poor academic performance among students (Ogunwale et al., 2020).

This study is grounded in two social theories: the social learning theory and the social control theory. The social learning theory, as posited by Albert Bandura (1971), suggests that observation is one of the most effective ways to acquire new knowledge. Hence, it deals with people's perspectives and how they feel when replicating a behaviour, they have seen practised. In applying this theory, we propose that students are likely to perpetrate violence when they experience it or see it perpetuated on others within close social settings such as the family. On the other hand, the social control theory, as propounded by Travis Hirschi (1969), examines the reasons why individuals might engage in criminal behaviour. It states that the presence or absence of social controls on individuals is a key determinant of an individual's decision to engage in criminal acts. Hence, people who commit crimes often feel they have no connection or are not obliged to obey or conform to the rules of society. Therefore, people behave in specific ways due to the influence of society. Social norms are instilled in children during childhood through parents who associate rewards with good conduct and punishments with bad conduct. Still, as the

individual ages, the obligation to social controls diminishes. Attachment commitment, involvement in society and belief in society's values are the components of individual-community relationships. Individuals will, therefore, resort to violence when they feel they do not have a sense of attachment.

Empirically, the perception of students about intimate partner violence varies based on their childhood experience of violence or abuse, differing belief systems, the influence of friends, and having elders as role models. Openness and respect for one's opinion in a relationship help reduce the possibility of intimate partner violence (Aigbodion & Duma, 2022). In Ghana, Alangea et al. (2018) and Amoakohene et al. (2019) employed qualitative designs to analyse IPV among university students. They found that the level of one's education is not only a sufficient condition but also a necessary condition for mitigating IPV. In determining the level of significance of the categorical variables on IPV among tertiary students in South Africa, Spencer et al. (2016) used Fisher's exact test. They found that students are exposed to IPV as either victims or perpetrators. In determining the prevalence of IPV among tertiary students in Greece, Papadakaki et al. (2020) found that students are exposed to one or two forms of IPV, similar to findings by Neves et al. (2019) and Miskulin et al. (2016) that tertiary students in Cape Verde, Portugal, and Croatia, respectively, are exposed to violence. A study by Aigbodion and Duma (2022), which employed a qualitative design to explore the perceptions of female students of protective and risk factors of IPV, found that the protective factors include good role models, fidelity in relationships, respect and transparency, while the risk factors include influence by friends and differences in belief systems.

A study using a two-stage least squares regression to determine the relationship between IPV and women's participation in the labour market found a positive relationship between IPV and women's labour force participation (Gedikil et al., 2023). In like manner, Eikemo et al. (2023) employed a Logit model to determine the factors influencing the likelihood of pregnant women experiencing violence and found that education, depressive symptoms, employment and living situations influence the likelihood of pregnant women experiencing violence. Lack of necessities, such as food insecurity, particularly among women, also affects the experience of IPV. For example, a study using a logistic regression model to determine the link between food insecurity, accessibility to water sources and IPV against women in Tanzania and in some SSA countries established that food and water insecurity are significantly related to the likelihood of experiencing all forms of IPV in Mwanza, Tanzania, and 26 SSA countries (Meyer et al., 2023; Bachweakizi et al.,2023).

Further empirical studies also found that socioeconomic status, exposure to drug abuse, lack of social support schemes and level of education are associated with exposure and reduction of IPV in most African countries (Adu, 2023; Ou et al., 2021; Kadir Shahar et al., 2020). In using a random effect meta-analysis to determine the pooled prevalence of IPV among "men who have sex with men", it was found that IPV prevails in such intimate relationships (Liu et al., 2021). Having sexually transmitted infections (STIs) can lead to IPV, just as IPV can increase the risk of STIs. In Malawi, it was also found that pregnant women living with HIV are prone to experiencing violence, while in Nigeria, IPV was found to be a strong predictor of STIs among married women (Wetzel et al., 2021; Ogunwale et al., 2020; Sigbeku et al., 2015; Oladepo et al., 2011).

In Ghana, several measures such as the Domestic Violence Act 732, " Domestic Violence and Victims Support Unit"(2018), The National Gender Policy (2015), the development of gender-based violence training manuals for the judiciary system in Ghana, the "Orange Support centre" and "Boame Mobile App," National Cyber Security Act(2020), "Domestic Violence Secretariat", and "Victims Support Unit of the Ghana Police Service" (2022) have been implemented to help reduce and mitigate intimate partner violence. These notwithstanding, the situation does not appear to be improving, with very little knowledge about IPV perpetration among students in tertiary institutions. Knowledge of the prevalence of perpetration and the factors that determine such perpetration is important in helping to combat IPV, particularly among tertiary students in a resource-scarce setting, such as the Wa municipality of the Upper West region. Although studies on IPV among tertiary students in Ghana exist, our study is the first to focus specifically on tertiary students in the northern sector of the country, particularly in the Wa municipality. Our study fills this gap by examining the knowledge, beliefs, and awareness of IPV and the factors associated with its perpetration among students in tertiary institutions in the Wa municipality of the Upper West Region.

METHODOLOGY

Study design

The study used a quantitative design (cross-sectional survey) to assess knowledge, beliefs, awareness, prevalence, and factors affecting IPV perpetration. The Wa Municipality is one of the eleven districts/municipalities in the region and covers around 579.86 square kilometres, or about 6.4 percent of the region's land area (Ghana Statistical Service, 2014a). The Municipality is bordered to the north by Nadowli District, to the East and West by Wa East District, and the South by Wa West District. It is located between 1º40'N to 2º45'N latitudes and 9º32'W and 10º20'W longitudes (Aduah & Aabeyir, 2012). The Mole-Dagbani group, which includes the Waalas, Dagaabas, and Sissalas, constitute 80.4% of the residents in the Wa Municipality. Other ethnic groups in the Municipality are the Akan, Ewe, Ga, Dagomba, Grushi, Gonja, and Moshies, all of whom engage in secular employment and commerce (Osumanu et al., 2019).

The municipality has four tertiary institutions, which attract students from diverse socio-cultural backgrounds. These institutions include the Simon Diedong Dombo University of Business and Integrated Development Studies (SDD-UBIDS), Dr. Hilla Liman Technical University (DHLTU), Nusrat Jahan Ahmadiyyah College of Education (JAHAN-Wa), and the Wa Nursing Training College (Wa—NTC). All institutions, except JAHAN-Wa, were selected for the study. Students from these institutions served as the targeted

population. Postgraduate students from SDD-UBIDS were excluded from the study.

Sample and sampling procedure

According to the Ghana Statistical Service[1], about 43% of men and women across various populations in Ghana have experienced violence once in the last 12 months. Using this prevalence and the formula[2] for estimating sample size (Ameh et al., 2012), we calculated a sample size of 377. However, we recorded a response rate of 75% (283), as many students were reluctant to answer the questionnaire despite resampling. Thus, the study used a sample size of 283 students from three tertiary institutions within the Wa municipality. The participants were randomly selected from the population to form the sample for the study. This approach prevents selection bias and enhances the internal validity of the data collected.

Data collection

We used a structured questionnaire to collect the needed data from the research respondents. The questionnaire was closed-ended to ensure concise and precise responses, which would enable quantitative analysis of the collected data. The questionnaire also covered areas of interest to the study: demographic characteristics, awareness and knowledge base of respondents on dating violence, and perpetration of dating violence. Trained research assistants administered the questionnaire.

Analytical approach

First, we used descriptive statistics to describe our sample, the perpetration of IPV and students' knowledge and attitudes towards IPV. Second, since the dependent variable (IPV perpetration) is binary, we employed the logistic regression model to analyse the factors related to IPV perpetration. We analysed two forms of IPV (physical and psychological) perpetration based on the standard instrument on the knowledge, attitudes, and practices (KAPs) in various IPV domains (Thompson, 2006). We included age, gender, parents' educational level, place of residence, financier of educational needs, and whether the student lives with both parents as explanatory variables.

RESULTS

Demographic characteristics

A total of 143 males (50.53%) and 140 females (49.47%) participated in the study, as indicated in Table 1. Those within the 18-20 age category comprised 14.84% of the sample, 81.63% were within the 21-27 age category, and 3.53% were between the ages of 28 and 33. A total of 113 (39.93%), 39 (13.78%), 67 (23.67%), and 64 (22.61%) of the respondents, respectively, reported that their father was either not employed or employed in the private formal sector, private informal sector, or public sector. Similarly, 50.53%, 13.43%, 16.61%, 11.66%, and 7.77% responded, respectively, that their mother had no formal education, primary education, JHS/JSS, SHS/SHTS, technical/vocational and tertiary education, respectively. Approximately 73.14% of the respondents reported that both parents live together. Additionally, 49.45%, 10.55%, 16%, 2.55%, 16.36%, and 5.09% of the respondents, respectively, reported that their educational needs were met by their parents, father, mother, other non-relatives, other relatives, or themselves. It was also found that 69.96% of respondents engaged in any work to earn an income in the past 12 months. While others worked to cater for their educational and personal needs (63.91%), 7.96% worked to support their family, and 28.86% of the students worked to support their family while also caring for their personal and educational needs.

Table 1: Demographic characteristics of the respondents

Variable	Frequency	Percent
Age Category		
18-20	42	14.84
21-27	231	81.63
28-33	10	3.53
Gender		
Males	143	50.53
Females	140	49.47
Respondent's Level of Education		
Level 100	35	12.37
Level 200	122	43.11
Level 300	74	26.15
Level 400	52	18.37
Father's employment type		
No employment	113	39.93
Private formal sector	39	13.78
Private informal sector	67	23.67

[1] https://www2.statsghana.gov.gh/docfiles/publications/DVSummary_Report.pdf

[2] $s = z^2 * p * (1 - p)/e^2$ where s is the sample size, Z is the z-value (1.96) for 95% confidence interval, p is the prevalence of violence and e is the 5% error margin.

Public sector	64	22.61
Mother's educational level		
No formal education	143	50.53
Primary	47	16.61
JHS/JSS	38	13.43
SHS/SHTS/Technical vocational	33	11.66
Tertiary	22	7.77
Parents currently live together		
Yes	207	73.14
No	76	26.86
Financier of educational needs		
Both parents	136	49.45
Father only	29	10.55
Mother only	44	16
Other non-relatives	7	2.5
Other relatives	45	16.36
Self	14	5.09
Worked in the past 12 months		
Yes	198	69.96
No	85	30.04
Reason for working		
To support the family	16	7.96
Educational & personal needs	127	63.19
All above	58	28.86

Knowledge, attitude and practices (KAPs) towards IPV

KAPs about IPV were measured on a Likert scale from strongly agree to strongly disagree. Respondents were asked to indicate their rankings of statements, such as whether it is acceptable to hit a boy/girlfriend, the reactions of friends if one hits the boy/girlfriend, and whether one can forcefully have sex with the boy/girlfriend. From the results in Table 2, 60.64%, 34.63%, and 63.12% strongly disagree that it is not acceptable to hit a boy/girlfriend, strongly agree that friends will be shocked if they hit their boy/girlfriend and strongly disagree that one cannot forcefully have sex with the boy/girlfriend, respectively. From the survey, students in tertiary institutions considered intimate partner violence, in general, not acceptable. However, some still do not see anything wrong with IPV. For example, nearly 20% either disagree or strongly disagree that their friends would be shocked if they hit their girlfriend. As presented in Table 2, about 16.61% of the respondents had perpetrated physical and psychological violence, respectively.

Table 2: Knowledge, belief and Awareness of IPV among students in Tertiary institutions

Indicator	It is acceptable for a boy to hit a girl	A boy can force himself on a lady	Friends will be shocked if one hits their girlfriend	Friends will be cool if one hits the girlfriend	One will feel ashamed if one were violent against a partner
Agree	6 (2.13)	6 (2.13)	96 (33.92)	16 (5.67)	131(46.29)
Disagree	78 (27.66)	80 (28.37)	27 (9.54)	101 (35.82)	16 (5.65)
Neutral	20 (7.09)	14 (4.96)	27 (9.54)	19 (6.74)	17 (6.01)
Strongly agree	7 (2.48)	4 (1.42)	98 (34.63)	5 (1.77)	86 (30.39)
Strongly disagree	171 (60.64)	178 (63.12)	35 (12.37)	141 (49.7)	33 (11.66)

Perpetration of violence	Frequency	Percent
Physical violence		
Yes	47	16.61
No	236	83.39
Psychological violence		
Yes	47	16.61
No	236	83.39

Factors related to IPV Perpetration

Results in Table 3 show there is no significant relationship between the respondent's age, father's educational level, respondent's parents' living together, and physical violence perpetration. However, we found a significant relationship between gender, the respondent's level of education, the type of employment of the mother and the father, both the mother's and the father's educational level, work in the past 12 months, the place of residence of the respondent and physical violence perpetration. Specifically, the results show that females were 0.087 (95%CI -0.165 – -0.010) less likely to perpetrate physical violence compared to males. It was also established that level 400s were 0.418 (41.8%) (95%CI 0.247 – 0.589) more likely to perpetrate physical violence compared to level 100s. Students whose mother was employed in the private informal sector were 0.152 (15.2%) (95% CI 0.050 – 0.255) more likely to perpetrate physical violence, and those whose fathers were employed in the same sector had lower chances of perpetrating physical violence, hence the chance of perpetration decreases by 10.5% (0.105) (95% CI -0.206 – -0.004) compared to those whose father had no employment. Respondents whose mothers attended school to the Junior High school level (JHS/JSS) had 0.124 (12.4%) (95% CI -0.014 – 0.263) more likelihood of perpetrating violence compared to those with no formal education, while the chances of perpetrating physical violence decreased by 0.099 (9.9%) (95% CI -0.193 – -0.004) for respondents whose mother's highest level of education was tertiary compared to those whose mother had no formal education. It was also found that respondents who worked in the past 12 months were 0.075 (7.5%) (95% CI 0.150 – 0.150) more likely to perpetrate physical violence compared to those who did not work in the past 12 months. Respondents who lived with their parents were 0.105 (10.5%) (95% CI 0.006 – 0.204) more likely to perpetrate physical violence compared to those who lived alone.

Table 3: Logit regression on Physical and Psychological violence perpetration

	Physical violence		**Psychological violence**	
	Marginal effects	*95% CI*	*Marginal effects*	*95% CI*
Age category (base is less than 20 years)				
20-27	-0.007 (0.076)	-0.155 – 0.142	-0.024 (0.071)	-0.163 – 0.116
28-33	-0.086 (0.110)	-0.302 – 0.129	-0.144* (0.087)	-0.315 – 0.026
Gender (Base is male)				
Female	-0.087** (0.040)	-0.165 – -0.010	-0.077** (0.038)	-0.152 – -0.002
Respondent's educational level (Base is level 100)				
Level 200	-0.049 (0.053)	-0.152 – 0.054	-0.047 (0.050)	-0.145 – 0.050
Level 300	0.042 (0.062)	-0.080 – 0.163	0.054 (0.060)	-0.063 – 0.171
Level 400	0.418** (0.087)	0.247 – 0.589	0.453** (0.079)	0.298 – 0.608
Father's employment type (Base is no employment)				
Private formal	-0.069 (0.071)	-0.208 – 0.070	-0.069 (0.073)	-0.212– 0.074
Private informal	-0.105** (0.052)	-0.206 – -0.004	-0.119** (0.053)	-0.222 – -0.015
Public sector	0.046 (0.089)	-0.129– 0.221	-0.008 (0.081)	-0.167 – 0.150
Mother's employment type (Base is no employment)				
Private formal	0.035 (0.061)	-0.083 – 0.154	0.042 (0.063)	-0.080 – 0.165
Private informal	0.152** (0.052)	0.050 – 0.255	0.136** (0.049)	0.040 – 0.232
Public sector	0.081 (0.082)	-0.079 – 0.241	0.093 (0.085)	-0.073 – 0.258
Mother's educational Level (Base is no formal education)				
Primary	-0.053 (0.050)	-0.150 – 0.044	-0.063 (0.050)	-0.160 – 0.034
JHS/JSS	0.124** (0.071)	-0.014 – 0.263	0.114* (0.066)	-0.015 – 0.243
SHS/SHTS	0.045 (0.073)	-0.097 – 0.188	0.016 (0.066)	-0.113 – 0.144
Tertiary	-0.099** (0.048)	-0.193 – -0.004	-0.107** (0.054)	-0.213 – -0.002
Father's educational Level (Base is no formal education)				
Primary	0.404 (0.100)	0.209 – 0.600	0.429** (0.085)	0.261 – 0.596
JHS/JSS	0.091 (0.070)	-0.046 – 0.227	0.105* (0.063)	-0.019 – 0.229
SHS/SHTS	0.066 (0.073)	-0.078 – 0.209	0.086 (0.069)	-0.049 – 0.221
Tertiary	0.031 (0.078)	-0.122 – 0.184	0.089 (0.073)	-0.054 – 0.233
Parents living together	-0.083 (0.070)	-0.220 – 0.053	-0.079 (0.060)	-0.197 – 0.039
Worked in the past 12 months	0.075** (0.038)	0.150 – 0.150	-0.071** (0.037)	-0.002 – 0.144
Residence of the respondent (Base is stays alone)				
Both parents	0.105** (0.051)	0.006 – 0.204	0.165** (0.041)	0.085 – 0.245
Father only	0.078 (0.128)	-0.174 – 0.329	0.152 (0.129)	-0.101– 0.405
mother only	0.066 (0.067)	-0.066 – 0.198	0.082 (0.051)	-0.017 – 0.181
Other relatives	0.084 (0.066)	-0.046 – 0.213	0.121** (0.052)	0.019 – 0.224

Pseudo r-squared	*0.356*	*0.377*
Wald Chi-square	*77.037*	*94.492*
Prob > chi2	*0.000*	*0.000*
Number of obs.	*260*	*282*

**** p<.01, ** p<.05, * p<.1*

Similarly, the results in Table 3 present the factors influencing the perpetration of psychological violence. We did not find a significant relationship between the respondents whose parents live together and psychological violence among students in tertiary institutions in the Wa municipality. However, a significant relationship was established between age, gender, level of the respondents, the level of education of both mother and father of a respondent, the type of employment of both the mother and father, place of residence, worked in the past 12 months and psychological violence perpetration. It was established that respondents who were in the age brackets between 28-33 were 0.144 (14.4%) (95% CI -0.315 – 0.026) less likely to perpetrate psychological violence compared to those who were less than 20 years of age, whereas females were 0.077 (7.7%) (95% CI -0.152 – -0.002) less likely to perpetrate psychological violence compared to males in these tertiary institutions. Level 400s were also 0.453(45.3%) (95% CI 0.298 – 0.608) more likely to perpetrate psychological violence compared to level 100s. Respondents whose father and mother were employed in the private informal sector were 0.119 (11.9%) (95% CI -0.222 – -0.015) and 0.136 (13.6%) (95% CI 0.040 – 0.232) less and more likely to perpetrate psychological violence, respectively, compared to those whose parents were not employed. It was also found that as the level of education of a respondent's mother increases, the chance of perpetrating psychological violence decreases. Respondents whose mothers attained JHS/JSS were 0.114 (11.4%) (95% CI-0.015 – 0.243) more likely to perpetrate psychological violence, while those whose mother's level of education attained was tertiary were 0.107 (10.7%) (95% CI-0.213 – -0.002) less likely to perpetrate psychological violence compared to those whose mother had no formal education. The likelihood of a respondent whose father attained primary or JHS/JSS education perpetrating psychological violence increased by 0.429 (42.9%) (95% CI 0.261 – 0.596) and 0.105 (10.5%) (95% CI -0.019 – 0.229), respectively. Respondents who worked in the past 12 months were 0.071(95% CI -0.002 – 0.144) less likely to perpetrate psychological violence compared to those who had not worked in the past 12 months. Respondents staying with both parents had 0.165 (16.5%) (95% CI 0.085 – 0.245) more chances of perpetrating psychological violence compared to those who stayed on their own. Those who live with other relatives were 0.121 (12.1%) (95% CI 0.019 – 0.224) more likely to perpetrate psychological violence compared to those who stayed on their own.

DISCUSSION

Given the dire effects of IPV on personal development, this study was conducted to determine the prevalence, attitudes, and factors influencing IPV perpetration among students in tertiary institutions in WA. The knowledge of students was measured based on their acceptance of violence. In general, it was found that, apart from a few, students saw violence as an unacceptable act. About 69.65%, 25% and 5.36% of the study participants, respectively, disagreed strongly, disagreed, and were neutral on the acceptability of a boy hitting his girlfriend. Similarly, 80.36%, 12.50%, 5.36% and 1.79% of the participants, respectively, disagreed strongly, disagreed, neutral and agreed strongly that a boy can force himself sexually on his girlfriend even if she is not interested. About 8.93%, 5.36%, 7.14%, 44.64%, and 33.93% of the participants, respectively, disagreed strongly, disagreed, were neutral, agreed, and agreed strongly that their friends would be shocked if they hit their boyfriend/girlfriend. Though students in these institutions frown on violence, they still perpetrate some forms of violence. This finding is contrary to that found by Neves et al. (2019). Their study found that students in Cape Verdean universities in Portugal perceive violence as an acceptable way of correcting misconduct. On the contrary, our study found that students in tertiary institutions in Wa are aware of intimate partner violence but consider it unacceptable.

This study found that the overall prevalence of IPV perpetration was 16.61%, which is far below the 76.4% reported by Flake et al. (2013), but still undesirable. Our results also contradict the 66.3%, 48.2% and 42.6% prevalence levels among university students in Spain, a tertiary hospital in Abakaliki, Nigeria, and a Ghanaian university, respectively (Llano-Suarez et al., 2021; Anikwe et al.,2021; Spencer et al., 2016). We also found that students in the age category of 28-33 were less likely to perpetrate psychological violence compared to those under 20 years. At the same time, level 400s were found to be more likely to perpetrate physical violence and psychological violence compared to level 100s. This finding is supported by Anikwe et al. (2021) and Isokariari et al. (2023), who identified age and the year of study as significant predictors of violence among tertiary students. Level 400 students understand the ways of the school compared to those of Level 100; hence, they engage in violent acts, often in the name of ushering them into the system. Based on the perception and belief of most women in the African setting, it was found that female students are less likely to be perpetrators of physical and psychological violence. Women in most African homes justify the beating of women on most occasions, and they perpetrate it in self-defense. This follows the findings of Aigbodion and Duma (2022), who looked at the perceptions of female students on protective and interpersonal risk factors in a university in Nigeria, and Llano-Suarez et al. (2021), who looked at gender roles and IPV among female university students in Spain.

Students who live with both parents and relatives are more likely to perpetrate violence since, as children, they learn from the environment in which they grow and seeing violence practised in their homes will be considered normal and are likely to pick up such acts from home. They will resort to such violent acts, seeing them as normal behaviours. This is

influenced by the social learning theory propounded by Bandura (1971). Students who work are also more likely to experience sexual violence, as they will be abused just for the reason of providing for their needs or offering a job opportunity. Students who work to cater for their families have a greater likelihood of perpetrating psychological violence. This is so because they are usually stressed and will not need to be pressured. Hence, any slightest provocation from other students was retaliated with harsh words. This is supported by the findings of Anikwe et al. (2022), who examined the burden of IPV on nursing students and nurses in a tertiary hospital in Nigeria, as well as those of Aigbodion and Duma (2022). Mother's level of education dramatically influences a student's perpetration of violence. Mothers and fathers who have lower levels of education do not have access to resources that promote peaceful conflict resolution, stress management and prosocial behaviour; hence, they will not be able to nurture their children to adopt violent coping mechanisms compared to those whose mothers attain tertiary education. Well-educated mothers may provide more guidance and positive role models for managing disagreements without resorting to violence since they are more likely to access resources promoting peaceful conflict resolution and prosocial behaviour.

Finally, students whose parents work in the private informal sector are more likely to perpetrate physical or psychological violence due to limited parental supervision caused by long working hours and financial instability, which fosters stress and frustration. Their exposure to violent environments and a lack of resources for emotional development make aggression normal as a coping or conflict-resolution mechanism.

CONCLUSION AND POLICY IMPLICATIONS

The results from the study show that students in tertiary institutions in Wa perpetrate intimate partner violence. The overall perpetration is 16.61%. Demographic and social variables, including age, respondents' level, mother's and father's employment type, mother's and father's level of education, gender, residence, and work experience in the past 12 months, showed a significant association with IPV. It is therefore concluded that tertiary students in Wa perpetrate IPV. Although the prevalence rate is low, it is undesirable and warrants attention, as minor problems can escalate into major ones. Each of these institutions has a harassment policy, but its effectiveness is unknown. Therefore, this study recommends that students be given a thorough orientation on factors that characterise IPV, its effects and possible solutions to it. Additionally, mentorship groups and programs should be established to enable students to learn and develop good habits in their relationships. Finally, courses should be introduced in various programs offered by such institutions, so that students can be trained as ambassadors and sensitisation officers for all forms of violence.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The study found a significant association between social and demographic variables and IPV perpetration; it could not determine their causal relationship. Some of the limitations of the study are that it focused on determining whether tertiary students in Wa perpetrate intimate partner violence, and not the causes or effects of intimate partner violence. Finally, the definition of violence, as per the study, could be expanded to include economic violence. Future research can look at the determinants and effects of economic violence on the Socioeconomic development of students and communities in Ghana.

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT COFERENCE PROCEEDINGS

Exploring the interplay between work-life balance and job performance among employees in accommodation facilities: A qualitative study

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A B S T R A C T

The hospitality industry is characterised by long working hours, irregular shifts, and high service expectations, making it difficult for employees to maintain a healthy work-life balance (WLB). This study delves into the experiences of WLB and its influence on job performance among employees in hotels in Tamale, Ghana. The study uses a qualitative lens, conducting in-depth interviews with 25 hotel employees across various job roles to comprehend their lived experiences in accommodation facilities in Tamale, Ghana. The results reveal that rigid work schedules, excessive workloads, and a lack of managerial support significantly contribute to work-life conflicts, leading to stress, burnout, and reduced job performance. Many employees struggle to balance work and personal responsibilities, often resorting to informal shift-swapping as a coping mechanism. Poor WLB negatively impacted job performance, customer service quality, job satisfaction and wellbeing. The study recommends that hotel managers implement flexible scheduling, improve workplace support systems, and ensure adequate staffing levels to enhance employee well-being. It also suggests integrating employee assistance programs and structured policies to mitigate work-life conflicts.

INTRODUCTION

In today's competitive market landscape, businesses increasingly adopt sustainable strategies to enhance employee well-being and boost productivity (Bataineh, 2019). Recently, professionals and scholars have shown a growing interest in achieving a healthy balance between work and personal life. This interest is driven by changes in workforce demographics, the intensity and pace of work, and the increasing number of hours employees are required to work (Helmle et al., 2014). Employees need to feel satisfied and happy in their roles (Wood et al., 2020) to perform at their best. As a result, work-life balance (WLB) has emerged as a key factor in raising employee satisfaction and improving job performance (Dayour & Adongo, 2023).

Work encompasses the range of official responsibilities a person is tasked with in their job (Sirgy & Lee, 2018). WLB refers to the harmony achieved between work commitments and other aspects of life, such as leisure activities, family responsibilities, and personal development (Jayasingam et al., 2021). Azeem and Akhtar (2014) defined it as the ability of individuals to appropriately prioritise their work, personal well-being, family, and social activities. According to Soomro et al. (2018) WLB has become a crucial factor for those seeking a high quality of life. It supports individuals in living healthy, fulfilling, and successful lives (Bataineh, 2019; Dayour & Adongo, 2023) as the symmetry between work and normal life activities, including leisure, creates a sense of balance.

WLB has been recognised as a critical issue for both individuals and organisations. Research shows that achieving ample WLB enhances employee productivity, which has a positive effect on organisational performance (Bataineh, 2019). Therefore, maintaining symmetry in work and life is important for individuals to be fulfilled and achieve overall well-being (Chandran & Abukhalifeh, 2021). Having a good WLB supports better mental and physical health, brings about higher job satisfaction, reduced stress, and an improved quality of life (Bataineh, 2019; Wood et al., 2020). On the other hand, a continued deprivation of WLB can result in exhaustion, decreased motivation, increased turnover, and ultimately, poor organisational performance (Sheppard, 2016). Besides, an asymmetry in work and life is liable to have negative consequences on one's health, safety, and level of stress at

work (Anku-Tsede & Kutin, 2013). Employees who experience positive WLB are believed to contribute significantly to an organisation's competitiveness and profitability (Bataineh, 2019; Wood et al., 2020). To promote sustainable success in a competitive market, firms can develop effective strategies and policies that support their workforce, enhance employee engagement and satisfaction, reduce turnover, and drive overall organisational performance by understanding the critical role of WLB in employee productivity (Obiageli et al., 2015; Sheppard, 2016). Annan (2020) highlights that employees with a healthy WLB are more inclined to perform at their best, as it contributes positively to their family's well-being. However, for most workers, achieving a suitable balance between work and life has become a big challenge, more so in the hospitality industry. This is because the hospitality industry largely operates 24-hour businesses. Therefore, hospitality jobs today are associated with extended working hours, intense workloads, changing shift patterns and demanding clientele (Chandran & Abukhalifeh, 2021).

Employees are the driving force behind delivering exceptional guest experiences and ensuring the smooth operation of hospitality facilities like hotels, restaurants, and resorts (Verevka, 2019). However, the industry's demanding nature often makes maintaining a healthy WLB challenging for workers. For instance, Darko-Asumadu et al. (2018) and Kasango (2022) argue that work constitutes a significant stress factor, resulting in tension and stress. The stress often arises from limited family-friendly policies, inflexible scheduling, inadequate job design, and insufficient parental leave options, impacting employees' productivity and straining family relationships (Chaudhuri et al., 2020). Due to job-related stress or work-life conflict/imbalances, there is a rising concern that home and community life quality is declining (Kasango, 2022). Employee input and productivity may suffer due to work-life conflict because people who struggle to maintain a healthy WLB frequently struggle to manage work duties (Tayal & Mehta, 2023).

The tourism industry plays a crucial role in driving physical, social, and economic development, with the hospitality sector, especially hotels, serving as a key source of employment. However, the demanding nature of the industry, marked by long working hours, unpredictable schedules, frequent time away from home, and high levels of client interaction, often places significant pressure on employees to prioritise success above all else (Akter et al., 2019). This reality highlights the critical need for WLB to support employee well-being and maintain consistent, high-quality service delivery (Gamor et al., 2014). While WLB has been explored in hospitality and tourism, most research has focused on Western contexts (e.g., (Bouzari & Karatepe, 2020; Cabaraban & Borbon, 2021; Chandran & Abukhalifeh, 2021). Notable exceptions include Gamor et al. (2014), who studied how employee performance impacts the hotel sector and Dayour and Adongo (2023) who examined the influence of work-family-leisure balance on hotel employees' psychological health. However, these studies largely overlook how WLB or imbalance directly affects job performance, especially from a qualitative perspective, whereby respondents can give their own lived accounts of how that impacts their workplace performance. Moreover, how hotel employees negotiate and manage work-life imbalances is not given any attention in the hospitality literature. Most existing research is also quantitative (Bouzari & Karatepe, 2020; Cabaraban & Borbon, 2021; Chandran & Abukhalifeh, 2021; Dayour & Adongo, 2023; Gamor et al., 2014), offering limited insights into the lived experiences of employees juggling work and personal responsibilities and how these dynamics influence their workplace performance. This study, therefore, aims to fill these gaps in the literature by 1) examining hotel employees' experiences with WLB, 2) how WLB impacts their job performance within a hotel environment and 3) how they negotiate the imbalances/conflicts between work and life. By focusing on Ghana, a resource-constrained environment, this research will enrich the literature with context-specific insights and strategies to address work-life imbalances or conflicts. The rest of the paper is structured into the literature review, research methods, results and discussion, conclusions, implications of the study, limitations and areas of further research.

LITERATURE REVIEW

Work-Life Balance

The term WLB is widely discussed in academic literature, yet its exact definition remains ambiguous and moot. Mohanty and Mohanty (2014) maintain that this is largely occasioned by the use of WLB, work-family interface, work-family satisfaction, and work-life satisfaction as alternative terms in the extant literature. In general terms, it refers to the interaction and alignment between an individual's work and personal roles, often described through concepts such as role integration, enhancement, or facilitation (Brough & Kalliath, 2009). Frone (2003) understands WLB as a state where minimal conflict exists between work and family responsibilities, allowing individuals to function effectively in both areas. Similarly, Voydanoff (2005) suggests that WLB is achieved when individuals successfully engage in and manage both work and personal domains. Kalliath and Brough (2008) describe WLB as achieving harmony between work and personal activities, contributing to overall well-being. Greenhaus and Allen (2011) expand on this by framing it as an individual's satisfaction and effective fulfilment of work and life roles.

Furthermore, Hirschi et al. (2019) emphasise the importance of individuals perceiving themselves as efficient and content in both domains while maintaining alignment with their values. Achieving a balance requires navigating role expectations in both spheres while minimising conflicts and maximising satisfaction (Clark, 2000). The concept also extends to managing the increasing overlap between work and personal life brought about by technological advancements, which often blur the boundaries between professional and personal time (Jones et al., 2013). For Redmond et al. (2006), achieving work-life balance in the workplace is supported by organisational policies such as flexible work arrangements, which help employees meet their professional and personal demands. These policies are particularly significant in industries with intensive work environments, such as hospitality, where long hours and irregular shifts can create work-family conflict. Supportive supervisors and equitable workplace practices play a critical

role in promoting a culture that allows employees to maintain balance, thereby enhancing job satisfaction and overall well-being. Moreover, work-life balance is not a one-size-fits-all concept, but rather it is influenced by personal circumstances, gender, and cultural contexts. For women, balancing work and family can be more challenging due to barriers like workplace discrimination and societal expectations, which can limit their career advancement and exacerbate role conflicts (Kara et al., 2013). Consequently, WLB involves more than time management; it requires access to resources and institutional support to ensure equitable opportunities for individuals to thrive professionally and personally.

Work-life balance, employee performance and satisfaction

WLB is essential for employee performance, particularly in demanding industries such as hospitality and tourism. It involves managing professional and personal responsibilities to achieve harmony, which significantly impacts work outcomes (Allen et al., 2020; Haar et al., 2014). The spillover theory explains how experiences in one domain (work or life) influence the other, suggesting that unresolved work-life conflicts can negatively impact performance. Workers who perceive a healthy work-life balance are better able to focus, experience reduced stress, and contribute more support to the success of the organisation (Dousin et al., 2019; Thevanes & Mangaleswaran, 2018). This relationship is particularly crucial in hospitality, where employee performance directly affects customer satisfaction and organisational reputation. Furthermore, WLB also influences job satisfaction, as it helps employees feel supported and valued in managing their responsibilities. Satisfied employees are more likely to exhibit positive attitudes and behaviours, enhancing workplace morale and customer interactions in service-oriented industries (Thevanes & Mangaleswaran, 2018). According to Allen et al. (2020), organisations that offer supportive policies, such as flexible work schedules and mentoring programs, help reduce work-life conflict and promote job satisfaction. In the hospitality industry, where irregular hours and high workloads are common, ensuring WLB is vital to maintaining employee well-being and engagement.

Dousin et al. (2019) found that job satisfaction mediates the relationship between WLB and employee performance, emphasising the idea that satisfied employees are more productive and committed to organisational aspirations. Accordingly, employees who feel content with their work and personal life alignment often exhibit higher levels of performance and allegiance (Riaz et al., 2021). This dynamic is particularly significant in hospitality and tourism, where employee satisfaction directly correlates with customer service quality and organisational success (Ramirez-Asís & Gharbi, 2023). Flexible working conditions, supportive leadership, and acknowledgement of employees' efforts contribute to job satisfaction, leading to enhanced performance and retention.

Promoting WLB is essential for employee satisfaction and performance within the hospitality and tourism space, where high work pressure is the norm. Adaptable scheduling, supportive management practices, and policies that acknowledge personal commitments can help employees manage the unique challenges of the industry (Allen et al., 2020; Thevanes & Mangaleswaran, 2018). Addressing WLB not only improves employee well-being but also strengthens their commitment and productivity, which are crucial for sustaining competitive advantage in this service-driven industry. The hospitality and tourism literature in Ghana lacks an exploration of hotel employees' experiences with WLB, particularly its impact on job performance and the strategies they use to navigate associated imbalances and conflicts. This study aims to address this gap by examining employees' experiences with WLB, assessing how it affects their performance, and uncovering the ways they manage these challenges. Such insights are scarcely studied in the broader tourism literature, underscoring the importance of this research.

Theory

The relationship between work and personal life has been examined through several theoretical lenses, including Spillover Theory (Crouter, 1984; Piotrkowski & Crits-Christoph, 1981), the Job Demand-Resource (JD-R) Theory (Bakker & Demerouti, 2014), and Boundary Theory (Nippert-Eng, 2008). Spillover Theory suggests that emotions and experiences in one domain can influence the other. This spillover may be positive, for example, satisfaction at work enhancing home life, or negative, as in work stress leading to family conflict. JD-R Theory further explains how job demands (e.g., long hours, emotional labour) can deplete energy and cause strain, while job resources (e.g., support, autonomy) can buffer these effects and enhance engagement. These theories provide valuable insights into the structural and psychological pressures that shape work-life balance (WLB).

However, the Boundary Theory offers a more behaviourally nuanced and individualised framework. It focuses on how people manage the interface between work and personal life, with individuals falling along a continuum from segmenters, who prefer clear separations, to integrators, who are comfortable with overlap between roles. This theory is especially relevant in demanding sectors like hospitality, where employees often face irregular shifts, emotional labour, and limited institutional support – conditions common in Ghana's hotel industry. In such environments, workers are compelled to develop personal strategies to manage their boundaries. The Boundary Theory enables this study to explore the outcomes of WLB, such as well-being and job performance, and the lived experiences and coping mechanisms employees use to manage competing demands.

Despite its strengths, the Boundary Theory is not without limitations. One key critique is that it focuses heavily on individual agency while underemphasising structural and organisational constraints. This can lead to an overreliance on personal responsibility for managing work-life balance, without adequately accounting for systemic issues such as inflexible work policies, cultural expectations, or economic pressures. Additionally, the theory's categorisation into segmenters and integrators may oversimplify the dynamic and often context-dependent ways people manage boundaries over time. Nevertheless, the Boundary Theory

provides a rich framework for understanding work-life negotiations in complex work environments.

RESEARCH METHODS

Study area setting

The Tamale Metropolis in the Northern Region of Ghana is a key commercial hub and one of the fastest-growing cities in West Africa, with a population of approximately 374,744. Geographically located between latitudes 9°16 and 9°34 north and longitudes 0°36 and 0°57 west, it is bordered by Savelugu, Kumbungu, Sanerigu, Tolon, Yendi, and Gonja districts. Tamale's economy thrives on activities such as trading, construction, auto mechanics, farming, and shea butter extraction. The city also serves as a regional hub for financial institutions, NGOs, educational institutions, and a teaching hospital that supports northern Ghana and parts of the Bono and Ahafo regions. Tamale is an ideal setting for studying WLB and workplace performance among hotel employees due to its rapid urbanisation and expanding hospitality industry. As the fastest-growing city in northern Ghana and a major tourism hub, Tamale hosts the highest number (43) of registered hotels in the region, including various star-rated and budget hotels (three 2-star, ten 1-star, 45 budget hotels, 4 guesthouses and 1 hostel) (Munkaila, Zakaria, & Clifford, 2018). The city's hospitality sector has grown significantly, especially after infrastructural developments during Ghana's hosting of the 2008 African Cup of Nations (CAN), attracting more visitors and increasing demands on hotel employees. These workers face long hours, irregular shifts, and high service expectations, making WLB a critical concern. Additionally, Tamale's strong communal lifestyle and family-oriented socio-cultural factors may present unique challenges in balancing work and personal life, unlike larger cities with more structured human resource policies (Abdulai et al., 2020). Understanding how hotel employees navigate these challenges offers valuable insights into WLB strategies suited to regional contexts. This study is essential for informing policies that enhance employee well-being and performance, ultimately improving service quality in Tamale's thriving hospitality sector.

Study design

The study is grounded in phenomenology, which is used to understand the nature of a phenomenon within a social context and, more importantly, from the individual's perspective or those who have experienced it (Nandinee et al., 2022). It aims to understand a phenomenon from the opinions of individuals who have experienced it. Consequently, the study uses this lens to understand the lived experiences of hotel employees regarding how they navigate life and work roles and the effect of that on their performance at the workplace. This methodological choice was necessary because past studies (Bouzari & Karatepe, 2020; Cabaraban & Borbon, 2021; Chandran & Abukhalifeh, 2021; Dayour & Adongo, 2023; Gamor et al., 2014) have largely relied on quantitative methods, often overlooking the deeper, subjective insights necessary for capturing personal narratives and views.

Sample size and sampling procedure

The study interviewed twenty-five (25) respondents across the twelve (12) different accommodation facilities in the Tamale Municipality, including housekeeping supervisors, receptionists, general managers, chefs, waiters, waitresses, room attendants, bartenders, cleaners, security officers and laundry attendants (see Table 1). A convenient sampling technique was used to select respondents for interviews (Dayour et al., 2023). This was targeted at workers who were available and ready to be interviewed. The theory of saturation was applied, where we stopped the interviews as the issues being elicited were becoming repetitive (Dayour, 2018), resulting in a sample of 25 respondents. The interviews were conducted within the premises of the hotels after employees ended their shifts to allow them ample and uninterrupted time for the interview. The interviews lasted between 30 and 45 minutes. In all, thirty-one (31) employees were contacted with the permission of a general manager or the CEO of the facility. In the end, twenty-five (25) of them consented to be interviewed after having an appreciation of what the study was about.

Table 1: Respondent characteristics

Pseudonym	Type of Accommodation	Gender	Age	Designation
R1	2-star	Male	29	Housekeeping supervisor
R2	2-star	Female	30	Receptionist
R3	2-star	Female	40	General manager
R4	1-star	Female	30	Receptionist
R5	1-star	Male	45	Chef
R6	1-star	Male	33	Waiter
R7	1-star	Female	24	Waitress
R8	1-star	Female	55	Room attendant
R9	Budget	Female	25	Chef
R10	Budget	Male	38	Bartender

R11	Budget	Male	34	Security officer
R12	Budget	Female	40	Room attendant
R13	Budget	Female	36	General Manager
R14	Budget	Female	28	Laundry attendant
R15	Budget	Female	47	Waitress
R16	Budget	Male	35	Receptionist
R17	Budget	Male	39	Room attendant
R18	Budget	Female	42	Chef
R19	Budget	Male	53	Housekeeping supervisor
R20	Budget	Male	42	Manager
R21	Budget	Male	40	Laundry attendant
R22	Budget	Female	22	Waitress
R23	Budget	Female	25	Room attendant
R24	Budget	Male	37	Receptionist
R25	Guest House	Male	46	Cleaner

Data collection instrument

A semi-structured interview guide containing open-ended and pre-scripted probes was used to guide the data collection. Besides, spontaneous probes, where needed, were used to offer more depth and breadth to the interviews (Dayour, 2019). Through this method, the researchers engaged with respondents' perspectives, addressing emerging issues and incorporating new insights that arose during the discussion. The interview guide was structured into four main parts. The first part gleaned information on respondents' background attributes, including sex, age, designation and the type of accommodation facility that employed them. The second part gathered information on employees' experiences of WLB at the workplace, while the final part examined how they negotiated the conflicts or imbalances between work commitment and personal life roles.

Data analysis

Thematic analysis was employed to analyse the data, drawing on both inductive and deductive coding techniques to ensure a comprehensive understanding of participants' lived experiences (Ozuem et al., 2022). Inductive coding allowed themes to emerge naturally from the raw data, while deductive coding was guided by existing theoretical frameworks, particularly the Boundary Theory and Work-Life Balance literature (Dayour et al., 2023; Clark, 2000; Nippert-Eng, 2008). This dual approach enabled the study to stay grounded in participants' narratives while also ensuring alignment with established concepts in the literature. The convergence of these approaches occurred during the axial coding phase, where categories from both inductive and deductive processes were merged and refined into overarching themes. This ensured that the analysis was both data-driven and theoretically informed, offering depth, context, and rigour to the findings. Following Saunders et al. (2016), the analysis involved several key stages: familiarisation with the transcripts, initial open coding, theme development, theme refinement, and interpretation. Each interview transcript was read multiple times to ensure immersion, with key phrases and responses highlighted and assigned codes. These were then grouped into broader thematic clusters that aligned with the study's objectives and theoretical underpinnings. The reliability and validity of the data were ensured through 'member-checking' where the refined codes were shared with three respondents to confirm that the codes indeed reflected their perspectives or otherwise (Dayour, Park, & Kimbu, 2019).

RESULTS AND DISCUSSION

This section presents and discusses the study's results based on the study's objectives, supported by the Boundary Theory (Nippert-Eng, 2008) and relevant empirical literature. The themes were generated inductively from the data and deductively from theory, providing a nuanced understanding of employees' lived experiences. The discussion is structured along three main thematic areas (i.e., entanglement between work-life and normal life, the impact of work-life conflict/imbalance on employee performance, and work-life conflict negotiation strategies), each with sub-themes that reflect and explain the depth of variations in respondents' lived experiences.

Trapped between work shifts and life

This theme mirrors the tensions employees experience as they attempt to fulfil their work obligations and personal social roles and responsibilities. It reflects structural and relational barriers that impede WLB. The study found that employees within the hotel workplace face considerable challenges in maintaining a WLB, which also impacts their performance. These issues relate to the sub-themes of 1) inflexible scheduling and 2) absence of supportive structures.

Inflexible scheduling

One main structural inhibitor of WLB expressed was the lack of flexibility in work schedules, making it difficult for workers to plan their time effectively. Most employees

lamented rigid rosters and the lack of formal procedures to change schedules. Especially, those employed in 1-star and 2-star hotels indicated that they were unable to change their rosters to suit their needs, and those who could make adjustments often relied on informal arrangements with colleagues rather than official mechanisms. The rigid scheduling system is a major source of frustration, as it limits their ability to attend to personal matters, spend time with family, attend funerals, weddings, outdooring or engage in leisure activities. According to the Boundary Theory (Nippert-Eng, 2008), this mirrors an environment that generates strong segmentation, constraining employee independence and flexibility over boundary negotiation. The finding also aligns with Zheng et al. (2016) who found that the ability to modify work schedules significantly contributes to improved WLB and overall job satisfaction, while the opposite is also true. The view finds expression in the voice of a 29-year-old housekeeping supervisor working in a 2-star hotel:

> *I think it is very important to put in place deliberate policies within our hotel to enable us to get time for our families…. employers should be able to make arrangements to give a chance to workers to have time for themselves. I sometimes feel like leaving the job, and other times, I don't feel like leaving, especially when I am facing challenges with too much stress or not having time for my family. Sometimes, when my family complains about me not getting time for them, I feel like changing jobs, but where will I get a new job? I feel like not being here because of the stress (he sighed). Now and again, I feel like changing and sometimes don't feel like changing. I sometimes also need time for myself to do my stuff, but I don't get time to do it, which further makes me feel like changing the job.*
>
> *…. You also need to make time for your family and your job. One's presence may be needed at the same time at the job level and the family level. For instance, during funerals, weddings or outdooring, your family members often need your presence. (30-year-old female receptionist in a 1-star hotel).*

Lack of supportive structures

From a relational perspective, the data showed that employees were deprived of peer and managerial support. Many respondents noted that their co-workers were not particularly supportive when they faced challenges that impacted their work performance. Supervisors often demonstrated ambivalence to personal difficulties, further aggravating the employee work-life schism. This finding is consistent with Dodanwala et al. (2022) who found that a lack of workplace support exacerbates employees' stress and dissatisfaction. The absence of a supportive work environment forces many employees to suppress their personal needs, ultimately leading to burnout and emotional exhaustion (Dayour & Adongo, 2023). Meanwhile, some employees admitted that they resolved to confront the challenging work conditions, feeling they had no alternative employment opportunities. An employee shared this in that regard:

> *…Neither my colleagues nor my supervisors are prepared to help you adjust your schedules to attend to other equally important social issues when the need arises. Supervisors often think that once we are paid, we must stick to our schedules, which makes it difficult for us to balance our work with normal life choices. As for my colleagues, only a few may consider swapping their time with you (a 38-year-old bartender in a budget hotel).*

Work-life imbalance/conflict and its impact on performance

This theme exposes how the lack of WLB impacts employees' physical, emotional and job performance. In so doing, two sub-themes involving 1) fatigue, burnout and poor service delivery and 2) overlapping roles and undermined efficiency are presented and discussed in this section.

Fatigue, burnout and poor service delivery

The respondents noted that working beyond their shift duration, often resulting in exhaustion with no compensation, is unfair. The inability to take time off for personal well-being led to feelings of frustration and disengagement at work. These support the assertion by Bhandari and Soni (2015) that the demanding nature of the hospitality industry often prevents workers from maintaining a fulfilling personal life, leading to dissatisfaction and lower motivation levels. A 24-year-old female waitress in a 1-star hotel narrated:

> *Occasionally, when we have continued workshops, you have to work throughout, and when you are off-duty, sometimes you feel you need to come and support the business run. Even though you get very exhausted, the next day, they expect you to come to work and sometimes render poor services, to the dissatisfaction of customers. As we know, they expect good services, but once you are tired, your services will be poor.*

Additionally, the study revealed that overtime work had a significant impact on employee efficiency. Many respondents indicated that working long hours left them physically and mentally exhausted, reducing their ability to provide high-quality service to customers. Respondents echoed this concern, with some employees describing instances of falling asleep during work breaks due to extreme fatigue. Tayal and Mehta (2023) found that excessive work hours in the hospitality industry led to exhaustion, reduced job performance, and increased service errors. Overworked employees are more prone to mistakes, which ultimately affect customer satisfaction and business performance. These outcomes resonate with the Spillover Theory, where strain at the workplace negatively influences performance and emotional well-being. An employee echoed this:

> *… You must be emotionally balanced to be able to work here; it is simply very tiring. I work beyond my shift hours most of the time, which makes me so tired, but I have to be here the following day. Sometimes,*

this affects my mood and job performance the whole day, and some customers ask questions about my mood, while others get angry and even report me to the manager. I sometimes wish to leave this job, but I love what I do too, though there is so much burnout, which affects my productivity sometimes (33-year-old male waiter in a 1-star hotel).

Overlapping roles and undermined efficiency

Many respondents reported that excessive workloads prevented them from engaging in personal activities, including hobbies, exercise, and even personal career development opportunities. They lamented that understaffing forced them to multitask, including cooking and waiting tables, leading to role overload and reduced work efficiency (Bakker & Demerouti, 2014). An employee suggested that management should employ more workers to reduce the burden on existing staff and improve overall job efficiency, supporting the argument by Wong and Ko (2009), who underscored the point that understaffing in the hospitality industry forces employees to work beyond their limits, ultimately affecting their long-term commitment to the organisation. Accordingly, employers who fail to address workload concerns risk high turnover rates and decreased workforce morale (Tan et al., 2020).

If they bring in more staff, the pressure will be reduced on the few who are here and have to perform multiple roles. For this shift, I am the chef but also the waitress. I prepare the food and come out and serve the guests, but paid the same amount. This is not fair, but we can't talk much about it. This makes me exhausted and sometimes affects the quality of the food (42-year-old female chef employed in a budget hotel).

Most respondents thought that if their hotels prioritised WLB, productivity would increase, and employee retention would improve. This gives credence to the view that organisations with strong WLB policies experience lower turnover rates and increased employee engagement (Soomro et al., 2018).

Employee strategies for negotiating work-life conflicts

Unlike the aforementioned theme, which highlights the effect of imbalance, this last major theme uncovers the strategies used by employees to navigate their dual roles. It was quite evident from the study that many hotel workers struggle to negotiate conflicts between their work and personal lives, and therefore found informal ways to adapt to such situations. One of the major conflicts identified was the need to prioritise work commitments over family responsibilities. Many respondents also reported difficulties in attending important family events, such as weddings, funerals, or religious gatherings, due to rigid work schedules. Some key informants shared personal stories of how their families frequently complained about their absence, leading to emotional stress and dissatisfaction. Some employees even reported working during vacations due to staff shortages, which further exacerbated their work-life imbalance. This supports an earlier study (Sirgy & Lee, 2016), which argues that work-life conflicts in service-oriented jobs create emotional strain, affecting employees' mental well-being and overall happiness. In addressing this obvious conflict, two negotiation strategies were distilled from the data: peer-to-peer informal shift negotiation and recalibrated aspirations.

Peer-to-Peer informal shift negotiation

Employees mostly depended on informal negotiation strategies with their peers at the workplace to attend to urgent individual matters. In some cases, workers swapped shifts with teammates to accommodate personal responsibilities, while others adjusted their reporting times based on mutual agreements. This finding is consistent with Pluut et al. (2022), who maintain that informal negotiations among employees can help alleviate short-term conflicts but do not address the structural issues that contribute to work-life imbalance. These approaches, however, lacked formal institutional backing, yet offered a temporary relief. A 40-year-old female general manager is quoted as saying:

Sometimes I swap my shift with my assistant, but it is not guaranteed, especially if the other he also needs the time off to attend to his issues.

A 34-year-old security officer in a budget hotel also remarked:

… Sometimes what I do is swap my shift with someone in my department to allow me to attend to more pressing issues. Sometimes you get the chance, but sometimes not if the person also needs that time too for some important reasons. This is not a guaranteed way of balancing work and personal life roles

Recalibrated Aspirations

We also found that some employees adapted to their work-life conflicts/imbalances by recalibrating their personal expectations – by avoiding some social events like funerals, religious events, and postponing leisure among others, supporting the Boundary Theory where employees behave like segmenters by force, not by choice. Due to their job demands, employees distance themselves from personal roles to avoid stress. These emotional adaptations are not ideal but reflect the constrained agency in a system that requires a continuous work attitude.

… That is why I was saying that my husband complains about me always being at work with no time to relax together or attend social gatherings. More to the point, as I earlier mentioned to you, my work schedules and other social issues, like funerals, among others, conflict with my work and vice versa. I don't even attend my ordained church any more. I changed to a different church because they worship in the evening, and this is not a useful adjustment to me. I am just managing it until I find a better job (25-year-old female room attendant in a budget hotel).

CONCLUSIONS

This study set out to explore how hotel employees in Tamale, Ghana, experience work-life balance (WLB), how those experiences impact job performance, and the strategies they adopt to navigate work-life conflicts. Using a qualitative lens involving a phenomenological approach, the study provides rich, context-specific insights that deepen our understanding of WLB in a labour-intensive and understudied hospitality setting of Ghana. The findings show that many employees work under rigid scheduling systems with little independence, limited managerial support, and persistent understaffing – all of which serve as inhibitors to achieving a meaningful WLB. The lack of institutional structures to support personal needs forces employees into reactive and often unsustainable coping strategies, such as informal shift-swapping or adaptive sacrifices in personal life. These work-life conflicts were shown to affect their work output, including reduced job performance and emotional fatigue.

Moreover, the study reveals that while employees actively attempt to manage boundaries between work and life, their efforts are constrained by organisational cultures that implicitly discourage balance. Many adopt forced segmentation or weak integration strategies due to the lack of systemic support – conditions that ultimately affect not just their productivity, but also their personal wellbeing and long-term commitment to the industry. The findings underscore the urgent need for structural reforms in human resource management within the hospitality sector, particularly in resource-constrained contexts like Tamale. Improving WLB is not just a matter of employee welfare – it is critical to operational efficiency, service quality, and sustainable organisational performance.

THEORETICAL IMPLICATIONS

This study provides important contributions to Boundary Theory (Nippert-Eng, 2008), which explains how individuals manage the boundaries between work and personal life through segmentation or integration. The findings both support and extend the theory while also revealing contextual limitations that challenge its assumptions. First, the study supports Boundary Theory by confirming that organisational structures heavily influence how employees manage work-life boundaries. Most hotel employees in this study were forced into segmentation due to inflexible schedules and strict work routines. However, this segmentation was not by choice but imposed, revealing that workplace conditions can limit employees' ability to negotiate boundaries. Second, the study extends the theory by showing how employees in a resource-constrained setting negotiate boundaries informally. Instead of relying on formal workplace policies, which do not even exist, they engaged in peer-based strategies like shift-swapping or adjusted their social lives to cope. These findings highlight the role of collective and adaptive boundary management in contexts where institutional support is lacking. Third, the study challenges a core assumption of Boundary Theory – that individuals have the agency to choose how they manage boundaries. In this case, economic insecurity and job scarcity limited employees' options. Many were unable to negotiate for balance and simply adapted under pressure. This suggests that Boundary Theory must better account for structural and contextual constraints, especially in low-income or informal employment settings. Overall, the study shows that while Boundary Theory is useful, its application must be fine-tuned to reflect the lived realities of workers in resource-scarce environments.

MANAGERIAL IMPLICATIONS

The study provides crucial insights for hotel managers and other hospitality service operators seeking to improve employee WLB. First, managers should implement flexible work schedules to allow employees to adjust their shifts based on personal and family needs. Many respondents reported difficulties in scheduling time off, which negatively affected their well-being. Implementing structured yet flexible scheduling policies will enhance worker satisfaction and reduce burnout, with a knock-on effect on performance. Second, improving workplace support mechanisms is essential. Employees who felt unsupported by supervisors were more likely to experience job dissatisfaction. Management should cultivate a collaborative work environment where employees feel comfortable discussing personal challenges without fear of judgment. Introducing employee assistance programs (EAPs) and peer mentorship structures could help employees balance personal and work responsibilities more effectively. Third, reducing excessive workloads through better staffing and task distribution is critical. Many respondents reported feeling overworked due to understaffing. Managers should ensure adequate staffing levels to prevent excessive work demands on a few employees. Additionally, providing incentives for overtime work, such as financial compensation or extra leave days, can help mitigate employee dissatisfaction related to long working hours. Last, training and development programs should be implemented to educate managers and supervisors on the importance of WLB. Ensuring that supervisors understand the impact of work-life conflict on employee well-being will promote a more supportive work culture.

AREAS FOR FURTHER RESEARCH

This study dwelt largely on the perspectives of hotel employees regarding their WLB and its impact on job performance. Consequently, the study failed to tap into the views of managers and supervisors concerning what they did to ensure their employees maintained a good WLB. Therefore, future studies could explore the perspectives of both managers and employees to compare those views for a more informed call to action. Besides, including other subsectors such as travel and tours, attractions, events, and transportation industries would offer a more nuanced understanding of the nature of WLB and job performance across various players in the hospitality and tourism industry for more tailored policy directions.

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT COFERENCE PROCEEDINGS

Cross-Sectional Study of the Determinants of Plastic Waste Separation Practices Among Urban Households in Wa, Ghana

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A B S T R A C T

Plastic waste management remains a critical urban challenge, particularly in the Global South, where rapid urbanisation has outpaced sustainable infrastructure development. This study investigates the plastic waste separation practices of 292 households in the Wa Municipality, Ghana, using a cross-sectional survey and multistage sampling across 14 urbanised communities. Findings reveal that while all households generate plastic waste, only 24% actively separate it, despite 83.6% reporting awareness of separation practices. Notably, awareness, rather than education or income, was the strongest predictor of behaviour, with aware individuals being nearly 19 times more likely to separate their plastic waste. Plastic bottles emerged as the most frequently generated and prioritised for separation, suggesting a clear entry point for targeted recycling initiatives. Additionally, lack of bins, time constraints, and perceived irrelevance were dominant barriers to separation. The study therefore recommends context-sensitive policies, public awareness campaigns, and infrastructure expansion to bridge the gap between environmental concern and household action. These findings provide empirical grounding for advancing circular economy practices and inform future urban waste management policies across similar contexts in the Global South.

INTRODUCTION

Plastics have become ubiquitous in contemporary life, shaping industries, economies, and daily routines across the globe. They are integrated into almost every aspect of modern existence, from packaging to construction, textiles to electronics (Gopaldas, 2016; Cronin, Hadley & Skandalis, 2022). As Freinkel (2011) aptly described, plastic is "a huge, and yet strangely invisible, part of modern life." The pervasiveness of plastic has, however, led to its emergence as one of the most pressing environmental challenges of our time (Kedzierski, Frère, Le Maguer, & Bruzaud, 2020). Plastic waste pollution is now recognised as a significant global issue, with grave implications for ecosystems, public health, and sustainable development. Geyer, Jambeck, and Law (2017) emphasized that "plastics have outgrown most man-made materials and have long been under environmental scrutiny."

Worldwide, vast quantities of plastic waste are generated due to the widespread use of plastic products. Between 1950 and 2015, 8300 million tonnes of plastic were produced globally, of which approximately 4900 million tonnes were discarded (Geyer, Jambeck, & Law, 2017). Alarmingly, each year an estimated 4.8 to 12.7 million tonnes of plastic waste end up in the oceans, threatening marine life and ecosystems (Agamuthu, Mehran, Norkhairah, & Norkhairiyah, 2019).

This global crisis is mirrored in the African context, particularly in Ghana, where increasing urbanisation, population growth, and economic activity have intensified the demand for plastic materials. In Ghana, plastics are used extensively for packaging, transportation, and commercial distribution. Local studies and reports indicate a rise in plastic consumption and waste generation in urban areas such as Accra, Kumasi, and Tamale (Evode et al., 2021). More recently, secondary cities like Wa, located in Ghana's Upper West Region, have experienced rapid urban expansion without the parallel development of robust waste management systems. This has resulted in significant environmental stress due to indiscriminate disposal and poor segregation of plastic waste.

Most consumers accept plastics as essential parts of their daily consumption without questioning their environmental impact (Cronin, Hadley & Skandalis, 2022). However, the

durability of plastic materials poses a serious environmental threat. Under suitable physical, chemical, and biological conditions, plastics can take decades to centuries to decompose. Unlike organic materials, they remain in the environment, building up in landfills, waterways, and oceans (Ballerini et al., 2018; Brandon, Jones, & Ohman, 2019). Despite efforts towards recycling and reuse, roughly 50% of plastic produced has low economic value, making recovery unfeasible in many cases. Shockingly, only 2% of plastic waste has been effectively recycled, while about 6% has been burned. The vast majority—around 92%—has been disposed of in landfills or the open environment since the 1950s (Geyer, Jambeck, & Law, 2017).

Kedzierski et al. (2020) identified three dominant drivers for the increased use of plastic in packaging: the substitution of traditional materials with plastic (Risch, 2009), urbanisation and population concentration (Cheng & Urpelainen, 2015; United Nations, 2017, 2018), and access to global consumer markets (Paek, 2004). Historically, materials like glass, pottery, wood, wicker, and textiles served as primary packaging and storage media (Bevan, 2014; Kedzierski et al., 2020). However, these have largely been replaced by plastics due to their convenience and cost-effectiveness.

Interestingly, although plastics are omnipresent, they rarely receive conscious attention from users. Most consumers accept plastics as integral components of their daily consumption experiences without questioning their environmental consequences (Cronin, Hadley & Skandalis, 2022). The durability of plastic materials, however, poses a significant environmental risk. Under favourable physical, chemical, and biological conditions, plastics may take decades to centuries to decompose. Unlike organic materials, they persist in the environment, accumulating in landfills, waterways, and oceans (Ballerini et al., 2018; Brandon, Jones, & Ohman, 2019).

Despite efforts towards recycling and reuse, an estimated 50% of plastic produced is regarded as having low economic value, rendering recovery unviable in many situations. Alarmingly, only 2% of plastic waste has been effectively recycled, while about 6% has been incinerated. The vast majority - approximately 92% - has been disposed of in landfills or the open environment since the 1950s (Geyer, Jambeck, & Law, 2017).

This study aims to assess plastic waste separation practices among urban households in Wa, Ghana, focusing on the barriers and opportunities for effective waste management. It addresses the limited understanding of plastic waste separation practices (PWSP) at the household level in emerging urban centres like Wa. While extensive literature exists on plastic consumption and pollution in major cities, less is known about PWSP in rapidly urbanising secondary towns. This study, therefore, investigates household-level usage, management, and willingness to separate plastic waste in Wa. It seeks to provide data-driven insights into the behavioural, structural, and socio-economic factors that influence plastic waste segregation in the context of urbanising Ghana. The findings are expected to inform local policy and intervention strategies aimed at improving environmental sustainability and waste governance.

STUDY AREA PROFILE

The Wa Municipality is one of the districts that make up the Upper West Region of Ghana (Figure 1). The Upper West Region is in the northwestern part of Ghana and shares boundaries with Burkina Faso to the north and north-western, the Upper East Region to the East and the Northern Region to the South. The Wa Municipality shares administrative boundaries with the Nadowli-Kaleo District to the North, the Wa East District to the East and South and the Wa West District to the West and South. It has a land area of approximately 234.74 square kilometres, which is about 6.4% of the region's land area (Wa Municipal Assembly, 2012). The municipality serves as a transport hub for the northwestern part of Ghana, with major roads leading south to Kumasi, north to Hamile and Burkina Faso, and northeast to Tumu and the Upper East Region.

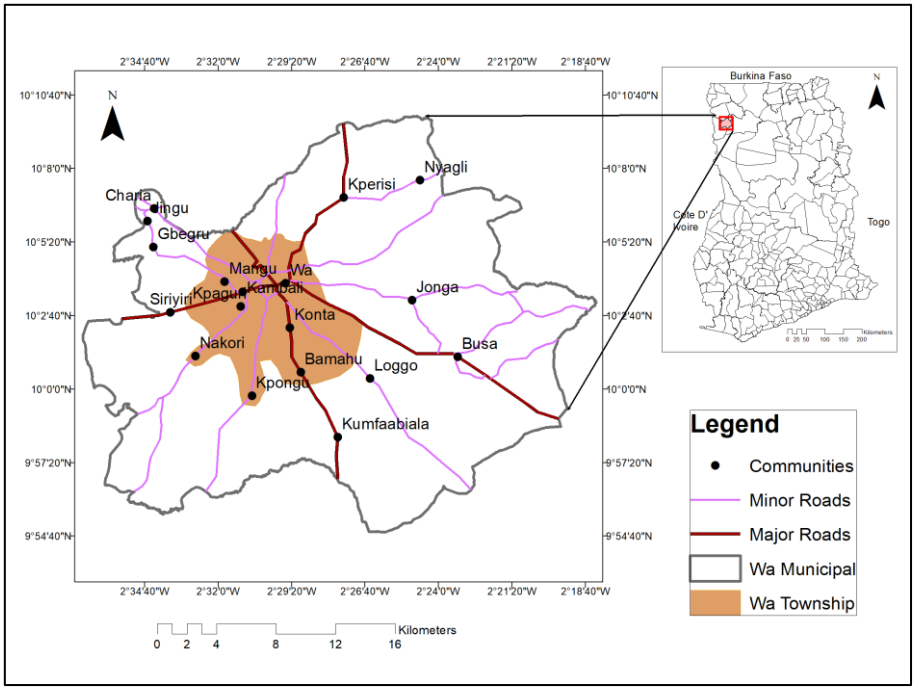

Figure 1: Wa Municipality in context

STUDY METHODOLOGY

A cross-sectional survey, which targeted households within the Wa Municipality, was carried out. The study adopted a multi-stage sampling technique. The first phase was to stratify the communities in the Municipality into planned, unplanned, and emerging areas. Then, using quota random sampling, a total of 14 communities were selected from the various strata. Finally, convenience sampling was used to select two hundred and ninety-two (292) sampling units from the selected communities. The study employed the use of both closed and open-ended questionnaires and personal interviews in obtaining data and information; hence, the data obtained from the study are both quantitative and qualitative.

Data analysis

The responses were coded and analysed using SPSS version 20.3. The data was analysed using descriptive statistics and inferential (non-parametric) statistics. Non-parametric statistics were used because the selection of the sampling units was non-probabilistic; hence, normality cannot be guaranteed, among others. The descriptive statistics involved both univariate and bivariate analysis, such as frequency distribution of variables, cross-tabulations, and summary measures such as means, variance, coefficients of skewness and kurtosis. Though non-parametric statistical tools have their drawbacks, they are instrumental in analysis since they are very robust and do not make any assumptions about the form of the underlying distributions. Used include Kruskal-Wallis test of independent sample means, chi-square test of independence (association), Spearman rank correlation coefficient and odds ratio.

Let x_{ij} be the income of the j^{th} respondent in the i^{th}Area (example unplanned), where the total number of areas is c (In the case of this study are three: unplanned, planned and emerging areas) and its rank is denoted by $\mathcal{R}_{ij}$. to test the hypothesis that

H_0: The distribution of income does not significantly vary across the various Areas.

Against

H_1: The distribution of income significantly varied across the various Areas.

The Kruskal-Wallis test, which is computed based on the ranked data $\mathcal{R}_{ij}$ was used. The test statistic is given by $K = \frac{12}{N(N+1)}\left(\sum_{i=1}^{c}\frac{\mathcal{Z}_i^2}{n_i}\right) - 3(N+1), i = 1,2,\dots,c.$

Where: n_i is the sample size of the i^{th}Area.

$N = n_1 + n_2 + \cdots + n_c.$

$\mathcal{Z}_i = \sum_{j=1}^{n_i}\mathcal{R}_{ij}, j = 1,2,\dots,n_i.$

The Spearman rank correlation coefficient was used to measure the strength of the relationship between variables such as patronage of a service provider for waste disposal (say X) And Income level (say $Y$of the respondent.

Let (x_i, y_i) be an ordered pair of the two variables, the X and Y. The Spearman rank correlation coefficient r_s is computed based on the differences in the ranks of the variables as follows:

$$r_s = 1 - \frac{6\sum_{i=1}^{n}\Theta_i^2}{n(n^2-1)}, i = 1,2,\dots,n.$$

Where $\Theta_i = \mathcal{R}(x_i) - \mathcal{R}(y_i)$.

To test for association between variables, income levels such as area of residence and the patronage of waste service providers, among others, the chi-squared test of association was used.

It tests the null hypothesis that there is no association between the variables. Its test statistic is given by $the\ chi-$ squared $= \sum_{i=1}^{r}\sum_{j=1}^{c}\frac{(\Xi_{ij}-\mathrm{E}_{ij})^2}{\mathrm{E}_{ij}}, i = 1,2,\dots,r, j = 1,2,\dots,c.$

Where: Ξ_{ij} is the observed frequency, E_{ij} is the expected frequency

Degree of freedom (df) is given by $df = (r-1)(c-1)$.

The study then sought to determine the effect of awareness of plastic waste separation on the practice of separating plastic waste by computing the odds ratio. The odds that a person who is aware of plastic waste separation separates his plastic waste are computed as

$$Odds\ ratio = \frac{\text{The odds of separating whilst aware of plastic waste separation}(O_{SA})}{\text{The odds of separating whilst unaware of plastic waste separation}(O_{NA})}$$

Where: $as\ O_{SA} = \frac{number\ who\ were\ aware\ and\ separated\ their\ plastic\ waste}{number\ who\ were\ aware\ and\ did\ not\ separate\ their\ plastic\ waste}$

and $O_{NA} = \frac{number\ who\ were\ unaware\ and\ separated\ their\ plastic\ waste}{number\ who\ were\ unaware\ and\ did\ not\ separate\ their\ plastic\ waste}$.

RESULTS

The socio-demographic characteristics of respondents who participated in the study are presented in Table 1. The respondents' occupational status revealed that over half (54.5%) of the respondents were public servants, whilst a considerable proportion (36.3%) were Traders (Table 1).

Table 2 presents the income levels of the respondents against their residential area. Many (69.6%) of those living in unplanned areas earned incomes between GHC1000 and GHC3000, whilst the rest (30.4%) earned incomes below GHC1000 (Table 2). None of the respondents living within the unplanned areas earned incomes above GHC3000 (Table 2). All the respondents who earned above GHC5000 reside within the emerging areas of the municipality. A Kruskal-Wallis test of independent samples to determine if the distribution of income significantly varies across the various Areas, Unplanned, Emerging and Planned Areas, was significant, suggesting that the distribution of income significantly varied across the various Areas.

Table 1: Socio-demographic characteristics of respondents

Variable	Categories	Frequency	Percent
Sex	Male	91	31.2
	Female	201	68.8
Age	15 - 24	1	0.3
	25 – 54	261	89.4
	55 - 64	24	8.2
	65+	6	2.1
Educational level	None	42	14.4
	Basic	55	18.8
	Secondary	31	10.6
	Graduate	148	50.7
	Postgraduate	16	5.5
Marital status	Married	209	71.6
	Single	64	21.9
	Divorced	3	1.0
	Separated	1	0.3
	Widowed	15	5.1
Occupation	Farmer	12	4.1
	Trader	106	36.3
	Civil Servant	3	1.0
	Public Servant	159	54.5
	Others	12	4.1
Total		292	100.0

Table 2: Income levels versus residential area of respondents

Income level	Unplanned Area		Emerging Area		Planned Area		Total	
	n	%	n	%	n	%	N	%
<1000	28	30.4	9	7.5	12	15.0	49	16.8
1000 – 3000	64	69.6	82	68.3	57	71.2	203	69.5
3001 – 5000	0	0.0	18	15.0	11	13.8	29	9.9
>5000	0	0.0	11	9.2	0	0.0	11	3.8
Total	92	31.5	120	41.1	80	27.4	292	100.0

Kruskal-Wallis Test of Independent Samples

Null hypothesis	N	Test statistic	Degree of freedom	Asymp. Sig.	Decision
The distribution of income is the same across all the categories of the Area	292	42.396	2	0	Reject the null hypothesis

*n is the frequency, and N is the total frequency

All respondents indicated they generated plastic waste alongside other wastes (Table 3). From Table 3, it is observed that less than half (46%) of the respondents separate their household waste before disposal. On the type of containers used for temporary household waste storage, most (84.6%) of the respondents used waste bins for storing their waste at their homes, a few, however, indicated using old buckets (9.6%), polythene bags (4.8%) and paper cartons (1%).

Table 3: The practice of household waste separation across the types of waste generated, age groups and educational level

Variable	Category		Separation of household waste		Total (%)	Pearson Chi-Square	
			No	Yes		Value	Asymp. Sig.
Type of waste generated	Electronic	No	8	4	12(4.1)		
		Yes	151	129	280(95.9)		
	Organic	No	8	17	25(8.6)		
		Yes	151	116	267(91.4)		
	Plastics	Yes	159	133	292(100.0)		
Age Group	15 – 24		1	0	1(0.3)	5.862	0.119
	25 – 54		136	125	261(89.4)		
	55 – 64		18	6	24(8.2)		
	65+		4	2	6(2.1)		
Total (%)			159(0.54)	133(0.46)	292(100)		
Educational level	None		25	17	42(14.4)	14.055	0.007
	Basic		29	26	55(18.8)		
	Secondary		25	6	31(10.6)		
	Graduate		69	79	148(50.7)		
	Postgraduate		11	5	16(5.5)		
Total			159(0.54)	133(0.46)	292(100)		

The study observed that more than half (54.5%) of the respondents patronised the services of waste disposal service providers in managing their waste (Table 4). However, it was observed that 45.5% (133) of the respondents who did not patronise the service of a service provider in disposing of their waste either disposed of it in communal containers (35.9%) or open channels (26%) or some designated dump sites (23.7%). The rest either disposed of it in bushes (8.4%), their backyards (3.8%), undeveloped lands or uncompleted buildings (Table 4). Though generally people from various income levels patronised these service providers, the proportion of respondents with incomes above GHC1000 who patronised these services is more than those who earned below GHC1000 (Table 4).

Table 4: Patronage of a service provider for waste disposal versus the income level of respondents

Patronage of a service provider for waste disposal	Income level				Total	Pearson Chi-Square	
	<1000	1000 – 3000	3001 - 5000	>5000		Value	Asymp. Sig.
No	29	87	11	6	133(45.5%)		
Yes	20	116	18	5	159(54.5%)	5.657	0.130
Total	49(16.8%)	203(69.5%)	29(9.9%)	11(3.8%)	292(100%)		

Alternative venues for the disposal of waste by households that do not patronise the service of waste collection agents

Disposal Sites	Frequency	Percent
Backyard	5	3.8
Undeveloped Parcels of land	2	1.5

Bushes	11	8.3
Communal Containers	47	35.3
Uncompleted building structures	1	0.8
Open channels	34	25.6
Designated sites	31	23.3
Others	2	1.5
Total	133	100

Spearman rank correlation and Chi-Square tests of patronage of a service provider for waste disposal and the Income Level of respondents

Measure	**Value**	**df**	**Asymp. Sig.**
Pearson Chi-Square	5.657	3	0.130
Likelihood Ratio	5.663	3	0.129
Linear-by-Linear Association	3.235	1	0.072
Spearman Correlation	0.123		0.035
N of Valid Cases	292		

A Spearman rank correlation coefficient of 0.123 (Table 4) calculated showed a very weak relationship between patronage of a service provider for waste disposal and respondents' income levels. To further explore this apparent relationship, the Chi-square test was employed to determine whether there is a significant association between the two variables. The results in Table 4 indicate that the test is not significant. Therefore, there is no association between the two variables at a 5% significance level.

Generally, the average amount that respondents who patronise waste service providers spend on waste disposal service monthly is GHC30.09. This value is not as varied and skewed as the values of standard deviation (5.525), and the measure of skewness (0.247) is relatively small.

5.1 Plastic waste practices

The types of PW generated by 292 respondents are presented in Figure 1. It is observed from the figure that most respondents (over 90%) create bottles, sachets, and bags. Many (over 60%) also generate plates, Styrofoam, straws and stirrers as PW among others as shown in Figure 1.

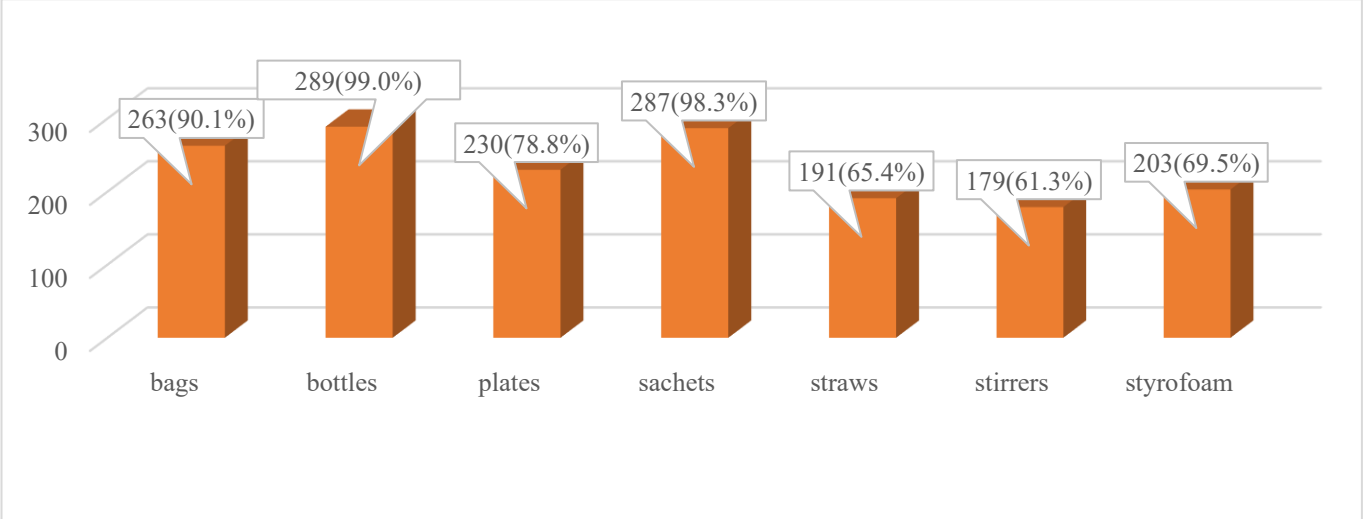

Figure 1: Type of plastic waste generated.

The majority (76.0%) of the respondents do not separate their PW at all, though most (83.6%) of them had heard (or are aware) of PW separation, as shown in Table 5. A chi-squared test of association revealed that there is no association between a respondent's age or educational level and his or her practice of PW separation. However, a person's awareness of PW separation was found to be associated with the person's practice of PW separation.

Table 5: PW separation tendencies and source of education on PW separation

Variable	Categories	Separation of PW		Total (%)	Pearson Chi-Square	
		No	Yes		Value	Asymp. Sig.
Awareness of PW separation	No	47	1	48 (16.4)	15.101	0.000
	Yes	175	69	244(83.6)		
Age group	15 – 24	1	0	1	1.318	0.725
	25 – 54	196	65	261		
	55 – 64	20	4	24		
	65+	5	1	6		
Educational level	None	40	2	42	12.533	0.14
	Basic	41	14	55		
	Secondary	25	6	31		
	Graduate	103	45	148		
	Postgraduate	13	3	16		
Total (%)		222(76.0)	70(24.0)	292(100.0)		
Source of education on PW separation						
Source			Frequency		Percent	
Radio			80		32.8	
Television			43		17.6	
Social media			33		13.5	
Newspaper			15		6.1	
Friend/Relative/Colleague			71		29.1	
Others			2		0.8	
Total			244		100.0	

The odds that a person who is aware of plastic waste separation separates his/her plastic waste were computed and obtained as 18.52. This value implies that a person is approximately 19 times more likely to separate his/ her plastic waste if aware of PW separation than he/she is expected to do if ignorant about PW separation. The awareness of respondents on PW separation came from various sources, as shown in Table 5. Notable among these is traditional media (thus radio, TV and newspapers), which is mentioned by more than half (56.5%) of the respondents as their source of education on PW separation. Others got educated on PW separation by peers and relatives (29.1%), whilst the rest got their education from social media (13.5%) and other sources such as schools (0.8%), as shown in Table 5.

The extent of separation of the various types of PW was then sought from those who separated their plastic waste and recorded in Table 6. From Table 6, it is observed that respondents generally indicated separating some of their PW, such as polythene bags (85.7%), sachets (60%) and plates (58.6%). While many respondents also indicated separating none of the plastics like stirrers (82.9%), straws (72.9%) and Styrofoam (52.9%).

Table 6: Extent of separation of the various types of PW and separation reasons

	Extent										Total	
	None		some		Half		Most		all			
Plastic	n	%	n	%	n	%	N	%	n	%	N	%
Bags	6	8.6	**60**	**85.7**	3	4.3	1	1.4	0	0	70	100
Sachets	25	35.7	**42**	**60.0**	2	2.9	1	1.4			70	100

Bottles	2	2.9	15	21.4	19	27.1	**32**	**45.7**	2	2.9	70	100
Plates	28	40.0	**41**	**58.6**	1	1.4	0				70	100
Stirrers	**58**	**82.9**	11	15.7	1	1.4					70	100
Straws	**51**	**72.9**	17	24.3	2	2.9					70	100
Styrofoam	**37**	**52.9**	30	42.9	3	4.3					70	100
broken chairs	2	2.9	6	8.6	25	35.7	**36**	**51.4**	1	1.4	70	100

Concerned about HPW separation and reasons

Variable	**Response**	**Freq**	**Percent**
Concern about plastic waste separation	No	87	29.8
	Yes	205	70.2
	Total	292	100.0
Reason(s) for concern	It is important	172	83.9
	It can be recycled	16	7.8
	It generates income	8	3.9
	It improves human health	1	0.5
	It ensures environmental cleanliness	11	5.4
	Lack of knowledge on plastic waste separation	15	17.2
Reason(s): lack of concern	It is not important	67	77.0
	Time-consuming	11	12.6

*n is the frequency, and N is the total frequency

When quizzed on whether they are concerned about the menace of plastic waste and the need to separate the waste they generate from their households, the majority (70.2%) of the respondents were concerned about plastic waste separation (Table 6). For those who were concerned, most (83.9%) of them deem it important to separate their waste, which can be recycled (7.8%), generates income when sold (3.9%), improves human health (0.5%) and ensures environmental cleanliness (5.4%). The few (29.8%) who were not concerned about plastic waste separation mostly (77.0%) deemed the practice unimportant, lack of knowledge about the practice (17.2%), and it is time-consuming (12.6%) (Table 6).

Regarding the importance of separating PW before disposal, most (93.5%) of the respondents felt it was important to sort HPW before disposal and gave multiple reasons for their opinion, as shown in Table 7. From the 93.5% of respondents who indicated it was important to separate plastics before disposal, many (65.9%) stated that it made it easier and faster to dispose of it, among other reasons, such as the fact that it enhances environmental cleanliness (26.4%) and eases reuse and recycling. Many (78.9%) of the few who felt the practice was unimportant stated that it was a waste, among other reasons, such as the lack of machines for recycling purposes (15.8%) and the fact that they just burn it together with the other rubbish.

Table 7: Respondents' opinion on the importance of sorting PW before disposal and reasons.

Variable	**Response**	**Frequency**	**Percent**
Opinion on the importance of sorting plastic waste	No	19	6.5
	Yes	273	93.5
	Total	292	100.0
Reasons for deeming sorting unimportant	Time wasting	15	78.9
	I burn it	1	5.3
	No machinery to do recycling	3	15.8
	Total	19	100.0
Reasons for deeming sorting important	It makes disposal easy and faster	180	65.9
	It enhances environmental cleanliness	72	26.4
	It makes reuse and recycling easier	19	7.0
	It improves human health	2	0.7
	Total	273	100

Though many respondents claimed they deemed it important to sort their PW before disposal (Table 8), relatively few (23.9%) of them separate their plastic waste at home, citing multiple reasons as shown in Table 8. The majority (76.1%) who do not separate their PW at home, majorly (63.5%) attributed it to the lack of adequate bins to store the PW, among other reasons, such as the fact that it consumes time, and there may be no immediate plans for use or storage of these PW at home.

Table 8: PW separation practices and willingness to sort

Variable	Response	Frequency	Percent
The practice of separating some HPW	No	222	76.1
	Yes	70	23.9
	Total	292	100.0
Reason(s) for not separating HPW	Time-consuming	61	27.5
	Inadequate waste bins	141	63.5
	It has no use in the house	24	10.8
Willingness of respondents who currently do not practice the separation of HPW to separate their PW at source and the reasons.			
Willingness to sort PW at the source	No	144	64.9
	Yes	78	35.1
	Total	222	100.0
Reasons for unwillingness to sort PW at source	No bins	77	53.5
	Time factor	75	52.1
	Mostly not generated	8	5.6
Reasons for willingness to sort PW at source	Environmental Health	15	19.2
	Human Health	27	34.6
	Monetary benefits	26	33.3
	Reuse and recycle	12	15.4

Only a few (35.1%) of those who do not currently sort their PW from the source are willing to do so now for multiple reasons, such as the improvement of the environment and, by extension, human health, monetary benefits, and the fact that they can be recycled and reused. Those (64.9%) who still do not intend to sort their PW at home mainly cited reasons such as inadequate bins, time-consuming and the fact that they mostly do not generate PW (Table 8).

The study then sought the views of the few respondents who were willing to sort their PW at home on the type of PW they would be comparatively more willing to sort. They were tasked to rank in order of importance the waste they would be most willing to sort out, to the type they would least like to sort out, from the seven (7) types of PW that could be produced at home. These plastics are bags, bottles, plates, sachets, straws, stirrers and Styrofoam. The results in Table 9 reveal that most (96.1%) of the respondents who are willing to sort their plastics at home are very willing to sort plastic bottles from their plastic waste in comparison with the others, as it is ranked the most important. Plastic bags are the second most important plastic that is considered by many (62.8%) respondents with prospects for sorting their plastic waste. The type of plastic that many (67.9%) of the respondents who are willing to sort their rubbish considered least important, and hence would be less likely to sort, is stirrers. Plates, Styrofoam, sachets and straws are respectively ranked third, fourth, fifth and sixth, in order of importance.

Table 9: Rank in order of importance of PW that respondents are willing to separate

Plastic	Highest		2nd choice		3rd choice		4th choice		5th choice		6th choice		lowest		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	N	%
Bags	1	1.3	**49**	**62.8**	8	10.3	0	0	2	2.6	6	7.7	12	15.4	78	100
Bottles	**74**	**96.1**	4	3.9	0	0	0	0	0	0	0	0	0	0	78	100
Plates	2	2.6	7	9	**46**	**59**	2	2.6	2	2.6	10	12.8	9	11.5	78	100
Sachets	1	1.3	5	6.4	3	3.8	17.0	21.8	**41**	**52.6**	6	7.7	5	6.4	78	100
Straws	0	0.0	0	0.0	0	0.0	3	3.8	6	7.7	**30**	**38.5**	39	50	78	100

Stirrers	0	0.0	0	0.0	0	0.0	0.0	0.0	2.0	2.6	23	29.5	**53**	**67.9**	78	100
Styrofoam	0	0.0	2	2.6	3	3.8	**32**	**41**	11	14.1	3	3.8	27	34.6	78	100

Reasons for the ranks assigned to the order of importance of PW

Plastic	Bags		Bottles		Plates		sachets		Straws		stirrers		Styrofoam	
	N	%	n	%	N	%	n	%	N	%	N	%	N	%
Reuse	**58**	**74.3**	52	66.7	22	28.2	4	5.2	0	0	4	5.1	**47**	**60.3**
Sale	0.0	0.0	**60**	**76.9**	7	9	**45**	**58.4**	0	0	0	0	0	0
Recycle	45	57.7	0	0	**33**	**42.3**	4	5.2	4	5.1	1	1.3	3	3.8
Not generated	18.0	23.1	0.0	0.0	15.0	5.1	17.0	22.1	**74**	**94.9**	**73**	**93.6**	28	35.9
Burn	0.0	0.0	0.0	0.0	1.0	1.3	8	10.4	0.0	0.0	0.0	0.0	0.0	0.0

*n is the frequency, and N is the total frequency

Respondents gave multiple reasons for the order of importance ranking of PW generated. Most of the prospective respondents are more willing to sort plastic bottles because they can easily be sold or reused (Table 9). Plastic bags were cited as the second most important plastic that prospective respondents would sort because they can reuse and recycle them, among other reasons. Straws and stirrers were cited as the least important plastics respondents would consider sorting because these are mostly not generated, among other reasons.

The respondents who indicated concern about PW separation were then asked about their satisfaction with its extent in their neighbourhood. From Table 10, most (80.7%) of the respondents are generally satisfied with the level of PW separation in their neighbourhood, and only a few (6.4%) are dissatisfied.

Table 10: Satisfaction level on the extent of PW separation

Satisfaction level	Frequency	Percent
Very satisfied	2	2.6
Satisfied	63	80.7
Indifferent	1	1.3
Very dissatisfied	7	9.0
Dissatisfied	5	6.4
Total	78	100.0

DISCUSSION

This study presents a nuanced understanding of household PW generation, separation behaviours, and disposal practices in Wa, a rapidly urbanising city in Ghana. Key findings reveal that although all respondents reported generating PW, less than half (46%) actively separate their waste. This aligns with prior research in other developing country contexts, such as studies by Addo et al. (2020) and Costa et al. (2022), which demonstrate low engagement with household-level waste separation practices in urban neighbourhoods. These findings point to a systemic challenge: limited infrastructure and insufficient public education to support and incentivise plastic waste separation practices (PWSP) at the source (Rodic & Wilson, 2017).

A statistically significant relationship was found between respondents' educational level and their willingness to separate waste, supporting existing literature from Zaikova et al. (2022) and Lawrence et al. (2020). This indicates that individuals with higher education may possess better environmental awareness, greater access to information, and a stronger understanding of the ecological and economic benefits of recycling. Surprisingly, this study did not observe a relationship between age and PWSP, contradicting findings by Zaikova et al. (2022), who reported subtle generational differences in waste sorting behaviour. This discrepancy may stem from contextual or cultural variations that shape environmental behaviour in Wa differently from other regions.

The majority of the respondents asserted getting waste separation information from Radio (32.8%) and Television (17.6%), respectively. This revelation is consistent with literature demonstrating the invaluable role of traditional media as one of the most effective channels for environmental education in sub-Saharan Africa due to its wide reach, accessibility, and trustworthiness. For instance, Fordjour et al. (2023) expound that in Ghana, traditional media,

especially radio, remains a primary information source on environmental issues, especially in urban and peri-urban areas where internet penetration is low.

The study further revealed that though most (83.6%) of the respondents had heard (or are aware) of plastic waste separation, the majority (76.0%) of them do not separate their PW at all. This awareness and action gap could emanate from behavioural dynamics: for instance, it can be viewed from the psychological dimension where factors such as cognitive dissonance, perceived inefficacy, and behavioural inertia all come into play. According to Ajzen's Theory of Planned Behaviour (1991), behavioural intention is influenced by an individual's perceived behavioural control, which depends significantly on their knowledge and skills. Studies (Hu et al., 2021; Tang et al., 2023) confirm that when individuals understand the steps involved in separating waste, they are far more likely to engage in the practice effectively. In Ghana, Addo-Fordwuor and Seah (2024) note that many residents do not separate waste simply because they do not know how, and the instructions or guidance are not readily available or standardised. Thus, knowledge of how to separate is a critical enabler of behaviour.

Beyond procedural knowledge, awareness also entails knowledge of where to take or store separated waste. This is particularly important in informal settlement-prone areas such as Wa, where waste infrastructure may be underdeveloped or inconsistently maintained. A study by Anbazu et al. (2022) in the Oforikrom Municipality of the Ashanti Region found that many residents were willing to separate waste but did not know where to dispose of recyclables, which discouraged continued participation. Thus, targeted education on the identification of collection points, recycling centres, or pick-up systems significantly enhances participation in PW separation. Also, awareness campaigns can play a critical role in shaping attitudinal factors by helping individuals understand the environmental, economic, and health benefits of waste separation. Garaika and Sugandini (2021) maintain that positive environmental attitudes and beliefs about the effectiveness of one's actions are strong predictors of pro-environmental behaviour. In Ghana, a study by Anokye et al. (2024) revealed that many people do not see the urgency of separating waste because they perceive individual actions as having minimal impact. Hence, campaigns that emphasise tangible benefits such as reduced disease risk, cleaner communities, job creation through recycling, and lower municipal waste loads will help to elevate the perceived importance of waste separation and motivate action.

Furthermore, strategies such as incentives and rewards for persons who engage in the practice, and gamification can go a long way in promoting the practice, whilst the provision of necessary infrastructure, such as bins, might also promote the practice. In terms of waste storage, a large proportion (86.4%) of households reported using designated waste bins, suggesting the presence of some degree of supportive infrastructure for storage. However, a significant minority (15.4%) still relied on unsuitable alternatives like polythene bags, old buckets, and paper cartons, which are environmentally problematic. Similar issues were raised by Rahman (2020), who emphasised the potential environmental hazards of makeshift waste storage, including increased littering and pest infestations (Leistenschneider et al., 2020).

Regarding access to formal waste disposal services, more than half of the respondents (54.5%) utilised available services. This reflects growing demand for structured waste management in urban municipalities, consistent with findings by Al-Hayali & Alkattan et al. (2021). However, this study revealed a weak positive correlation (Spearman coefficient = 0.123) between income and usage of formal services, with chi-square analysis indicating no statistically significant association. This suggests that affordability and availability remain critical barriers, echoing concerns raised by Suardi et al. (2018) and Rodic and Wilson (2017). In Wa, lower-income households reported limited engagement with collection services despite expressing a willingness to participate in PWSP. These findings signal the need for interventions targeting both economic and infrastructural barriers. Costa et al. (2022) recommend subsidising collection services in underserved neighbourhoods to ensure equitable access. Additionally, integrating informal waste collectors, as proposed by Leistenschneider et al. (2023), could strengthen collection coverage, reduce environmental contamination, and create employment opportunities within marginalised urban areas.

Improper disposal remains prevalent, with 45.5% of respondents reporting non-use of formal collection services. Disposal methods such as open channels (26%), poorly managed communal containers (35.9%), bush dumping (8.4%), and backyard disposal (3.8%) contribute to significant environmental and public health risks. These behaviours reflect trends observed across sub-Saharan Africa, where open dumping is common due to systemic gaps in waste infrastructure and governance (Wilson et al., 2017; Suardi et al., 2018). Al-Hayali & Alkattan et al. (2021) argue that expanding service coverage and increasing the frequency of collection are critical to addressing such challenges. Moreover, public education on the impacts of improper disposal, as advocated by Zaikova et al. (2022), may influence behavioural change and shift norms.

The study also examined the types of plastic waste produced, showing that plastic bottles and sachets are predominant, with over 90% of households reporting their use. This aligns with findings by Jambeck et al. (2015) and confirms that single-use plastic packaging remains a major source of pollution. Furthermore, more than 60% of respondents created plastic plates, Styrofoam containers, and drinking straws—items commonly linked to take-out food and informal markets (Khan et al., 2019). These results highlight the urgent need for policies to cut down on single-use plastics, promote alternatives, and encourage behavioural change. Rodic and Wilson (2017) stress the importance of reusable containers and shopping bags, while Pandey et al. (2023) support structural measures such as plastic bag bans, plastic taxes, and extended producer responsibility (EPR) schemes.

An encouraging observation from the study is that 70.2% of respondents expressed concern about plastic waste. This indicates a growing environmental consciousness. However, there is a clear gap between awareness and action. Only a small proportion of concerned individuals cited environmental cleanliness (7.8%) or recycling possibilities

(5.4%) as motivators for separation, pointing to an opportunity for deeper engagement and education. Educational gaps were further highlighted by the 17.2% of respondents who reported not knowing how to separate their waste, reinforcing the need for targeted awareness campaigns (Zaikova et al., 2022). Tailored messaging, user-friendly sorting guides, and public sensitisation efforts could improve separation rates and reduce the volume of improperly disposed of plastics.

LIMITATIONS

The use of convenience sampling in selecting the final units for the research can potentially pose a bias as the selection process is not really random, hence might violate the assumption of normality, implying parametric statistics cannot be used for the analysis. Likewise, the generalisability of the findings might be limited. To address this limitation, nonparametric methods were used for the analysis, which are generally less powerful and give less precise estimates in comparison to parametric statistics when the assumption of normality is met. Future studies may consider incorporating probability sampling techniques such as stratified or simple random sampling to ensure balance of visibility with rigour and enhance the representativeness of data.

CONCLUSIONS

This study examined household plastic waste separation practices in Wa's urban neighbourhoods, revealing a high level of concern about plastic pollution but limited corresponding action. Key barriers included inadequate knowledge about sorting methods and a perceived lack of importance. Nonetheless, a strong willingness to sort commonly used plastics like bottles and bags suggests potential for targeted interventions. To improve separation rates, municipal authorities should intensify public education campaigns and provide clear, accessible sorting guidelines. Strengthening collaborations with private waste firms to expand recycling infrastructure and introducing community-led outreach programmes can further enhance participation. Future research should explore the effectiveness of such initiatives in bridging the concern–action gap and promoting sustainable waste practices.

Declarations

The authors conceived and designed the work. The authors declare no conflicts of interest regarding the publication of this manuscript. This research received no funding.

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT COFERENCE PROCEEDINGS

Socio-demographic determinants of households' participation in urban agriculture in Wa, Ghana

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A B S T R A C T

As with many sub-Saharan African countries, households' participation in urban agriculture (UA) remains low in Ghana. To guide effective interventions and enhance the scalability of Urban Agriculture (UA) practices, this study examined how socio-demographic factors influence households' participation in UA in Wa, Ghana. Data were gathered through a survey of 800 households in Wa, and analysed using descriptive statistics and binary logistic regression. The results show a significant association between the sex of the household head, farming experience, access to land, migration status, educational attainment of the household head, and household housing situation with households' participation in UA. The odds ratios indicate that households headed by individuals with more than 4 years of farming experience, households with a head who has completed senior high school, households with access to land, or immigrant households are more likely to engage in UA. These results highlight the multifaceted nature of the factors influencing households' participation in UA. Policy interventions should prioritise improving access to education, facilitating land access, and providing support to immigrant households. By targeting these factors, stakeholders can effectively promote UA as a sustainable solution to urban food insecurity.

INTRODUCTION

Urban agriculture (UA) involves food cultivation and animal husbandry on urban and peri-urban land (Tornaghi, 2014) and encompasses various forms of farming activities including small-intensive farms, food production on housing estates, land sharing, rooftop gardens, beehives, restaurant-supported salad gardens, public space food production, balcony gardens among others (Pradhan et al., 2023). The practice of agriculture in cities is not novel in global urban history, but the intensity with which it is organised and operationalised varies across time. In recent times, UA has gained global traction because of the occurrence of rapid urbanisation and intense pressure being placed on food production and food supply systems, especially in fast-developing cities such as those in sub-Saharan Africa (Abdulai, 2022; Chukwu, 2019; Pham et al., 2023). In addition, climate change shocks are increasingly common, and the spatial footprints of cities are expanding across the developing world (Blekking et al, 2022). Despite its small-scale production nature, UA could provide sufficient food to meet the demand and nutritional needs of about one billion people (20.8%) of the global urban population (Kriewald et al., 2019).

Whether we can improve urban food security will depend on how responsive and resilient the urban food production and supply systems are in the face of continuing urban growth, changing consumption patterns, weak rural-urban food supply linkages, and production constraints in the urban farming sector (Wenban-Smith et al. 2016). However, as the spatial footprint, urbanisation, and urban population increase, the need for accessible and affordable food also increases (Blekking et al., 2022). This makes UA crucial in complementing the food production and supplies from the rural areas to meet the needs of urban residents. Given this, UA is gaining prominence in developed and developing countries alike. It is estimated that more than 1.6 billion people are involved in UA worldwide, but the proportions vary from country to country (Orsini et al., 2013). The significant number of people's involvement in UA is critical because they could be preventing the situation where cities take large-scale food imports for granted, and may need to consider reviving agricultural production in urban areas or the urban fringe to reduce the demand for land surfaces elsewhere.

UA has gained recognition worldwide with deliberate projects and initiatives such as the Pet Bharo project in India

(Ali & Srivastava, 2017) and the Five Borough Farm, a project in New York, USA (Reynolds, 2015). However, UA projects do not often translate into wider adoption by residents due to several challenges, especially in developing countries, where the ecological footprints threaten UA's sustainability. The growing urban population affects UA through the consumption of fertile urban and peri-urban lands that could be used for food production (Abdulai, 2022; Wadumestrige et al., 2021). Furthermore, limited agricultural inputs, poor soil fertility and environmental pollution are some of the challenges of UA adoption (Wadumestrige et al., 2021). UA is also faced with the depletion of fresh-water resources, erosion of soils, and temperature and precipitation changes (Hallett et al., 2016). Urban farmers also have limited access to land, and the challenge is further compounded by climate change and the failure of local authorities to integrate this activity into urban plans (Hallett et al., 2016). Nonetheless, individual residents and households continue to practice agriculture within and in the immediate urban environment, especially in developing countries (Adeyemo et al., 2017; Bolang & Osumanu, 2019; Uko et al., 2023).

The literature increasingly highlights that participation in UA remains low across sub-Saharan Africa (Bolang & Osumanu, 2019), emphasizing the importance of understanding the factors influencing households' engagement to inform effective interventions and the scalability of UA practices. However, existing studies on the determinants of household participation in UA often present contradictory findings, necessitating further empirical investigation. For example, while Grebitus' (2021) work in Detroit, USA, found that women were less likely than men to engage in UA, Heinecken (2017) reported the opposite in Cape Town, South Africa. In Phoenix and Detroit, USA, Chenarides et al. (2021) observed that individuals with higher education were more likely to participate in UA for environmental sustainability reasons, whereas Adams et al. (2024) and Nimoh et al. (2024) work in Kumasi, argued that highly educated individuals perceive UA as less attractive, leading to reduced participation. To address these contradictions and provide clarity, this study explored the influence of household socio-demographic characteristics on participation in UA in Wa, Ghana. The study contributes to the growing literature on UA in developing countries by highlighting that multiple factors influence household participation in UA. The findings of the study also underscore the need for urban planners to integrate urban agriculture into policies and programmes aimed at reducing urban poverty and achieving zero hunger, in line with Sustainable Development Goals 1 and 2.

EMPIRICAL AND CONCEPTUAL REVIEW

UA generally involves the rearing of animals and the cultivation of crops within the urban space. UA has emerged as a central component of urban food systems in the light of rapid urbanisation and climate change which impact the availability of arable lands and food security, respectively. Indeed, UA has been shown to contribute to food security of urban households (Poulsen et al., 2015), contributes to urban economy (Drechsel & Keraita, 2014), provide income for the unemployed (Nimoh et al., 2024), as a climate change adaptation strategy (Dubbeling et al., 2019) and for combating urban heating (Mancebo, 2018). Furthermore, it contributes significantly to the diversity of foods found in urban markets. In Tamale, for instance, research has shown that about 80% of cabbage found in the markets are produced of UA (Bellwood-Howard et al., 2015).

Despite the benefits of UA, the factors influencing its participation are complex (Kirby et al., 2021). Rezai et al. (2014) found that society recognition, attitude and the social impact of UA were the top three considerations for individuals participating in UA. Similarly, Grebitus (2021) examined the drivers of small-scale UA in Detroit and found that trust, attitude, and knowledge affected the growing of produce at home and community gardens. Some previous studies have also identified socio-demographic factors as the drivers of household participation in UA. Using a multivariate probit model, Lemma and Sharma (2024) demonstrated that age, marital status, family size, employment status, access to credit, and education, among others, were factors that significantly influenced participation in UA. These variables were measured across four dimensions of motivation: economic reasons, social connections, food security and general well-being. Their findings showed that the significance of each of the factors varied in direction and magnitude across the four motivational dimensions. For instance, they found that as women grow older, they are more likely to participate in UA to guarantee food security, foster social connections, and improve their well-being. Similarly, education was shown to have a negative influence on the likelihood of women participating in UA owing to social and economic motivations.

Nigus et al. (2024) examined the determinants of adoption of UA practices in eastern Ethiopia. They grouped UA under three practices, namely, vegetable production, livestock rearing, and crop-fruit production. Their results demonstrate that the decision to adopt each one of the UA practices was mediated by different factors at various levels of significance. For participation in vegetable production, age, sex, education level, credit access, land size, extension contact, and participation in community groups, non-farm income, and participation in UA training were found to be significant. The adoption of livestock rearing was impacted by sex, perception, land size, credit access, farming participation, and participation in community groups. Finally, participation in crop-fruit production practices was significantly shaped by age, farming experience, perception, distance from the market, dependency ratio, and UA-related training.

Adams et al. (2024) explored residents' choice of urban farming systems in the Kumasi Metropolis of Ghana and found that age, gender, years of formal education, religious affiliation, location of residence, food insecuirty status, availability of vacant land, household income, and extension access were significant drivers of urban households' decision to participate in UA. These determinants were corroborated by Nimoh et al. (2024), who found that household size, available land, income, positive perception of backyard gardening, and time availability were factors that influenced participation in UA. Chenarides et al. (2021) found that participation in UA was most likely when household size was smaller and younger, and more educated. On the contrary, Lemma and Sharma (2024) argued that women from larger

families were more likely to participate in UA to meet increasing food demand (see also Grebitus, 2021). Education levels tend to have dual effects on UA participation. Higher education levels may, on the one hand, increase parti cipation by equipping people with knowledge about the need for environmental sustainability and innovative agricultural practices (Chenarides et al., 2021). On the other hand, highly educated individuals may perceive UA to be less attractive, leading to reduced participation (Adams et al., 2024; Nimoh et al., 2024). Gender dynamics also play a critical role in UA. Some studies found that women are more likely than men to participate in UA (Olivier & Heinecken, 2017) due to their traditional role of feeding the household (Hovorka et al., 2009). However, gendered barriers such as unequal access to land may limit women's participation in UA. Consequently, some studies have concluded that women are less likely than men to participate in UA (Grebitus, 2021). In terms of income, empirical studies show that households with higher income are less likely to engage in UA (ibid). It suggests that households with less income are most likely to engage in UA as a subsistence strategy to augment their food needs while reducing their expenditure on food.

Based on the empirical evidence, Figure 1 shows the conceptual framework, which lays the foundation to test the socio-demographic factors that shape households' decisions to participate in UA. The influence of socio-demographic characteristics such as age, household size, sex, and migration status on households' decision to participate in UA were analysed. In addition, economic activities were analysed given that previous studies found that non-farm income shapes households' decision to participate in UA (Nigus et al., 2024). Also, access to land and housing situation were explored as availability of land and tenure security have been demonstrated to influence the participation of households in UA (e.g., Adams et al., 2024; Nimoh et al., 2024). Finally, education level and years of experience in farming were assessed, given that prior studies have found them to be drivers of UA.

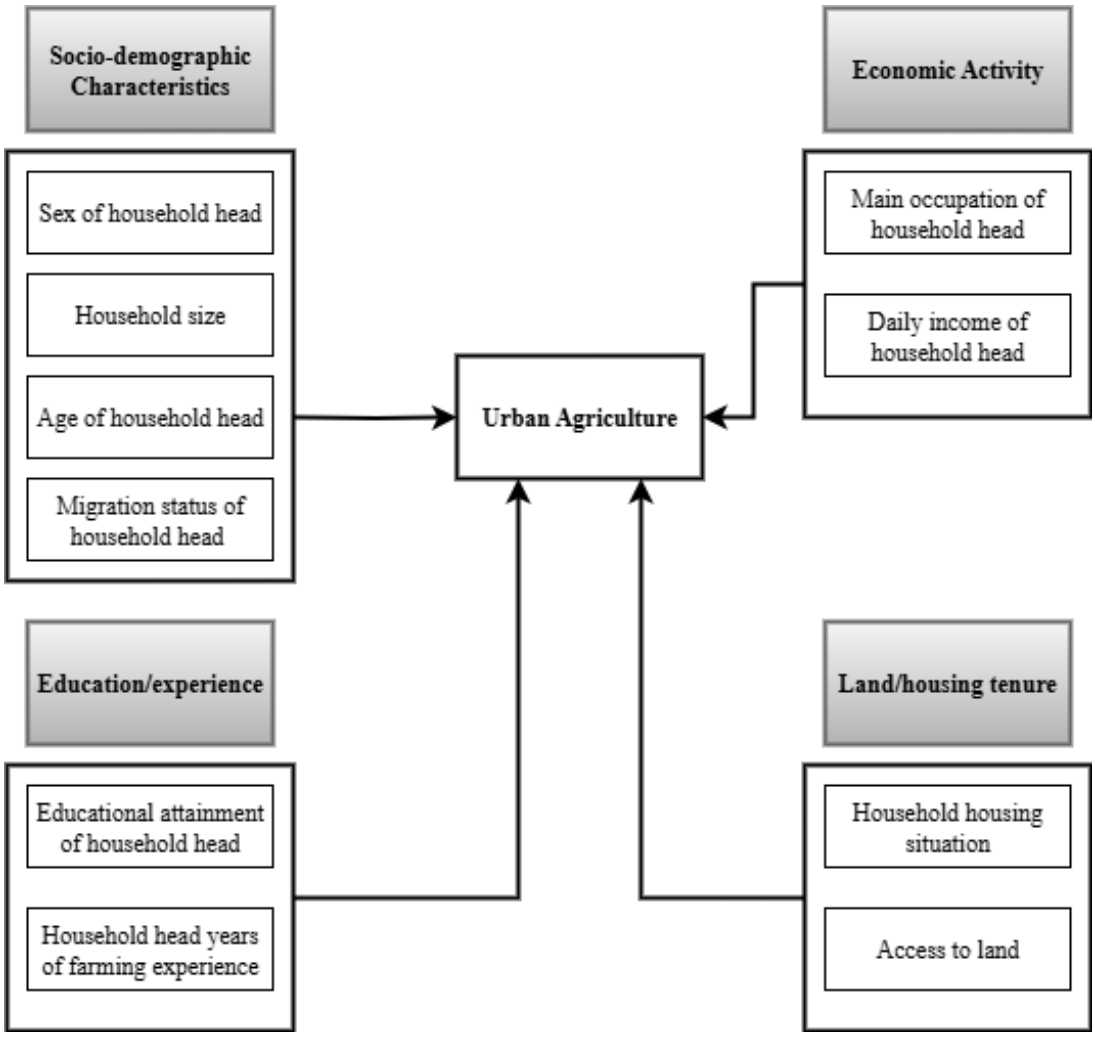

Figure 1: Socio-demographic factors influencing participation in urban agriculture

Source: Authors' construct

METHODOLOGY

Description of the study area

An extensive profile of Wa is presented in the work of Ahmed et al. (2020) titled "*City Profile: Wa, Ghana*". Wa is the capital of the Upper West Region and the Wa Municipality. As shown in Figure 1, Wa lies within latitudes 10º10'W to 10º6'W and longitudes 2º24'N to 2º34'N with a total land area of approximately 30 km^2 (Ahmed et al., 2020). Major neighbourhoods include Kaabaye, Zongo, Dondoli, Limanyiri, Wapaani, Fongo, Dobile, Dokpong, Airport, Kumbiehi, Kambali, Tindamba, Bamahu, Sombo, Konta, Mangu and Kpaguri. The city is home to approximately 143,358 people, with 51.16% of them being female (Ghana Statistical Service, 2021). A significant portion of the population (29.3%) is engaged in agriculture, forestry, and fisheries, while others work in service, sales, crafts, and related trades (Ghana Statistical Service, 2014). As of 2021, there were 36,758 households in Wa with the average household size being 3.9 (Ghana Statistical Service, 2021).

Wa experiences two distinct seasons: the wet season and the dry season. The South-Western Monsoon winds from the Atlantic Ocean bring rain between May and September (Ghana Statistical Service, 2014). In contrast, the North-Eastern Trade winds from the Sahara Desert cause a long dry season from October to April. Temperatures can reach 41°C in March and April, just before the rainy season starts in late May and ends in October. Annual rainfall ranges between 840mm and 1400mm (Ghana Statistical Service, 2014). The vegetation of Wa is characterised by short, fire-resistant trees interspersed with grasses that shed their leaves during the dry season. The common food crops cultivated by the people include legumes (beans and cowpea); maize, millet, groundnut, guinea corn and roots, and tubers (yam, cassava, and sweet potato). Vegetables such as okra, pepper, tomatoes, and cassava leaves are also cultivated. Households also keep sheep, goats, cattle, and poultry.

The vegetation type and climatic conditions adversely affect soil fertility, agricultural yield, food security, and income levels. A comprehensive food security and vulnerability analysis conducted by the Ministry of Food and Agriculture (MoFA) and the Ghana Statistical Service (GSS) in 2020 revealed that 4.6% of households in the Wa Municipality are food insecure. However, as Wa is an urban centre, the prevalence of food insecurity may be higher. The incidence of poverty in Wa stands at 35.5%, which is 27.7 percentage points higher than the incidence for all urban areas in Ghana (Ghana Statistical Service, 2015).

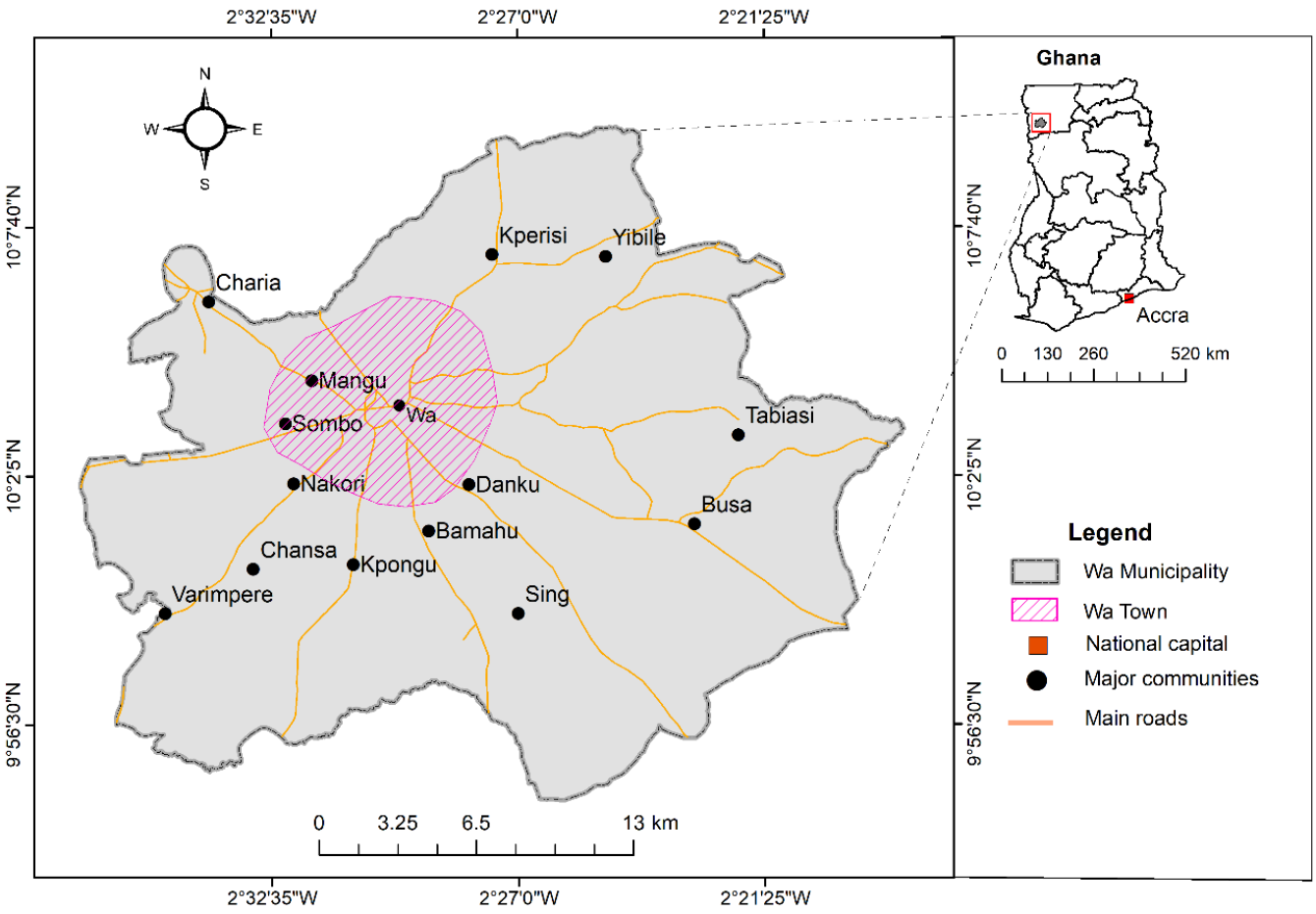

Figure 2. Location of Wa in Ghana

Study approach and design

A quantitative approach, specifically a cross-sectional design, was adopted for this study. The household was the unit of analysis, given that farming decisions are typically made at the household level. According to the 2021 Population and Housing Census, Wa recorded a total of 36,758 households (Ghana Statistical Service, 2021). Using Yamane's (1973) sample size formula with the confidence level being 95%, a sample of 396 was obtained and rounded up to 800 to enhance the statistical power of the findings. This sample of 800 was distributed equally between urban and non-urban farming households due to the lack of specific data on the number of households engaged in urban farming. This distribution was crucial to allow for comparative analysis using chi-square tests and binary logistic regression. Four neighbourhoods—Dobile, Dokpong, Wapaani, and Kpaguri—were selected for the study using a simple random sampling technique (fishbowl method). In each neighbourhood, data were collected from 100 urban farming households and 100 non-farming households. At the household level, the heads of households were purposively targeted as respondents because they are the primary decision-makers regarding household farming activities.

To ensure high-quality data collection, four research assistants were recruited, each holding at least a first degree and fluent in Dagaare, Waali, and English. These assistants were trained on the study objectives, ethical considerations, and data collection procedures. Each research assistant was assigned to one of the selected neighbourhoods and tasked with surveying 100 urban farming households and 100 non-farming households. A purposive sampling method was employed to identify households within the two categories until the required sample size was reached in each neighbourhood. Data collection was conducted in October 2023, coinciding with the end of the farming season, to capture a comprehensive dataset that included late-season farmers. SurveyCTO, a Computer-Assisted Personal Interview (CAPI) technology, was used for data collection. This ensured efficient, accurate, and secure data entry. Before initiating each interview, the Research Assistants introduced themselves, explained the purpose of the study, and obtained informed consent from the respondents. The interviews, conducted in Dagaare, Waali, or English, based on the respondent's preference, lasted approximately 15 - 20 minutes.

The survey collected data on both dependent and independent variables (Table 2). The dependent variable, household participation in urban farming, was binary: "yes" (indicating engagement in UA) and "no" (indicating non-engagement). The independent variables included the following 10 socio-

demographic characteristics: sex of the household head, household size, age of the household head, marital status, main occupation, educational attainment, migration status, income, years of farming experience and access to land. The socio-demographic variables were drawn from the empirical literature review exploring the factors influencing participation in UA (see, for example, Adams et al., 2024; Nimoh et al., 2024; Chenarides et al., 2021).

The collected data were synced to the SurveyCTO server and downloaded in SPSS format for analysis. Descriptive statistics were used to summarize the data, while the chi-square test and binary logistic regression were employed to identify associations and predict the odds of household participation in urban farming based on the independent variables.

Table 1. Dependent and independent variables

Variables	Categories
Dependent variable	
Household participation in urban farming	Yes
	No
Independent variables	
Sex of household head	Male
	Female
Household size	Small (1-3)
	Medium (4 – 9)
	Large (10 +)
Age of household head	18-35 years
	36-60 years
	61 years and above
Main occupation of household head	Agriculture
	Civil/public servant
	Artisan
	Trading/business
	Retired
	Unemployed
	Student
Household housing situation	Owner occupier
	Rent free
	Renting
Marital status of household head	Married/cohabitation
	Never married
	Widow/widower
Educational attainment of household head	No formal education
	Primary
	JHS or equivalent
	SHS or equivalent
	Tertiary
Migration status of household	Indigene
	Immigrant
Daily income of household head	Earned less than $1 a day
	Earned $1 - $2 a day
	Earned more than $2 a day
Household head years of farming experience of	No experience
	Low experience (1-3 years)
	Moderate experience (4 – 9 years)
	High experience (10 years +)
Access to land	No
	Yes

RESULTS

Socio-demographic characteristics of the respondents

The socio-demographic characteristics of the respondents are presented in Table 2. About two-thirds (64.0%) of household heads who participated in the study were male, while the remainder were female (36.0%). Most households (62.9%) were medium-sized. In terms of age, the majority of household heads surveyed were between 36 and 60 years (53.6%), followed by younger heads aged 18–35 years (40.0%). Only a small percentage (6.4%) were aged 61 years

or older. Over two-thirds of the households (78.5%) were indigenes, while immigrants constituted 21.5%. Households predominantly had married or cohabiting heads (81.9%), while 11.3% were headed by individuals who had never married, and 6.9% were headed by widows or widowers. Nearly half (47.6%) of households were owner-occupiers, while 33.3% lived rent-free, and 19.1% rented their accommodations. A significant portion of household heads (30.6%) attained tertiary education, followed by those with Senior High School (SHS) or equivalent qualifications (23.3%), and those with no formal education (22.3%). Lower levels of formal education, including Junior High School (JHS) (15.6%) and primary education (8.3%), were less common. The most common occupation was trading/business (41.8%), followed by civil/public service (22.6%). Agriculture accounted for only 12.4%, while smaller proportions were artisans (9.5%), unemployed (7.5%), retired (2.4%), and students (3.9%). Over half of household heads (56.0%) earned more than $2 a day; 28.1% earned less than $1 a day, and 15.9% earned between $1 and $2.

Households varied widely in farming experience. While 29.8% had no experience, 27.5% had low experience, 17.8% had moderate experience, and 25.0% had high experience. The majority of households (68.1%) had access to land for urban farming, while 31.9% did not. Farm sizes were generally small, ranging from 0.1 acre to 1 acre, with an average size of 0.4 acre. Crops grown include maize, yam, vegetables, cassava, guinea corn, groundnut, beans, millet, and rice.

Table 2 Characteristics of the respondents (N=800)

Variables	Number	Percentage (%)
Sex of household head		
Male	512	64.0
Female	288	36.0
Household size		
Small (1-3)	145	18.1
Medium (4 – 9)	503	62.9
Large (10 +)	152	19.0
Age		
18-35 years	320	40.0
36-60 years	429	53.6
61 + years	51	6.4
Marital status of household head		
Married/cohabitation	655	81.9
Never married	90	11.3
Widow/widower	55	6.9
Household housing situation		
Owner occupier	381	47.6
Rent free	266	33.3
Renting	153	19.1
Main occupation of the household head		
Agriculture	99	12.4
Civil/public servant	181	22.6
Artisan	76	9.5
Trading/business	334	41.8
Retired	19	2.4
Unemployed	60	7.5
Student	31	3.9
Educational attainment of household head		
No formal education	178	22.3
Primary	66	8.3
JHS or equivalent	125	15.6
SHS or equivalent	186	23.3
Tertiary	245	30.6
Income		
Earned less than $1 a day	225	28.1
Earned $1 - $2 a day	127	15.9
Earned more than $2 a day	448	56.0
Migration status		
Indigene	628	78.5
Immigrant	172	21.5
Years of farming experience		
No experience	238	29.8
Low experience (1-3 years)	220	27.5
Moderate experience (4 – 9 years)	142	17.8

High experience (10 years +)	200	25.0
Access to land for urban farming		
No	255	31.9
Yes	545	68.1

Note. Due to rounding errors, percentages may not equal 100%

Association between household socio-demographic characteristics and participation in UA

Results of a chi-square test showing the association between household socio-demographic characteristics and participation in UA are presented in Table 3. A significant association exist between the sex of the household head and household participation in UA ($\chi^2 = 6.272$, $p = 0.012$). Male-headed households were more likely to farm within Wa Town compared to female-headed households (53.3% versus 44.1%). There was no statistically significant association between household size and farming within Wa Town ($\chi^2 = 3.042$, $p = 0.218$). However, medium and large households had slightly higher farming participation rates (51.5% and 51.3%, respectively) compared to small households (43.3%).

Age was not significantly associated with UA participation ($\chi^2 = 1.054$, $p = 0.590$). However, older household heads (61 years and above) had the highest participation rate (54.9%), followed by those aged 36–60 years (50.8%), and those aged 18–35 (48.1%). Main occupation was significantly associated with participation in UA ($\chi^2 = 17.574$, $p = 0.007$). Households headed by individuals in agriculture (60.6%), civil/public service (57.5%), and artisans (51.3%) had the highest participation rates, while those in trading/business had the lowest participation rate (42.2%).

Housing situation showed a significant relationship with participation in UA ($\chi^2 = 10.014$, $p = 0.007$). Owner-occupiers had the highest participation rate (55.1%), followed by renters (50.3%) and those in rent-free housing (42.5%). Marital status was not significantly associated with participation in UA ($\chi^2 = 0.234$, $p = 0.890$). The participation rates were similar across married/cohabiting (49.6%), never-married (52.2%), and widow/widower (50.9%) households, suggesting that marital status does not influence participation in UA significantly.

Educational attainment was significantly associated with UA participation ($\chi^2 = 18.620$, $p = 0.001$). Participation was highest among those with primary education (63.6%) and tertiary education (55.1%), while it was lowest among those with SHS or equivalent (38.2%). Migration status showed a strong and significant association with UA participation ($\chi^2 = 24.915$, $p = 0.0001$). Immigrants had a much higher UA participation rate (66.9%) compared to indigenes (45.4%).

Income was not significantly associated with UA participation ($\chi^2 = 3.905$, $p = 0.142$). However, households earning less than $1 a day had the highest participation rate (55.1%). Farming experience was strongly and significantly associated with participation ($\chi^2 = 191.109$, $p = 0.0001$). Households with moderate experience (70.4%) and high experience (64.5%) were more likely to farm compared to those with low (64.1%) or no experience (12.6%). Access to land was the most significant determinant of UA participation ($\chi^2 = 345.530$, $p = 0.0001$). Households with access to land were much more likely to farm within Wa Town (72.5%) compared to those without land access (2.0%).

Table 3. Association between household characteristics and participation in urban farming

Factors	Did you farm within Wa Town this year?	
	No	Yes
Sex		
Male	239(46.7%)	273(53.3%)
Female	161(55.9%)	127(44.1%)
Pearson chi-square statistics	X^2=6.272; df=1; p=0.012*	
Household size		
Small (1-3)	82(56.6%)	63(43.3%)
Medium (4 – 9)	244(48.5%)	259(51.5%)
Large (10 +)	74(48.7%)	78(51.3%)
Pearson chi-square statistics	X^2=3.042; df=2; p=0.218	
Age		
18-35 years	166(51.9%)	154(48.1%)

36-60 years	211(49.2%)	218(50.8%)
61 years and above	23(45.1%)	28(54.9%)
Pearson chi-square statistics	X^2=1.054; df=2; p=0.590	
Main occupation of the household head		
Agriculture	39(39.4%)	60(60.6%)
Civil/public servant	77(42.5%)	104(57.5%)
Artisan	37(48.7%)	39(51.3%)
Trading/business	193(57.8%)	141(42.2%)
Retired	10(52.6%)	9(47.4%)
Unemployed	27(45.0%)	33(55.0%)
Student	17(54.8%)	14(45.2%)
Pearson chi-square statistics	X^2=17.574; df=6; p=0.007*	
Household housing situation		
Owner occupier	171(44.9%)	210(55.1%)
Rent free	153(57.5%)	113(42.5%)
Renting	76(49.7%)	77(50.3%)
Pearson chi-square statistics	X^2=10.014; df=2; p=0.007*	
Marital status		
Married/cohabitation	330(50.4%)	325(49.6%)
Never married	43(47.8%)	47(52.2%)
Widow/wodower	27(49.1%)	28(50.9%)
Pearson chi-square statistics	X^2=0.234; df=2; p=0.890	
Educational attainment		
No formal education	85(47.8%)	93(52.2%)
Primary	24(36.4%)	42(63.6%)
JHS or equivalent	66(52.8%)	59(47.2%)
SHS or equivalent	115(61.8%)	71(38.2%)
Tertiary	110(44.9%)	135(55.1%)
Pearson chi-square statistics	X^2=18.620; df=4; p=0.001*	
Migration status of household		
Indigene	343(54.6%)	285(45.4%)
Immigrant	57(33.1%)	115(66.9%)
Pearson chi-square statistics	X^2=24.915; df=1; p=0.0001*	

Income		
Earned less than $1 a day	101(44.9%)	124(55.1%)
Earned $1 - $2 a day	70(55.1%)	57(44.9%)
Earned more than $2 a day	229(51.1%)	219(48.9%)
Pearson chi-square statistics	X^2=3.905; df=2; p=0.142	
Years of farming experience		
No experience	208(87.4%)	30(12.6%)
Low experience (1-3 years)	79(35.9%)	141(64.1%)
Moderate experience (4 – 9 years)	42(29.6%)	100(70.4%)
High experience (10 years +)	71(35.5%)	129(64.5%)
Pearson chi-square statistics	X^2=191.109; df=3; p=0.0001*	
Access to land		
No	250(98.0%)	5(2.0%)
Yes	150(27.5%)	395(72.5%)
Pearson chi-square statistics	X^2=345.530; df=1; p=0.0001*	

Note. Percentages computed by rows. *p≤0.01.

Odds of household participation in UA based on varied socio-demographic characteristics

The results of the logistic regression analysis, which display the odds of households engaging in UA based on various socio-demographic characteristics, are presented in Table 4. Female-headed households are 0.328 times less likely to engage in UA compared to male-headed households. However, this relationship was not statistically significant (p = 0.176). Compared to small households, households with a medium size were 1.752 times more likely to engage in UA, while households with a large size were 1.641 times more likely to participate in urban farming. However, these odds are not significant (p > 0.05).

Compared to households headed by individuals aged 18–35 years, those aged 36–60 years had 0.148 fewer odds of participating in UA, while those aged 61 years and above had 1.661 times higher odds. However, neither of these relationships was statistically significant (p > 0.05). Households headed by individuals who were never married had 3.010 times higher odds of participating in urban farming compared to those headed by married or cohabiting individuals, and this relationship was statistically significant (p = 0.018). Widow/widower-headed households also had higher odds (1.444) compared to those headed by married or cohabiting individuals, but this was not statistically significant (p = 0.501).

Households living rent-free had 1.460 times higher odds of participating in urban farming compared to owner-occupiers, while those renting were 0.08 times less likely to engage in UA compared to owner-occupiers' households. Neither of these results was statistically significant (p = 0.178 and p = 0.827, respectively). Households with heads as civil/public servants, artisans, traders, retirees, and students had lower odds of participating in UA (0.589, 0.506, 0.577, 0.209, and 0.920, respectively) compared to households with heads as agriculturalists. However, these differences were not statistically significant. Households whose heads were unemployed were 1.834 times more likely to participate in UA compared to households with heads as agriculturalists, but this was not statistically significant (p-values > 0.05).

Compared to households with no formal education, those with primary education had 2.071 times higher odds of participating in urban farming, while those with tertiary education had 1.446 times higher odds. However, neither of these relationships was statistically significant (p-values > 0.05). Households earning $1–$2 a day had 1.526 times higher odds of participating in urban farming compared to those earning less than $1, while those earning more than $2 had 1.086 times higher odds. Neither of these results was statistically significant (p-values > 0.05).

Immigrant households had 1.680 times higher odds of engaging in urban farming compared to indigenous households. However, this relationship was not statistically significant (p = 0.121). Households with low farming experience had 15.970 times higher odds of participating in urban farming compared to those with no farming experience. Those with moderate and high experience had even higher odds (32.371 and 19.958, respectively). These relationships were statistically significant (p < 0.0001). Households with access to land were 231.338 times more likely to participate

in urban farming compared to those without access. This relationship was statistically significant ($p < 0.0001$).

The model's overall performance was robust, with a significant omnibus chi-square statistic ($\chi^2(26) = 608.437$, $p < 0.0001$). The model explained 71.0% of the variation in households' participation in UA (Nagelkerke $R^2 = 0.710$) and had a classification accuracy of 88.4%. These results suggest that the selected factors effectively predict urban farming participation, with access to land and farming experience emerging as the most critical determinants.

Table 4. Odds of household participation in UA by the explanatory variables

Explanatory variables	Odds ratios	Standard Errors	P values
Sex of household head			
Male	1.000		
Female	.672	.294	.176
Household size			
Small (1-3)	1.000		.246
Medium (4 – 9)	1.752	.335	.094
Large (10 +)	1.641	.427	.246
Age			
18-35 years	1.000		.514
36-60 years	.852	.285	.575
61 + years	1.661	.673	.451
Marital status of household head			
Married/cohabitation	1.000		.051
Never married	3.010	.467	.018
Widow/widower	1.444	.546	.501
Household housing situation			
Owner occupier	1.000		.354
Rent free	1.460	.281	.178
Renting	.924	.363	.827
Main occupation of the household head			
Agriculture	1.000		.226
Civil/public servant	.589	.530	.318
Artisan	.506	.552	.217
Trading/business	.577	.424	.195
Retired	.209	.958	.102
Unemployed	1.834	.615	.324
Student	.920	.776	.914

Educational attainment of household head			
No formal education	1.000		.145
Primary	2.071	.531	.171
JHS or equivalent	1.118	.399	.780
SHS or equivalent	.669	.371	.278
Tertiary	1.446	.455	.418
Income			
Earned less than $1 a day	1.000		.575
Earned $1 - $2 a day	1.526	.412	.305
Earned more than $2 a day	1.086	.351	.814
Migration status			
Indigene	1.000		
Immigrant	1.680	.334	.121
Years of farming experience			
No experience			.000
Low experience (1-3 years)	15.970	.346	.000
Moderate experience (4 – 9 years)	32.371	.411	.000
High experience (10 years +)	19.958	.361	.000
Access to land for urban farming			
No			
Yes	231.338	.510	.000
Model summary			
Omnibus chi-square statistics: $\chi^2(26) = 608.437$, $p < .0001$			
Pseudo-R^2 (Nagelkerke R^2) = 0.710			
-2 Log Likelihood = 500.599			
Cases classification accuracy = 88.4%			

DISCUSSION AND IMPLICATIONS OF THE FINDINGS

This study identified access to land as the main determinant of household participation in agriculture in Wa. From the odds ratios, households with access to land were over 200 times more likely to participate in urban farming compared to those without access, and this was statistically significant ($p < 0.0001$). This highlights how land availability is a prerequisite for farming in urban areas. Without access to land, farming is impossible, regardless of the availability of other enabling conditions, as reported in previous studies in other parts of Africa (Lemma & Sharma, 2024; Nigus et al., 2024). For example, Lemma and Sharma's (2024) work revealed how access to larger farming spaces correlated with increased participation in UA, indicating the need to eliminate the barriers to land accessibility to enable increased participation in UA (Assefa Tuji, 2016; Goldstein et al., 2017).

Farming experience of the household head also emerged as an important factor in the household's decision to engage in urban farming. The finding signals that households with farming experience are likely to farm compared with those who have never undertaken the activity. This is not surprising

because people who have had farming experience are likely to have better skills, more knowledge, and networks needed to increase the benefits while reducing the risk. In previous studies (Lemma & Sharma, 2024; Nigus et al., 2024; Chou et al., 2017), it is observed that greater participation in urban agriculture is shaped by the farming experience. Also, the sex of the household head significantly influences participation in UA, with male-headed households more likely to partake than female-headed ones. However, the odds were not significant. The likelihood of a male-headed household participating in UA over a female-headed household may be due to sociocultural norms in many sub-Saharan African countries, where men often have greater access to resources such as land and capital, as well as decision-making power, than women (Grebitus, 2021). However, our finding contrasts with Olivier and Heinecken's (2017) suggestions that UA in Africa was dominated by women.

A significant association was observed between the primary occupation of the household head and participation in UA. Based on the odds ratios (though not statistically significant), households whose heads participate in farming in general or are unemployed were more inclined to undertake UA, as compared to households with heads in artisan work, civil/public service, retirement, trade, or student roles. This suggests that farming households possess an inherent inclination towards agriculture, regardless of the environmental setting. Also, unemployed household heads are more likely to engage in farming, in contrast to heads involved in alternative occupations, due to the employment opportunities and lower skill requirements offered by farming, as reported in previous studies like Adams et al. (2024) and Nimoh et al. (2024).

The association between the income of the household head and participation in UA was not significant. This finding suggests that income is not a significant driver of urban farming. The finding contrasts with that of Lemma and Sharma (2024), who suggested that women with higher household income were less likely to participate in UA for economic benefits and food security. From the chi-square statistics, household housing situation and participation in UA exhibited a significant association. From the odds ratios, households that rented were less inclined towards engaging in farming in comparison to owner-occupier and rent-free households. This could be attributed to the fact that renters often encounter challenges in accessing land to do farming in the city.

Educational attainment significantly affects household participation in UA. Generally, persons with at least primary education were more likely to engage in urban farming compared to those without formal education. This may be due to their increased awareness of the benefits of urban farming. The finding confirms the conclusion that individuals with higher education were more likely to participate in UA for environmental sustainability reasons (Chenarides et al., 2021). The findings do not support the view that highly educated individuals perceive UA to be less attractive, hence reduced participation (Adams et al., 2024; Nimoh et al., 2024). A significant association was also established between household residential status and participation in UA, which reveals that immigrant households were more likely to farm compared to indigenous households. This is perhaps because immigrants might rely on farming as a survival strategy due to limited access to formal jobs, while indigenes might have diversified income sources or perceive UA as less critical.

The association between household size and household participation in UA was not significant. However, from the odds ratios, medium and large size households are more likely to participate in UA compared to small size households. However, the odds were not statistically significant. The results show that while medium/larger households may provide more labour, other factors have a stronger influence. This could mean that labour availability is not a limiting factor for urban farming in Wa, as even smaller households might find ways to participate using hired labour or labour-saving methods. This finding reaffirms the lack of consensus in the literature regarding the effect of household size on participation in UA. While Chenarides et al. (2021) found that participation in UA was most likely when household size was smaller, others argued that individuals from larger families were most likely to participate in UA owing to the need to meet increasing food demand (Grebitus, 2021; Lemma & Sharma, 2024).

Like household size, the association between the age of the household head and the household participation in UA was not significant. Compared to households headed by individuals aged 18–35 years, those aged 36–60 years were less likely to participate in urban farming, while those aged 61 years and above were more likely to participate in UA. The lack of a clear trend suggests that other factors, such as access to land and resources, outweigh the effect of age. The result contrasts with van Lier et al. (2017), who found that younger individuals were more likely to participate in UA, while supporting that of Grebitus, Printezis, and Printezis (2017), who found that older individuals were more likely to be involved in UA.

The association between the marital status of the household head and the household's participation in UA was not significant. However, from the odds ratios, households headed by individuals who were never married and those headed by widows/widowers were more likely to engage in urban farming compared to those headed by married or cohabiting individuals. This may be because farming decisions in Wa Town are more influenced by economic and structural factors, such as land access and income, rather than the household head's marital status. Another factor relates to time, where those who have never married or are widows/widowers may have enough time to engage in UA compared to those who are married. The issue of time availability and its effect has been explored by Nimoh et al. (2024).

The Pseudo- R^2 indicates that the factors analysed in this study account for 71.0% of the variation in households' participation in UA. This suggests that 29% of the factors influencing urban households' decisions to engage in UA were not included in the model. Issues of time availability (Nimoh et al., 2024), knowledge and attitude towards UA (Grebitus, 2021; Rezai et al., 2014), the type of UA (Nigus et al., 2024), food insecurity, location, credit access and extension services (Adams et al., 2024), and market access

(Houessou et al. 2020), access to water for crop production (Gyasi et al., 2014), among others, affect households' decision to participate in UA but were not included in our model.

CONCLUSIONS AND RECOMMENDATIONS

This study highlights the critical role of land access as the primary determinant of household participation in UA in Wa, with households having access to land being significantly more likely to engage in farming activities. Additionally, farming experience emerged as an essential factor, underscoring the importance of skills and knowledge in reducing risks and enhancing benefits in urban farming. While gender, educational attainment, housing situation, and migration status also influenced participation, their effects varied in significance. Factors such as income, household size, and age of the household head showed no strong association with urban farming, suggesting that other structural and contextual elements, particularly land access, play a more pivotal role. To enhance UA in Wa, policymakers should prioritize policies and programs that address land access barriers, such as streamlining land tenure systems or providing designated spaces for urban farming. Capacity-building initiatives should be introduced to improve farming knowledge and skills, particularly for inexperienced households. Furthermore, targeted interventions should address socio-cultural barriers to ensure inclusive participation, especially for women and renters who face unique challenges.

The study is not without limitations. To begin with, the study focused exclusively on the determinants of household participation in crop farming, but UA encompasses a broader range of activities, including animal rearing. Future research should investigate the factors influencing animal rearing in Wa to provide a more comprehensive understanding of urban agricultural practices. While our model demonstrated strong explanatory power at 71%, it did not account for several important factors that could influence household participation in UA. Variables such as time availability, knowledge and attitudes, location, access to credit, extension services, market opportunities, and water availability for crop production were excluded from our analysis. Future studies in Wa and similar contexts should consider these additional factors to deepen our understanding of the complexities and dynamics of household participation in UA.

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Current account balance and monetary policy nexus: The role of currency biases from currency redenomination adaptation

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A B S T R A C T

Redenomination policy implementation and adaptation process result in specific behavioural biases leading to suboptimal financing decisions. These suboptimal decisions sway the economy from the path of equilibrium, thereby creating current account imbalances for an economy. Will implemented monetary policies be effective in addressing the current account imbalances in the presence of these behavioural biases? This study employed the non-recursive baseline system and impulse response functions (IRF) of the SVAR (Structural Vector Autoregressive) model as an empirical strategy to address the study's research objective using annual data from 1980 to 2018. Evidence from the endogenous shocks of the model suggests that the redenomination policy impacted both the current account balances of the Ghanaian economy and the implemented monetary policies. That is, amid redenomination, monetary policy showed an improved effect on the current account balance of Ghana. Therefore, the study recommends that researchers, policymakers, and stakeholders take a critical look at the impact of these biases in the financial markets and on household consumption in order to deal with manners appropriately since their effects will directly impact the current account balance and also render implemented monetary policies ineffective.

INTRODUCTION

The decision for countries to shed zeros from their currency values has existed since 1960, with most of these countries coming from emerging and transitional economies. The exercise has been referred to as redenomination by some authors (Mosley, 2005; Lianto and Suryaputra, 2012; and Zidek and Chribik, 2015), while others have termed the same exercise as currency reform (Mas, 1995; Leijonhufvud, 2000; and Staehr, 2015). While currency reform exercise is seen by Leijonhufvud (2000) as part of the stabilization plans for transition economies and in achieving or sustaining macroeconomic stability, Staehr (2015) argued that currency reform adaptation anchors on the acceptance and credibility of the new currency and that the success of the currency exercise depends on policy measures that usually accompany the implementation to achieve the needed economic target for these transitional economies. The currency redenomination exercise has been executed once for countries like Island, Ghana, and Turkey, twice in Bolivia, thrice in Belgium, Russia, Ukraine, and Poland, and severally times in Argentina, Yugoslavia, and Brazil in their economic development (Ioana, 2005). Most countries have embarked on this policy exercise because of the exchange rate depreciation of their domestic currencies and/or high inflation.

Even though Ghana had experienced similar hyperinflation in 1977 (116%), 1981 (117%) and 1983 (123%), the exercise of redenomination was not adopted. However, after a series of economic reforms (Structural Adjustment Program (SAP), Economic Recovery Program (ERP), Ghana Poverty Reduction Strategy (GPRS), etc) under various governments, Ghana finally redenominated its currency in 2007. The implementation was done on the back of criticisms from some sections of the populace, with the central bank of Ghana indicating that the rescaling of four zeros is just a 'numerosity' bias and the nominal value was inconsequential (Dzokoto, Mensah, Twum-Asante and Opare-Henaku, 2010). However, the real value of the recalibration brings the human element into play within the exercise, which leads to some consequences and evidence of cognitive biases and money illusion (Dzokoto et al., 2010). Mussweiler and Englich (2003) and Lemaire and Lecacheur (2001) have equally reported evidence of cognitive biases during the Euro transition. The authors affirmed that individuals assumed prices of products in the new Euro were cheaper than the old and familiar currencies of countries at the time of the Euro transition. Mussweiler and Englich (2003) and Lemaire and Lecacheur (2001) adduced a simple reason for this individual perception of prices based on the principle of money illusion. The reason of the authors was that individuals perceived the

nominal value of the familiar currency (old) to be higher than the new Euro. This situation can influence individuals to spend beyond their rational and objective levels.

Since the redenomination exercise has some features similar to the Euro currency transition, there is the likelihood that Ghana's redenomination adaptation can bring some of the mentioned experiences to bear on the Ghanaian economy as a result of the recalibration of 10000 Cedis to 1 new Cedi. The implications of policy adaptation among economic agents will be currency bias behaviours that may deviate from strict rationality (Gomes 2021a), which can have aggregate effects on the Ghanaian economy. For instance, individuals can expend excessively or less than normal based on their assumptions and perceptions, and the consequences may sway the economy from its equilibrium path. Spending more in an economy like Ghana, which produces less and imports more, will imply excessive importation, which may lead to a current account deficit. Also, spending more can equally impact negatively on aggregate savings, leading to weak capital formation and economic growth (Majekodunmi et al., 2023). Therefore, this study provides new empirical evidence on redenomination effects and the monetary and current account nexus from emerging markets. Raghubir and Srivastava (2009) posited that the systematic influence of denomination on spending decisions has significant implications for the monetary policy perspective. The critics of these currency biases and money illusions have questioned the length of time (period) within which economic biases last over time in an economy because they believe policies (monetary in this case) are implemented by economic management to curb certain economic occurrences and the expectation is that these biases will attenuate or eliminated with time. This study holds the view that most of the economic policies are based on rational expectation models, while these biases are created based on irrational behaviours of economic agents. Therefore, monetary policy measures, for example, may not be able to fully deal with abnormalities in the economy. Besides, there is evidence in the literature (Shafir et al., 1997; Fehr and Tyran, 2014; Noussair et al., 2012 and Luba and Winn, 2014) that suggests that these irrational behaviours do persist for a long time because it has to do with human behaviour and can sometimes not be eliminated even through learning.

Dzokoto et al. (2010) studied Ghana's redenomination policy adaptation and used a qualitative design to explore the experiences of Ghanaian consumers after the implementation of the redenomination policy. The authors found that individuals had the tendency to make judgments on a nominal value basis rather than the real value of money as a result of the redenomination. The evidence suggests that the implementation of currency reform is believed to be accompanied by abnormal behaviours of economic agents, which are characterized by money illusion and economic uncertainties. Money illusion is known to have economic impact in literature (Bawuah et al., 2023; Saayman et al., 2021; Morales and Fatas, 2021; Yang and Yang, 2021; Luba and Winn, 2014; Fehr and Tyran, 2014:2001; Noussair et al., 2012) as well as economic uncertainties (Olanipekum et al., 2019; Olasehinde et al., 2020). For example, changes in spending behaviour as a result of the currency redenomination in Ghana, as reported by Dzokoto et al. (2010), impacted the savings pattern of individuals. Savings are induced by existing interest rates in an economy at any point in time, and therefore, any possible impact of consumption biases that connect savings patterns will necessarily call for monetary policy implementation, which will deal with the resulting current account imbalances in the economy.

According to the intertemporal framework (Obstfeld and Rogoff, 1995), any adjustment in savings relative to consumption triggers a consequential effect on the country's current account balance. Aside Dzokoto et al. (2010) survey evidence that redenomination adaptation caused changes in spending (consumption) and the resulting potential impact on Ghana's current account balance, Bawuah et al. (2023) also hold evidence that redenomination policy adaptation triggered biases which impacted on Ghana's forex market and by extension the exchange rate. The exchange rate is also a major component of the net foreign asset approach in evaluating the current account balance of an economy through adjustments in goods and services. This theoretical linkage implies that biases that accompanied redenomination policy adaptation in Ghana might have impacted the economy's current account, and its assessment in this study is deemed relevant. This study makes a contribution to the monetary policy and current account balance nexus by introducing behavioural effects in the form of currency biases into the relationship and re-examining the adequacy of monetary policy shocks in dealing with current account imbalances amidst the presence of currency biases. This analytical evaluation is necessary because a paucity of studies has been done in developing economies in terms of the effects of these behavioural biases. Therefore, the findings of this study will serve as very significant information for similar developing economies that intend to undertake a currency redenomination policy in future. Already, Lane and Milesi-Ferretti (2014) have posited that countries outside Europe still experience current account imbalances in spite of the major contractual strategies that emerged after the 2007 crisis. Could it be that Ghana's situation is a result of the impact of currency biases that accompanied the currency redenomination amidst various monetary policies implemented over the same period? In order to answer this question, there is a need to assess the strength of monetary policy impact on the current account amidst currency biases from redenomination policy adaptation.

Again, Quartey and Afful-Mensah (2014) reviewed the impact of financial and monetary policies on the Ghanaian economy. Although this paper concluded that both policies made a positive impact on the economy, it did not perform any empirical data analysis to look at how the implemented monetary policies over the period have impacted the economy. Moreover, special reference was not given to the specific policy period (as in this study), and their scope and context did not take into account the currency reform issues amidst post-redenomination policy adaptation. Therefore, the aim of this study is to 1. assess whether redenomination shock impacted monetary policy, 2. assess whether redenomination shock impacted current account balance and 3. Examine shock interactions between monetary policy and current account balance amidst redenomination shock, controlling for GDP and exchange rate shocks. The rest of the paper is

structured as follows: literature review, data and data sources, methodological review, empirical strategy, unit root and stationarity test, presentation of results, results discussion, conclusion and recommendation, and references.

LITERATURE REVIEW

Theoretical and empirical review of currency biases

Chen (1976) indicated that the authorities in Taiwan have refused to issue big- big-denominations to meet trade needs. This was because public interpretation of such issuance might have triggered inflationary expectations, which would eventually have driven prices up in the economy, even though the total stock of money would have been the same. The author's claim suggests that individual perceptions have consequences on an economy, even though the underlying fundamentals of the economy may remain unchanged. Again, the presentation of Chen (1976) suggests that the introduction of currency denomination at a point in time has an impact on public perceptions, which has unplanned consequences on an economy. Redenomination policy comes with denominational changes and nominal face value changes in a country's currency as well. Therefore, given the fact that the implementation of the policy in Ghana was received with public outcry and scepticism (Dzokoto et al., 2010), the accompanying public perception and its effect on the Ghanaian economy cannot be underestimated, even holding fundamentals constant. It is obvious from the inference of Chen (1976) that the policy adaptation has the tendency to exert psychological biases on the economy.

One of the oldest biases associated with money (currency) is money illusion. This bias implies a lack of rationality of economic agents, a concept that is alien to economists yet has significant implications (Shafir et al., 1997; Tyran, 2007; Fehr and Tyran, 2001:2014; Luba and Winn, 2014; Morales and Fatas, 2021). Patinkin (1965), cited in Shafir et al. (1997), defines the phenomenon simply as a deviation from real decision making. Thus, there is a tendency for economic agents to think in terms of nominal rather than real monetary values. Despite its ambivalent feature in the field of economics, the phenomenon has been used to explain economic issues that are difficult to comprehend under the usual rational assumptions, such as normative principles of descriptive invariance conditions that are upheld by economic theories (Howith, 1983). Even though some economist hold doubt against money illusion arguments, Luba and Winn (2014); Noussair et al. (2012); Tyran, 2007; Shafir et al (1997); Fehr and Tyran (2014; 2001), Morales and Fatas, (2021) and Bawuah et al. (2023) have all adduced evidence regarding the existence of money illusion phenomenon and also indicated stalwartly that the phenomenon manifests itself when economic decisions are made by economic agents in diverse ways. Some of the authors have posited that the nature and existence of money illusion and how it displays itself in reality cannot be easily attenuated through learning. The logic is that the elusive decisions are made based on economic agents' subjective judgment, which often defiles objectivity and logical principles according to psychology researchers (Gigerenzer and Brighton, 2009; Gigerenzer and Gaissmaier, 2011; Gomes, 2021b). These tendencies are likely to occur under redenomination adaptation and adaptation in Ghana. The presence of money illusion has been confirmed by Dzokoto et al. (2010) and specifically in the forex market as well (Bawuah et al., 2023). The presence of this bias in the forex market will likely impact financial assets and transactions on goods and services (import/export). The possible consequence will be the impact on the current account by extension.

Aside from money illusion, other theoretical concepts like 'Bias for whole' (Mishra et al. 2006), denomination effect (Raghubir and Srivastava, 2009), physical appearance of money (Ojedo and Macizo, 2022; Di-Muro and Noseworthy, 2013), and Denomination-spending matching effect (Li and Pandelaere, 2021) induce individuals to make irrational financing decisions (currency biases). These currency biases in the literature are evident in increasing household willingness to spend and spending behaviours (change in consumption). Given the effects of these biases, an obvious expectation is that household savings will be affected, especially when the increase in consumption is not triggered by an increase in household wealth or income. Since redenomination adaptation tends to trigger these biases in an economy, it raises the possibility of Ghana's current account being impacted. This claim is affirmed by the intertemporal approach to the current account by Obstfeld and Rogoff (1995). The authors suggest that the current account is the result of savings and investment decisions undertaken by individual households of a nation. This theoretical framework suggests that any adjustment in savings relative to consumption of citizens of a nation will trigger a consequential effect on the country's current account balance. Recounting the possible biases that can affect the Ghanaian economy as a result of redenomination policy adaptation, the likely question that one may ask is: What is the contribution of monetary policies in taming these predicted biases on the economy, if there is any? Since redenomination is partly a monetary issue and monetary policies are meant to address economic challenges that are similar to the possible irregularities discussed, it is pertinent to assess how monetary policy has affected the economy after redenomination implementation.

Monetary policy, exchange rate and current account development

After the 2008 financial crisis that hit the US housing market, many countries have taken steps to adjust to the consequences of their economic which suffered. According to Belke and Dreger (2013), the difference that arises through the investments and savings in domestic economies is what is considered a current account imbalance. The discrepancies in savings have been linked to fiscal policies by the governments, which have most often reduced savings by nationals as well as the current account balances of the country in question. Studies on the country's current account have been enormous, especially in the post-financial crisis era. The relationship between current account dynamics and monetary policies among countries has received huge attention in both past and recent literature. Empirically, the following studies have investigated the current account balance and monetary policies of countries in global and African settings, in addition to country specifics (see Ferrero, Gertler and Svensson, 2008; Ivrendi and Guloglu, 2010; Lu,

2012; Herz and Hohberger, 2013; Belke and Dreger, 2013; Quartey and Afful-Mensah, 2014; Makanza and Dunne, 2016).

Ferrero et al. (2008) explored the consequences of current account modification for monetary policy within a modest two-country Dynamic Stochastic General Equilibrium (DSGE) model. Their study tested the Obstfeld and Rogoff (2005) static model of exchange rate receptiveness to current account reversals. The study considered two different adjustment scenarios namely; "slow burn" (where the adjustment of the current account deficit of the home country is smooth and slow) and "fast burn" (where due to an unexpected swing in outlooks of comparative growth rates, there is a speedy setback of the home country's current account). The main finding of the study states that the monetary policy system has significant penalties for the conduct of domestic variables (examples, output and inflation) but much less so for global variables such as current account and real exchange rates. Using the same model, Herz and Hohberger (2013) investigated the dynamics that are associated with macroeconomic response, in particular to the current account under the alternative exchange rate regimes. Their findings revealed that entry into a monetary union makes an economy more vulnerable to a productivity shock, which leads to a higher variability in the current accounts of some member countries, most notably in the short run. In order to ascertain the relationship among monetary policy shocks, exchange rates, and trade balances in five inflation targeting countries, Ivrendi and Guloglu (2010) employed the structural vector error correction model (SVECM) with short-run and long-run restrictions. They uncovered that a contractionary monetary policy shock leads to a decrease in the general price level and output of economies, an appreciation in the exchange rates of the countries, and an improvement in the trade balance in the short run.

Also, it was unveiled through the study conducted by Lu (2012) that monetary policies affect current account movement in a two-country model. The author employed the non-linear regression methods and discovered that the current account dynamics of countries depend largely on the intra-temporal and intertemporal elasticities of substitution, the degree of the pricing of the domestic currency, in addition to all the shocks available in the economy. Further studies delve into what accounts for current account imbalances across the globe. Centring on Europe, Belke and Dreger (2013) attempted to explore the determinants of the imbalances associated with current accounts among European countries by using a panel econometric technique. It is made known in their study that a lack of competition is the ultimate reason for the external deficits of some European countries. They further disclosed that a deterioration of competitiveness is not feasible for the countries that experience surplus, and asymmetric responses are required to reduce the imbalances uncovered. On the same issue of global imbalances, Gosse and Guillaumin (2013) ascertained whether external shocks can explain the Asian side of global imbalances. Using the structural vector autoregressive (SVAR) model, the authors indicated that the exchange rate effect on the current account exhibited a J-curve effect across some countries and GDP differential accounts for external shocks. They generally concluded that external shocks affected the current account surplus for some countries, with oil shock and US monetary shock influencing the current account.

On the African continent, Makanza and Dunne (2016) investigated the current account dynamics and monetary policy transmission in South Africa. Due to the changes in the global monetary conditions, the authors sought to analyze the effect of external and internal monetary shocks on current account development so as to examine whether altering global monetary policy warrants any involvement of the current account in developing markets. The study employed the Structural VAR model and found that the current account is affected by global monetary shocks, with huge foreign interest rates resulting in a smaller current account shortfall. They reported that the normalization of the US monetary policy led to a sharp current account reversal. Exchange rate results, per their analysis, also depicted a trend of the J-curve effect with a very small impact of monetary policy on the current account based on the variance decomposition. Quartey and Afful-Mensah (2014) reviewed the financial and monetary policies in Ghana. Their review discovered that, while there has been a remarkable improvement in the key monetary policies during the period under review, the fiscal imbalance in the country has limited the outcomes of the monetary policies that have been rolled out. This indicates that government policies affect the desired impacts of the monetary policies by the central bank. It is therefore worth noting that all the studies have made diverse contributions in line with monetary policy, fiscal policy, and current account imbalances. Monetary policy shocks impact current accounts (Gosse and Guillaumin, 2013; Makanza and Dunne, 2016), whether domestically or globally. However, none of the papers have considered the effect of a monetary shock resulting from the implementation of a currency reform that falls directly under the umbrella of the central bank, the custodians and supervisors of monetary policies. The call for this monetary shock assessment becomes more critical when the currency bias literature suggests that policy adaptation can lead to suboptimal financing decisions of economic agents that can likely sway an economy from its path of equilibrium. This study, therefore, assesses the shock of policy adaptation as a result of irrational behavioural activities on implemented monetary policy and the economy's current account, and further ascertains how implemented monetary policy shocks have exerted on the current account balance amidst redenomination policy adaptation.

Theoretical framework

According to available literature (Makanza and Dunne, 2016), the current account can be expressed through alternative approaches, namely, the absorption approach, the twin deficit approach, and the net foreign assets approach. The absorption approach looks at the current account in relation to income levels and expenditure of the economy, while the twin deficit considers the relationship in terms of the current account and fiscal balance. The net foreign assets approach considers the result of goods, services and financial assets. This study adopted a framework that theoretically links monetary policy to the current account through the net foreign assets approach. As a basis for this theoretical linkage, this study followed the intertemporal approach by Obstfeld and Rogoff (1995). This intertemporal approach relied on the

notion that savings and investment are affected by residents' expectations about relative interest rates, exchange rates, output growth, and other macroeconomic aggregates. Therefore, the current account in this approach becomes the function of residents' savings and investment decisions that are made at a point in time. This makes this study consider the factors that drive the savings investment relationship and the effect of monetary policy on those factors. The assumption underlying the intertemporal approach to the current account is that the economy being applied to is a small open economy (a typical case of Ghana's economy) with an accumulation of net foreign assets (A_{t+1}) as a measure for current accounts.

Additionally, an assumption that the only traded asset in the economy is a consumption-indexed bond that pays a net interest of r_t and has a discount factor at date S given by $R_{t,s.}$ This gives equation 1 as:

$$(1+r_t)A_t = \sum_{s=t}^{\infty} R_{t,s}\left(C_s + G_s + I_s + Y_s\right) + \lim_{s\to\infty} R_{t,s}A_{s+1} \quad (1)$$

From assumption equation 1, the current account identity can be determined by letting the consumption path follow the economy's intertemporal budget constraint so that interest rate on the accumulation of assets, income, government spending and investment becomes the functional variables of the current account. The measure of current account would, therefore, be the deviation of these variables from their actual levels at time t given by equation 2.

$$CA_t = (r_t - \tilde{r})A_t + (Y_t - \tilde{Y}_t) - (G_t - \tilde{G}_t) - (I_t - \tilde{I}_t) + \left[1 - \frac{1}{\left(\widetilde{B/R}\right)\sigma}\right]\left(\tilde{r}_t A_t + \tilde{Y}_t - \tilde{G}_t - \tilde{I}_t\right) \quad (2)$$

Equation 2 makes two inferences about monetary risk and the factors that determine the current account in the model (Obstfeld and Rogoff, 1995). First, even though the exchange rate is not explicitly indicated in the framework, the exchange rate affects the criterion variable (current account) through the trade in assets between the foreign and domestic economies. Second, only domestic variables are captured in the model, and global shocks do not affect the dynamics of the current account. This is because this global shock affects all countries and all countries adjust to it similarly (Obstfeld and Rogoff, 1995). The assumption of the small open economy makes this approach suitable for this study because the economic description suits Ghana's situation. Again, the fact that the framework dwells on only domestic variations is a second justification for the appropriateness of the choice of this framework. This is because the interest of this study is to ascertain domestic dynamics that have been necessitated by the adaptation of the redenomination as a policy.

Empirical strategy

The empirical specification follows (Obstfeld and Rogoff, 1995; Kim and Roubini, 2008). Kim and Roubini (2008) analyse the fiscal and monetary variables together on the current account, but this study modifies the specification to include only the monetary variable (Makanza and Dunne, 2016) with no external monetary shock, just to meet Obstfeld and Rogoff's (1995) framework of a closed economy. In modelling the relationship between current account and monetary policy at the country level analysis, Bergin (2006) and Makanza and Dunne (2016) indicated two prominent models: the NOEM (New Open Economy Macroeconomics) model and the SVAR (Structural Vector Autoregressive) model. According to Bergin (2006), the SVAR model has often outperformed the NOEM model, and growing empirical studies on current account analysis have employed the SVAR model and utilized Blanchard and Quah's (1989) identification restrictions cited in (Kano 2008; Kim and Roubini, 2008; Makanza and Dunne, 2016).

The analytical performance of the SVAR model in analysing macroeconomic variables about the current account at a country level and its (SVAR) ability over NOEM motivates this study to employ the Structural VAR model. The SVAR model can reflect the contemporaneous relationship among variables, unlike the normal (simple) VAR, which only reflects the interaction between the lag and the current periods of variables (Pan et al., 2019). The economy is modelled in the VAR to isolate the exogenous component of shocks in the following equation:

$$G(L)y_t = e_t \quad (3)$$

In this case, y_t is the data vector in the baseline model is given by [REDEN, LGDP; CAD; RIR: LREER], where REDEN is a dummy representing the average currency bias estimates after the redenomination policy, LGDP is the natural logarithm of gross domestic product, CAD is the current account deficit (in the case of Ghana, the current account balance for the study period is a deficit), RIR is the real interest rate in Ghana, and LREER is the natural logarithm of the real effective exchange rate. G(L) is the matrix Polynomial in the lag operator, and e_t is a vector of serially uncorrelated structural disturbances. The structural model is derived from the reduced form of equation 3 as;

$$y_t = B(L)y_t + u_t \quad (4)$$

The structural parameters from equation 4 are generated by using the generalized non-recursive method that imposes restrictions to identify the structural components of the error terms. The identification scheme structure is summarized in equation 5, following Kim and Roubini's (2008) identification scheme:

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ g_{21} & 1 & 0 & 0 & 0 \\ g_{31} & g_{32} & 1 & g_{34} & g_5 \\ g_{41} & 0 & 0 & 1 & 0 \\ g_{51} & g_{52} & g_{53} & g_{54} & 1 \end{bmatrix} \begin{bmatrix} reden \\ \lg dp \\ cad \\ rir \\ lreer \end{bmatrix} = G(L) \begin{bmatrix} reden_{t-2} \\ \lg dp_{t-2} \\ cad_{t-2} \\ rir_{t-2} \\ lreer_{t-2} \end{bmatrix} + \begin{bmatrix} e_{reden} \\ e_{\lg dp} \\ e_{cad} \\ e_{rir} \\ e_{lreer} \end{bmatrix} \quad (5)$$

Where e_{reden}, $e_{\lg dp}$, e_{cad}, e_{rir} and e_{reer} are the structural disturbances which are redenomination, GDP shocks, current account deficit shocks, domestic monetary shocks and exchange rate shocks. u_{reden}, $u_{\lg dp}$, u_{cad}, u_{rir} and u_{reer} are the residuals in the reduced form equations?

The first row of restrictions portrays the redenomination policy, which is considered to be exogenous to the existing Ghanaian economy after the year 2007. It is assumed the variable cannot affect world variables. GDP, the second line of the equation, is used as a control for business cycle fluctuations on the current account balance under the assumption that output is not contemporaneously affected by other variables in the framework, following Kim and Roubini (2000). This interaction helps to assess the effect of redenomination shock on GDP. The third line of the equation indicates the current account balance, which is contemporaneously affected by redenomination policy, GDP, real interest rate (monetary policy) and the exchange rate. This assumption is needed to analyse the monetary policy's effect on the current account amidst the currency biases (redenomination policy) while controlling for GDP and exchange rate. The fourth row displays the real interest rate, which is used as a monetary policy effect on the current account. Under the inflation targeting framework, monetary policy aims to keep inflation within the band. An assumption is made that the real interest rate is not contemporaneously affected by other domestic variables. This is to help assess the extent of shock of the currency biases on monetary policy. The final and last row of the baseline equation presents the exchange rate, which represents equilibrium in the financial market. The exchange rate is considered to have a contemporaneous effect on all variables in the system because it is considered to be a forward-looking asset price (Kim and Roubini, 2000; 2008). The use of interest rate and exchange rate as a proxy for monetary shocks to the current account in this study followed other studies (Bergin, 2006; Kim and Roubini, 2008; Makanza and Dunne, 2016) that have explored monetary shocks in the current account nexus. To ensure model specification in the baseline system of equations (5) is properly identified, a null hypothesis test of overidentifying restrictions is conducted. In this test, it is expected that the null hypothesis of overidentifying restrictions is valid and must not be rejected at any significant level so as to confirm that restrictions made in the baseline are valid.

This test is conducted in the VAR estimator, and conclusions are made based on the likelihood chi-square and its respective p-value. After the identification test and estimation of structural parameters comes the impulse response function and the variance decomposition of the SVAR model. Both tools help to investigate dynamic interactions and the strength of causal interactions among the study variables as stipulated by the baseline system and restrictions. The impulse response functions display the effect of the standard deviation shock of one endogenous variable on the other variables in the system. Thus, by means of the impulse response function, this study reports on the direction, magnitude, and persistence of the current account to variations in the other variables in the system. The variance decompositions suggest the proportional change in a variable's forecast error variance attributable to its advances and interactions with other variables. The decompositions, as applied in this study, help in ascertaining the relative variations (in percentage terms) in real interest rate, exchange rate and output that are accounted for by variations in the current account.

Because the data being used in the study is time series, a stationarity test becomes necessary. One of the debates in the literature is whether to estimate SVAR at levels or transform the data to a stationary state by differencing. While it is well known that non stationary multivariate analysis produces spurious relations and biased estimates, some authors have also argued that differencing the data can lead to loss of information relevant to the establishment of a particular relationship and could create distortions in the VAR system results (Brooks, 2014; Enders, 2008; Sims, Stock and Watson, 1990). These authors further admonished that estimating at levels is appropriate if a researcher's objective is to examine relationships through impulse response functions and variance decompositions and not estimate the coefficient of parameters in a bit to verify a hypothesis. On the basis of their argument, some authors have conducted empirical analysis using VAR and SVAR at different levels (Kim and Roubini, 2000; Tsangarides, 2010; Makanza and Dunne, 2016). This study follows the same approach to estimate SVAR at levels because the target is to establish interactions based on impulse response functions. The appropriate (maximum) lag length needed is automatically displayed under the SVAR model. The selection is based on the Akaike Information Criterion (AIC) or Schwarz Information Criterion (SIC), and both have displayed similar results in the literature. The descriptive statistics for the study variables are presented in Table A6 (Appendix).

Data and data source

From literature (Obstfeld and Rogoff, 1995; Makanza and Dunne, 2016) and theoretical relations, the following data variables have been used to draw inferential conclusions on this study objective: Real GDP (gross domestic product), current account balance (deficit in the case of Ghana), real interest rate, exchange rate and Redenomination variable. GDP is measured at constant prices (WDI), and the current account deficit (CAD) is measured as the ratio of the current account balance to GDP in percentage form (WDI). The real interest rate is measured as the difference between the lending rate (EIU) and the inflation rate (WDI), and it is used to proxy monetary policy. The real effective exchange rate is used as to proxy for the exchange rate (WDI). A variable of interest in this study is redenomination (REDEN), and it is measured as the average of currency biases estimated by Bawuah et al. (2023) and used as a dichotomous variable in the model specifications (Appendix table). The dummy breaks this study period into two: the period before redenomination (0) and the period after redenomination (1), which represents the estimated averages of biases up to 2018. These averages represent the financial and economic activities that have taken place during and after the policy adaptation. The argument in the literature suggest that these psychological and emotional tendencies associated with this period as a result of policy adaptation has a long-term effect because it has to do with human behaviour (Shafir et al., 1997; Fehr and Tyran, 2014; Noussair et al., 2012 and Luba and Winn, 2014). Therefore, this period is expected to exhibit a behavioural shock on the economy.

According to Asteriou and Hall (2011), the dummy or dichotomous variables are an appropriate means of incorporating nominal scale data information in econometric models. Dummies in regression models offer important test information, according to Fabozzi et al. (2014). Also, Zidek

and Chribik (2015) used a dummy to measure redenomination in their empirical estimation, so using the dummy in this study does not exhibit inconsistency in the literature. The dummy variable is defined as

$$D = \begin{cases} 0 & for \quad t = 1,.....K \\ 1 & for \quad t = K+1,....L \end{cases}$$

Where t = 1,…..K represents the data period from 1980 – 2006 and t = K+1,……, T represents 2007 – 2018. The study data ends in 2018 because the interest is to consider the effect of redenomination policy shock, and going beyond 2018 may include COVID shock, which may produce deceptive results. Besides, the redenomination policy adaptation is an event, and the further away we draw from the policy period, the less the impact may be.

Unit root and stationarity test

Stationarity test is conducted based on four models (ADF test, Phillip and Perron test, DF-GLS test, and the KPSS test). This approach has become necessary because of some criticisms which have been levelled against some individual models. This approach helps the study establish consistency and robustness in the order of integration based on the different models' output. The results from the four models are presented in Table 1 at 1% (***) or 5% (**), or 10% (*) significance levels.

Table 1: Stationarity Test Results

The table presents stationarity test results at levels and first differences. Also, consideration is made for constant and no trend and constant and trend analysis under 4 different test models. The order of integration for the study variables has been I(0) and I(1).

	Level		First difference		
	C	CT	C	CT	
Variables					OI
Elliott-Rothenberg-Stock DF-GLS test					
LGDP	0.1960	-1.6595	-2.2714**	-3.4461**	I(1)
LREER	-0.9355	-1.9255	-5.0280***	-1.9417*	I(1)
REDEN	-0.5211	-1.8412	-6.1347***	-6.2409***	I(1)
RIR	-3.7610***	-5.8295***			I(0)
CAB	-2.9600***	-4.1345***			I(0)
Phillips-Peron test					
LGDP	2.7734	-3.4109*	-3.4559**	-3.4935*	I(1)
LREER	-1.5295	-1.8621	-6.2827***	-6.8304***	I(1)
REDEN	-0.6331	-1.9601	-6.0827***	-6.0710***	I(1)
RIR	-4.0807***	-5.7193***			I(0)
CAB	-4.0633***	-4.1875**			I(0)
Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test					
LGDP	0.7448	0.2115	0.5284	0.1335***	I(1)
LREER	0.5769	0.1627	0.1276***	0.1030***	I(1)
REDEN	0.5666	0.1543	0.1329***	0.0695***	I(1)
RIR	0.6051	0.0965***			I(0)
CAB	0.4742	0.0963***			I(0)

ADF Test					
LGDP	0.8527	-2.8375	-3.5777**	-3.7525**	I(1)
LREER	-1.6566	-2.5239	-6.2827***	-6.4816***	I(1)
REDEN	-0.6330	-1.9601	-6.0828***	-6.0704***	I(1)
RIR	-4.1421***	-5.6735***			I(0)
CAB	-4.0174***	-4.1875**			I(0)

RESULTS

The objective here is to assess the extent of monetary policy shocks on the current account amidst redenomination policy adaptation. To ascertain the impact of monetary policy on the economy, measured by the current account, the SVAR model is employed to provide empirical estimates for statistical inferences. The analysis starts by looking at the correlation between any two pairs of variables. This presentation is seen in Table 2.

Table 2: Correlation Matrix

The table presents the correlation coefficient between any two of the study variables. It serves as the autocorrelation check on the variables that are being employed for the study analysis. All coefficients suggest no autocorrelation, even though some coefficients are high.

Variables	REDEN	GDP	CAB	RIR	REER
REDEN	1				
GDP	0.0492	1			
CAB	-0.2185	-0.0033	1		
RIR	0.0455	0.4083	0.2594	1	
REER	-0.0223	-0.6122	-0.2849	-0.6058	1

Source: Computed from study data by the Researcher

From Table 2, all pair relationships have indicated relatively low correlation coefficients except the correlation between the real effective exchange rate and gross domestic product, which is a bit high yet within the accepted autocorrelation benchmark range. Both variables have been kept in the model for control purposes and also in line with the adopted framework. There is a positive relationship between the real interest rate and the current account balance, indicating that an appreciation trend in the real interest rate worsens the current account balance. An inverse relationship between redenomination and current account balance is also reported in Table 2, suggesting that current account balance improves with policy adaptation. Again, a negative relationship is reported between the exchange rate and the current account balance, indicating that an appreciation in REER could result in a deterioration of the current account balance. This result is consistent with economic theory.

Table 3: Lag Length Selection

The table reports the lag selection results that help in making the decision as to the lag order to be used in estimating the SVAR model. Four (4) out of the five (5) diagnostic results selected the lag of 2.

Lag	LR	FPE	AIC	SC	HQ
0		16.076	16.967	17.184	17.043
1	285.333	0.006	9.114	10.420**	9.574
2	46.407**	0.004**	8.680**	11.075	9.524**

Note: * indicates lag order selected by the criterion at 5% for each test.

Above is Table 3, which reports the lag order selection for the VAR estimation. The table reports five different selection criteria, thus Likelihood Ratio (LR) test, Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Criterion (SC) and Hannan-Quinn Information Criterion (HQ). All five were estimated to enhance consistency in selecting the most appropriate lag length. Generally, SC and

HQ are known to pick smaller lag lengths, while AIC and FPE are known to perform well when the sample size is small (less than 60). From Table 3, four (4) out of five criteria tests selected an optimal lag length of 2. Therefore, the baseline model is estimated with a lag length of 2. The baseline model identification was crafted based on restrictions, and the validity of these restrictions needs to be confirmed to ensure that the model is accurately specified. For confirmation, Table 4 reports the estimated results of the null hypothesis that 'over-identification is valid'. The likelihood result did not reject the null hypothesis at any level of significance (χ^2 = 0.150, p = 0.70 at 2 decimal places). The result, therefore, confirms that the identification is valid, and one can proceed with the analysis using the baseline model.

Table 4: Likelihood test for Overidentifying Restrictions

The table presents the results of the likelihood diagnostic test of overidentifying restrictions of structural parameters in the VAR system. The table results did not reject the null hypothesis that over-identification restrictions are valid.

Log likelihood	Chi square	p-value.
-138.2940	0.1496	0.6989

H_0: Over-identifying restrictions are valid

Based on the likelihood result, the baseline model for equation 5 is estimated in the VAR system to determine the structural parameters.

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0.0212 & 1 & 0 & 0 & 0 \\ 4.2489 & 19.9091 & 1 & -0.0146 & 0.0671 \\ -13.3600 & 0 & 0 & 1 & 0 \\ -0.1199 & 5.2032 & 0.0021 & 0.0042 & 1 \end{bmatrix} \begin{bmatrix} reden \\ \lg dp \\ cad \\ rir \\ lreer \end{bmatrix} = G(L) \begin{bmatrix} reden_{t-2} \\ \lg dp_{t-2} \\ cad_{t-2} \\ rir_{t-2} \\ lreer_{t-2} \end{bmatrix} + \begin{bmatrix} e_{reden} \\ e_{\lg dp} \\ e_{cad} \\ e_{rir} \\ e_{lreer} \end{bmatrix} \quad (6)$$

Next to the model identification is the analysis of the effects of shocks using the impulse response function. This is done by first considering the redenomination shock on the endogenous variables in the model (Tables 5) and finally assessing the monetary policy effect on the current account position using the third row of the baseline function in Eqn 6.

The impulse response functions allow the observation of current account reactions due to monetary policy adjustment resulting from a shock from redenomination adaptation. From column 1, row 1, the impulse response result depicts that redenomination affects the current account negatively for the first three periods (Table 5). That is, a one standard deviation shock of redenomination (currency biases) causes a significant decrease in the current account deficit. This suggests that the redenomination shock improved the current account deficit for that period. Since Ghana's current account balances for the study period are deficit throughout, a decrease relationship between redenomination shock and current account deficit signifies a reduction in the country's deficit balances, which means an improvement in the Ghanaian economy. The intuition is that an increase in individual consumption that is associated with the currency biases improves the economy's GDP (Table 5), leading to the initial improvement of the economy. However, in order to meet the increased consumption of the economy demands that more goods and services must be imported to meet the growing demands, since Ghana's economy depends largely on importation. This will result in a negative net export balance, leading to a worsening of the country's current account deficit. From table 5, the improvement movement started from 1.58 percentage points to 0.80 and lastly 0.001 percentage points. Then, in the last two periods (4th and 5th), the impact of redenomination leads to a worsening of the current account deficit. This is because the relationship between the 4th(fourth) and 5th(fifth) is a positive one. A positive relationship suggests that as the bias effect increases, the current account deficit equally increases. An indication that the current account deficit worsens with bias effects.

The effect of redenomination on real interest rates is a mixed one, with signs alternating in between periods (Table 5). That is, a one standard deviation shock of redenomination (currency biases) resulted in a mixed interaction with monetary policy. Redenomination had a positive impact on monetary policy in periods 1 and 3 and a negative impact in periods 2, 4 and 5. Meaning some monetary policies have been able to improve the economy even in the presence of some of the predicted behavioural irregularities that come along with redenomination policy adaptation at certain periods. A negative interaction suggests that as currency biases increase in the economy, implemented monetary policies become less effective. Shock periods 2, 4 and 5 suggest that monetary policies would not deal with currency biases resulting from redenomination policy adaptation. However, a positive shock interaction, as in the case of periods 1 and 3, suggests that implemented policies move in lock step with shocks of the currency biases in the economy. This implies that the implemented monetary policies for these periods were able to withstand the effects of currency biases on the economy. The resulting pattern is seen in the impulse response graph in column 3, row 2 (Figure 5I). The mixed effect of Reden (currency bias effects) on monetary policy is reflected in how monetary policy shocks impact on current account balance of the Ghanaian economy, as shown in Figure 5G. This curvature is seen in column 1, row 2 (Figure 5G), which represents the shock pattern of the real interest rate on the current account. The figure shows that the interaction resulted in CA initially falling and rising and falling again, just mimicking the mixed shock effects between Reden and RIR. It suggests that part of the effect of the redenomination shock on the real interest rate has influenced the real interest rate on the current account.

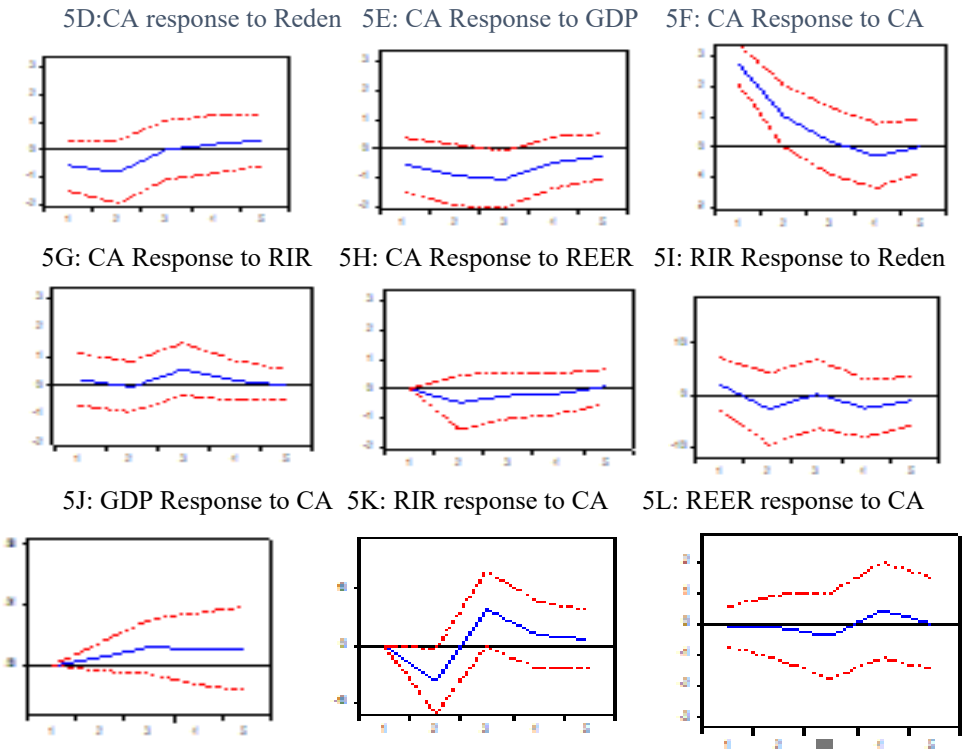

Figure 5 (D-L): Impulse response functions of variables

Table 5: Impulse response of REDEN on study variables

Table 5 presents estimated parameters of the impulse response function from the SVAR system. Based on the literature argument, the estimated parameters are not the point of interest, but whether a shock exerted a positive or negative relationship is the analytical information of interest from the table.

Period	REDEN	GDP	CAD	RIR	REER
1	0.5807	0.5371	-1.5807	3.2209	-0.4912
	(0.4668)	(0.4571)	(0.4668)	(0.4535)	(0.5112)
2	0.8068	0.9097	-0.8068	-2.5425	-0.4656
	(0.5793)	(0.5286)	(0.5099)	(0.4350)	(0.4636)
3	0.0020	1.0476	-0.0010	3.9458	-0.2265
	(0.5358)	(0.4888)	(0.5615)	(0.4562)	(0.3944)
4	0.2165	0.4674	0.2165	- 2.4403	-0.1681
	(0.5309)	(0.4441)	(0.5309)	(0.3469)	(0.3509)
5	0.3502	0.2550	0.3502	-2.6037	-0.0860
	(0.4553)	(0.3870)	(0.4286)	(0.2696)	(0.2893)

Shock interaction between Reden and Gross Domestic Product (GDP) is positive throughout the periods. This suggests that an increase in the currency biases leads to an increase in Ghana's GDP, and this is possible through increased individual spending as predicted by the currency bias literature. This probably explains why Ghana's current account deficit balance (CA) with the Reden shocks improved during the initial stages of their interaction (table 5). The shock interaction between Reden and real effective exchange rate is negative throughout the periods, an indication that currency biases deteriorate the strengthening of the Ghanaian currency relative to other currencies. That is, improvement in GDP through spending leads to more importation in excess of exportation, and the probable consequence is the weakening of the domestic currency. Finally, from matrix Eqn 6, the baseline equation of the recursive model of the SVAR parameters reveals a negative interaction between real interest rate and current account deficit balance (Matrix row 3) amidst Reden in the model. Collectively, the negative interaction between these two variables suggests that monetary policies in Ghana have an inverse relationship with currency account deficit. That is, a rise in good monetary policies in the Ghanaian economy results in a reduction of the current account deficit even amid currency biases. Having controlled

for GDP and real effective exchange rate, monetary policy is noted to improve Ghana's current account deficit balance within the study period, amidst currency biases introduced in the Ghanaian economy as a result of redenomination policy adaptation.

DISCUSSION

The analytical results suggest that the impact on monetary policy by redenomination shocks is a mixed one (negative/positive), with shock effects alternating along the study periods. Negative implies that monetary policy is rendered ineffective at a certain point in time by the presence of currency biases in the Ghanaian economy. This happens when the implemented monetary policy lacks the ability and strategy to curb expected currency biases. That is to say that the period interest rate was not prohibitive enough to deter induced spending, which is a behavioural effect that is triggered by the currency biases resulting from redenomination adaptation. Under a situation where these bias effects are not able to be restrained by the interest rate effect, monetary policy for the period will be ineffective, and this supports the concluding predictions in previous studies (Bawuah, 2025) in Ghana. However, positive shock interaction between the two variables indicates that monetary policies for the periods can deal with currency biases. In principle, the interest rate for the period is prohibitive enough to discourage induced spending, which is a behavioural effect that is triggered by the currency biases resulting from redenomination adaptation. Monetary policy is therefore considered effective in this case.

From the result again, the current account balance improves initially with the shock of redenomination and later deteriorates in terms of deficit. This evidence from the study results depict that currency biases induce consumer spending, thereby increasing Ghana's GDP. This situation improves the Ghanaian economy and consequently the current account balance. However, the increased consumption will necessitate more importation of goods and services to meet the growing demands resulting from the biased behaviours of individuals. Excessive importation will lead to the depreciation of the domestic currency against other currencies and consequently worsen Ghana's current account deficit. This argument is evident from Table 5, where a negative interaction is reported between currency biases (Reden) and the real effective exchange rate (REER). This trend is the reverse of the J-curve effect, which postulates a temporary deterioration of a trade balance following a currency depreciation, and then afterwards a subsequent improvement follows. This result is consistent with the findings of Makanza and Dunne (2016), Gosse and Guillaumin (2013), and Kim and Roubini (2008) under the Obstfeld and Rogoff (1995) framework. The positive interaction reported between Reden shock and GDP in this study is expected and consistent with theories that are associated with the currency denomination literature (Di-Muro and Noseworthy, 2013; Raghubir and Srivastava, 2009; and Mishra et al., 2006). These authors have demonstrated empirically that currency denomination biases induce consumer spending that is not consistent with rational dictates that influence financing decisions. In the Ghanaian context, studies (Dzokoto et al., 2010; Bawuah, 2025) have equally confirmed this consumption induced facts and it may account for the positive shock interaction between these estimated biases and GDP.

The study results also indicate that there is an indirect relationship between real interest rate, which is a monetary policy tool, and current account balance (deficit) amidst redenomination and two other variables GDP and real effective exchange rate (REER) in the estimated model. This result suggests that good monetary policies by Ghana's policymakers led to a reduction in Ghana's current account deficit. This is an indication that monetary policies improved Ghana's current account position during the study period. The intuition is that interest rate in Ghana is averagely considered to be high and it prohibits individuals to borrow and spend on household consumption as expected by the bias theories. This monetary policy measure attenuates the effects of these bias behaviours on the economy's aggregate consumption leading to less aggregate demand of the Ghanaian economy. Less aggregate demand will necessitate moderate importation which would have strengthen the economy's current account position as against excess importation which would have worsened Ghana's current account deficit. This evidence in the study depicts that implemented monetary policies improved Ghana's economic position within the study period and this finding is in line with what Quartey and Afful-Mensah (2014) reported in the Ghanaian context over the period. Again, improved current account balance result is consistent with South Africa's situation (Makanza and Dunne, 2016) and across selected countries (Gosse and Guillaumin, 2013) though the magnitude of this effect across countries like China, Hong Kong are comparatively smaller (Gosse and Guillaumin, 2013) relative to interactions of macroeconomic variables.

CONCLUSION AND RECOMMENDATIONS

The principal aim of the study is to assess the impact of redenomination policy adaptation on the Ghanaian economy. Specifically, this study tried to ascertain the extent of the effects of monetary policy shocks on Ghana's current account position amidst redenomination policy adaptation. Three specific objectives guide the study. First is to ascertain the effect of redenomination (represented by average estimated currency biases) shock on monetary policy. Second is to ascertain the effect of redenomination shock on the Ghanaian economy which is proxied by current account balance. Third is to examine the effect of monetary policy shock on current account balance amidst redenomination policy adaptation. Espousing strong literature argumentation with regards to currency biases and their possible impact on selected study variables and following the proposed empirical strategies, the study found that expected currency bias shocks resulting from redenomination policy implementation impacted on the selected economic indicators in the study model. Evidence from the endogenous shocks of the model suggests that the shock of the redenomination policy impacted both the implemented monetary policy and the current account balances of the Ghanaian economy. Also, amidst redenomination shock and controlling for GDP and real effective exchange rate (REER), the study found monetary policy to have improved Ghana's current account deficit balance. Deductively, it can be concluded from the study that currency biases impacted positively on GDP but the shock on the GDP is not strong enough to induce excess importation

that will weaken Ghana's domestic currency and consequently impacting negatively on her current account position. Therefore, Ghana's current account deficit balance improves with implemented monetary policy within the study period amidst redenomination policy adaptation.

The findings suggest that the presence of currency biases are impactful in the Ghanaian economy. This gives a counter notion that currency reform and redenomination are just 'numerosity gimmicks' as professed by the Central Bank of Ghana during the policy implementation. The evidence in this study suggests that monetary policies that are able to deal with the effects of these currency biases tend to improve current account balance. Therefore, the study recommends that researchers, policymakers, and stakeholders take a critical look at the impact of currency biases and deal with it appropriately. Specifically, the effect of these biases on the forex market and consumption behaviours as the currency denomination literature confirms should be looked at since these biases have direct impact the current account balance and also have the tendency of rendering implemented monetary policies ineffective. Also, countries that wish to embark on redenomination policy in the future must incorporate post-implementation education as part of the currency policy implementation strategy to deal with problem specific issues which are human behaviour in nature. This step will quickly help to attenuate or eliminate some of the possible biases that may accompany policy implementation, thereby reducing its total impact on the economy. Future research can look at how these currency biases impacted on investors decision by analysing bias effects in the stock or financial markets after the redenomination period.

Data availability statement

The data that support the findings of this study are openly available in the World Development Indicator (WDI) and Economist Intelligence Unit (EIU) databases at https://data.worldbank.org
https://store.eiu.com/product/countrydata

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APPENDIX

Table 6: Descriptive Statistics of Study Variables

The essence of this table is to report the statistical (descriptive) properties of the variables that are being used for the empirical analysis in this chapter. There are 5 variables in all.

Variables	**CA**	**LGDP**	**REDEN**	**LREER**	**RIR**
Mean	-5.522	21.2850	0.2703	5.1004	-5.0354
Median	-5.174	21.4450	0.0000	4.6997	5.0848
Maximum	1.332	26.2710	1.0000	8.1668	17.9800
Minimum	-12.491	15.2707	0.0000	4.1693	-107.374
Std. Dev	3.552	3.2704	0.4502	0.9673	28.4981
Skewness	-0.123	-0.1427	1.0346	1.8710	-2.4461
Kurtosis	2.156	1.8622	2.0703	5.6733	8.7183
Jarque-Bera	1.257	2.1212	7.933	32.6059	87.310
Probability	0.534	0.3462	0.0189	0.0000	0.0000
Sum	-215.367	787.5437	10.000	188.7144	-186.308
Sum. Sq. Dev	479.518	385.0434	7.297	33.68461	29237.15
Obs	38	38	38	38	38

Note: LREER=Real Effective Exchange Rate; RIR=Real Interest Rate; LGDP=Gross Domestic Product; REDEN=Redenomination; and CA=Current Account.

Table 7: Average bias estimated

YEAR	**Fiscal Deficit Bias Estimates**	**Nominal Exchange Bias Estimates**	**GDP Bias Estimates**	**Average Bias Estimates**
1980	0	0	0	0
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	0	0	0	0
1987	0	0	0	0
1988	0	0	0	0
1989	0	0	0	0
1990	0	0	0	0

1991	0	0	0	0
1992	0	0	0	0
1993	0	0	0	0
1994	0	0	0	0
1995	0	0	0	0
1996	0	0	0	0
1997	0	0	0	0
1998	0	0	0	0
1999	0	0	0	0
2000	0	0	0	0
2001	0	0	0	0
2002	0	0	0	0
2003	0	0	0	0
2004	0	0	0	0
2005	0	0	0	0
2006	0	0	0	0
2007	0.842	0.213	0.019	0.358
2008	3.690	0.465	0.133	1.430
2009	0.747	0.630	0.395	0.591
2010	1.359	0.821	0.385	0.855
2011	1.081	1.033	0.413	0.843
2012	6.113	0.247	0.551	2.304
2013	2.031	1.637	0.596	1.422
2014	1.147	1.752	0.931	1.288
2015	0.783	1.785	1.095	1.237
2016	1.331	1.841	1.087	1.420
2017	0.008	1.896	1.121	1.009
2018	2.008	1.928	1.103	1.680

Source: Bawuah et al., (2023)

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT COFERENCE PROCEEDINGS

Labour casualisation in health facilities in the Upper West Region of Ghana: A conflict between survival and dignity

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Challenges, Conflict theory, Employment, Human rights, Job security, Casual workers

Labour casualisation is a common practice, especially in developing countries with heightened unemployment. Despite clear laws regulating labour casualisation in Ghana, the practice is still common. This paper investigates evidence of the existence of labour casualization in health facilities; explores the reasons for the existence of labour casualization in the facilities; and examines the challenges faced by casual workers. A cross-sectional exploratory design was used in the study. A total of 25 qualitative in-depth interviews were conducted from government health facilities in the Upper West Region (UWR) of Ghana in 2022. Participants were selected using targeted, quota, and purposive sampling techniques. The results indicate labour casualisation is high in UWR among non-clinical staff in health facilities. Despite the workers facing challenges such as human rights abuses, inadequate salary, job insecurity, and disrespect in the workplace, the practice is still predominant because of the battle for survival. We thus argue that, unless a better alternative is provided, workers and job seekers will continue to work in and accept casual roles. We conclude that enactments against labour casualisation alone are not enough. Attention should therefore be geared towards the expansion and creation of more jobs to provide workers and job seekers with alternatives.

INTRODUCTION

Labour casualisation in Ghana has become a pressing issue (Rockson, 2016), as the country grapples with economic challenges and labour market dynamics (International Monetary Fund, 2024). Labour casualisation refers to the increasing reliance on casual or temporary labour (Animashaun, 2023). It is the shift in employment, from a preponderance of full-time and permanent positions to reliance on casual and contract positions. It often denies workers the benefits and security typically associated with permanent employment (Animashaun, 2023; Zakari et al, 2022).

According to the 2023 Labour Statistics Bulletin, the labour force participation rate in Ghana is 67.6% (Ghana Statistical Service [GSS], 2023). While this figure may suggest a positive employment rate, it may be attributed to a high number of casual workers and their enormous negative implications. In 2023, GSS reported that approximately 450,717 individuals were classified as casual workers. These large numbers highlight the prevalence of labour casualisation across various sectors. Among other melanomas, casual workers are often reported to face lower wages, limited access to social protection, and reduced opportunities for career advancement (Otuturu, 2021; Bayo, 2019). The worsening situation of relying on labour casualisation thus raises concerns regarding job security, workers' rights, and the overall quality of employment.

Due to the evidence of understaffing in health facilities in Ghana (Asamani et al., 2021; Sakyi, 2008), the Management of health facilities may be right to regularly resort to engaging the services of casual workers. Although the creation of a necessary flexible environment for organisations in hiring labour is required under conditions of survival and emergency, it should not be the norm. Against this, however, labour casualisation has become enormous to the extent of attracting the attention of key stakeholders (Bayo, 2019). In many cases, what is supposed to be temporal often lasts for many months and sometimes years, a situation described as permanent casualisation (Bayo, 2019).

The enormity of the problem was recently discussed by the legislative arm of government when the Member of Parliament for Nadowli-Kaleo delivered a statement on how casual workers are engaged for long periods, sometimes, up to 20 years, against section 75(1) of the Labour Act 2003 (Act 651) in Ghana (Sumah, 2022). The Act states that workers, when engaged by an organisation for more than 6 months, should be considered permanent (Ghana Labour Act, 2003). This is reinforced by historical judicial rulings, such as in Benjamin Aryee and 691 Versus Cocoa Marketing Board in 2006 (Alesu-Dordzi, 2018). Based on these constitutional provisions, some scholars conclude that casual workers in the country enjoy protection (Eze & Eze, 2013) and are less likely to have complaints about their work and status. As to whether these conclusions have a true reflection on the lived experiences of casual workers in Ghana is rhetorical.

A limited number of studies have been cited to have assessed this rhetorical situation. Evidence in this regard seems to suggest that the regulatory environment and the institutions expected to protect workers are either non-existent or inadequate (Gyapong 2020). Where prevalence is established, regulatory institutions tend to legitimise oppression and inequality instead; a situation which perhaps calls for substantial policy reforms through rigorous empirical work (Gyapong 2020). There is also evidence of negative implications of livelihood dispositions by employers (McGann et al., 2016) as a cause. Yet other scholars argue that, the very workers who are supposed to expose bad practices of labour casualization are somewhat quiet because liberalization activities and agitations might keep them forever stuck in the very casual system they despise (Bayo, 2019), perhaps, because of how commitment serves a primary pre-condition for progression to a permanent staff status in many organizations (Marzuki, 2023). Similarly, authorities of local communities are afraid of upsetting firms that provide employment opportunities to their people (Gyapong, 2019) through advocacy against the menace, while governments have also been accused of not showing any determination to address the issue (Rockson, 2016).

Amid these is the argument that research seeking to address issues of labour in health organisations seems even more limited. Much literature is instead rooted in theoretical and analytical perspectives (Islam et al, 2018; Wills & Earle, 2007), speaking particularly to the question of improved health (Wills & Earle, 2007), leaving discussions of labour to its margins (Gyapong, 2020). Therefore, several questions relating to labour, particularly labour casualisation, remain unanswered. Against this backdrop, the current study investigates the existence of labour casualisation among non-clinical staff in health facilities in the Upper West Region of Ghana. The specific objectives of the study are to: (1) investigate the evidence of the existence of labour casualisation in the health care facilities in the Upper West Region; (2) explore the reasons for the existence of labour casualisation; and (3) explore the challenges faced by casual workers. Through a detailed analysis, the study contributes to the discourse on labour rights, investigates the abuse of human rights under labour casualisation in health facilities in the Region and explores the reasons why casual workers continue to work under conditions that abuse their rights.

LITERATURE REVIEW

Conflict Theory as a framework for understanding labour casualisation

Conflict theory is rooted in the work of Karl Marx and provides a powerful lens for analysing labour casualisation, particularly in the context of Ghana's healthcare sector. At its core, the theory posits that society is structured around persistent inequalities, with social, economic, and political power concentrated in the hands of dominant groups who exploit and control less powerful groups for their benefit (Zakari and Ifah, 2023). In the labour market, this manifests as employers (the dominant group) seeking to maximise profits and flexibility by casualising employment, while workers (the subordinate group) bear the brunt of job insecurity, low wages, and diminished rights.

From this perspective, labour casualisation is not merely a response to economic pressures or technological changes, but a deliberate strategy by employers to maintain control and reduce costs at the expense of workers' welfare. The literature shows that casual workers in Ghana face human rights abuses, inadequate salaries, job insecurity, and disrespect (Gyapong, 20220; 2019), yet continue to accept such roles perhaps due to a lack of viable alternatives and high unemployment. The conflict theory explains this endurance of casualisation as a product of structural inequality, where those with economic power design systems (such as temporary contracts and weak enforcement of labour laws) to perpetuate their advantage and keep workers in a state of dependency and vulnerability (Zakari and Ifah, 2023).

Recent scholarship extends Marx's analysis by emphasising the creation of both direct exploitation and broader forms of domination and structural vulnerability in precarious work (Hickson, 2020). Precarious and casual workers are subject to arbitrary power from employers, who can hire and fire with little notice, and from broader social forces-such as landlords or lenders-who exploit their unstable incomes. This "structural domination" traps workers in cycles of insecurity, limiting their ability to assert their rights or improve their conditions (Hickson, 2020). In most developing countries like Ghana, even where laws exist to protect casual workers, weak enforcement and the prioritisation of business interests over labour rights reinforce these patterns of domination (Zakari and Ifah, 2023; Gyapong, 20220; 2019).

In sum, conflict theory highlights how the interests of capital-profit maximisation and managerial control are advanced through casualisation, while workers' needs for security and dignity are subordinated (Benach et al., 2014; Kalleberg, 2009). This theoretical lens is especially relevant in the Ghanaian context, where casualisation persists despite legal protections, illustrating how power imbalances and institutional weaknesses perpetuate exploitation in the labour market.

Existence of labour casualisation

Labour casualisation-the shift from permanent, full-time employment to temporary, contract, or part-time work-has become increasingly prevalent across various sectors, including healthcare. This trend is evident globally, with significant implications for workforce stability, employee well-being, and service delivery. Numerous studies confirm the widespread adoption of casual labour in healthcare facilities, such as hospitals and clinics, as a response to fluctuating service demands and financial constraints (Buchan & Campbell, 2013). The practice is not limited to developed countries. Developing nations, including those in Africa, also report rising levels of casualisation (ILO, 2016; McGann, White, & Moss, 2016).

The International Labour Organisation (ILO) notes an increase in non-standard forms of employment worldwide, including casual, temporary, and part-time work (ILO, 2016; Standing, 2011). While healthcare is a focal point, similar patterns are observed in other sectors (Kalleberg, 2011).

Casual workers often face job insecurity, limited access to benefits, and reduced job satisfaction, which can negatively affect service quality and continuity of care (McGann et al., 2016; Benach et al., 2014). These challenges are particularly acute in healthcare, where workforce stability is crucial for patient outcomes.

Causes of labour casualisation in the health sector

A primary reason for casualisation is its use as a temporary cost-saving measure. Many health facilities, such as hospitals and clinics, often face financial constraints and seek to reduce costs. Casual labour offers a flexible and cost-effective approach, allowing organisations to manage costs while addressing staffing needs (Buchan & Campbell, 2013). By hiring casual staff, healthcare organisations sidestep liabilities associated with full-time employees, such as pensions and paid leave (Fragkiadakis et al., 2016). Economic downturns and austerity measures further exacerbate this trend, compelling organisations to minimise fixed labour costs (Willis et al., 2017). In essential sectors like healthcare, reliance on public funding makes them vulnerable to budget cuts and financial crises, leading to increased use of temporary staff (Standing, 2011).

Labour casualisation in healthcare may also result from shifts in the supply and demand of personnel. In regions with a surplus of professionals, employers may prefer to employ casual labour (McGann et al., 2016). Flexibility is especially useful in healthcare, where temporary arrangements help organisations adjust to variable patient loads, unexpected staffing shortages, and fluctuating service demand (Jones et al., 2020). Temporary staffing allows organisations to lower fixed labour costs and manage finances more flexibly. However, while it benefits employers, the workers may face job insecurity, fewer benefits, and lower satisfaction, which can impact patient care quality and continuity (McGann et al., 2016). Laws and regulations, such as overtime restrictions, may cause organisations to rely on casual labour to comply with the law (Hebson, Rubery, & Grimshaw, 2015). While labour laws aim to protect workers' rights and ensure fair employer-employee relations, overly strict enforcement can hinder employers from meeting operational demands, forcing them to seek alternatives like casual staff (ILO, 2016).

Technology is another driver of labour casualisation. The adoption of healthcare technology, including automation and telemedicine, is reshaping workforce needs (Weiner, Yeh, & Blumenthal, 2013). Automation and digital health tools can displace certain roles while creating demand for specialized, often temporary, digital skills (Hazarika & Math, 2020; Autor, 2015). Telemedicine, in particular, often requires casual or contract employees to manage peak patient loads and support remote care infrastructure.

While the literature extensively explores reasons for labour casualization-highlighting cost reduction, rapid technological advancements, and compliance with laws and regulations, most studies are based on contexts outside Ghana. Although casualization is common in Ghana, there are no specific studies to determine if the same reasons apply or if unique factors driv the practice in the Ghanaian context.

METHODOLOGY

Study area and approach

The study was conducted in the Upper West Region of Ghana in 2022. The objectives and the nature of the research questions required the use of a qualitative approach. The nature of the approach to the study made the entire process dependent on a careful definition of the meaning of words, the development of concepts, variables, while the data relied on human interpretation and evaluation. The approach was adopted because the concepts, constructs and variables were not dispassionately measured in a standardised way. Notwithstanding, the process was rich and suitable to an extent of leading to a great insight into the subject matter of the study and human society in general.

Population and sampling

The population for the study involved workers in health facilities in the Upper West Region. Specifically, casual workers were targeted in addition to regular workers in administrative and union leadership positions. The sample consisted of non-clinical workers because clinicians were not found to be engaged on a casual basis. Creswell (2018) advocates for purposeful sampling in qualitative research to ensure participants have rich information in the area of enquiry and can best illuminate the research questions. The distribution of the sample aligns with this principle, as individuals in the target groups were most likely to provide detailed accounts of the existence, challenges and lived experiences of labour casualisation in the health facilities.

Because of the usefulness of sampling in research, scholars have various views on this topic. Generally, Vasileiou et al. (2018) posit that sampling is about having an adequate number of participants to suit the study. However, other scholars have suggested a specific range of numbers for qualitative studies, such as 9-17 (Henneck and Kaizer, 2022), 15- 25 (Marshall et al., 2013), and a maximum of 30 (Vasileious et al., 2018; 2022). Based on these assertions, a sample size of 25 participants was selected for this study, which is specifically in line with Creswell's (2018) assertion that phenomenological studies should have a sample size of between 15 and 25 participants. Samples were selected from government health facilities. Table 1 shows the distribution of samples.

Table 1: Distribution of sample size

Category	Administrators	Casual workers	Union leaders	Total
Sample	5	15	5	25

3.3 Data collection and analysis

A mix of qualitative methods was used for data collection and analysis. Predominantly, we used qualitative interviews and focus group discussions with key actors in health facilities for collecting data on life histories and stories relating to the constructs of the study. Specifically, administrators, casual workers and labour union leaders were engaged. An in-depth interview guide was used to conduct the interviews, while a focus group discussion guide was used to aid data collection during the focus group discussion sessions. A narrative analysis approach was used, which involved extracting themes, structures, and interactions from transcripts obtained from in-depth interviews and focus group discussions. The narrative was extracted from different aspects of the data, involving both what was collected and how, the nature of the performance during the storytelling, as well as the reactions and body language of storytellers. All these were done to "reveal the undercurrents that may lie under the simple narrative of the story" (Walliman, 2017, p. 142).

RESULTS

Background of respondents

Table 2 summarises information on the background of the study respondents.

Table 2: Summary of background information of respondents.

Background	Option	Frequency	%
Sex	Males	14	56
	Females	11	44
	Total	**25**	**100**
Worker status	Administrators	5	20
	Union leaders	5	20
	Casual workers	15	60
	Total	**25**	**100**
Age	21-30 Years	5	20
	31-40 Years	15	60
	41-50 Years	5	20
	Total	**25**	**100**
Status of a casual worker	Administrative Support Staff	5	33
	Cleaners	7	47
	Messengers	3	20
	Total	**15**	**100**

From Table 2, 15 out of the study respondents were casual workers in various health facilities in the Upper West Region. In addition, five were worker union leaders, while the remaining five were administrative workers. There were eleven females and fourteen males who were aged between 22 and 47 years old. Out of the total casual workers, five were administrative support staff, seven were cleaners, and three were messengers.

Evidence of labour casualisation

The data established evidence of labour casualisation in the health facilities in the Upper West Region of Ghana. In each of the facilities, casual workers were identified. In some cases, casual workers outnumbered the "regular" workers. In general terms, the minimum number of workers in the facilities was found to be 150 while the maximum was 500. Of this, the number of casual workers in the facilities ranged from 33 to 150, giving an indication of a large ratio of workers being employed on a casual basis. For example, out of the total of 416 workers at Jirapa government hospital, 334 were regular workers and the remaining 82 were casual workers [Resp. 9].

Reasons for labour casualisation

The results revealed that none of the workers employed on a casual basis was happy with the casual working arrangements. In fact, given the opportunity, the workers did not hide from their desire to leave their jobs as casual employees. However, it looked like there was no sign of these people leaving their jobs even in the long term. Exploring further, the study found that there were a number of reasons for the existence and practice of labour casualisation. Although the disadvantages of the practice were mentioned, it sounds as though the reasons for the practice were so strong that they could not be resisted, just as the reasons for the patronage by the workers. In general, the reasons for the casualisation were quite different from the perspectives of the casual workers themselves, on one hand and those of the administrative staff, their employers on the other hand.

Reasons for labour casualisation from the perspective of the casual workers

From the perspectives of the casual workers, the reasons for accepting the status of casual employment spanned from the need to satisfy basic needs to a lack of knowledge and limited choices of employment opportunities. It was recorded that, no

matter the challenges associated with the roles of a casual worker, such as inadequate remuneration, disrespect and inhumane treatment from superiors and colleague workers, it was still considered important to accept the status quo because the associated salary was the only means of personal and family survival. As a result, a respondent retorted when quizzed why she continued working as casual staff:

> "…. but what should I do? It is the only thing that provides myself and my family with the means of survival. Our elders' say, even if your breath is rotten, there you lick". [Resp. 25]

From the evidence, it is clear that the workers fear that, without the supposed "bad work", they will not be able to meet any of their basic needs. To support this, another respondent said:

> "…because the work gives me money to take care of my family, I can't stop it until I get a different and better alternative. I am sure you will bear with me, that that will not be a good decision to take" [Resp. 2].

They also accepted that, to be able to save is a difficult task that needs extreme financial discipline and self-denial because of the meagre amounts they receive as compensation. Nevertheless, workers can save a small amount of money from their earnings after meeting certain basic needs. Explaining her ability to save at the end of every month, a respondent said:

> "…some time ago, I decided to stop this work and start petty trading, which I thought would be able to earn me more money. But I realised that earnings from the trading will not come in bulk. This will make it very difficult for me to save. But as for this work, am able to save small…. It also helps me to save because the money always comes in bulk, not in pieces" [Resp. 15].?

Another reason for the existence of the practice is the limited choices of the workers. The workers agreed that they have three main interwoven limitations in this regard. These are limited employment opportunities, limited qualifications, and limited access to benefits such as bonuses and work leave. In the first instance, the high unemployment rate in the country was pointed out. Due to this, there are few opportunities for countless people. These opportunities, no matter how small they promise to reward, are even scrambled for by the numerous unemployed. The situation is worsened by the fact that the casual workers are further limited by their qualifications to compete for most of the available jobs. This is because, in most cases, casual workers do not have any academic qualifications at all or very low qualifications in this regard. At best, few of them have apprentice training in areas such as carpentry, electrical work and plumbing, with a few others completing basic school. On the other hand, most vacancies in the job market require higher academic qualifications, ranging from a bachelor's degree to various post-graduate degrees. As a result of this, respondents said, the vacancies they fit in the job market are those that will mostly accept them as casual workers; therefore, their decision to continue to accept the status of working as casual employees, despite the many challenges they face. The following statement from the data confirms this:

> "The time I was taken (referring to time of employment), I was not having any certificate. And there were people with certificates who didn't even have employment. Also, there are people here who have certificates but who are not permanent workers. So, I have no option than to accept and manage it small, small. I hope to get something better someday" [Resp. 20]

Some of the participants also asserted that many of the challenges they go through are just characteristic of being an employee for someone, although some are peculiar to casual employees.

Reasons for labour casualisation from the perspective of administrators and union leaders

When the administrative staff were interviewed, they also confirmed the existence of labour casualisation. They alluded to the fact that casual employment is among the labour to be never advocated for. However, the very officials who spoke against this issue are those who engage the workers on a casual basis at the facilities. It became evident that this dilemma will persist, if not forever, onto the foreseeable future. This is because, from their perspective, the reasons for engaging workers on casual basis seem so strongly tied to be untied at their level. The casual workers are recruited at the facility level but the reasons for recruiting them are beyond control at the facility level.

The administrative staff, including the Human Resource (HR) personnel said that, permanent staff in facilities are employed and cared for by the central government. They asserted that if the central government refuses to employ staff on permanent basis, administrators at the facilities level cannot do that. Notwithstanding this, they said the number of permanent staff that were employed and posted to the facilities was woefully inadequate, and if nothing was done about the situation, work at the facilities would be stalled. Because of this, Management at the facility levels were forced to engage the hands of more workers on a casual basis and pay them with Internally Generated Funds (IGF). So, one of the reasons for engaging labour on a casual basis was to augment the inadequate staffing situation in the facilities, a situation that could not be solved by Management at the facility level, except to manage it through employing casual workers. To explain this, a respondent said:

> "The reason why we recruit people on a casual basis is to augment the staffing situation in the Hospital. Our staffing situation is very inadequate. If something is not done about it, we can't run the Hospital. And the only thing we can do about it is to employ staff and pay them with our IGF. To do this, we can only engage them on a casual basis" [Resp. 8].

The employers share with the workers the reason for survival. They explained that, apart from being employed on a casual basis for reasons such as those discussed, it was also a source of employment for people in the local communities, some of whom would otherwise not have been able to get employment. According to the Administrators, some of the reasons were "inability to follow the employment procedures of the central government" and "lack of formal education qualifications by these workers".

4.5 Challenges of casual workers

The main focus of the study was to first establish evidence and reasons for the practice of labour casualisation and the challenges associated with the practice. The study explored challenges peculiar to casual workers. Challenges identified bordered on a lack of job security, human rights abuses, inadequate salaries, disrespect from Management and colleagues and a lack of professional growth.

Job insecurity

The workers feared that, because they were not permanent, they could lose their jobs at any time. This was because their appointment was always for a short period of six months, subject to renewal. Owing to this, they lived in perpetual fear of Management deciding not to renew their appointment. The refusal to renew their appointment in this case might not be based on their abilities, capabilities and performance, but on offences that Management might take from the workers for expressing their views. A respondent said:

> "My major problem in this job is lack of job security. I think my job is not secure, and that is a big problem. Since I am not a permanent staff, my boss can decide to let me go home at any time. You know they renew our mandate every six months, if somebody is angry at you, they can decide that at the end of the six months, they will not give you another appointment, and you will have nothing to say" [Resp. 17].

Inadequate salaries

According to them, all workers complain about the inadequacy of salaries. However, the situation of the casual workers was worse. They were the lowest-paid staff without regard to qualification, nature of responsibilities and working experience. A respondent affirmed this challenge by saying, "yes, the financial! We are facing challenges on the financial side". Another respondent then illustrated the nature and extend of the financial challenge facing them.

> "Yes! The challenge we face as casual workers is that, many of us are married people and we have mothers who are not doing anything. We have old ladies and old men we take care of. And also, some of us are schooling, we pay our own school fees, because of that, we are struggling. What we are passing through as casual workers is not easy" [Resp. 12].

From the illustration, it was clear that the inadequate salaries of casual workers were worsening the already poor social and financial situations they faced.

Lack of promotion

The study found that the arrangements did not permit the promotion of casual workers. This was different from challenges faced by permanent workers on promotion, bordering particularly on bureaucratic bottlenecks. The casual workers complained that they were not qualified for any promotion, no matter their output or tenure in the organisation. A respondent illustrated this challenge in the following way:

> "Our major challenge here is that they don't promote us. No matter how long one works here, you are not promoted… Meanwhile, we know the work… "[Resp. 9]

The inability to be promoted had several effects on the professional, social and economic lives of casual workers. First, it impeded their professional growth and development. Inability to Be promoted created little or no room for professional development. Besides, casual workers had limited financial resources to develop themselves through further training and education. In case a casual worker was eventually made permanent, the years spent working on a casual basis did not count towards promotion. This was because one important factor for promoting workers in the Ghana Health Service is working experience measured in terms of the number of years in the service, in which case their working experience was calculated minus the number of years worked on a casual basis.

Fundamental human rights abuses

These abuses were from colleagues, regular workers, Management and the general public, including patients and other clients. From the perspective of Management, engaging workers on a casual basis for more than six months without making them permanent was clearly against labour laws in Ghana, specifically, section 75(1) of the Labour Act 2003 (Act 651). To outwit the requirements of the law, the workers said, they were always given new appointment letters for a maximum of every six months. This was an abuse of the constitutional provisions and thus the rights of the workers.
It was a clear indication of employers taking advantage of the lack of employment opportunities in the country. Employers refused to employ on a permanent basis, but still managed to get workers to work permanently. The abuse centered on reasons of avoiding certain costs to be incurred on workers when employed permanently. For example, the issue of no promotion helped the facilities avoid increasing the salaries of workers who came with promotions.

Again, the findings revealed that certain fundamental human rights of casual workers, such as the right to freedom of speech, were trampled upon because of their contract status. They were unable to ask basic questions about their work. In some cases, they were asked to shut up because they were virtually not seen as part of the official workforce of their facilities. In a statement to confirm this, a respondent said:

> "If I demand explanation for anything, they will not give. I think this is bad because there are cases when I am in charge of something and will be the one to account for it, yet I am not given the needed answers to questions" [Resp. 4].

The respondents also indicated that both Management and their colleagues, permanent workers, did not accord them the necessary respect. They were sometimes used as 'errant boys' and girls' and talked to without respect.

DISCUSSION

The issue of labour casualisation has been documented in labour and employment literature as a subject of concern. Similarly, the results of the current study provide clear evidence of labour casualisation in health facilities in the Upper West Region of Ghana, with a good proportion of non-medical staff engaged as casual workers in the Region. Observations from health facilities in the Upper West Region of Ghana reveal significant practice of labour casualisation. There were cases of casual workers outnumbering regular

staff. Although expressing dissatisfaction with their roles and desiring stability, the casual workers feel trapped by a triple line of limitations: limited skills, limited job options and limited economic opportunities, leading to economic necessity. This aligns with literature highlighting that precarious employment leads to insecurity and low morale (Bagrmwin et al., 2023). Employers view casualisation as a cost-effective staffing solution, yet this creates a cycle of dependency for workers (Akologo et al., 2021). The challenges faced by casual workers are numerous and discussed below.

Job security

Worldwide, the lack of job security of casual workers is a critical concern for the livelihoods and well-being of casual workers (Kalleberg, 2018; Kalleberg & Vallas, 2017; Kalleberg, 2013; Kalleberg, Reskin & Hudson, 2000) because of its numerous implications. Studies have drawn an association between mental health status and labour market outcomes (Dawson, Veliziotis, Pacheco & Webber, 2015). It is reported that even permanent employees develop poorer mental health when they think of the possibility of experiencing temporary employment arrangements in future. It is therefore important to emphasise that the fear of losing their jobs due to temporary appointment arrangements can be emotionally distressing among the casual workforce. The fear and distress become worse due to the arbitrary nature of non-renewal; a situation reported to not be based necessarily on the workers' abilities, capabilities, or performance; thus, amplifying uncertainty among casual workers about job security. In the end, this leads to severe and audacious consequences on the financial stability and the entire livelihood of these workers.

Inadequate salaries

The results revealed huge wage disparities between casual workers and permanent workers, with the former receiving comparatively low wages. This phenomenon is supported by highlights in the literature asserting that casual work arrangements tend to offer lower pay and fewer benefits to employees (Kalleberg, 2013; 2012). The impact of receiving low salaries, according to existing studies, leads to a widening inequality (Loewenson, 1993), financial hardship (Persson, Larsson & Nässén, 2022), increased stress, and limited access to essential services. In the case of the current study, the low wages and salaries are particularly detrimental, affecting the ability to meet the financial demands of a large dependency ratio. This outcome is reflected in the work of existing scholars like Price and Elu (2016), who found that the dependency ratio places added financial strain on low-wage workers. Ultimately, inadequate salaries of the workers have some social and financial consequences on the livelihood of the workers and their families. Hence, the difficulty for such workers to be able to meet basic needs, including housing, education, and healthcare. This may have spilt-over social implications on the broader community.

Lack of promotion

Literature outlines issues with a lack of promotion as a major challenge facing casual workers in healthcare facilities (Das & Baruah, 2013) in general. When examined closely, this can impact the professional, social, and economic lives of the workers. Worldwide, promotion policies are unfavourable for casual workers. In general, literature on labour practices often highlights that casual workers face significant challenges in terms of career advancement (Rasak, Arisukwu & Asamu, 2017; Kalejaiye, 2014). They have no or low opportunities for growth and career development because of the limited access to promotions. This challenge impacts the economic life of workers negatively in the sense that a lack of promotion opportunities leads to stagnant wages in the midst of rising cost of living. This causes financial instability among workers, which in turn affects their economic well-being and ability to meet their financial needs. Aside from the economic impact, a lack of promotion for workers also leads to social and professional isolation, which can also affect their perception of organisational justice and hence their job satisfaction and overall well-being; this was found to be the case among casual workers in this study.

Human rights abuses

The challenge relating to human rights abuses faced by casual workers in the workplace violates a host of labour laws and associated fundamental human rights. Foremost, are the issues relating to the length of time of engagement coupled with the unwillingness to engage permanently. It is explicitly stated in section 75(1) of the Labour Act 2003 (Act 651) that workers should not be engaged in Ghana for more than six months. Beyond six months, a worker's engagement should be made permanent. Employers, however, manage to go behind the provisions in the act by engaging workers on a series of six-month contracts. While employers end up engaging employees for years on a temporary basis, they do so with caution by engaging them on a bi-yearly basis, and this is a complete violation of the law, raising legal and ethical concerns for employers.

Aside right to job security, casual workers have other rights such as the right to speak up, seek explanations, fair treatment, respect and protection from all forms of abuses, based on age, gender, religion, ethnicity, among others, which must be protected. Consequently, the International Labour Organisation, government agencies and various labour unions advocate for the rights of all workers, regardless of their employment status. Notwithstanding, abuse of workers' rights has been reported as a common incident among casual workers in the current study, with a negative impact on the well-being of workers. When these rights are abused, it becomes difficult to establish good well-being and a healthy work environment.

Disrespect from management and colleagues

The current study also identified disrespect as a major challenge confronting casual workers. The show of disrespect has proven to be a recurrent theme in employment literature in general and the casualisation literature in particular. It is reported that, while the transformational nature of the global economy is fertilising the production of casual workers, victims often experience disrespect, abuses, marginalisation and exclusion at the workplace due to non-standard employment status (Standing, 2015; 2014; 2011). This is leading to a new global class structure in which an emerging class referred to as "the precariat" is constituted entirely by casual workers without adequate measures in place to alleviate the chronic challenges and the inhuman treatment normally meted out to this vulnerable group of workers.

CONCLUSIONS AND IMPLICATIONS

The study found that labour casualisation is widespread in health care facilities in Ghana's Upper West Region, driven by staff shortages and limited employment opportunities. We conclude that, while casualisation provides temporary staffing relief, it results in significant disadvantages for casual workers, including job insecurity, low wages and salaries, lack of career advancement, and exposure to rights violations. These challenges undermine both worker well-being and the sustainability of the healthcare system. Addressing labour casualisation requires urgent policy reforms to protect casual workers and tackle the root causes of understaffing. Without such action, reliance on casual labour and its associated hardships are likely to persist.

The findings of this study have important implications for healthcare policy and workforce management in the Upper West Region and similar contexts. The reliance on casual labour, while addressing immediate staffing shortages, compromises the stability and morale of the health workforce, potentially affecting the quality of care delivered. Persistent job insecurity, wage disparities, and lack of professional development opportunities for casual workers may lead to high turnover rates and reduced motivation, undermining health system efficiency. Therefore, policymakers must prioritise reforms to ensure fair employment conditions, including job security, equitable pay, and clear career pathways for casual workers. Additionally, addressing the underlying causes of understaffing, such as inadequate funding and limited recruitment, will be critical to reducing reliance on casual labour and building a more resilient, motivated, and skilled healthcare workforce.

LIMITATIONS AND RECOMMENDATIONS

Based on the study findings, a number of recommendations are put forth. There is an urgent need for comprehensive labour reforms to protect casual workers from arbitrary termination and ensure they have access to essential employment benefits. These reforms should also enforce the legal provisions on the duration of casual employment as enshrined in the Labour Law 2003 (Act 651). To reduce the financial hardships faced by casual workers, it is crucial to implement wage equity policies. Salaries should be determined based on qualifications, responsibilities, and job performance, rather than employment status. Casual workers should be given access to training and development programs to enhance their skills and improve their chances of securing permanent employment. Additionally, years of service as casual workers should be recognised in promotion decisions.

The government must prioritise the recruitment and equitable distribution of permanent staff in health facilities. This will reduce the reliance on casual labour and ensure that all workers are provided with stable and secure employment, especially in public health facilities. It is essential to strengthen the enforcement of labour rights and ensure that casual workers are treated with the same respect and dignity as permanent employees. Thus, safeguarding their right to fair treatment, adequate compensation, and a safe working environment. This requires a collaborative effort from policymakers, healthcare administrators, and labour unions.

Finally, we recommend future research to extend the scope to include health facilities in all Regions of Ghana, as this is currently the limitation of the study in terms of geographic scope. This will give a better picture of the pressing issue in the whole nation and further highlight the need for policy reforms regarding casualisation in Ghana.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the author(s) used https://www.perplexity.ai/ and CHAT GPT in order to edit the paper to help improve language and readability. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Declaration of conflict of interest

The authors declare that they have no conflicts of interest to this work.

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT COFERENCE PROCEEDINGS

Does economic freedom spur industrial development? Evidence from sub-Saharan Africa

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ABSTRACT

Economic freedom is considered a necessary ingredient for industrial development. However, empirical studies on the impact of economic freedom on industrial development in the sub-Saharan African (SSA) region are limited. Additionally, the empirical approaches used in existing studies raise endogeneity concerns. This study, therefore, examines the nexus between economic freedom and industrial development in SSA, utilising panel data from 40 countries for the 1995-2022 period and an extended 2SLS regression for panel fixed effects in the data analysis. The study found a significant positive relationship between economic freedom and industrial development, indicating that economic freedom spurs industrial development in the SSA region. Other factors driving industrial development in the SSA region include infrastructure development, trade, and external debt. To accelerate industrial development in the SSA region, it is recommended that governments and international development partners prioritise policies that increase and sustain economic freedom.

INTRODUCTION

Industrialisation typically fuels the continuous increase in jobs and productivity that characterises the social and economic advancement of most developed nations (Athukorala & Sen, 2016). However, with the rise of new technology and international trade trends, concerns have arisen that the prospects for industrialization in sub-Saharan Africa (SSA) may be limited. Many argue that countries in the region have faced "premature deindustrialisation", potentially undermining the effectiveness of policies and strategies aimed at promoting industrialisation as a key driver of sustainable growth (Ravindran & Manalaya, 2023; Rodrik, 2016).

Notwithstanding, industrialisation and structural transformation are essential elements of the African Union's Agenda 2063. Industrialisation is a key focus in the development plans of several African nations, with some actively implementing policies to enhance the manufacturing sector's ability to engage in value-added processes and to generate employment. Given the revived interest in industrialisation across the continent and the success some countries have had in job creation within manufacturing, the main issue is not whether SSA countries should consider industrialisation as a route to sustainable growth but rather how to bolster their industrialisation initiatives (Abdulai et al., 2020; Steel & Evans, 1981). Evidence has shown that the African region has continued to industrialise, given that the share of manufacturing employment and value-added in total output has either increased or remained flat in most areas of the African continent. In particular, manufacturing value added as a share of gross domestic product (GDP) has been rising with income level in non-oil economies, underscoring the key role of resource endowments in the industrialisation experiences of SSA countries (Nguimkeu & Zeufack, 2024).

Economic freedom is believed to create an environment that fosters innovation, entrepreneurship, and investment (Acs et al., 2008; Hefer et al., 2015), which positively impacts industrial development (Ikonne & Nwogwugwu, 2020; Ogunwusi & Ibrahim, 2014; Fang, 2023). However, most of the countries in SSA face challenges in terms of their levels of economic freedom. Despite some progress in recent years, SSA continues to have an Index of Economic Freedom, as measured by the Heritage Foundation, below 60, which is considered poor (Miller et al., 2022). Among the 48 countries in SSA, only Mauritius and Botswana are mostly free (score of 70-79.9), while South Africa, Swaziland, Seychelles, Uganda, and Côte d'Ivoire are moderately free (score of 60-69.9). The rest are either in the mostly unfree (50-59.9) or repressed (score of 0-49.9) category. This poses a problem

because economic freedom is believed to bring prosperity to an economy (Miller et al., 2022). Countries enjoying more economic freedom tend to achieve higher wealth and enhanced living standards, and they tend to have better investment and business climates to attract industrialisation (Berggren, 2003).

Economic freedom has been regarded as a necessary ingredient for industrial development. However, there are limited empirical studies on the impact of economic freedom on industrial development, especially in developing countries, including the SSA region. The few existing studies have employed analytical approaches that raise concerns for potential endogeneity (Gohmann, 2008; Shikur, 2024; Djahini-Afawoubo, 2015). This study is designed to fill the knowledge and methodological gap by examining the impact of economic freedom on industrial development in countries in the SSA region. It employs data from 40 countries in SSA for the 1995-2022 period, and the extended 2SLS (IV) by Schaffer (2010) is used in the data analysis. The extended 2SLS (IV) is more advanced than the conventional 2SLS and GMM; it can handle problems of heteroskedasticity, autocorrelation, and endogeneity, and limit instrument proliferation (Baum et al., 2012). GMM uses lagged values of endogenous variables as instruments, which may still contain some correlation with the error term, leading to weak instrument problems. The extended 2SLS relies on externally chosen instruments that are theoretically or empirically justified, reducing potential bias from weak instruments (Sˆderbom, 2009; Stock et al., 2002). The results of this study can guide governments in the SSA region to implement policies that can foster economic freedom and industrialisation.

The rest of the paper is structured as follows: Section 2 presents a literature review, Section 3 presents the research methods employed, Section 4 presents the results and discussion, Section 5 presents the conclusion and recommendations, and Section 6 presents the limitations and areas for further research.

LITERATURE REVIEW

The concept of economic freedom has been discussed in the economic literature for decades, with varying interpretations of the concept. Beach and Miles (2006) conceive economic freedom as the ability of individuals to work, produce, consume, and invest in an economy as they wish, with guaranteed freedom. Kim and Holmes (2016) believe that the freedom to choose how to obtain and utilise economic resources and goods is the main idea of economic freedom. Borović (2014) states that the main objective of economic freedom is to minimize government intervention in the economy and increase the role of the private sector. Gwartney and Lawson (2003) argue that economic freedom ensures personal choice, voluntary exchange, the right to compete, and the protection of property. Economically free countries typically have strong property rights and allow for the free movement of production factors (Jaffe & Louziotis, 1996). Economic advancement is seen to result from this economic liberty. Nonetheless, a nation's political and economic structures largely dictate its level of economic freedom. Berggren (2003) identifies three benefits of economic freedom: promoting economic growth, providing growth-enhancing incentives, and increasing the return on productive effort through tax policies, legal systems, and property protection. Miller, Kim and Holmes (2016) also state that economic freedom empowers individuals, provides greater opportunities, improves quality of life, and fuels economic growth.

The connection between economic freedom and economic growth is well-established, with studies suggesting that countries with higher levels of economic freedom experience faster economic growth (Hussain & Haque, 2016; Borović, 2014). In an economically free society, individuals can work, invest, consume, and produce as they like. The government also allows goods, labour, and capital to move freely and refrain from any restriction of liberty, but still allows a little intervention when necessary (Miller et al., 2022). Hafer (2015) found that countries with higher levels of economic freedom and other influences held constant have higher levels of entrepreneurial activity, on average. In their study, Sayed and Abedelrahim (2024) show that economic freedom is a consistent long-term catalyst for entrepreneurship, with specific elements like tax burden and government spending playing a pronounced role in shaping entrepreneurial inclinations. Acs et al. (2008) further underscore that nations with greater economic freedom exhibit higher innovation and entrepreneurial activity levels, with economic freedom influencing both the quantity and quality of entrepreneurship. Moreover, studies conducted by Carlos Díaz-Casero et al. (2012) and Kuckertz et al. (2016) highlight a positive correlation between economic freedom and entrepreneurial activity.

Industrialisation, on the other hand, refers to the structural changes that underdeveloped countries undergo in their development process, transitioning from an agricultural to an industrial economy, with significant societal transformations accompanying this shift (Kuznets, 1973). Rodrik (2016) states that African countries have a high proportion of employment in services and informal activities but lack a major manufacturing sector. The few studies on the direct relationship between industrial development and economic freedom have shown a positive relationship, generally. Djahini-Afawoubo (2015) studied the impact of economic freedom on industrialisation in Africa using dynamic panel data with pooled OLS, fixed effects, random effects, and GMM panel regression estimations. The results indicate a positive impact of economic freedom on industrialisation in Africa. Shikur (2024) examined the long and short-run impact of different explanatory variables, including the effect of economic freedom on manufacturing development in African countries using the panel ARDL model. The study concluded that economic freedom significantly increases the industrialisation level in the short run and reduces industrialisation in the long run. Gohmann (2008) found that economic freedom has a positive contribution to the service industry growth in the United States.

Numerous studies have found a positive correlation between industrial development and economic growth (Szirmai & Verspagen, 2015; Doucouliagos & Ulubasoglu, 2006). Das (2002) argued that trade liberalization allows access to imported inputs at free trade prices, access to technology and

capital, as well as a more competitive exchange rate, which boosts industry growth. Busse et al.'s (2024) study concluded that trade liberalisation has contributed to deindustrialisation in developing countries. Azolibe and Okonkwo's (2020) analysis shows that the relatively low level of industrial sector productivity in SSA is largely due to their poor electricity and transport infrastructure and underutilisation of water supply and sanitation infrastructure. Haraguchi et al. (2019) studied the relationship between political stability and industrialization in African countries. The results indicated that political stability significantly increased industrialisation over the whole period and post-1990, whereas it decreased industrialisation pre-1990. Mijiyawa (2017) examined the relationship between institutions and industrialisation in the case of Africa and found that improved government efficiency and a low degree of corruption significantly contribute to the growth of African manufacturing. Mesagan and Bello (2018) interacted infrastructure with institutions, and their results suggest that infrastructure has a positive and significant effect on industrial performance, alluding to the fact that institutions are very important in making infrastructure to enhance industrial performance in Africa. Banikhalid (2017) studied the impact of inflation on industrial production in low-income economies. The study found that there is no statistically significant impact of inflation on industrial production. Other studies (e.g., Judith & Chijindu, 2016; Amaefule & Maku, 2019; Shikur, 2024) found a negative relationship between inflation and industrial development. Ayuba's (2023) findings indicated that over the long term, external debt and infrastructure contribute to the growth of industrial output, while they impede it in the short term. The study further revealed that the interactive effect of external debt and infrastructure on industrial output was negative in the long run, suggesting a limited ability to drive industrial growth. However, the study revealed that in the short run, the synergy between external debt and infrastructure has a positive impact on industrial output.

RESEARCH METHODS

Data

The study used panel data from 40 of the 48 SSA countries from 1995 to 2022. The selection of the countries for inclusion in the study is based on the availability of comparable data. The data was sourced from the Heritage Foundation and the World Bank (World Development Indicators). The data on economic freedom is obtained from the Heritage Foundation, while the data on industrial development and other variables such as inflation, external debt, infrastructure development, political stability, trade, democracy, and size of jurisdiction are obtained from the World Development Indicators (WDI) of the World Bank. The data from the Heritage Foundation and World Bank were matched-merged, and the final sample used in the analysis contains 1,120 observations for the 1995-2022 period. However, because of missing data in some of the variables for some countries, the number of observations varies with the type of analysis.

Variables and measurement

The variables and their measurement are presented in Table 1 below. The dependent variable, industrial development (IND), is measured by industry value-added, expressed in constant 2015 prices in United States (US) dollars. The industry value-added comprises value added in mining, manufacturing, construction, electricity, water, and gas. Several studies have employed industry value-added as a measure of industrial development (e.g., Djahini-Afawoubo, 2015; Taiwo et al., 2021). The Index of Economic Freedom (IEF) by the Heritage Foundation is used as a measure of economic freedom (see e.g., Verner, 2015), where economic freedom is defined as the basic right of individuals to manage their labour and property (Miller et al., 2012). The Heritage Foundation has been publishing the annual Economic Freedom Index for countries since 1995. The Index of Economic Freedom is composed of twelve elements, namely, property rights, judiciary effectiveness, government integrity, fiscal health, tax burden, government spending, business freedom, labour freedom, monetary freedom, trade freedom, investment freedom, and financial freedom (see Miller et al., 2012 for further details). The index ranges from 0 to 100, with 100 indicating the highest level of economic freedom. Countries are classified based on their index scores as follows: 0-49.9 = repressed economy, 50-59.9 = mostly unfree economy, 60-69.9 = moderately free economy, 70-79.9 = mostly free economy, and 80-100 = free economy (Heritage Foundation, 2025).

The study included some variables to control for other factors that can affect industrial development besides economic freedom. The control variables included are Infrastructure Development (ENFR), Trade (TRD), Inflation (ENF), Political Stability (PLS), and External Debt (EXDT), following previous studies (e.g., Haraguchi et al., 2019; Ayuba, 2023; Onyele et al., 2024; Kaplinsky & Morris, 2019; Azolibe & Okonkwo, 2020). This study utilizes access to electricity (% of the population with access to electricity) as a proxy for infrastructure development. Trade (indicator for trade openness) is measured as the sum of exports and imports of goods and services as a share of the gross domestic product. Inflation is measured by the consumer price index. Political stability is measured by the absence of violence/terrorism. It measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. External debt is measured by external debt stocks (% of Gross National Income). It is debt owed to non-residents repayable in currency, goods, or services (World Bank, 2024).

Economic freedom may be endogenous in the industrial development model. Some determinants of economic freedom may also affect industrial development. Also, just as economic freedom can spur industrial development, industrial development can influence economic freedom. This case of reverse causality is also another source of endogeneity. To address the endogeneity, the economic freedom variable must be instrumented using appropriate instruments. The instruments used are expected to directly influence economic freedom; they should not affect industrial development other than through their effect on economic freedom (see Wooldridge, 2010). This study employs Democracy (DEM) and the Size of Jurisdiction (SOJ) as instruments for economic freedom. Democracy is proxied by

the voice and accountability index following Fenira (2014). It captures perceptions of the extent to which a country's citizens can participate in selecting their government, as well as freedom of expression, freedom of association, and free media. The index is measured from -2.5 (weak) to 2.5 (strong) governance performance. The Size of Jurisdiction is measured by population density (people per square kilometre of land area), following Mortensen et al. (2022). We believe that these variables correlate with economic freedom and have no direct impact on industrial development based on previous findings (e.g., Wagner et al., 2004; Brennan & Buchanan, 1980; Sobel, 2021; Iverson et al., 2019; Akers, 2020).

Table 1: Variables and measurement

Variables	Measurement	Source	Expected Sign
Industrial Development (IND)	Industry value added (constant 2015 price USD)	World Bank (2024)	
Economic Freedom (IEF)	Index of Economic Freedom	Heritage Foundation (2024)	+
Infrastructure Development (INFR)	Access to electricity (% of population)	World Bank (2024)	+
Trade (TRD)	Trade (% of GDP)	World Bank (2024)	+
Inflation (INF)	Inflation, consumer prices (annual %)	World Bank (2024)	-
Political Stability (PLS)	Absence of violence/terrorism	World Bank (2024)	+
External Debt (EXDT)	External debt stocks (% of GNI)	World Bank (2024)	-
Democracy (DEM)	Voice and accountability estimates	World Bank (2024)	
Size of Jurisdiction (SOJ)	Population density (people per sq. km of land area)	World Bank (2024)	

Source: Authors' Construct, 2024

Conceptual model

To deal with the issues of endogeneity arising from simultaneity, omitted variables, and measurement errors as identified in the research gap, this paper uses the panel 2SLS model. In such circumstances, the OLS is not capable of delivering consistent parameter estimates (Wooldridge, 2010). The use of the 2SLS produces consistent estimates for the explanatory variable (Angrist & Pischke, 2009). The conceptual model is presented in Figure 1 below. We assume that economic freedom is endogenous, hence correlating with the error term in the model. To address this endogeneity, we introduce the instrumental variables (size of jurisdiction and democracy) into the model that correlate with economic freedom but have no direct impact on industrial development.

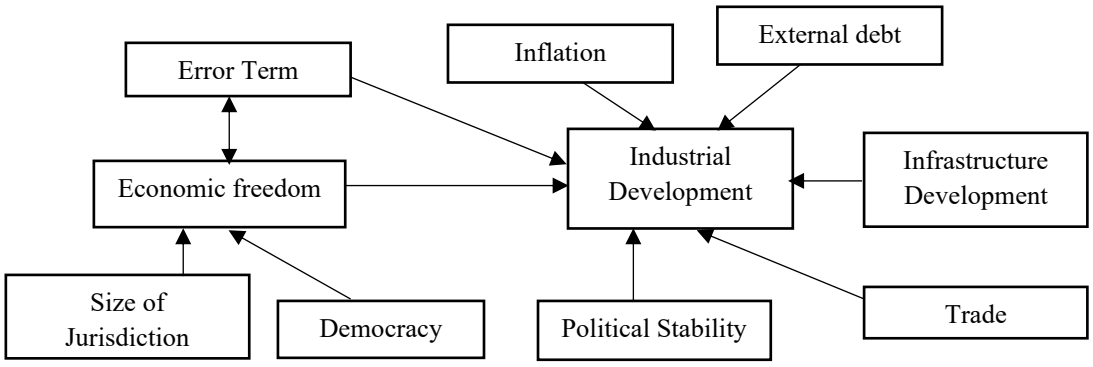

Figure 1: Conceptual Model
Source: Authors' Construct, 2024

Empirical models

In examining the link between industrial development and economic freedom in SSA, we start with the following simple linear panel model following Verner (2015):

$$LnIND_{it} = \beta_o + \beta_1 IEF_{it} + \beta_2 INFR_{it} + \beta_3 TRD_{it} + \beta_4 INF_{it} + \beta_5 PLS_{it} + \beta_6 EXDT_{it} + \mu_i + \tau_i + \nu_i \quad (1)$$

where i=cross-sectional dimension (countries), t=time series dimension (1995- 2022), β_o, β_1,…, β_6 are coefficients to be estimated, μ_i= individual-specific fixed effect, τ_t =time-specific fixed effect, and ν_i = error term. All variables are as defined earlier in Table 1.

This equation is estimated using pooled OLS, panel fixed effects, and panel random effects models. However, the parameter estimates are likely to be biased and inconsistent as economic freedom may be correlated with the error term due to other unobserved factors (e.g., Brennan & Buchanan, 1980; Wagner et al., 2004; Sobel, 2021; Iverson et al., 2019; Akers, 2020). That is the $Cov(IEF_{it}, \nu_i) \neq 0$. Therefore, the equation is re-specified as panel 2SLS(IV) following Cornwell et al. (1992) and Ajayi (2024):

$$IEF_{it} = a_o + a_1 INFR_{it} + a_2 TRD_{it} + a_3 INF_{it} + a_4 PLS_{it} + a_5 EXDT_{it} + a_6 DEM_{it} + a_7 SOJ_{it} + \mu_i + \tau_i + \nu_i \quad (2)$$

$$LnIND_{it} = \beta_o + \beta_1 IEF_{it} + \beta_2 INFR_{it} + \beta_3 TRD_{it} + \beta_4 INF_{it} + \beta_5 PLS_{it} + \beta_6 EXDT_{it} + \mu_i + \tau_i + \nu_i \quad (3)$$

Equations (2) and (3) are the first-stage equation and the second-stage equation, respectively. We introduced two instrumental variables, democracy (DEM) and size of jurisdiction (SOJ), to the panel-2SLS model in equation 2 (first stage equation). The a_o - a_7 are coefficients relating to variables in the first-stage equation to be estimated, while $\beta_o - \beta_6$ are coefficients relating to variables in the second-stage equation to be estimated. All other variables and parameters are as defined earlier. The IEF_{it} in the second-stage equation (equation 3) is the predicted value of IEF_{it} from the first-stage equation in estimating the causal effect of economic freedom on industrial development in the second equation. Equations (2) and (3) are estimated simultaneously. The study's null hypothesis states that there is no relationship between economic freedom and industrial development in SSA, while the alternative hypothesis posits a positive relationship between economic freedom and industrial development. This is presented mathematically as follows:

H_o: $\beta_1 = 0$
H_1: $\beta_1 > 0$

RESULTS AND DISCUSSION

Descriptive analysis

The descriptive summary of the variables is presented in Table 2. The maximum score for economic freedom for the chosen countries in the study is 77.00, while the lowest is 21.40. The average economic freedom score is 54.40, indicating that most of the SSA countries are in the "mostly unfree" category of the Index of Economic Freedom. Industrial development as measured by industry value added (in constant 2015 USD) has a maximum value of 100,000,000,000 USD and a minimum value of 72,000,000 USD, with an average of 8,130,000,000 USD. Table 2 displays the summary statistics for the remaining variables. Table 3 presents the panel unit test using the Im-Pesaran-Shin (2003) Test. The null hypothesis is that all panels contain unit roots (nonstationary), and the alternative hypothesis is that some panels are stationary. It can be seen from Table 3 that, except for SOJ, there is strong evidence to reject the null hypothesis that all panels contain unit roots (nonstationary).

Table 4 presents the correlation matrix for each of the independent variables. The extremely low correlations between the independent variables imply that multicollinearity issues are unlikely to arise in our model.

Table 2: Descriptive Summary of Variables

Variables	Observations	Mean	SD	Min	Max
Industrial Development	1044	8.13e+09	1.76e+10	72000000.00	1.00e+11
Index of Economic Freedom	1059	54.40	7.79	21.40	77.00
Infrastructure Development	1039	36.02	25.25	1.03	100.00
Trade	1037	66.64	29.32	16.35	175.80
Inflation	1046	18.02	157.11	-16.86	4145.11
Political Stability	960	5.43	1.71	1.00	9.00
External Debt	1051	64.91	62.67	3.90	506.04
Democracy	920	33.01	19.60	1.48	79.23
Size of Jurisdiction	1080	87.19	120.23	1.95	634.12

SD=Standard deviation, Min=Minimum, Max=Maximum.

Source: Authors' Construct, 2024

Table 3: Panel Unit Test

	Im-Pesaran-Shin Test results Ho: All panels contain unit roots Ha: Some panels are stationary	
Variables	**P-Value at Level**	**P-value at First Difference**
Index of Economic Freedom	0.00	-
Infrastructure Development	0.00	-
Industrial Development	0.02	-
Trade	0.00	-
Inflation	0.00	-
Political Stability	0.00	-
External Debt	0.00	-
Democracy	0.00	-
Size of Jurisdiction	0.99	0.000

Source: Authors' Construct, 2024

Table 4: Correlation Matrix

Variables	**IEF**	**INFR**	**TRD**	**INF**	**PLS**	**EXDT**	**DEM**	**SOJ**
IEF	1.00							
INFR	0.37	1.00						
TRD	0.05	0.25	1.00					
INF	-0.14	-0.02	-0.061	1.00				
PLS	0.05	0.26	-0.14	-0.02	1.00			
EXDT	-0.14	0.01	0.16	0.03	-0.16	1.00		
DEM	0.60	0.49	0.15	-0.09	0.05	0.01	1.00	
SOJ	0.36	0.25	-0.04	-0.03	-0.14	0.00	0.13	1.00

LnIND=Log of industrial development, IEF=index of economic freedom, INF=infrastructure development, TRD=Trade, INF=Inflation, PLS=Political stability, EXDT=External debt, DEM=Democracy, SOJ=Size of jurisdiction

Source: Authors' Construct, 2024

Pooled OLS, Fixed Effects, and Random Effects Estimations

Table 5 presents the results of the Pooled OLS, Fixed Effects, and Random Effects models estimated using Equation 1. The F-statistics/Wald chi-squares are statistically significant in all three models. Hence, we conclude that the models fit the data. We controlled for years (time) and countries in the Pool OLS and Random Effects models. Also, we controlled for years in the Fixed Effects model. Economic Freedom is a positive and significant determinant of Industrial Development in all three models. A Hausman specification test was performed to select between the estimated results for Fixed Effects and Random Effects. The Hausman specification test is significant at the 1% level, suggesting the Fixed Effects model is better than the Random Effects model. Therefore, we interpret the results of the Fixed Effects model. The results show that economic freedom has a positive coefficient and is significant at the 1% level. Infrastructure development and trade positively impact industrial development at the 1% significance level. Political stability shows a positive sign but has an insignificant impact on industrial development. Inflation has a negative impact and is significant at the 5% level, while external debt has a positive impact on industrial development only at the 10% level of significance. However, as indicated earlier, caution should be exercised when interpreting these results, as the estimated coefficient for economic freedom may be biased and inefficient due to the presence of endogeneity. Hence, panel 2SLS Fixed Effects and EC2SLS Random Effects models are estimated, and the results are presented in the next section.

Table 5: Results of Pool OLS, Fixed Effects, and Random Effects

VARIABLES	Pool OLS LnIndustrial D	Fixed Effects LnIndustrial D	Random Effects LnIndustrial D
Economic Freedom	0.00739***	0.00739***	0.00739***
	(0.00251)	(0.00251)	(0.00251)
Infrastructure Development	0.00414***	0.00414***	0.00414***
	(0.00145)	(0.00145)	(0.00145)
Trade	0.00252***	0.00252***	0.00252***
	(0.000683)	(0.000683)	(0.000683)
Inflation	-0.000625**	-0.000625**	-0.000625**
	(0.000285)	(0.000285)	(0.000285)
Political stability	0.0134	0.0134	0.0134
	(0.0171)	(0.0171)	(0.0171)
External Debt	0.000416*	0.000416*	0.000416*
	(0.000248)	(0.000248)	(0.000248)
Constant	22.75***	20.34***	22.75***
	(0.155)	(0.157)	(0.155)
Year Dummy	Yes	Yes	Yes
Country dummy	Yes	No	Yes
Observations	731	731	731
R-squared/within	0.983	0.613	0.613
F-Statistics/Wald	576.40***	36.36***	37466.24***
Number of Groups	40	37	37

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' Construct, 2024

Panel 2SLS Fixed Effects and EC2SLS Random Effects Estimations

The estimated results of the panel 2SLS Fixed Effects and EC2SLS Random Effects models (Equations 2 and 3) are presented in Table 6. Several diagnostic tests were conducted. Firstly, an under-identification test of IVs was conducted using the Kleibergen-Paap rk LM Test under the null hypothesis that the equation is under-identified. The test result is significant at the 1% level, and therefore, we reject the null hypothesis and conclude that the equation is identified. Thus, the instruments (democracy and size of Jurisdiction) are relevant. We also performed a weak identification test using the Sanderson-Windmeijer (2016) first-stage F-statistic. It can be used to diagnose whether a particular endogenous regressor is weakly identified. Staiger and Stock (1997) suggested the rule of thumb that, in the case of one endogenous regressor, the instrument will be deemed weak if the first-stage F-statistic is less than 10. On this basis, our first-stage F-statistic is 13.40, which is greater than 10, and hence we conclude that the instruments (democracy and size of jurisdiction) are strongly correlated with the endogenous regressor (economic freedom).

Again, we performed an overidentification test for all the instruments using the Hansen J-test. The joint null hypothesis is that the instruments are valid. That is, they are uncorrelated with the error term, and the excluded instruments are correctly excluded from the estimated equation. A rejection casts doubt on the validity of the instruments (Hayashi, 2011). Our P-value for the test is 0.103. Thus, we fail to reject the null hypothesis that the instruments are valid. Moreover, we tested the endogeneity case for economic freedom with the Durbin-Wu-Hausman test under the null hypothesis that the specified endogenous regressor (economic freedom) can be treated as exogenous. The P-value of the test is 0.00, which demonstrates that economic freedom cannot be treated as exogenous; hence, it correlates with the error term, causing the problem of endogeneity. The rejection indicates that the 2SLS Fixed Effects estimator should be employed (Davidson et al., 1995; Wooldridge, 2000). Therefore, we conclude that our model passed all the IV-related tests. We applied the Heteroscedasticity-autocorrelation robust option to correct possible heteroscedasticity and autocorrelation issues. For robustness, we ran the Error-Corrected Two-Stage Least Squares (EC2SLS) Random Effects model following Baltagi and Li (1995). The results are reported in Table 6, in addition to the 2SLS Fixed Effects results. It accommodates the error components by accounting for serial correlation and heteroskedasticity. The F-statistics for both models in Table 6 are significant at the 1% level. This shows that the models fit the data. We controlled for years in the 2SLS Fixed Effects model and controlled both years and countries in the EC2SLS Random Effects model. We discuss the results of the 2SLS Fixed Effects model, although the results from the two models are similar, as shown by the signs and magnitudes of the coefficients in Table 6.

Table 6: Results of 2SLS Fixed effect and EC2SLS Random effects

Variables	2SLS-FE LnIndustrial D	EC2SLS-RE LnIndustrial D
Economic freedom	0.0568***	0.0568***
	(0.0138)	(0.0099)
Infrastructure Development	0.0039*	0.0039**
	(0.0021)	(0.0019)
Trade	0.0023**	0.0023**
	(0.0009)	(0.0009)
Inflation	-0.0010**	-0.0010***
	(0.0005)	(0.0004)
Political stability	-0.0192	-0.0192
	(0.0273)	(0.0229)
External Debt	0.0009**	0.0009***
	(0.0004)	(0.0003)
Constant		20.60***
		(0.455)
Summary Statistics		
Year Dummy	Yes	Yes
Country dummy	No	Yes
F-Statistics/Wald	19.34***	23445.09***
Underid. Test (LM Statistics)	17.905[0.00]	
No. Excluded Instruments	2=DEM, SOJ	2=DEM, SOJ
Weak Ident. Test (SW F Statistics)	13.397	
Overid. Test (Hassen J Statistics)	2.65[0.103]	
Endogeneity Test	23.4[0.000]	
Observations	707	707
R-squared	0.375	0.452
Number of Groups	37	37

Robust standard errors in round parentheses. Test statistics P-values in square parentheses. *** p<0.01, ** p<0.05, * p<0.1. Underid. Test (LM Statistics) = *Underidentification test* (Kleibergen-Paap rk *LM statistic),* Weak Ident. Test (SW F Statistics) = Weak identification test (Sanderson-Windmeijer First stage F statistics), Overid. Test (Hassen J Statistics) = Overidentification test (Hasen J Statistics), DEM=Democracy, SOJ=size of jurisdiction, LnIndustrial D=log of industrial development.

Source: Authors' Construct, 2024

From Table 6, all the variables are significant in both models except political stability. Relying on the 2SLS Fixed Effects estimated results for interpretation, economic freedom has a positive coefficient of 0.0568 and is significant at the 1% level. This means a unit increase in economic freedom will correspond to a 5.68% increase in industrial development in SSA. This suggests that economic freedom plays an important role in promoting industrial development in SSA. When industrial firms operate in an environment with minimal bureaucratic hurdles and strong legal protection, they are more likely to invest, innovate, and expand. This would increase productivity, job creation, entrepreneurial activities, and technological advancement within the industrial sector **(**Dobrev & Barnett, 2024; Udoh et al., 2023). In related studies by Ajahini-Afawoubo (2015) and Shikur (2024), economic freedom was found to affect industrial development positively. The lower magnitude of the impact of economic freedom on industrial development in SSA can be attributed to the state of the economic freedom score in the countries. On average, the data show that SSA countries are "mostly unfree".

On the control variables, infrastructure development, trade, and external debt all have a significant positive impact on industrial development in SSA, while inflation has a significant negative impact on industrial development in the region. The positive relationship between the three factors (infrastructure development, trade, and external debt) and industrial development in SSA is not surprising. Infrastructure, such as transportation networks, energy supply, and communication systems, provides the necessary foundation for industries to operate efficiently. When infrastructure is improved, it reduces costs, increases accessibility, and enhances productivity for industries (International Monetary Fund, 2017). Past studies have also found a positive connection between infrastructure and industrial development (e.g., Azolibe & Okonkwo, 2020; Agénor & Alpaslan, 2018). Also, the positive impact of trade may be because it opens up markets and provides access to a wider range of resources, technologies, and innovations. It allows industries to expand their customer base beyond domestic borders, increasing sales and revenue potential. Trade encourages competition, which can drive efficiency and innovation within industries. By importing raw materials and components at competitive prices, industries can lower

production costs and improve product quality, further enhancing their global competitiveness (Amiti & Konings, 2005). Dodzin and Vamvakidis (2004) also found a positive relationship between trade and industrial development.

Furthermore, the positive relationship between external debt and industrial development may be attributed to the fact that by borrowing from external sources, countries can access the necessary capital to invest in large-scale industrial projects and technological advancement that might otherwise be unattainable due to limited domestic resources. External debt can enable countries to import essential machinery and technology, facilitating modernisation and competitiveness in global markets, which are all essential for industrial growth (N'Zue et al., 2022). Ayuba (2023) confirmed that external debt has a positive impact on industrial output in the short run. Finally, the negative impact of inflation on industrial development in the region can be because of increasing costs of raw materials, labour, and other inputs, which can squeeze profit margins for industries. As prices rise, purchasing power declines, leading to reduced consumer demand for goods and services (Sun,2024). This can result in lower sales and revenue for industries, potentially stalling growth and investment. This negative impact is confirmed by Judith and Chijindu (2016), Amaefule and Maku (2019), and Shikur (2024).

CONCLUSION AND POLICY RECOMMENDATIONS

This paper examines the impact of economic freedom on industrial development in sub-Saharan Africa using panel data covering the 1995-2022 period. The study applied the 2SLS Fixed Effects approach in the data analysis. Other models were run for robustness checks, which include Pooled OLS, Fixed Effects, Random Effects, and error-corrected 2SLS Random Effects models. The study concludes that economic freedom is a significant driver of industrial development in sub-Saharan Africa. While infrastructure development, trade, and external debt spur industrial development, inflation tends to reduce industrial development. Based on the findings, sub-Saharan African countries should put more effort into making their economies free to enhance their industrial development. Policymakers in sub-Saharan African countries concerned with industrial development should focus on policies that spur industrial development. With economic freedom, individuals should be able to work, invest, consume, and produce as they like, with the government also allowing goods, labour, and capital to move freely and refraining from unnecessary intervention. Governments should also prioritise policies that favour infrastructure development, trade, and the attraction of external capital, as they enhance industrial development.

LIMITATIONS AND AREAS OF FURTHER RESEARCH

The study is limited to countries in SSA. Future studies should focus on other developing regions of the world for comparison with the findings of this study. Also, since the study was limited to examining the impact of economic freedom on industrial development, future studies can examine the impact of economic freedom on other outcomes such as poverty, inequality, inclusive development, and environmental sustainability.

Declarations

There are no competing interests to declare.

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Navigating conflicts; understanding microfinance institutions in Ghana's Brong Ahafo Region

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A B S T R A C T

Microfinance Institutions (MFIs) are pivotal in fostering financial inclusion and improving the economic well-being of marginalized populations. However, their operations are often impeded by internal and external conflicts, which have contributed to the collapse of several institutions, particularly in Ghana. This study investigates the conflict management strategies employed by MFIs in the Brong Ahafo Region in navigating organizational challenges. Using an interpretivism approach and a multiple case study design, four MFIs were purposively selected, involving 58 participants, including staff, clients, and key informants. Data were collected through interviews and analysed thematically. The study revealed six conflict management strategies: avoidance, compromise, collaboration, accommodation, organizational restructuring, and the use of external mediators. The findings underscore the importance of transparent communication, robust governance frameworks and strategic stakeholder engagement in mitigating conflicts. This study offers practical recommendations for MFIs and policymakers to strengthen their operational resilience and enhance their role in economic development.

INTRODUCTION

Efforts to improve the economic well-being of communities, particularly the rural poor, through self-help initiatives have long been central to microfinance. These practices, which date back centuries (Twumasi, 1985), are rooted in providing financial support to low-income populations to promote a secure and peaceful livelihood. Microfinance Institutions (MFIs) have emerged as a key mechanism for achieving this goal, enabling marginalised groups to access essential financial services. MFIs play a vital role in fostering financial accessibility to individuals who are largely excluded from traditional banking systems and are critical to building inclusive financial systems (Lee & Choi, 2017; Lassoued, 2017).

Microfinance is now a global phenomenon, with a significant presence in Africa, where the sector has experienced substantial expansion (Long & Marwa, 2015). This growth has attracted many entrepreneurs to the field across the continent (Bakker, Schaveling, & Nijhof, 2014). Global data illustrate the impact of microfinance. Over 140 million people worldwide benefit from its services (Microfinance Barometer, 2022), with 30 million beneficiaries in Africa and 3 million in Ghana alone (Ghana Association of Microfinance Companies [GAMC], 2022) as of 2021. These numbers are expected to rise as new MFIs emerge and existing institutions expand their operations. The primary mission of MFIs is to provide financial services to underserved populations, granting them access to resources typically unavailable through conventional banking systems (Zamore *et al.,* 2019). MFIs not only empower individuals economically but also contribute to the broader goal of sustainable economic development in low-income and developing nations (Odoom & Amofa, 2019).

In Ghana, microfinance has played a critical role in alleviating economic hardships for many clients. However, the sector has experienced significant setbacks, including frequent bankruptcies and institutional collapses driven by conflicts (Bank of Ghana, 2019; Boateng *et al.,* 2016; Meiste & Jakstiene, 2015). Between 2011 and 2019, Ghana witnessed the collapse of over 489 MFIs due to operational lapses, license revocations, and conflict-related issues (Bank

of Ghana, 2019; Boateng *et al.,* 2016; Ofori, 2020). These conflicts have not only damaged the reputation of MFIs but have also strained their relationships with key stakeholders, particularly clients (Olsen, 2017).

Conflict, in this context, refers to disagreements arising from differences in values, interests, goals, or beliefs (Chaudhry & Arora, 2022; Okoro, Ogochukwu, & Okoro, 2018). Within organisations, conflicts often stem from power struggles, competition for limited resources, divergent needs and values, and control disputes (Iskamto, Ghazali, & Aftharorhan, 2022; Shabani *et al.,* 2022). Observable manifestations of microfinance conflicts include verbal altercations, opposition actions, mob violence, civil disobedience, and threats (Omisore & Abiodun, 2014; Prah & Yeboah, 2011). Several triggers of conflict in Ghana's microfinance sector have been identified. Owusu-Nuamah (2014) highlights high-interest payments on investments as a primary driver of conflict. Boateng et al. (2015) note that falsification of credit accounts and under-recording of customer deposits frequently lead to disputes. Addo (2014) identifies overtrading and excessive borrowing as factors enabling conflict. Vuuri (2021) points to fraudulent activities, misappropriation of funds, loan defaults, and inadequate staff compensation as significant contributors to conflict in the microfinance industry.

Unresolved conflicts can lead to a range of adverse outcomes, including frustration, tension, reduced self-confidence, communication breakdowns, collaboration challenges, poor work morale, diminished trust, discomfort, delays in work completion, absenteeism, protracted legal disputes, and low productivity (Abdul & Sehar, 2015; Akparep, Vuuri, & Musah, 2024; Chika-Anyawu & Oparanma, 2020; Shanka & Thou, 2017; Vuuri, 2021). Others include job losses among employees (Anokye, 2019; Vaultz, 2019) and increased government expenditure (Bank of Ghana, 2019). These consequences have significant socio-economic and security implications for clients, institutions, and nations as a whole (Akparep, Vuuri, & Musah, 2024). The World Bank (2019) highlights that public confidence in the microfinance sector has declined considerably, largely due to the unsustainable nature of these institutions, exacerbated by conflicts.

Despite these critical challenges, there is limited literature addressing how conflicts in microfinance institutions are managed productively to achieve their social mandate of providing financial services to low-income groups. This gap is particularly glaring in Ghana's Brong Ahafo Region, which has been severely impacted by microfinance failures (Larbi, 2016; Ofori, 2020). The absence of detailed research on conflict management strategies in this context presents a significant challenge, given the Region's history of microfinance collapses resulting from conflicts. Thus, it is crucial to investigate how microfinance institutions in the Brong Ahafo Region of Ghana manage conflicts they face in such challenging environments. The next sessions of the article encompass literature review, methodology, presentation of findings and discussions, conclusions, and recommendations.

LITERATURE REVIEW

Conflict is an inevitable element of organisational dynamics and can arise from a range of factors, including personality clashes, disagreements, competition for limited resources (Martins *et al.,* 2020), and differences in values, interests, goals, or beliefs (Chaudhry & Arora, 2022). Organisational conflicts may be classified as interpersonal, intrapersonal, intergroup, or intragroup (Adilo, 2019), and often originate from power struggles, resource scarcity, incompatibility of goals or values, and efforts to control or maintain the status quo (Iskamto, Ghazali, & Aftharorhan, 2022; Shabani *et al.,* 2022).

While conflict itself is not inherently negative, how it is managed can lead to either positive or negative outcomes (Akparep, Vuuri, & Musah, 2024; Zelenko, 2023). In the view of Lederach (2003), conflict is normal in human relationships and it is a motor of change. It affects people both negatively and positively. Conflict may be fruitful in society, as contended by some authorities, including Springs (2018). Boucher and Vincent (2010) earlier claimed that society needs some amount of harmony and disharmony, association and competition, of favourable and unfavourable tendencies in order to attain a determinate shape. Marfo (2019), however, maintains that when conflict assumes a violent tone and travels along the widening line of destruction by consuming property and persons, and threatens the stability of the social system, a more robust intervention becomes critical. Some conflicts are productive and may lead to the improvement of critical issues and the formation of new systems and institutions beneficial to society (Marfo, 2019). Yet, some conflicts are destructive and consume resources (Carpenter & Kennedy, 2001), which may call for swift resolution for the smooth functioning of society. Proper conflict management strategies, thus, are essential to mitigate adverse effects and harness positive outcomes of conflicts (Awan & Saeed, 2015).

Effective conflict management entails the application of techniques and strategies designed to resolve disputes constructively (Awalluddin & Maznorbalia, 2023). Wangari (2013) argues that conflict management focuses on minimising the harmful effects of conflicts while amplifying their constructive potential to enhance organisational performance and effectiveness. Conflict management, in effect, does not aim to avoid or eliminate conflict entirely but instead focuses on identifying issues and implementing fair, efficient, and reasonable strategies to resolve them (Gordon, 2014).

Various approaches to conflict have been proposed by scholars, including integration, domination, compromise, suppression, accommodation, collaboration, and avoidance (Blake & Mouton, 1964; Butler, 1993; Follett, 1940; Saduna, 2012; Toku, 2014). These strategies seek to address conflicts by focusing on interpersonal relationships and enacting structural organisational changes (Fatile & Adejuwon, 2011). This underscores the relevance of the Integrative Conflict Management Model (ICMM) as underpinned by the study of managing varied conflicts, especially in the context of MFIs. The ICMM emphasises resolving conflicts in a way that benefits all parties involved. It provides a practical framework

for evaluating and recommending appropriate conflict resolution strategies. It supports collaborative and proactive approaches, such as negotiation and mediation in managing diverse conflicts (Osei-Assibey & Asenso, 2015; Folger, Poole, & Stutman, 2017; Lewicki, Barry, & Saunders, 2020). Thus, it focuses on methods such as negotiation, mediation, and problem-solving to address underlying interests rather than surface-level positions. The application of ICMM in resolving conflicts in institutions, in the context of microfinance institutions in Ghana, is considered appropriate, as it views approaches to conflict from a holistic point of view.

Osei-Assibey and Asenso's (2015) study highlighted the role of microfinance institutions in Ghana's financial inclusion strategy using the ICMM. By analysing the adjustments made by microfinance institutions in response to the country's evolving financial inclusion agenda, the study emphasises the need for strengthening the regulatory environment and enhancing the operational capacities of MFIs to ensure that they can successfully contribute to the financial inclusion strategy and achieve long-term sustainability. By employing ICMM, Folger, Poole, and Stutman (2017), in their book 'Working Through Conflict: Strategies for Relationships, Groups, and Organisations (8th Edition)', discuss conflict management across interpersonal, group, and organisational settings. They concluded that conflict is an inherent aspect of human interactions, with the potential to yield both constructive and destructive outcomes.

The authors emphasise the importance of understanding the underlying complexities of conflict in relationships, groups, and organisations. The study points out various conflict management styles, such as collaboration, compromise, accommodation, and avoidance, and discusses how to apply these strategies depending on the situation and the individuals involved. The study integrates research, real-life examples, and practical advice to help readers develop conflict-resolution skills that are applicable in both professional and personal settings. Lewicki, Saunders, and Barry (2020) offer a detailed analysis of negotiation theories and practices, exploring key concepts in the psychology of bargaining, negotiation dynamics, and conflict resolution at both interpersonal and intergroup levels. The authors emphasise the need to integrate theoretical frameworks with practical applications. They concluded that negotiation is a crucial tool for managing differences across various social settings, highlighting the influence of communication, perception, emotion, cultural contexts, personality traits, and cognitive biases on conflict resolution.

Lewicki, Barry, and Saunders (2020) adopted the ICMM and provided a comprehensive guide to the theory and practice of negotiation, focusing on strategies, skills, and techniques essential for effective negotiation in various contexts. They emphasise the importance of understanding the interests and positions of all parties involved and how successful negotiations require finding mutually beneficial solutions. The study presents different negotiation styles and approaches, including distributive (win-lose) and integrative (win-win) strategies, and guides when and how to apply them. A central theme of the work is the focus on building long-term relationships through negotiation, explaining the role of trust, communication, and cooperation in achieving mutually advantageous outcomes. The work also discusses the challenges of negotiating in complex, multi-party settings and offers strategies for overcoming barriers such as conflicts of interest, power imbalances, and cultural differences. The study thus has equipped readers with the tools to become skilled negotiators, capable of navigating both simple and complex negotiation scenarios effectively.

The foregoing discussions suggest the need for conflict management experts to be mindful of their choice of conflict resolution strategies. Algert and Watson (2002), therefore, have suggested three criteria for evaluating conflict management strategies:

1. **Organisational learning and effectiveness**: Strategies should foster creative and critical thinking to promote long-term growth.
2. **Stakeholder needs**: The resolution process must actively engage all parties involved.
3. **Ethical conduct**: Leaders and participants must adhere to high ethical standards during conflict resolution.

Algert and Watson (2002) were of the view that when these criteria are met, conflicts can be understood as well-managed, and organisations can benefit from improved morale, stronger relationships, and greater operational effectiveness (Algert & Watson, 2002). The thrust of the debates is that microfinance institutions, in particular, should adopt integrated conflict management strategies that align with these criteria to address internal and external conflicts effectively.

RESEARCH METHODS

Study area

The study focuses on the Bono, Bono East, and Ahafo Regions, which represent 9.6% of Ghana's population (GSS, 2021). Despite significant MFI failures due to financial sector reforms and conflicts (Bank of Ghana, 2019; Larbi, 2016; Ofori, 2020; Vuuri, 2021), four MFIs continue to operate (Bank of Ghana, 2019). They include APA Microfinance Limited (AML), Beneficial Microfinance Company Limited, and Expert Link Microfinance Limited (Sunyani and Techiman Branches). The regions were selected because it is evident that they (then Brong Ahafo Region) were most impacted by the failures of MFIs in Ghana (Ofori, 2021; Akparep *et al.,* 2024).

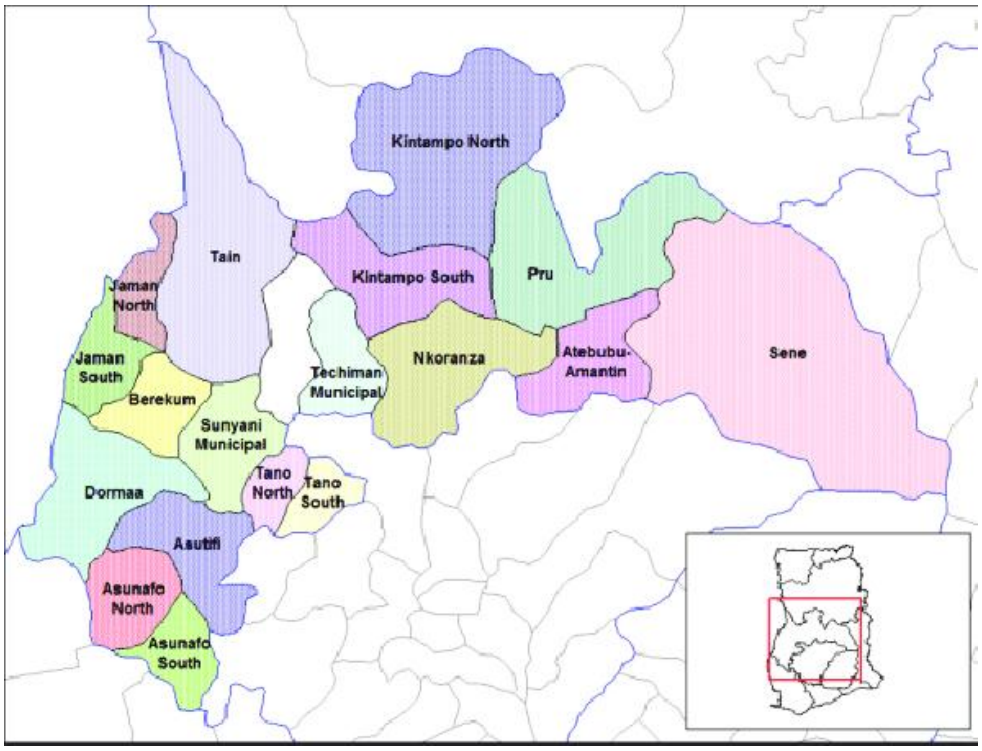

Figure 1: Map of the study area
Source: Ghana Statistical Service (2019)

Study approach and design

Grounded on the worldview of interpretivism (Sarantakos, 2002), a multiple case study design with a qualitative approach (Heale & Twycorss, 2018) was adopted to ensure a broader investigation of the research objectives. The qualitative approach using a multiple case study design is relevant because the study intends to understand the conflict management strategies adopted by MFIs in the regions without generalising the findings, as argued by Greener and Martelli (2015).

Sample size determination, sampling procedures, and data analysis techniques

Four MFIs (Expert Link – Sunyani and Techiman Branches, APA Microfinance Limited, and Beneficial Microfinance Limited) were purposefully selected because they have experienced some conflict situations (Akparep, Vuuri, & Musah, 2024; Ofori, 2020). The sampled population is summarised as follows:

Table 1: Summary of participants

S/n	Category	Number	Data collection technique
1	Chief Executive Officers/Managers	4	Interviews
2	Operations Managers	4	Interviews
3	Loan Supervisors	4	Interviews
4	Front Desk Staff	4	Interviews
5	Field staff (Mobile Bankers)	4	Interviews
6	Microfinance clients	32	Interviews
7	Police Officers	3	Interviews
8	Ghana Association of Microfinance Companies	2	Interviews
9	Microfinance Consultant	1	Interviews
	TOTAL	58	

Source: Authors' Compilation (2024).

The study employed a purposive (variation) sampling technique in selecting all 58 participants. Though 40 customers were targeted across the four microfinance institutions, 32 were interviewed due to data saturation, a generally endorsed standard for determining an adequate sample size in purposive sampling (Merriam, 2009). Mobile bankers assisted in identifying the selected clients. Qualitative data from interviews were analysed through thematic analysis using deductive coding. This involves data familiarisation, coding, theme identification, theme categorisation, and theme refinement (Saunders *et al.,* 2016). This was done by reading through field interview notes and listening to the recorded versions a number of times while writing down recurrences, comparisons, and differences concerning the research objectives. Consequently, relevant data were organised, cleaned, and stored appropriately for data safety purposes. Data presentation was done using contextual alignment through verbatim documentation of

findings to reflect participants' views while aligning them to existing literature.

In adherence to the ethics of social science research, confidentiality and anonymity of participants were strictly ensured. This was done by identifying participants with alphabets and numeric values to protect their identities. Microfinance Managers/CEOs were identified as A^1, A^2, A^3, and A^4; operation managers were identified as B^1 to B^4; C^1 to C^4 for supervisors; D^1 to D^4 for front desk staff, and F^1 to F^4 for mobile bankers. Customers were identified with K^1 to $K^{32,}$ and key informants W^1 to W^6.

RESULTS

Demographic characteristics of participants

The study participants were 58, consisting of 25 females and 33 males. Out of the 58, 20 were staff of MFIs, 32 were customers of MFIs, three were Ghana Police Officers, two were Executives of GAMC, and one microfinance consultant. The demographics of the customers are presented in Table 2.

Table 2: Summary of the occupation of customers of MFIs

Occupation of Customers of MFIs	Frequency
Building materials and hardware operators	8
Petty Trading	5
Electrical Suppliers	4
Printing Press	4
Motorcycle Dealers	4
Mobile Money Operators	3
Spare Parts Dealers	3
Second Hand Dealers (Home-used goods)	1
Total	32

Source: Field Work, 2024

Strategies Employed by Microfinance Institutions in Managing Conflicts in the Brong Ahafo Region

The thrust of the study was to examine the various strategies utilised in managing conflicts by MFIs in the Brong Ahafo Region. Various responses, including avoidance, compromise, collaboration, accommodation, organisational restructuring and external party involvement, emerged as captured by Table 3.

Table 3: Frequency of response to conflict management strategies adopted by MFIs in the Brong Ahafo Region

Theme	Number of sources: Workers	Number of Source: Clients	Number of sources: Informants	Total Responses
Avoiding	14	10	6	30(51.7%)
Compromising	15	12	6	33(56.9%)
Collaborating	17	15	6	38(65.5%)
Accommodating	13	5	4	22(37.9%)
Organizational Restructuring	20	3	6	29(50.0%)
External Parties	14	9	5	28(48.3%)

Source: Field Work, 2024

Avoiding Strategy

The study identified avoidance as a key conflict management strategy employed by microfinance institutions (MFIs). Many (30) participants mentioned that they preferred to sidestep conflicts, particularly for minor issues, without taking entrenched positions. In an interview, a participant (F1) shared:

> *"Sometimes, you approach a customer for deposits, and when you greet them, they may ignore you or respond angrily. There is this client who is upset with me and doesn't respond to my greetings, but I remain calm. I only visit him to collect money, and I don't let it affect my work. He gives me the money, even though he doesn't acknowledge my greetings. If he's fighting me, I'm not, and I focus on the business relationship. As long as it doesn't affect our transactions, I ignore everything and continue collecting deposits."* (F1, July 2024).

The key informants and some clients corroborated the assertion made by the microfinance staff that avoidance has been adopted in addressing conflict situations. A key informant (W2) stated:

"Avoiding or ignoring conflict is a commonly practised conflict management style. While it doesn't directly cost MFIs much, the long-term effects can be severe. Conflicts cannot be ignored forever; continued interaction between conflicting parties often leads to escalation. Avoidance is useful, but managers must proactively identify and address such conflicts to find lasting solutions." (W2, August 2024).

Documented records from two MFIs indicated that 19 staff-client conflicts were resolved through the avoidance approach between April and June 2023.

Compromising strategy

A compromising strategy emerged prominently among participants, with 33 of them highlighting its application in resolving conflicts. This approach involves negotiating to find common ground that resolves conflicts without jeopardising the work interests of the parties involved. A participant (A2) explained:

"Conflicts are widespread in our operations when dealing with customers; they occur daily. We have implemented measures to handle them. Sometimes, we take our staff to the customers or invite customers to our office to resolve the issues. In most cases, we ask our staff to concede—even if they are in the right—and apologise to the customer for peace to prevail. There are instances where customers, upon realising their fault, apologise to our staff. We emphasise to our staff, particularly field personnel, the importance of sacrifice in conflict situations to maintain peace and safeguard our operations." (A2 Statement, August 2024).

Another participant (B4) emphasised the importance of compromise in managing conflicts with clients:

"In most situations involving disagreements or staff-client confrontations, we, the staff, often sacrifice our interests for the sake of the clients because, as the saying goes, 'the customer is always right.' We strive to uphold this principle in the interest of our institution. Although some may interpret this as admitting guilt, we view it as a means to promote the success of our business, which is why we practice it." (Interview, August 2024).

The Key informants and some clients reiterated that compromising has been adopted as a major conflict management strategy among MFIs in the Region. A client remarked:

"Compromise delivers immediate results and helps to strengthen relationships by fostering collaborative solutions. I have ever been a beneficiary of this approach when I had a problem with one of the workers. My caution is that analysing personalities is essential when using compromise is used as a conflict strategy as aggressive individuals may attempt to dominate the process. Ultimately, the goal of this strategy is to establish common ground that is acceptable to all parties." (K21, July 2024).

Collaboration strategy

The findings revealed that microfinance institutions in the Region frequently use collaboration as a strategy to manage conflicts. This approach brings conflicting parties together to address concerns and develop lasting solutions that satisfy everyone involved. Records from four institutions indicated that 37 conflict cases were resolved through collaboration between January and June 2023. Interviews confirmed that collaboration is widely adopted, as it not only resolves conflicts but also aligns with the MFIs' goals. It fosters mutual agreement and strengthens relationships, making it a preferred conflict management strategy. A participant (B1) shared in an interview:

"In most situations, we bring the affected parties together and encourage an open conversation about the issue. We then ask them to propose solutions that everyone can agree upon and be satisfied with. We do this to ensure that no one is left dissatisfied. This strategy has greatly improved our working relationships and contributed to the overall growth of the institution." (Interview, August 2024).

Similarly, a client noted:

"Bringing people together to find their solution is the best way to address conflicts. This approach strengthens relationships and fosters collaboration for the growth and development of the institution without the necessary intervention of a third party. To me, this method guarantees the best resolution as the conflicting parties mutually share their experiences." (Client Remarks, August 2024).

Key informants also emphasised collaboration as the best conflict management strategy for MFIs, highlighting its role in promoting cohesion and facilitating effective decision-making. However, they noted that its success depends on the honest exchange of relevant information.

Accommodation strategy

The study found that the four microfinance institutions frequently use the accommodating strategy to manage conflicts. This strategy involves one party conceding to the other, prioritising peace over personal interests to support the growth of the institution. The findings revealed that MFI staff often adopt this role, placing customer satisfaction above their own interests. One staff member highlighted that "conceding fosters peaceful coexistence and promotes institutional growth," emphasising the importance of this strategy in maintaining harmony and facilitating progress within MFIs.

Staff member A1 shared:

"When customers come here with conflicts, sometimes there's no need to drag the issue on; we just settle it and move on. This is one way we deal with conflicts here. We only remind our staff to be cautious in dealing

with such customers in the future." (Interview, August 2024).

Similarly, staff member D1 recalled:

> *"I once gave a loan to a customer, and the following day they returned, claiming that the amount they received was less than what was promised. I almost became angry at first, but I had to calm myself down and handle it amicably. The customer mentioned a GH₵20 shortfall. Instead of arguing, I quietly took out my own money and gave it to the customer. I only advised him to always count the money before leaving the counter."* (D1 Statement, August 2024).

Organisational restructuring

The findings reveal that MFIs in the Region use organisational restructuring as a key strategy to manage conflicts. This approach involves altering communication channels, revising processes, and reassigning staff to minimise conflict. For example, if there are persistent complaints about a mobile banker, they may be transferred to a different department, branch, or supervisor to prevent further interactions with conflicting parties. Records from three institutions, along with feedback from the staff, indicated that the establishment of separate departments for loans and supervision confirmed this. In this arrangement, loan officers handle loan administration and client counselling, while supervisors are responsible for overseeing field staff activities. Participants highlighted that this restructuring effectively reduces both internal and external conflicts while enhancing operational efficiency.

A client agreed to the use of restructuring as a strategy adopted by MFIs. She stated:

> *"I once visited the MFI office and noticed that a particular worker was absent. Upon inquiry, I was told she had been relocated to another office. To me, this was right because most customers complained about her negative attitude toward workers. This development informed me that our complaints had been heard by management."*

Key informants underscored that MFIs manage conflicts by restructuring formal systems, realigning job roles, adjusting rules, and creating coordinating positions. They viewed this strategy as a highly effective approach to conflict management, helping to streamline operations and foster a more harmonious working environment.

External parties

The MFIs in the region often engage external parties to resolve conflicts by involving neutral individuals in mediation, particularly when internal efforts fail or when mistrust arises. These third parties bring fresh perspectives, skills, and ideas, offering innovative solutions, especially in prolonged conflicts. Clients tend to prefer third-party interventions, and MFIs typically rely on the Ghana Association of Microfinance Companies, consultants, or, in rare cases, traditional rulers and security agencies such as the police. These external mediators generally facilitate discussions without imposing solutions. However, in three instances, security agencies enforced solutions when parties failed to comply with the mediation process.

One staff member (A4) shared an example:

> *"We reported two cases to the Police in May 2023 involving clients who alleged they were duped by our staff. One of them persistently threatened our staff, so we had no choice but to report it to the Police. The Police were able to bring him to our office, and we resolved the case. The other case is still pending, and the Police are handling it."* (Interview, August 2024).

Five key informants confirmed the staff's statements, noting that MFIs had frequently called upon external parties to resolve conflicts with clients. One informant (W3) explained:

> *"We received a case where a staff member of one of the MFIs was threatened with various forms of intimidation, including death. With the evidence submitted by the victim, mostly texts, we processed the culprit for court, and the matter is currently being handled there. In cases where the issues are less severe and can be resolved internally, we handle those. We have successfully resolved several cases of physical and verbal threats and assaults between staff and customers of MFIs."* (Interview, August 2024).

A client corroborated by saying:

> *I know a friend who reported the management of the MFI to the police after failure to pay his entitlement on several demands. The police subsequently invited the manager, and in no time, the institution agreed to pay the money. My friend has since received his money but has stopped doing business with the institution* (Client Remarks, August 2024).

The police confirmed that customers and management occasionally approach them for assistance.

DISCUSSIONS

Effectiveness and implications of conflict management strategies

Avoidance strategy

The findings on avoidance strategy mean that parties avoid conflict situations it does not affect their professional relationships. The perspectives elicited support Zhenzhong's (2007) view that avoiding conflict is ideal when maintaining business relationships, and coherence is critical. It is also in congruence with Eiermann's (2006) emphasis that avoidance, though not inherently negative, can be an appropriate strategy depending on the context. The study demonstrates that while avoidance may provide a simple, short-term resolution, persistent avoidance of conflicts can lead to unresolved issues

escalating over time, potentially damaging personal and professional relationships and affecting the overall sustainability of MFIs. As noted by key informant W2, conflicts cannot be ignored forever, and continued interaction between conflicting parties often leads to escalation. This suggests that while avoidance is useful for immediate peace, managers must proactively identify and address such conflicts to find lasting solutions.

Compromising strategy

The prominence of a compromising strategy among participants reflects its practical utility in maintaining customer relationships while preserving institutional interests. The findings align with Burnside (2008), who underscores the importance of mutual sacrifice in achieving compromises and resonate well with Saduna (2012), who emphasises that reaching an acceptable resolution often requires concessions from the parties involved. However, the study reveals an interesting power dynamic where MFI staff are predominantly the compromising party, often sacrificing their positions even when they are correct. This approach, while maintaining the "customer is always right" principle, raises questions about employee satisfaction and long-term sustainability. The strategy appears effective for immediate conflict resolution and relationship maintenance, but may create workplace dynamics that favour customers disproportionately.

Collaboration strategy

The widespread adoption of collaboration, evidenced by 37 resolved cases in the first half of 2023, demonstrates its effectiveness as a conflict management tool. The findings strongly align with Saduna (2012), who characterises collaboration as a win-win strategy and the most effective method for conflict resolution. This supports Friedman, Curral, and Tsai's (2000) assertion that collaboration works best when all parties disclose their hidden agendas. The findings further agree with Henner's (2010) emphasis on collaboration's positive effects on organisational performance and managerial effectiveness. The strategy not only resolves conflicts but also strengthens relationships and fosters mutual understanding, making it particularly valuable for MFIs that depend on long-term customer relationships. The success of collaboration in this context suggests that when parties are willing to engage openly and honestly, sustainable solutions can be achieved.

Accommodation strategy

The frequent use of accommodation strategy reflects the service-oriented nature of MFIs, where customer satisfaction often takes precedence over individual staff interests. This approach is consistent with Waitchalla and Raduan's (2006) perspective, which underscores the importance of suitability over individual gain. However, the findings reveal important limitations of this strategy. As Saduna (2012) describes it as a lose-lose strategy, and the research confirms that accommodation may overlook root causes, potentially allowing future conflicts to resurface. This aligns with Kreitner and Kinicki's (2004) assertion that unresolved issues can reemerge. While accommodation provides a temporary resolution and maintains harmony, it may not address underlying systemic issues that could prevent future conflicts.

Organisational restructuring

The use of organisational restructuring represents a proactive approach to conflict management that addresses structural causes rather than just symptoms. The establishment of separate departments for loans and supervision demonstrates how MFIs can minimise conflict through strategic organisational design. This approach appears highly effective because it removes the source of conflict rather than managing its symptoms. By separating potentially conflicting roles and responsibilities, MFIs create clearer boundaries and reduce opportunities for misunderstanding. The strategy also shows institutional learning, as MFIs adapt their structures based on conflict patterns they observe or experience.

External party intervention

The engagement of external parties, including police, GAMC, and consultants, represents the escalation pathway when internal conflict management fails. The views of 28 participants who believe in the effectiveness of external parties suggest that third-party intervention serves as an important safety net for the conflict management system. However, the findings reveal both benefits and challenges of the approach. While external parties bring neutrality and fresh perspectives, there are concerns about potential bias, relationship damage, and boundary overstepping. The fact that some cases require police intervention and court proceedings indicates the severity that some conflicts can reach when not properly managed through internal mechanisms.

CONCLUSION

The study interrogated the conflict management strategies employed by microfinance institutions in the Brong Ahafo Region of Ghana. Through a qualitative approach using multiple case studies, the study provided valuable insights into how MFIs navigate conflicts in their operations. The results show that MFIs in the region adopt six main conflict management strategies, including avoiding, compromising, collaborating, accommodating, organisational restructuring, and the use of external parties. Collaboration and compromise appeared to be the dominant conflict management strategies. The preference for collaborative methods aligns with the Integrative Conflict Management Model (ICMM), which emphasises resolving conflicts in ways that benefit all parties involved. The least utilised strategy was accommodation, suggesting that while MFIs recognise the importance of maintaining relationships, they also prioritise addressing underlying issues rather than simply yielding to maintaining peace. The study demonstrates that when conflicts are managed proactively through strategies such as collaboration, organisational restructuring, and mediation, MFIs can minimise disruptions, streamline operations, and maintain consistent service delivery. Conversely, poorly managed conflicts can lead to financial setbacks, including increased loan defaults and operational inefficiencies.

Implications of the study

The implication of the study is that proactive conflict management strategies, such as mediation (use of external parties), accommodation, organisational restructuring, and collaboration, are crucial for maintaining operational stability. By addressing conflicts effectively, MFIs can minimise disruptions, streamline their operations, and deliver consistent services.

The findings also imply that poorly managed conflicts can lead to financial setbacks, including increased loan defaults and inefficiencies. Investing in conflict resolution and prevention helps MFIs safeguard their financial resources and promote long-term financial resilience.

Another major policy implication of the study is that it highlights the importance of good governance practices, which are integral to conflict management. By reinforcing governance frameworks and adhering to regulatory standards, MFIs can reduce internal disputes, align their operations with policy objectives, and ensure ethical practices.

Finally, by identifying six conflict management strategies (collaboration, accommodation, organisational restructuring, avoidance, compromise, and external party involvement), the study demonstrates how the ICMM framework can be effectively applied to evaluate and implement diverse conflict management approaches within MFIs.

RECOMMENDATIONS

MFIs should invest in comprehensive training programs for the staff and management in conflict resolution techniques, including mediation and collaborative problem-solving. These programs should be tailored to address the specific types of conflicts commonly encountered in MFI operations.

They should allocate a budget for proactive conflict management initiatives, such as workshops and team-building activities, to reduce the likelihood of destructive conflicts before they emerge. This will help them be in a better position to monitor, identify, and address early warning signs of potential conflicts that could disrupt the financial stability of the institution. This should include regular feedback loops from both staff and clients.

Besides, MFIs should develop and implement clear policies and protocols for conflict resolution tailored to their peculiar needs to ensure that conflicts are productively managed for the betterment of the institution, workers, and clients. These policies should outline step-by-step procedures for addressing different types of conflicts and specify the roles and responsibilities of all parties involved.

More so, MFIs should foster open communication across all levels of the institution to address grievances before they escalate. This includes establishing formal channels for reporting conflicts and regular fora for stakeholder dialogue.

MFIs should conduct regular internal and external audits to ensure compliance with regulatory standards, identify and mitigate governance-related conflicts before they impact operations. This also requires active stakeholders' involvement, including employees and clients, in decision-making processes to align operations with their needs and expectations, thereby preventing conflicts arising from misaligned interests or expectations.

LIMITATIONS AND AREAS OF FURTHER RESEARCH

While this study provides valuable insights into conflict management strategies in MFIs from a qualitative approach, it could not gauge the quantitative aspect of the responses and may not be generalised to other contexts, given that it is specific to the Brong Ahafo Region. The study, therefore, recommends a quantitative study to test the effectiveness of the strategies identified using a large sample size and wider regional coverage. Also, the future study could quantitatively examine the conflict resolution success rates and cost-effectiveness of different strategies to provide more comprehensive guidance for MFI management.

DECLARATIONS

The authors declare that they have no known competing financial interests nor personal relationships that could have appeared to influence the work reported in this paper.

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ETHICS STATEMENT

Interview guides were pre-verified, and ethical clearance was obtained from the Ethical Clearance Board of the Simon Diedong University of Business and Integrated Development Studies for this study. All ethical considerations, including anonymity of participants, informed consent, and voluntary participation, were strictly adhered to in this study.

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT COFERENCE PROCEEDINGS

Unpacking the critical role of Networks in the migration processes of immigrants in Ghana

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Ghana, migration processes, social networks, West African

A B S T R A C T

The available literature on migration suggests that before migrating, most migrants actively seek critical information from their social networks. However, studies on the essential role of migrant networks in the migration processes among migrants in West Africa are largely focused on internal migration, especially the seasonal outmigration of rural folks. This study examined the Significant role of social networks in the migration processes of 779 West African immigrant traders in the Accra Metropolis, Ghana, using a mixed-methods research approach. The results revealed that family members and relatives of the respondents influenced migration decisions and provided relevant information about the destination. The major forms of information that the immigrants sought were revealed to be information about navigating challenges, ready jobs and investment opportunities. Most respondents were offered support by already established immigrants to settle in, and the commonest form of help obtained was accommodation. These findings have key policy ramifications for Ghana's migration management, including policy inputs on the complex roles of social networks driving the movement of people into the country.

INTRODUCTION

This study examined the crucial role of migrant networks in the migration processes of West African migrants who reside in Ghana, and eke as itinerant traders in the country's informal retail sector. In executing this, two distinct pathways through which migrant networks provide utility to migrants were investigated. The first assessed how migration networks provide migrants with access to vital information regarding their chosen destination, and the second analysed how migration networks serve as a safety net for migrants at the destination. While a variety of definitions of what constitutes migration networks have been widely espoused by many scholars, the current study adopted the one given by Douglas Massey (1993), mainly because it is the most cited in the literature (Ryan, Eve, & Keskiner, 2022). According to Massey, migration networks are arrays of interpersonal links that connect migrants, former migrants, and non-migrants in origin and destination areas through ties of kinship, friendship and shared community origin. On the other hand, the term itinerant traders denote a group of migrant entrepreneurs who sell both foreign and locally manufactured goods from one market site to another, mainly on foot. In many instances, these groups of entrepreneurs usually employ a variety of approaches to facilitate their movement, including trolleys, bicycles, wheelbarrows, and other equipment.

In recent times, there has been renewed interest in understanding the nature and significant roles of migrant social networks in the migration processes and decisions of people across the globe. Studies, such as Van Meeteren and Pereira (2013) and Czaika et al. (2021), have shown that our understanding of the facilitative role of social networks in the entire migration process is critical for informing key policy priorities aimed at addressing challenges associated with the transnational migration of people. Previous scholars, notably Fawcett (1989) and Shuva (2022), have reiterated the need to pay attention to the nature and functions of the diverse social networks that connect and sustain the migration of people, especially in the context of the developing world.

According to Penninx et al. (1993) and Blumenstock and Chi (2022), the decision to migrate is among the most significant social and economic choices individuals make. The existing literature on migration highlights various factors influencing the decision to migrate. These factors include employment prospects, differences in social amenities, life-cycle considerations, and migration costs. In all these aspects,

social networks and the information they provide play a crucial role. For example, at the migrant's origin, the structure of potential migrants' social networks influences their ability and desire to migrate. Furthermore, previous studies stress that social networks are vital to migration decisions since they offer information about the migration process, facilitate access to the job market, directly lower migration costs, and support migrants in integrating smoothly upon arrival at the destination (European Commission, 2000; Farré & Fasani, 2013; Conduah, 2023). Consistent with earlier findings, Munshi (2003), Munshi (2014), Margherita and Mendola (2015), and Dustmann et al. (2016) have identified two essential functions of migrant networks. The first provides migrants with access to important information about the socio-economic conditions of potential destinations, while the second offers tangible and intangible resources to help reduce risks and costs associated with migration, both before and after the move.

In seeking to understand the critical roles played by relatives and friends, return migrants at the origin and current migrants at the destination have been widely researched by various scholars (Munshi, 2003; Hanson & McIntosh, 2010; Ryan et al., 2022). In particular, there is copious literature in the more developed world on how migrant networks facilitate entry into the labour market and promotion and career advancement in organizations (Palgi & Moore, 2004; Bachmann & Baumgarten, 2013). However, there is considerable ambiguity about the nature and relative significance of these mechanisms through which networks operate, especially from a developing country context like Ghana. In Ghana, studies on this important subject are limited to internal migration and irregular migration of Ghanaian migrants (Tanle, 2014; Yendaw, 2018). For instance, the prevailing view in the migration literature is that internal migrants tend to move to destinations where they have more social connections, but a handful of empirical studies particularly from the Ghanaian setting attempted to unpack these critical nuances regarding the distinct roles of social networks in the migration processes of immigrants in the country (Yendaw, 2018; Ghana Statistical Service-GSS, 2021). In particular, evidence about who takes the migration decision, and whether they obtained information about the destination before their migration and the kind of information sought and from where/whom, and whether these immigrants received any form of support upon arrival at the destination and the nature of the support and from where/whom, specifically among West African immigrants in the country are rare if not completely absent (Yendaw, 2018).

Meanwhile, assessing the critical role of migrant networks is crucial to our broader understanding of networks as conduits and facilitators of migration, and the design of migration policies to manage migration in Ghana and West Africa. While this study does not intend to claim to be the first to investigate these crucial nascent topics in the broader literature, as indicated, factually, scholarly publications in the context of Ghana and the West African sub-region that have specifically examined the above topical matters, especially involving West African itinerant immigrants in the country, are limited in number. However, evidence suggests that the population of West African immigrants, especially those engaged in itinerant retailing of merchandise, constitute the majority of all foreign population put together in the country (GSS, 2012, 2021).

Following the above research gap identified in the literature, this study is anchored on these pertinent questions: (1) How is the decision to migrate taken among the immigrants? (2) What role do networks play in the entire migration process of the immigrants? Proffering solutions to these questions is important for two key reasons. One, it contributes to our broader understanding and appreciation of how social networks shape the migration configuration within the West African region, including how migration becomes initiated and perpetuated. Two, the findings would probably provide very critical information for managing intraregional migration in Ghana and the West African Region as a whole.

LITERATURE REVIEW

As an attempt to explain migration, a plethora of theories have been deployed by diverse writers (Lee, 1966; Wallerstein, 1974). The majority of these writers, however, have tended to focus more on the reasons for the migration, with limited attention on how people migrate, including how they tap into their social networks to facilitate the migration process. For instance, the classical writer, Adam Smith, has attributed labour migration to imbalances in poverty and unemployment within the global labour market (Lebhart, 2005). Adherents of the neo-classical theory portray migration as being generally motivated by financial and psychological factors (Todaro & Steven, 2006; Kurekova, 2011). According to this theory, owing to global imbalances in the supply of capital and labour together with wage disparities and standards of living, most migrants tend to migrate to areas where job opportunities and general economic situations, for the most part, wages are attractive (Kurekova, 2011). From this review, it is clear that the neo-classical writers linked labour migration to disparities in wages and job avenues and suggested that people migrate to raise and maximize their wages in receiving countries (Stark, 1985).

Contrary to the neo-classical standpoint, the new economics of labour migration perceived migration as a temporary undertaking by individuals with target earning thresholds, mostly negotiated within the family unit. According to this theory, migration can be best explained within a wider societal context, and hence viewed the family is viewed as the most appropriate decision-making unit (Stark, 1999). This thinking by Stark has, over the years, increased the scope for incorporating factors other than individual utility maximisation as the main driver influencing migration decision-making. Similarly, Arango (2000) and De Haas (2008), writing within the new economics of labour migration viewpoint, reiterated the role of the migrant's family in the process leading to migration. In an attempt to understand some of these nuances in the literature, this study examined the dynamics involved in the migration processes of West African immigrants who reside in the Accra Metropolis of Ghana and work as itinerant retail traders. The specific issues examined within this context bordered on how the decision to migrate was taken and the strategies employed to accomplish

the migration process, particularly who decides to migrate, and whether they sought information about their destination before migrating, and the facilitative role of migration networks in the whole migration process. Considering the conflicting theoretical debates among the neo-classical and the new economics of labour migration scholars, this paper is an attempt to add to the literature by unpacking the fundamental role of migrant networks in the migration processes among West African immigrants in Ghana.

In spite of the fact that the above theoretical perspectives discussed are useful in explaining why people migrate from one place to another, the theoretical insights of the migration systems theory championed by Mabogunje (1970) have been reviewed and adopted as the theoretical framework guiding the study. This theory is suitable for this paper in that its underlying suppositions adequately explicate the various processes entailed in the migration of people beyond the simplistic explanations put forward by the social network theory of migration. That is to say, migration systems theory provides a more holistic perspective by likening migration to an entire system with key interdependent variables at play (Tagliacozzo, Pisacane & Kilkey, 2024). Moreover, Tagliacozzo et al. (2024) reiterate that systems theory depicts the movement of people not as an isolated episode, but as an interconnected flow within a broader system. Hence, it emphasizes critical relationships and feedback loops between different places and actors, highlighting how migration patterns evolve and perpetuate over time. This approach contrasts with earlier theoretical perspectives that focused on individual motivations or simple push-pull factors.

This systems theory reflects on migration of people as a network process in which migrants help each other by communicating with close relatives, friends and significant actors who provide them with vital information about the destination, financial assistance and even assisting to find jobs for them after exchanging essential information (Esveldt et al., 1995; Conduah, 2023). The theory unveils how the movement of people creates feedback loops, reinforcing existing patterns and influencing future migration. For instance, already established migrant networks can decrease the costs and risks associated with migration for future migrants, encouraging a higher migration momentum. The above assumption has similarly been underscored by several writers in the field (Massey, 1990; Hugo, 1981; Tagliacozzo et al., 2024; Abdulai et al., 2023) who opined that social networks among migrants, non-migrants and other significant actors facilitate the free movement of people by minimising the costs and risks associated with migration, as well as easing the smooth settling in of newly arrived migrants through various support mechanisms within the broader environment, notably housing, job-finding and feeding.

In this study, the concept 'social network' highlighted within the migration systems framework is used interchangeably with the term 'migration network' or 'migrant social network' and generally describes any form of established relationships between migrants and non-migrants built on the basis kinship ties, friendship, community and other institutional linkages as similarly acknowledged by several scholars in the field (Massey et al., 1993; Conduah, 2023; Yendaw, 2025). Though the broader social network literature identifies diverse typologies of migration networks, this study adopts the various types of migrant social networks proposed by Conduah (2023), notably including labour networks, personal networks (e.g., familial links), and illegal networks. According to Conduah (20023), these networks, particularly personal relations, play a crucial role in facilitating the entire migration process by providing support and other social capital resources to migrants in their journey and settling in at the destination. For example, a study conducted by Okyere (2018) involving 10 in-depth interviews and three focus groups of Ghanaians in South Africa revealed how participants' personal links (e.g., family members) with international experiences played a pivotal role in their migration to South Africa.

However, it has also been observed that these networks can also occasionally present difficulties such as migrant labour exploitation due to unequal power relations within networks and gross circumvention of established migration protocols (Awumbila, Teye & Yaro, 2017). In several countries, including Ghana, labour migration has been aided by licensed and unlicensed intermediaries or the networks of friends, relatives, brokers, transport providers, insurance companies and employers involved in the business (Awumbila et al., 2017; Bina, 2013). From the forgoing theoretical reviews, it is clear that the migration systems theory of migration supplemented by the basic underpinnings of the new economics of labour migration theory appear to be the most appropriate theoretical frameworks towards understanding the processes entailed in the migration of West African migrants to Ghana, including how they tap into various social networks within the broader migration system to facilitate their migration and successful integration into the Ghanaian economic system. This theory further contends that since migration networks are generally outside government control, it is mostly difficult for sovereign states to regulate the flow of people.

METHODOLOGY

Study area

The data used for the analysis in this paper were extracted from a doctoral thesis, which was carried out in 2017 on the topic "Migration patterns and livelihood activities of West African immigrant traders in the Accra Metropolitan Area (AMA). The selection of AMA was underpinned by the fact that it is the largest and most developed metropolitan with more vibrant migrant flows relative to other cities or regions in Ghana (GSS, 2021; Yendaw et al., 2023). According to GSS (2021) and Yendaw et al. (2023), Accra Metropolis constitutes a key destination for many West African migrants. The 2013 GSS report suggests that more than 21% of all immigrants in Ghana reside in the Greater Accra Region (the highest in the country), and AMA hosts the majority of these immigrants. This phenomenon is due to the existence of key modern infrastructural facilities and other employment opportunities, which continue to lure migrants from all parts of Ghana and beyond (GSS 2021; Yendaw et al., 2023). Moreover, after having considered the built-up and vast nature of the study area in addition to the fact that the immigrants reside in clusters (GSS 2021), I purposively selected nine (9) neighbourhoods, which were identified to be the main residential places of the immigrants during a

reconnaissance survey with community gatekeepers and leaders of the immigrants. They comprised Abossey Okai, Abeka, Ablekuma, Agbogbloshie, New Fadama, Sukura, Lartebiokorshie, Nima and Mamobi.

Study design, population and procedure

The study used a cross-sectional research design and a concurrent mixed methods research approach to unpack the role of social networks in the migration processes of West African immigrants in Accra, Ghana. Creswell (2012) has emphasised that researchers using mixed methods are required to demonstrate the various stages of mixing the data in their research. Accordingly, the design of this study includes one phase of data collection in which the quantitative approach was given priority and guided the study, while the qualitative dimension was embedded into the study and provided a supportive role. The target population for this study were drawn from West African immigrants who resided in the AMA as itinerant retailers for a minimum period of six months or more, and who were not dual nationals, naturalized foreign citizens or nationals by marriage. After having factored in the inherent difficulty in obtaining representative samples of itinerant populations like nomadic migrant retailers (Vigneswaran 2007), the snowballing procedure was used to search for the respondents, which produced a sample frame of 842 respondents from the nine 9 study sites. The original intention for using the snowballing method was to produce a sufficient sample frame for a randomised sample selection as a result of the lack of accurate information on this group of immigrants in the country (GSS, 2012, 2021). However, being mindful of the fact that the study employed the mixed methods approach and the argument in the central limit theorem that a large sample size is more likely to generate a normal distribution in a data set than smaller ones, the entire sampling frame of 842 was enrolled in the study. For the qualitative aspect of the study, nine (9) immigrant leaders (one key informant each of the nine neighbourhoods) who possessed key knowledge about the migration strategies and decision-making processes of the respondents, including how they tapped into various social networks to help them settle in at the destination, were purposively selected for key informant interviews.

Development of instruments and administration

Structured and semi-structured questionnaires (specifically an interview schedule and an interview guide) were used to collect the data from the respondents. The interview schedule was aided because the questions were worded in English, which many immigrant retailers can neither express nor understand, especially those from French-speaking states (GSS 2012). Hence, for all other languages, an interpreter was used where the author did not understand the language. The instruments were developed under four main sections. Section one consisted of questions on the respondents' socio-demographic characteristics such as country of origin, gender, age, educational level and marital status. Section two tapped into whether their decision to migrate was solely taken by them or influenced by significant others, and if the decision to move was influenced, the main sources of the influence. Section three sought to unveil whether they sought any form of information about the destination before their migration, and if they did, the type of information sought, and the sources of the information. The final section elicited information on whether they had any form of assistance on their arrival at the destination, and if they had, the kind of support extended to them and the sources of that support.

The interview guide, on the other hand, consisted of open-ended questions and pre-scripted probes, and was structured along the same headings just like the interview schedule. Before the actual field data collection, the instruments were pretested and reworked in the Kumasi Metropolis (the second-highest destination of West African immigrants), which helped improve the validity. All ethical questions that guide the conduct of social sciences research were strictly followed. In particular, topics concerning informed consent, anonymity, and confidentiality were followed throughout the field data collection. Regarding informed consent, the respondents for both the survey and the interview guide were briefed about the purpose of the study and the possible impacts on their participation in the study. Prior to the interview, a consent form was read and interpreted to them detailing their right to withdraw or avoid answering sensitive questions they deemed private. In terms of anonymity, all personal identifiers that were likely to link the data to them were avoided. The research protocol was reviewed and approved by the University of Cape Coast Institutional Review Board and assigned a protocol number UCCIRB/CHLS/2016/23 before the fieldwork commenced.

The instruments were administered by the author and three final year master's students from the University of Ghana, who were fluent in the local languages (Asante Twi and Ga), French and Hausa, which are the main languages spoken by the respondents. The questionnaires and key informant interviews were conducted face-to-face at the respondents' places of abode and workplaces. With prior permission of the respondents and key informants, a voice recorder was used to record the interviews and was complemented by note-taking of the discussions. The average duration of each key informant interview took between 30-45 minutes. Concerning the socio-demographic characteristics of the participants, all of them were men and were between the ages of 28-45 years. Four out of them had no formal education, one was literate in Arabic, two attained basic education, and the remaining two (one each) acquired basic and secondary level education. They were all Muslims, and apart from two single participants, the rest were all married, which contradicts GSS (2012) and Yendaw et al. (2019)'s findings that most itinerant immigrant retailers are generally unmarried and uneducated Muslim men.

Data processing and analysis

The validity of the data collected via questionnaire was authenticated by thoroughly reviewing the responses to ensure they were appropriately filled out. Subsequently, it was noticed that out of the 842 questionnaires checked, 779 of them were found to be properly completed, resulting in a response rate of 92.5%. The data were then processed using the Statistical Package for the Social Sciences (SPSS) version 21. Descriptive statistics, notably frequency distributions, percentages, and bivariate analysis (two-way tables) were used to analyse and report the findings. The data from the interviews were also cross-checked for validity by playing and listening to the content of the audio recordings several

times to confirm if they were thorough and complete. After the validation, it was confirmed that all the audios were accurate and usable. The data were then processed and analysed manually using the thematic analysis technique. The thematic analysis procedure was employed to identify, analyse and report patterns that emerged from the interviews. The thematic analysis was performed by following the four steps indicated by Yendaw (2019): data preparation and close reading of text to get familiar with the raw data, development of categories from the raw data into a model or framework (coding of data), searching for themes and recognizing relationships (i.e. axial coding), and refining of themes through coding consistency checks such as independent parallel coding. As a way of guaranteeing the credibility and validity of the results, the participant validation technique was used by contacting three of the participants to ascertain the interview transcripts. The next section of the study presents the results, discussion, conclusions and implications.

RESULTS

Socio-demographic characteristics of the respondents

As regards the respondents' socio-demographic characteristics, the results show that most of them are from Niger (42.2%), while the least (1.1%) come from other countries (Table 1). A large percentage of the immigrants (89.1%) are men. Over six out of ten (62.0%) of them are aged between 20-29 years, while a few (7.1%) are aged 40-49 years. Table 1 also reveals that about 60.0% of the immigrants are single, and over a sixth (66.7%) of them are without any formal education.

Table 1: Socio-demographic characteristics of the respondents

Socio-demographics	N	Percent
Country of origin		
Benin	39	5.0
Burkina Faso	32	4.1
Mali	176	22.6
Niger	329	42.2
Nigeria	146	18.7
Togo	49	6.3
Other	8	1.1
Gender		
Men	694	89.1
Women	85	10.9
Age (completed years)		
<20	89	11.4
20-29	479	61.5
30-39	164	20.0
40-49	55	7.1
Marital status		
Never married	462	59.3
Married	294	37.7
Widowed	13	1.7
Divorced/Separated	10	1.3
Educational attainment		
No formal education	520	66.7
Basic education	188	31.1
Secondary/tertiary	16	2.2

Decision to migrate

This section of the study evaluates the dynamics entailed in the migration processes of the respondents. The specific issues assessed here bordered on how the decision to migrate was taken, particularly concerning whether the decision to migrate was influenced by significant others or initiated by the immigrants themselves, and if influenced by others, the source (s) of influence on their decision to move. From the descriptive analysis, it was discovered that about 76.0 per cent of the respondents reported that their decision to migrate to the destination was influenced by others, with only about a quarter (24.0%) who reported that their decision to migrate was made by themselves. In relation to the sources of influence for their migration, Table 2 shows that 52.5 per cent of them were influenced by their family or relatives.

In order to obtain further nuances regarding the topic, the respondents' sources of influence for migration were cross-tabulated against their socio-demographic characteristics, notably country of origin, sex, age, marital status and education (see Table 2). The rationale was to ascertain whether their socio-demographic characteristics had any form of influence on the sources of influence for their migration. Table 2 reveals that most of them across their countries of origin were influenced to migrate by their family members or relatives. Relatively, however, respondents from Burkina Faso (78.9%) were mostly influenced to migrate by their family members. In terms of gender, the analysis indicates that women were largely influenced to emigrate by their families (54.4%), as against men, who were mostly influenced to move by their friends (61.1%).

As regards age, the findings show that whilst younger immigrants (≤20-29) were for the most part influenced to migrate by their family members, it was noticed that those who were quite older (30-49 years) were mainly influenced to migrate by their friends. On their marital status, the analysis shows that whereas 58.6% of those who were unmarried were largely influenced to migrate by their family/relatives, it was observed that those who were divorced/separated (81.8%) were largely influenced to migrate by friends. Finally, the results indicate that while respondents without any form of formal education were generally influenced to migrate to the destination by their family/relatives, those who had secondary/tertiary education were usually influenced to migrate by their friends (66.7%).

Table 2: Sources of influence to migrate by socio-demographic characteristics

Socio-demographics	Sources of influence for migration		
	N	Family/relatives (%)	Friends/pals (%)
Sources of influence to migrate	89	52.5	47.5
Country of origin			
Benin	7	59.3	40.7
Burkina Faso	9	78.9	21.1
Mali	24	50.8	49.2
Niger	49	50.2	49.8
Nigeria	33	53.4	46.6
Togo	9	62.1	37.9
Other	8	12.5	87.5
Gender of respondents			
Men	17	45.6	54.4
Women	2	61.1	38.9
Age (in years)			
Less than 20	94	56.6	43.4
20-29	86	57.0	43.0
30-39	6	33.3	66.7
40-49	3	33.3	66.7
Marital status			
Married	08	56.3	43.8
Single	60	58.6	41.4
Widowed	0	50.0	50.0
Divorced/separated	1	18.2	81.8
Educational attainment			
No education	394	56.6	43.4
Basic education	86	43.0	57.0
Secondary/tertiary	9	33.3	66.7

In elucidating the important role of families and relatives in the respondents' migration processes, one participant described vividly how his uncle, who lived in Ghana, influenced him to join him. In the narration, this was exactly what he said:

> *"My uncle, who lives in Ghana here encouraged me to join him in Accra. My uncle has the opportunity to travel to several West African countries, including Benin, Nigeria and now Ghana. He knows a lot about your country (Ghana). He convinced me that Ghana is the best for me because in Ghana, there is no police harassment, unlike Nigeria. He also told me Ghanaian authorities do not worry about foreigners travel document, and that Ghana is relatively peaceful. What finally convinced me was when he indicated that your country (Ghana) has a lot of business opportunities relative to mine (Mali). I decided to move to this place (Ghana) after reflecting on those good messages received from my uncle."* [38-year-old immigrant leader from Mali].

The role of family members in the decision to migrate among the respondents was equally supported in the following excerpts by two other migrant key informants. One of such views was expressed by a participant who stated that:

> *"My mother encouraged me by advising me that as a man, I had to work hard because that was the only way for me to survive, as my father was no more (dead). So, it was my mum who influenced me by giving me the confidence and the money to travel here." (Ghana)* [45-year-old immigrant leader from Niger].

The second participant, who was interviewed at New Fadama in the study area, recounted how his mother influenced him to travel to Ghana:

> *"The decision on my movement to Ghana was made by my mother. She decided to make me come here because I had my brother and sister in Ghana already doing small, small business."* [28-year-old immigrant leader from Nigeria].

Role of social networks in the migration process

The migration systems theory has emphasised the significance of feedback mechanisms, through which information about the migrants' reception and progress at the destination is transmitted back to the place of origin. Favourable information, according to Mabogunje (1970) and Massey et al. (1993), encourages further migration and leads to situations of almost organised migratory flows from one location to the other. In my quest to appreciate some of these nuances, the respondents were requested during the interview to indicate whether they had any form of information regarding the destination (Ghana) from anywhere prior to their migration, and if they did, the type of information received and from/whom. Similarly, the immigrants were requested in the interview to specify whether they obtained any form of assistance from anybody or institution during the migration process, and if they did, the form of support they received to enable them to settle in at the destination.

The descriptive results revealed that 75.6 percent of the respondents reported that they had information about the destination before their departure while about a quarter (24.4%) said otherwise. Concerning the type of information obtained, Table 3 reveals that the dominant information received was in respect of jobs and investment opportunities (88.5%) followed by information related to peace and security situation (18.1%). Concerning their countries of origin and the type of information sought about the destination, the analysis shows that while those from Togo (83.8%) were higher among those who were particular about information regarding jobs and investment opportunities, their Nigerian counterparts (28.2%) were predominant among those who sought information regarding peace and security situation in Ghana. The results showed that respondents from Burkina Faso (11.1%) were dominant among those who indicated that they sought more information with regard to living conditions at the destination (Table 3).

Table 3: Information received about Ghana by country of origin

	Type of information received before departure			
	N	Job/investment opportunities	Living conditions	Information on security
Variable		(%)	(%)	(%)
Type of information	811	78.5	3.3	18.1
Country of origin				
Benin	43	76.0	4.7	19.3
Burkina Faso	36	73.3	11.1	15.6
Mali	178	81.6	3.4	15.1
Niger	347	77.3	3.5	19.2
Nigeria	148	62.7	9.1	28.2
Togo	48	83.8	2.1	14.2
Other	11	79.2	0.7	20.1

In addition, the respondents' main sources of information about the destination were examined against their countries of origin. The rationale was to understand where and/or from whom the respondents obtained their information about the destination. The analysis in Table 4 indicates that friends and acquaintances (52.0%) were their main sources of information, while migrants who have migrated to Ghana and returned home (12.0%) emerged as the least common source from which they had their information about the destination. As depicted in Table 4, the respondents' sources of information about the destination were varied within their countries of origin. Whereas immigrants from Nigeria (75.5%) were among the majority who indicated they had information about the destination from their network of friends, their Burkinabe counterparts (60.5%) were dominant among those who reported having had information about the destination from their relatives. Further, those from Togo (26.0%) were also most likely among those respondents who said they had information about the destination from immigrants who travelled to the destination and returned home (Table 4).

Table 4: Sources of information about the destination and country of origin

	Sources of information about Ghana				
	N	Return Migrants at origin	Relatives at the destination	Friends & acquaintances at destination	Media (e.g., internet)
Variable		(%)	(%)	(%)	(%)
Sources of information	875	12.0	23.9	52.0	12.1
Country of origin					
Benin	51	0.0	37.3	35.3	27.4
Burkina Faso	43	20.9	60.5	14.0	4.7
Mali	214	6.1	30.4	43.9	19.7
Niger	357	14.3	18.8	55.7	11.2
Nigeria	147	12.9	10.2	75.5	1.4
Togo	50	26.0	30.0	40.0	4.0
Other	13	0.0	23.1	46.2	30.7

The study further attempted to understand whether the respondents, upon arrival at the destination, received any form of support from anyone or institution to enable them to settle in. The rationale was to ascertain the critical role social networks play in the integration processes of newly arrived immigrants at the destination. From the results obtained, over nine out of ten (92.2%) confirmed that they had some form of initial assistance from significant others to enable them to settle at the destination. Concerning the type of assistance obtained upon their arrival, Table 5 shows that accommodation (79.9%) was the major help obtained at the destination, while assistance relating to food (7.8%) emerged as the least form of support they received.

Table 5: Type of assistance received at destination by country of origin

	Type of help received on arrival			
Variable	N	Accommodation (%)	Food (%)	Financial (%)
Assistance received	760	79.9	7.8	12.4
Country of origin				
Benin	36	60.9	16.9	22.2
B. Faso	29	89.7	10.3	0.0
Mali	172	78.5	9.3	12.2
Niger	323	78.3	9.3	12.4
Nigeria	145	88.3	2.8	9.0
Togo	47	78.7	2.1	19.1
Other	8	62.5	0.0	37.5

B. Faso = Burkina Faso

A bivariate analysis of the respondents' countries of origin and the type of assistance received upon arrival at the destination depicted key variations within countries. Whereas those from Burkina Faso (89.7%) generally obtained assistance related to accommodation, it was noticed that those from Benin (16.9%) mostly received assistance related to feeding. The results further showed that a higher proportion of those from other countries (37.5%) other than the above-listed had the highest likelihood of receiving assistance about feeding on their first arrival at the destination (Table 5). In relation to the respondents' sources of assistance on arrival at the destination, Table 6 indicates that their main source of assistance was from non-relative kinsmen, such as friends from the same country (48.2%).

Table 6: Sources of assistance received at destination by country of origin

	Sources of assistance received on arrival			
Variable	N	Relatives/ Family (%)	Native Ghanaians (%)	Non-relative Kinsmen (%)
Sources of assistance	781	29.2	22.3	48.5
Country of origin				
Benin	39	30.8	46.2	23.1
Burkina Faso	34	79.4	14.7	5.9
Mali	177	43.5	36.2	20.3
Niger	330	23.0	25.2	51.8
Nigeria	145	14.5	0.7	84.8
Togo	48	27.1	2.1	70.8
Other	8	25.0	25.0	50.0

Native Ghanaian friends (22.3%) constituted the least source of assistance to them. Concerning their sources of assistance and their countries of origin, the results indicate that Nigerians (84.8%) were dominant among those who reported that they had assistance from non-relative kinsmen. Burkinabes (79.4%) had the highest form of assistance from direct family members at the destination, as compared to others. Also, respondents from Benin (46.2%) had the highest form of assistance from native Ghanaian friends at the destination (Table 6).

The analyses presented in Tables 5 and 6 were similarly corroborated during the qualitative interviews. With respect to the type and sources of assistance received at the destination, most of the key informants interviewed indicated that they obtained one form of help or the other, ranging from food, accommodation and financial assistance. The qualitative excerpt below represents some of the views shared by one of the participants who was contacted and interviewed at Nima:

> *"You know it can be very frustrating when you travel to a new place for the first time. Before I set off for Ghana, I first contacted some of my friends who were already working in Ghana to be sure of my safety on arrival. When I arrived, they did well for me. They assisted me with a place to lodge temporarily for some months before I was able to gather money with some friends to rent our lodging place. As a grown-up man, I did not depend on anybody for food. One other help I had was that my friends also assisted me with small money to start this business that you see me doing."* [39-year-old immigrant leader from Burkina Faso].

Further interviews with some of the immigrant leaders provided insights into this finding. One participant had this to say:

> *"Yes, I got help from my senior brother. He showed me how to relate to people in my new environment. He also took care of my feeding expenses for about four months before I was able to stand on my feet. If not him, things would ally been difficult for me at the beginning."* [38-year-old immigrant leader from Mali].

Contrary to the above views, a participant from Nigeria was of the view that he was neither given food, money, nor accommodation when he first arrived at the destination. He rather noted that he was assisted with business items on credit on his arrival, which enabled him to start his own business after a while.

> *"Actually, yes, I got help from both Ghanaians and Nigerians. But this help wasn't in the form of money, food or accommodation. What I can say is that they gave me some of their goods on credit to sell for them on commission basis, and that helped me survive until I was able to raise my own money to start my own business."* [28-year-old immigrant leader from Nigeria].

DISCUSSION

This study used a cross-sectional research design and a one-phase mixed data collection approach to unpack the critical roles of migrant social networks in the migration processes among 779 West African itinerant immigrant retailers in the Accra Metropolitan Area of Ghana. An interview schedule (researcher-administered questionnaire) and interview guide were used to collect the data from the respondents and participants, respectively. The findings indicate that most of the respondents reported that their migration to Ghana was influenced by their family members (relatives), and those from Burkina Faso were most likely to be motivated to migrate by their families or relatives. The analysis further indicated that young unmarried adult women who were without any form of formal education had the highest likelihood of responding to migration influences from their families/relatives. The fact that most of them were motivated to migrate by their families/relatives reinforces the observation made by the new economics of labour migration theory that migration decisions are not an individual affair but negotiated within larger household settings (Stark, 1999). These findings further resonated with the broader perspectives unveiled in the extant literature, where migrants' networks, including familial links, play vital roles in driving migration (Okyere, 2018; Conduah, 2023). Nevertheless, these findings contradict the basic tenets of the neoclassical perspective, which argues that migration is most often an individual decision to maximise income at the destination.

The evidence from the study further shows that most of the respondents, before their migration, sought information about the destination country, and the dominant information sought was related to information about employment and investment avenues. This perhaps might have influenced their decision to choose Ghana as their preferred destination among several alternative destinations in West Africa. For instance, a study by the European Commission (2000) and Yendaw et al. (2019) found that information about potential destinations not only influences the decision of individuals as to whether or not to migrate, but also the choice of their destinations. Also, Shuva's (2022) study on Bangladeshi immigrants in Canada highlights the significance of information-seeking behaviour in migration decisions. Like previous research, it emphasises the facilitative role of migration networks in providing job leads. This aligns with broader factors highlighted in the migration systems theory, such as cultural, political, and environmental considerations, which also influence migration patterns and choices. By situating studies within the context of the aforementioned findings, it becomes evident that migration decision-making is a complex and multidimensional process as typified in the migration systems theory, which perceives migration as part of an entire system with multifarious interdependent variables at play (Tagliacozzo et al., 2024). Moreover, Tagliacozzo et al. (2024) reiterate that systems theory depicts the movement of people not as an isolated episode, but as an interconnected flow within a broader system. While information-seeking behaviour plays a crucial role in informing migrants' choices, it operates in conjunction with social, cultural, political, and environmental factors to shape migration outcomes. By acknowledging the interplay of these factors, policymakers and stakeholders can develop more holistic approaches to address the needs and challenges of immigrant populations and promote inclusive and sustainable migration policies.

In relation to their countries of origin and information received about the destination, the study showed that a higher proportion of the migrants from Togo were among those who sought information about job and investment opportunities, which could be attributed to Togo's proximity to the destination country. It was also realized from the analysis that their sources of information about the destination were largely from friends, and respondents from Nigeria were among the majority who depended on friends for information about the destination. This finding resonates with what Hugo (1981), Massey et al. (1993) and Conduah (2023) found in their studies, where the major sources of information among their study participants were mainly family and friends. This evidence further reinforces the basic assumptions of the migration systems theory of migration, which argues that migration networks and multiple significant actors within the environment facilitate potential migrants' decisions to migrate by the provision of crucial information and assistance regarding the destination (Penninx et al., 1993; Tagliacozzo et al., 2024; Tanle, 2014).

It was equally observed that most of the respondents on arrival at the destination were provided with some form of assistance from their social networks to enable them to settle in, and the major form of help obtained was accommodation. In terms of their countries of origin, Burkinabes were among the most who indicated that they had help concerning accommodation. These findings imply that the commonest form of help for newly arrived West African immigrants in the country is housing. This revelation finds credence in the available literature, which indicates that the key challenge generally faced by many migrants on arrival at their destinations pertains to housing (Abdulai et al., 2023; Yendaw et al., 2023). This finding reinforces the underlying assumptions which underpinned the systems and network theories of migration that already established migrants at destinations may support newly arrived migrants or potential migrants of the same ethnic origin, by providing lodging places or information about the destination to reduce the risks and costs entailed in the migration process (Esveldt et al., 1995; Mabogunje, 1970; Massey at al., 1993; Okyere, 2018).

CONCLUSIONS AND POLICY IMPLICATIONS

Based on the results and the discussion presented, therein, this study concludes that the respondents' decision to migrate to Ghana was influenced by their networks, notably members of their families or relatives and those who were young, unmarried adult women and were without any formal education were among the majority who were largely influenced to migrate to Ghana by family members. This revelation vindicates the basic tenets of the new economics of labour migration theory, which argues that the decision to migrate is generally not made by individuals, but rather, the larger family unit. The current evidence, however, wields some uniqueness by challenging the long-held view of the neoclassical theorists' standpoint that the decision to migrate is an individual decision to maximize higher incomes at the destination.

The study further revealed that most of the respondents, before their migration, scouted for valuable information regarding the opportunities available at the destination, and friends were their key sources of information. Specifically, they were mainly interested in information about employment and business opportunities. It further emerged that most of the respondents obtained some form of support from their networks to enable them to settle into the destination. This finding aligns with the migration systems perspective, which argues that migrant social networks provide critical information and assistance to potential and newly arrived migrants. The current evidences have key policy relevance for Ghana's migration management institutions, such as the Ghana Immigration Service (GIS), whose duty it is to ensure effective migration governance in the country. This is because the study has unveiled the fundamental roles played by the migrant social networks in the entire migration process, including the decision to migrate. Hence, the study suggests that any migration policy of the government that aims to manage migration effectively in the country ought to factor in the critical roles of social networks, notably families and friends, in the entire migration management framework. Additionally, the study advocates for further in-depth research on this critical topic across the country to gain a thorough appreciation of migration strategies and decision-making processes of immigrants in the country. This will provide valuable insights for government policies to effectively manage migration issues in Ghana.

DECLARATION

The author declares that the paper is original, neither has it been previously published nor under consideration for publication elsewhere. There are no conflicts of interest so far as the submission of this paper is concerned.

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT COFERENCE PROCEEDINGS

Assessing the impact of teacher placement on teaching quality and learning outcomes in basic schools: A case study of Wa Municipality in the Upper West Region

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Teacher, placement, quality, teaching and learning, displacement

A B S T R A C T

High-quality teaching is essential for positive student outcomes, requiring both appropriate teacher placement and ongoing professional development. The study employed a cross-sectional survey design within the mixed methods approach to examine the impact of teacher placement on teaching quality in basic schools within Wa Municipality. Using a structured questionnaire and interview, data were collected from a sample of 422 teachers for quantitative data and 10 teachers for qualitative data, to assess the alignment of their placement with their areas of specialisation. The analysis revealed that many teachers are improperly assigned, leading to lower student engagement, reduced job satisfaction, and higher attrition rates. In contrast, teachers placed according to their expertise reported higher satisfaction and effectiveness. These findings emphasise the importance of accurate teacher placement in enhancing teaching quality and student outcomes. The study calls on school administrators and policymakers to prioritise strategic teacher placement and provide targeted support for those in misaligned roles. Addressing these challenges through systematic efforts can improve both teacher performance and educational outcomes, underscoring the critical role of teacher placement in achieving educational excellence.

INTRODUCTION

The persistent underperformance of pupils in basic schools has heightened the focus on teachers and the quality of teaching in Ghana. Teachers are indispensable in achieving quality education, and evidence confirms that teaching quality is a crucial predictor of student success (Beeharry, G., 2021). Recognising this, UNESCO and the International Task Force on Teachers for Education 2030 emphasise that teachers are fundamental to achieving the Education 2030 Agenda and Sustainable Development Goal 4 (SDG 4). The 2024 Global Report on Teachers highlights the urgent need for 44 million additional teachers worldwide by 2030 to meet universal primary and secondary education targets, underscoring the pivotal role of teachers in ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. In response, significant efforts have been made to improve teacher training. For example, the Government of Ghana, in collaboration with UKAid, introduced the Transforming Teacher Education and Learning (T-TEL) project. This initiative aims to transform pre-service teacher education by enhancing the quality of teaching and learning in public Colleges of Education. As part of this effort, the National Teacher Education Curriculum Framework (NTECF) and National Teachers' Standards (NTS) were developed to establish minimum professional competencies and guide teacher education programs nationwide.

However, despite these interventions, the issue of teacher placement and its impact on educational outcomes has received limited attention. Misplacing teachers can significantly undermine the quality of education, regardless of their qualifications or experience. Effective teacher placement involves strategically assigning educators based on their qualifications, experience, and subject-specific expertise to meet the unique needs of schools and students (Adedeji & Olaniyan, 2022). This process ensures an optimal match between teachers' competencies and the curricular demands, enabling them to leverage their strengths for maximum instructional impact.

Effective teacher placement not only ensures that educators can deliver lessons with deep content mastery but also equips them to clarify complex concepts, address misconceptions, and create engaging and standards-aligned lessons. This alignment supports differentiated instruction, ensuring all students' learning needs are met (Nudzor et al., 2021). Furthermore, well-placed teachers exhibit improved classroom management and pedagogical skills, creating positive learning environments and fostering stronger student-teacher relationships. Such an approach enhances student outcomes, including better academic performance, increased engagement, and improved retention rates. Addressing teacher placement is, therefore, critical to ensuring that investments in teacher training translate into meaningful improvements in educational quality.

Mismatched teacher placement leads to reduced job satisfaction, lower instructional quality, and higher attrition rates, disrupting the education system and student learning continuity (Adusei & Owusu, 2021; Ingersoll & Strong, 2018). Assigning teachers outside their expertise or interest causes frustration, disengagement, and burnout (Borman & Dowling, 2020). Conversely, strategic placement aligned with teachers' qualifications and interests promotes job satisfaction, professional growth, and instructional efficacy (Rahimi et al., 2023). This alignment supports adaptive teaching and differentiated instruction, enabling educators to address diverse student needs, create inclusive environments, and improve student outcomes (Tomlinson, 2017; Darling-Hammond, 2019).

Strategic teacher placement significantly enhances collaborative practices within schools by fostering meaningful participation in Professional Learning Communities (PLCs) and reflective teaching, which improve instructional quality and student achievement (Timperley et al., 2023; Hargreaves & Fullan, 2012). This directly influences student outcomes, ensures learners receive instruction from educators with both content mastery and pedagogical proficiency, and creates engaging and effective learning experiences (Mustapha et al., 2022). Conversely, mismatched placements often lead to reduced instructional quality and lower student achievement (Adusei & Owusu, 2021). Studies have shown that strategically placed teachers, particularly in subjects like mathematics and science, foster higher performance metrics and engagement levels due to their specialised knowledge and confidence in delivering complex concepts (Darling-Hammond, 2019; Ingersoll & Merrill, 2018). This underscores the importance of effective human resource management in maximising educational impact through thoughtful teacher placement.

Despite the benefits of teacher placement policies, concerns have arisen about the mismatch between teacher assignments and student needs in districts across Ghana, including the Upper West Region (Agyemang & Appiah, 2022; Mensah & Amponsah, 2020). Misallocating underqualified teachers to critical subject areas worsens educational disparities and negatively affects student performance (Agyemang & Appiah, 2022). However, there is limited empirical evidence and region-specific analysis to evaluate whether current teacher placement practices meet the unique needs of basic school students. As Owusu-Ansah (2023) highlights, reliable data is urgently needed to guide policy and improve placement practices. This study addresses this gap by examining how teachers are placed in the basic schools in the region, exploring the category of teachers that often experience misplacement, and examining the influence of teacher placement on instructional strategies and teaching quality in basic schools. In the Upper West Region.

LITERATURE REVIEW

Theoretical framework

Human Capital Theory, developed by Theodore Schultz in 1961, offered a valuable framework for exploring the connection between teacher placement and educational outcomes. This theory suggests that investing in individuals, particularly through education, training, and the effective use of skills, enhances productivity and economic value. In the realm of education, teachers are seen as vital human capital assets; their qualifications, competencies, and effective deployment significantly influence the quality of instruction and student achievement. This theory is particularly relevant when studying teacher placement in basic schools within the Wa Municipality. Placing qualified and professionally trained teachers in areas where they are most needed, such as underserved or rural communities, is viewed as a strategic approach to maximise the returns on educational investments. Thoughtful placement ensures that teaching capacity is available and aligned with the areas that need it most, thereby addressing disparities in educational delivery. Additionally, Human Capital Theory helps explain how inappropriate or inequitable teacher placements can lead to the underutilisation of teacher potential, negatively impacting the overall quality of teaching and learning outcomes.

When teachers are assigned to environments that do not match their skills or where they lack support and resources, their effectiveness may be hindered, resulting in less-than-optimal educational outcomes for students. Finally, the theory highlights the importance of quality teaching as a core component of human capital. It underscores that the strategic deployment of teachers is essential for improving school performance and achieving broader educational goals, such as those outlined in Sustainable Development Goal Four (SDG 4), which aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Therefore, Human Capital Theory provides a robust conceptual foundation for evaluating the impact of teacher placement on teaching quality and learning outcomes in the basic education sector.

The concept of teacher placement and historical evolution of teacher placement policies

Teacher placement refers to the systematic process of assigning educators to specific schools, subjects, and classrooms based on various criteria, including their qualifications, skills, experiences, and institutional needs (Adedeji & Olaniyan, 2022). Effective teacher placement ensures that educators are positioned in roles where their expertise aligns with curricular demands, fostering an environment conducive to quality teaching and learning. The objective is not only to match teacher competencies with subject requirements but also to consider contextual factors

such as student demographics and school resources (Mulkeen, 2020).

Historically, teacher placement systems have evolved in response to educational reforms and societal changes. In many countries, early placement policies were largely ad hoc, driven by immediate staffing needs rather than strategic planning. Over time, educational policymakers recognised the need for structured frameworks to ensure equitable distribution and optimal utilisation of teaching talent (Ingersoll, 2018). In the 21st century, teacher placement has become a critical component of educational policy, with a focus on addressing inequalities between urban and rural schools and ensuring that all students have access to qualified educators (Akyeampong & Stephens, 2021).

Factors influencing placement decisions

Teacher placement decisions are influenced by a complex interplay of professional, systemic, and contextual factors, all of which directly impact the quality of teaching and learning outcomes in basic schools. Understanding these factors is crucial for addressing disparities in educational delivery, especially in regions like the Wa Municipality. This section explores four key determinants of teacher placement: qualifications and subject expertise, socio-economic factors, political interference, institutional needs, along resource availability. Each factor has implications for how effectively teachers are matched to schools, affecting learner performance, teacher motivation, and the equity of education service provision.

Aligning teacher placement with their academic qualifications and professional training is essential for effective educational delivery. Teachers with subject-matter expertise are better equipped to deliver content deeply and relevantly. Mustapha et al. (2022) emphasise that students achieve better academic outcomes when teachers are assigned to subjects for which they are well-trained, as this strengthens both content mastery and instructional effectiveness. Similarly, Hanushek and Rivkin (2020) highlight that such alignment boosts classroom confidence and student engagement, ultimately improving learning outcomes.

Socio-economic disparities across different geographical areas significantly influence both the placement of teachers and their decisions to remain in those locations. Urban and peri-urban schools typically benefit from superior infrastructure, which includes modern classrooms, reliable technology, and well-maintained facilities. These areas also offer better housing conditions, access to essential social amenities such as healthcare, public transportation, and recreational facilities, as well as greater opportunities for professional development, including workshops and training programs. These factors collectively create an environment that attracts qualified teachers and encourages them to stay. In contrast, rural schools often grapple with chronic staffing shortages. Many of these institutions are situated in remote areas with limited access to basic resources and amenities, leading to poor living conditions for educators. The lack of adequate transportation options can make daily commuting challenging, while professional isolation can result in feelings of loneliness and reduced collaboration among peers. Consequently, these disadvantages contribute to an uneven distribution of qualified teachers, amplifying existing educational inequities and leading to systemic underperformance in disadvantaged regions. To effectively address these issues, Lankford et al. (2020) recommend the implementation of targeted policies designed to make teaching in underserved communities more attractive and sustainable. These might include rural posting incentives, such as financial bonuses or student loan forgiveness for teachers who commit to working in these schools for a specified duration. Additionally, housing schemes could provide affordable accommodation options for educators, thereby alleviating the burden of high living costs. Career advancement pathways, which could include opportunities for mentorship, leadership roles, or continuing education, would not only enhance job satisfaction but also encourage teachers to build long-term careers in these critical but underserved educational environments.

Political interference is another contentious issue in teacher placement, where decisions are often influenced more by favouritism or political affiliation than by professional merit. This practice frequently leads to mismatches between teachers' competencies and the specific needs of schools, undermining educational effectiveness (Opoku-Asare et al., 2023). In extreme cases, teachers may be placed in well-resourced urban centres due to political influence, while rural or high-need areas remain understaffed. Additionally, political manipulation can distort the equitable allocation of resources, exacerbating challenges for already marginalised schools (Akyeampong & Stephens, 2021). Ensuring transparency in placement procedures and minimising political interference, as suggested by Asare and Yeboah (2022), is vital for restoring fairness and effectiveness in the system.

A context-sensitive approach to teacher placement requires attention to the unique institutional needs of each school. These needs include characteristics of the student population, curriculum priorities, and the availability of teaching and learning resources. For example, schools that serve large populations of learners with special educational needs require teachers who are trained in inclusive and differentiated instruction. When placements reflect these specific needs, the educational experience becomes more responsive and effective. According to UNESCO (2021), aligning teacher deployment with institutional goals fosters inclusive and equitable learning environments, ultimately supporting the broader aims of national education policies and international frameworks such as the Sustainable Development Goals (SDGs).

Impact of teacher placement on educational quality

Teacher placement and student achievement

The strategic placement of teachers within educational systems is a critical factor in determining students' academic success. Research from both global contexts and sub-Saharan Africa consistently highlights the strong link between effective teacher deployment and student outcomes. This relationship is based on the idea that aligning teachers' expertise with the specific demands of each subject optimises the quality of instruction, fosters cognitive engagement, and enhances academic performance (Mustapha, Daramola, &

Usman, 2022). A growing body of literature indicates that students perform significantly better when taught by educators whose academic training and pedagogical expertise match their teaching subjects. For example, Lankford, Loeb, and Wyckoff (2020) conducted a large-scale longitudinal study showing that secondary school students in mathematics and science consistently scored higher on standardised tests when taught by teachers with relevant academic qualifications and teaching experience. These findings support the theoretical concept of content-pedagogy alignment, which suggests that deep knowledge of a subject enhances a teacher's ability to scaffold instruction, identify and correct misconceptions, and employ effective subject-specific teaching strategies (Ball, Thames, & Phelps, 2008). In the West African context, Adedeji and Olaniyan (2022) provide further evidence from a multi-country study, asserting that effective teacher placement policies are significantly correlated with student proficiency in core subjects like mathematics and literacy. Their research shows that schools with mismatched teacher assignments, where educators are assigned to teach subjects outside their area of training, report lower student pass rates, increased need for remediation, and greater disparities in learner achievement. The authors argue that these inefficiencies not only undermine instructional coherence but also demoralise teachers, which can lead to reduced motivation and commitment.

On the other hand, poor teacher placement results in negative consequences for student achievement. Teachers lacking sufficient content knowledge or pedagogical skills in a subject may resort to superficial teaching methods, leading to shallow learning and poor retention among students (Béteille & Evans, 2019). This issue is particularly pronounced in high-stakes subjects like mathematics and science, where a combination of pedagogical expertise and conceptual clarity is essential. Hanushek, Piopiunik, and Wiederhold (2019) argue, using data from the Programme for the International Assessment of Adult Competencies (PIAAC), that a teacher's cognitive ability and subject specialisation are the strongest predictors of student learning outcomes, especially in low-income and resource-constrained settings. Furthermore, strategically placing teachers is not only beneficial from a pedagogical standpoint but also makes economic sense. Misplacement can lead to instructional inefficiencies that require additional resources for remediation, while effective placement maximises the return on investment in teacher training and professional development (World Bank, 2018). This is particularly important for educational systems like Ghana's, where the distribution of qualified teachers is uneven between rural and urban areas. Research by Ampiah and Adu-Yeboah (2021) highlights that rural schools often experience higher rates of teacher misplacement due to national-level deployment models that do not consider the specific needs of schools, thereby worsening urban-rural disparities in student achievement. Overall, the literature strongly supports the idea that teacher placement has a significant impact on student academic achievement. Aligning teacher specialisation with instructional assignments enhances content delivery, promotes instructional depth, and improves learning outcomes. Conversely, misalignment can compromise instructional quality, especially in subjects that require a high level of cognitive and pedagogical competence. For educational reforms in regions such as Wa Municipality, implementing data-driven and needs-sensitive teacher deployment strategies could be crucial in bridging learning gaps and promoting equitable educational outcomes.

Classroom management and pedagogical effectiveness

The intersection between teacher placement and instructional effectiveness has increasingly garnered scholarly attention, particularly regarding its implications for classroom management and pedagogical quality. Empirical literature affirms that effective teacher placement, defined as the strategic alignment of teacher subject-area expertise, pedagogical training, and classroom assignments, has a direct and mediating impact on classroom ecology, teacher efficacy, and overall learning experience (Rahimi, Ghanizadeh, & Abdolrezapour, 2023; Tomlinson, 2020). Teachers who are confident and competent within their assigned subjects exhibit greater instructional adaptability and pedagogical creativity. Their expertise allows them to employ differentiated instructional strategies, manage diverse learner needs, and create inclusive classroom environments conducive to active engagement and meaningful learning (Tomlinson, 2020; Darling-Hammond et al., 2020). Rahimi et al. (2023) assert that teachers with subject-area confidence demonstrate higher levels of self-efficacy and are more likely to maintain positive classroom climates through proactive behavioural management strategies, clear instructional routines, and adaptive formative assessments. In contrast, mismatched teacher placements often undermine instructional delivery and classroom dynamics. Teachers assigned outside their areas of specialisation frequently report diminished self-efficacy, heightened stress, and difficulty in implementing evidence-based classroom management techniques (Opoku-Asare, Agyeman, & Boakye, 2023). These challenges not only inhibit student engagement but also foster environments where behavioural disruptions are more frequent and learning is less personalised. Adusei and Owusu (2021) found in their study of basic schools in Ghana that teachers deployed into unfamiliar subject areas struggled with planning coherent lessons, managing learner behaviour, and sustaining instructional momentum, leading to lower classroom productivity and increased reliance on rote methods. Furthermore, effective placement contributes significantly to the implementation of student-centred teaching practices, which rely heavily on teacher confidence in content and pedagogical versatility. In classrooms where placement is optimised, teachers are more likely to employ inquiry-based learning, collaborative projects, and formative feedback mechanisms that actively involve learners in the construction of knowledge (DeLuca, Coombs, & LaPointe-McEwan, 2019). Such instructional practices are linked to improved student motivation and academic performance, especially in diverse and inclusive settings (Miksza, 2020). Mismatched placements, by contrast, tend to produce rigid, teacher-centred practices, often marked by an overreliance on textbooks, lack of curricular innovation, and difficulty responding to diverse learner needs (Kumi-Yeboah & James, 2019). This not only compromises the quality of instruction but may also erode the relational trust between teacher and student, which is foundational to effective classroom management and learner engagement (Cornelius-White,

2007). Additionally, the systemic implications of teacher misplacement are far-reaching. Poor placement decisions can exacerbate teacher attrition, increase professional burnout, and weaken collaborative teaching cultures within schools. These outcomes, in turn, affect school-wide instructional coherence and undermine broader educational equity goals (Ingersoll, Merrill, & May, 2014). Thus, current research converges on the assertion that teacher placement is not merely an administrative task but a pedagogical intervention with substantial implications for classroom practice. Policies aimed at optimising teacher deployment must therefore move beyond considerations of availability and proximity to emphasise pedagogical alignment, teacher qualifications, and school context. In environments like Ghana's Wa Municipality, where teacher shortages often compel compromises in placement, strategic policy efforts must prioritise professional development, subject-specific support, and incentive systems to mitigate the negative consequences of placement mismatches and promote high-quality teaching.

Teacher motivation and job satisfaction

The strategic placement of teachers in roles aligned with their professional qualifications, interests, and subject expertise is a critical determinant of teacher job satisfaction and motivation. These psychosocial factors play a central role in sustaining instructional quality, reducing attrition, and ensuring consistency in student learning experiences. Extant literature underscores that congruence between teacher capacity and role assignment enhances both teacher well-being and educational outcomes (Ingersoll, 2018; Borman & Dowling, 2019). Job satisfaction among teachers is deeply intertwined with their perception of professional efficacy and alignment between assigned tasks and individual capabilities. When placements reflect teachers' subject-area competencies and pedagogical strengths, they are more likely to feel valued, supported, and capable of enacting high-impact teaching practices (Collie, Shapka, & Perry, 2012). Such alignment fosters a positive school climate, improves morale, and encourages sustained professional engagement, ultimately promoting a stable and experienced teaching workforce (Toropova, Myrberg, & Johansson, 2021). In contrast, poorly matched placements, such as assigning teachers to unfamiliar subjects or grade levels outside their training, are frequently associated with elevated stress, dissatisfaction, and burnout (Ampofo, Adjei, & Kwakye, 2020). Teachers in such circumstances often experience professional dissonance, as the incongruence between their expertise and instructional demands leads to reduced self-efficacy and diminished instructional enthusiasm. These outcomes have cascading effects: not only does instructional quality suffer, but the likelihood of attrition increases, particularly among early-career and under-supported teachers (Ronfeldt, Loeb, & Wyckoff, 2013). The consequences of high teacher turnover, often triggered by mismatched placements, extend beyond the individual educator to broader systemic challenges. Disruptions in teaching continuity can impede curriculum pacing, fragment student-teacher relationships, and limit institutional knowledge transfer within schools (Borman & Dowling, 2019). Research by Kraft, Papay, and Chi (2021) indicates that schools with stable teaching staff tend to perform better on student learning indicators, particularly in low-income settings, due to the cumulative benefits of experience and collaboration. Conversely, high turnover linked to dissatisfaction stemming from inappropriate placement exerts a destabilising effect on school cultures and student learning trajectories. Moreover, motivation, which is closely linked to placement appropriateness, mediates instructional innovation and sustained professional development. Motivated teachers are more likely to engage in reflective practice, adopt student-centred methodologies, and collaborate with peers (Wang, Hall, & Rahimi, 2015). Teacher motivation is enhanced when they perceive a fit between their professional identities and the roles, they perform in the school ecosystem (Day & Gu, 2010). Hence, strategic placement becomes not only a logistical concern but also a motivational intervention with direct implications for teacher performance and student outcomes. In the context of under-resourced educational systems, such as many basic schools in Ghana's Upper West Region, the misalignment of teacher placements, often due to logistical constraints and uneven teacher distribution can significantly exacerbate issues of low morale, absenteeism, and early exits from the profession (Ampofo et al., 2020; Acheampong & Fobih, 2022). These systemic patterns highlight the need for evidence-based deployment frameworks that account for teacher preferences, subject expertise, and school contextual needs. Ultimately, the literature reveals a compelling link between appropriate teacher placement, professional satisfaction, and instructional quality. For education systems to retain skilled educators and enhance student learning, placement policies must evolve from reactive allocation models to proactive, needs-based approaches grounded in teacher expertise and school priorities. Such reforms are critical for building resilient educational systems capable of advancing both teacher well-being and student achievement.

Challenges and equity in teacher placement

The unequal distribution of qualified teachers between urban and rural schools constitutes a long-standing structural challenge to educational equity, particularly in sub-Saharan Africa. A large body of empirical research demonstrates that urban schools are more likely to benefit from a concentration of experienced and credentialed teachers, whereas rural and remote schools often grapple with chronic shortages of qualified educators (Ampofo, Adjei, & Kwakye, 2020). This asymmetry in teacher allocation exacerbates educational disparities, as rural students are disproportionately denied access to high-quality instruction and stable learning environments.

The spatial distribution of teachers is influenced by a complex interplay of geographical, socio-economic, and infrastructural factors. Geographical isolation, limited housing, and underdeveloped social amenities in rural areas are key deterrents to teacher retention (Mulkeen, 2020). In many instances, rural postings are perceived by educators as punitive or career-limiting, particularly where opportunities for professional advancement, continued education, and supportive school leadership are absent (Akyeampong & Stephens, 2021). Consequently, teacher attrition rates remain disproportionately high in rural areas, contributing to staffing instability and instructional discontinuity.

While some national governments have attempted to address these disparities through incentive-based policies, their

impact has been uneven. For instance, Ghana has introduced measures such as rural housing allowances, hardship bonuses, and preferential promotion pathways to attract and retain teachers in underserved areas (Ampofo et al., 2020). However, these interventions often fall short of addressing the deeper systemic and professional concerns associated with rural teaching. Financial incentives alone are unlikely to offset the socio-cultural and infrastructural challenges faced by rural educators, particularly when broader systemic reforms are lacking (Mulkeen, 2020; Bennell & Akyeampong, 2007).

Compounding these logistical and professional barriers are the political dynamics that often shape teacher deployment. As highlighted by Asare and Yeboah (2022), in many educational systems, teacher placement decisions are influenced by political patronage, nepotism, and electoral cycles rather than pedagogical need or professional merit. Such politicisation undermines equitable resource allocation, resulting in sub-optimal matches between teacher qualifications and school needs. These distortions in deployment processes reduce transparency and weaken trust in the education system, particularly in communities that are persistently underserved.

The broader implications of inequitable teacher placement are far-reaching. The concentration of highly qualified teachers in urban areas correlates with consistently higher student achievement levels in those regions, thereby perpetuating existing educational and socio-economic inequalities (Mustapha, Mohammed, & Abdulai, 2022). Conversely, rural students often from low-income and marginalised backgrounds face compounded disadvantages, including larger class sizes, inadequate learning resources, and limited exposure to subject-matter specialists. This reinforces intergenerational cycles of educational deprivation and limits the transformative potential of schooling.

Addressing these inequities requires a paradigm shift in both policy design and implementation. First, equitable teacher deployment must be grounded in data-informed human resource planning that accounts for regional disparities in teacher supply and demand. Second, rural schools must be reimagined not as peripheral institutions but as critical nodes in the national education system, deserving of sustained investment in infrastructure, teacher support systems, and professional development (Akyeampong et al., 2013). Third, governance structures overseeing teacher placement must be insulated from political interference to ensure meritocratic and needs-based allocation (Asare & Yeboah, 2022).

Ultimately, achieving educational equity is contingent on the fair and strategic distribution of qualified teachers across all learning environments. When teacher placement aligns with the specific needs of schools and communities, regardless of location, it fosters improved student outcomes, teacher satisfaction, and system-wide efficiency. Conversely, entrenched inequities in placement will continue to undermine national and global goals for inclusive and quality education.

METHODOLOGY

Research area

The study was conducted in the Wa Municipality, situated in the Upper West Region of Ghana, a region facing unique challenges in teacher placement and quality education. The municipality serves as a representative setting to explore how teacher placement, qualifications, and regional educational policies affect teaching quality in basic schools.

Research design

The study used a cross-sectional survey design, a widely recognised approach for examining relationships, patterns, and associations among variables within a population at a single point in time (Creswell & Creswell, 2023). This design is ideal for capturing a snapshot of teacher behaviours, perceptions, and characteristics within the Wa Municipality, Upper West Region. It facilitates the exploration of correlations between key factors, such as teacher qualifications, placement, professional development, and perceptions of teaching effectiveness, providing valuable insights into their impact on the quality of education (Creswell & Plano Clark, 2018). A key advantage of the cross-sectional design is its ability to gather data from a large sample quickly and efficiently, avoiding the resource demands of longitudinal studies.

Population and sample size

The study population comprised 735 Basic School teachers, representing a significant portion of the teaching workforce within the educational system of the study area. The sample size for this study consisted of 432 teachers, selected from a total population of 735 Basic School teachers in Wa Municipality. We began by calculating the minimum sample size needed to ensure reliable and statistically valid results. Using Yamane's (1967) formula, with a 95% confidence level and a 5% margin of error, we determined that at least 259 teachers were needed from the total population of 735 Basic School teachers in the Wa Municipality. However, we decided to go beyond this minimum. To improve the accuracy of our findings, reduce the chances of statistical errors, and ensure that the results truly reflect the diversity of the teacher population, we increased the sample size to 432 teachers. This larger sample also allowed us to account for possible non-responses or incomplete questionnaires, thereby maintaining sufficient data for meaningful analysis.

Sampling technique

To ensure that our sample of 432 teachers accurately represented the entire population of 735 Basic School teachers across the 14 circuits in Wa Municipality, we employed a proportional sampling technique. This method guaranteed that each circuit was represented in the sample in accordance with its share of the total teacher population. We began by gathering the number of Basic School teachers in each of the 14 circuits from the District Education Office. For every circuit, we calculated its proportion of the total population of 735 teachers. We then multiplied this proportion by the total sample size of 432 to determine the number of teachers to sample from each circuit. By utilising the proportional sampling technique across all 14 circuits, we ensured that each teacher had an equal opportunity to be selected relative to their circuit's population size. This approach not only enhances fairness and equity in representation but also improves the generalizability and

validity of the study's findings for the entire population of Basic School teachers in Wa Municipality.

Instrumentation

The study used a four-point Likert scale questionnaire divided into two sections: closed-ended questions for quantitative data and open-ended questions for qualitative responses. The closed-ended questions employed a scale ranging from 1 = Strongly Disagree to 4 = Strongly Agree, enabling both statistical analysis and deeper insights into participants' views.

Data analysis

We used both quantitative and qualitative analysis to gain a comprehensive understanding of the study. For the quantitative data from structured questionnaires, we employed descriptive statistics percentages, means, and standard deviations, using SPSS version 27. This helped us identify patterns and trends in the responses. To ensure validity and reliability, the questionnaire was reviewed by experts, piloted with 30 teachers, and refined accordingly. We also calculated Cronbach's Alpha, with all values meeting the acceptable threshold of 0.70 or higher, confirming internal consistency. For the qualitative data, we used directed content analysis to interpret open-ended responses and field notes. This method allowed us to explore both predetermined themes and new ideas that emerged from the data. We ensured credibility through data triangulation and member checking, while an audit trail and peer debriefing supported the dependability and accuracy of our interpretations. These combined strategies helped us produce trustworthy and meaningful findings.

RESULTS AND DISCUSSION

Background characteristics of respondents.

The demographic profile of the 432 teachers surveyed in the Wa Municipality revealed several key characteristics. A significant majority of the respondents were male, accounting for 73.8% of the sample, while females represented only 26.2%, indicating a notable gender imbalance among the teaching workforce. In terms of age distribution, most teachers fell within the 30 to 49 years age range, comprising 91.9% of the sample, with only small proportions of younger teachers aged 20–29 (4.4%) and those nearing retirement aged 50–60 (3.7%). Regarding academic qualifications, the majority of teachers held at least a bachelor's degree, with 61.3% possessing a bachelor's and an additional 21.1% holding a master's degree, while 17.6% had a diploma in Basic Education or Early Childhood Education. This indicates a generally well-qualified teaching population. Lastly, when examining the rank distribution, the largest group of respondents was Assistant Directors II (34.7%), followed by Assistant Directors I (21.8%) and Principal Superintendents (19.2%), reflecting a workforce with a considerable proportion of mid- to upper-level professional ranks. Only a small fraction (3.0%) had attained the rank of Deputy Director, suggesting that few teachers are at the highest administrative levels within the Ghana Education Service. Overall, these demographic characteristics provide important context for understanding the experiences and perspectives of teachers in the Wa Municipality.

Research Question 1: How are teachers placed in the basic schools in the municipality?

The findings revealed a complex and somewhat inconsistent teacher placement system within the municipality that formally reflects Ghana's decentralised education structure but functionally retains significant centralised control. Most teachers (56.0%) identified the District or Municipal Education Office as the key authority responsible for their placement, consistent with Ghana's policy framework that empowers local offices to respond to contextual school needs (Ampofo et al., 2021). However, 22.2% of respondents reported that the Ghana Education Service (GES) Headquarters handled their placement, suggesting a continuing influence of central-level decision-making despite the intended devolution of authority (Mensah & Frempong, 2022). An additional 17.4% cited the Regional Education Office, while smaller numbers attributed placement responsibilities to headteachers (4.4%) or influences such as political or social connections (3.9%). These figures point to a fragmented structure with overlapping layers of authority and possible gaps in role clarity. In terms of placement criteria, a majority of teachers (57.6%) considered educational qualification the most important factor determining their deployment. This aligns with formal guidelines aimed at matching teacher expertise with instructional demands. Nonetheless, other factors were also reported as influential: student-teacher ratio (46.5%), school location (27.5%), and teacher rank. However, the application of these criteria appears inconsistent. For instance, although the student-teacher ratio is a key equity measure in teacher deployment policy (UNESCO, 2021), more than half of the respondents (53.5%) indicated it was not consistently considered in placement decisions. This inconsistency was particularly notable in rural schools, where teacher shortages are more severe (Akyeampong & Lussier, 2022). A major concern emerging from the data is the absence of teacher involvement in placement decisions. A significant 80.3% of teachers reported having no input in where they were posted, a finding echoed in several open-ended responses. Teachers expressed frustration over being excluded from decisions that directly affect their professional and personal lives. One teacher noted, "*I was assigned to a school without any prior consultation or consideration of my preferences*." Another remarked, "*Even though I raised concerns about the distance from my home, the authorities disregarded them*." These perspectives underscore the disempowering nature of the current system, where placement is perceived as a top-down imposition rather than a collaborative process. The sentiments shared by teachers reveal a mismatch between policy intentions and implementation. While decentralisation is meant to bring placement decisions closer to the realities of schools and communities, the centralised and opaque processes experienced by teachers undermine this goal. One respondent candidly stated, "*Placement decisions are entirely at the discretion of the education authorities; we have no say*," highlighting the limited role teachers play in matters concerning their deployment. These accounts reflect a growing disconnect between official placement frameworks

and the lived experiences of educators. This situation may negatively affect teacher morale, professional commitment, and retention, especially in underserved or hard-to-reach areas. Although only 3.9% of teachers reported that political or social influence played a role in their placement, this minority cannot be overlooked. As suggested by Nyamekye et al. (2020), even minimal incidences of favouritism or nepotism can erode trust in the system and create perceptions of unfairness that ripple across the broader teaching workforce. The anecdotal evidence from teachers confirms that where such non-meritocratic factors are perceived, they diminish engagement and weaken institutional credibility. Overall, the data reveal that teacher placement in the municipality is governed by a multi-tiered structure where responsibilities are blurred and processes lack transparency. Despite the stated decentralisation goals, placement decisions remain largely top-down, with limited teacher voice and inconsistent application of criteria such as qualifications, location, and student-teacher ratios. The current system, therefore, falls short of meeting the standards of equity, inclusion, and responsiveness envisioned under SDG 4. Addressing these shortcomings will require clearer role demarcation, more robust monitoring of placement criteria, and, above all, greater involvement of teachers in the decision-making process.

Table 1: Placement of Teachers in Basic Schools in Wa Municipality

	Frequency	Percent (%)
Teachers' views on who places teachers at the Basic Schools		
District/Municipal Education Office	242	56.0
Regional Education Office	75	17.4
GES Headquarters	96	22.2
Teachers' views on the factors that influence teacher placement.		
Educational qualifications	249	57.6
Rank of Teacher	47	10.9
Location	119	27.5
Other factors	17	3.9
Educational qualifications	249	57.6
Teachers' involvement in their placement.		
Yes	85	19.7
No	347	80.3
Placement of teachers in schools based on the student-teacher ratio		
Yes	201	46.5
No	231	53.5

Research Question 2: What subjects often experience misplacement?

Teacher misplacement is a persistent issue that significantly affects educational quality in the Wa Municipality. Data from the study revealed that misplacement is most prevalent among Social Studies teachers, who make up 38.2% of misplaced staff. This is followed by teachers of Religious and Moral Education (RME) at 17.6%, Computing at 13.7%, and Mathematics at 9.7%. Other core subjects, such as English Language, Science, and Ghanaian Language, had lower but still notable misplacement rates, ranging from 5.1% to 9.5%. These statistics indicated a systemic problem in aligning teacher expertise with their instructional assignments across different subject areas. The data also highlighted a significant variation in the extent of misplacement between primary schools and Junior High Schools (JHS) within the municipality. Teachers had consistently reported that misplacement is more pronounced at the primary level. As one teacher explained, *"In my years of teaching, I have noticed that teachers at the primary school level are more misplaced than those at the JHS" (Teacher 1)*. Another teacher echoed this sentiment, stating, *"In my view, primary*

schools have more teachers teaching the wrong subjects than those in Junior High Schools" (Teacher 15). These observations aligned with broader patterns identified in the survey data, which indicated that misplacement challenges are concentrated in the lower basic education tier. This discrepancy between primary and JHS levels may partly result from the generalist nature of teacher preparation at the primary level. Teachers in these schools are often trained to handle multiple subjects, which can lead to frequent mismatches between their training and the specific subjects they are assigned to teach. Mensah (2021) argues that such generalist training inadequately prepares teachers for delivering specialised content, especially in technical subjects like Computing or Mathematics. The findings of this study confirm these concerns, aligning with the work of Ampofo et al. (2020), who found that teacher misplacement at the primary level often leads to deficiencies in content delivery and diminished instructional quality.

In contrast, the study found that teacher placements at the JHS level are generally more aligned with subject specialisation. Teachers assigned to JHS are typically matched with their areas of academic training and strength, which reduces the likelihood of misplacement. This structured approach is supported by the findings of Osei and Amankwah (2021), who reported that subject-specific placements at the JHS level resulted in improved instructional outcomes and increased teacher effectiveness. The stronger alignment of the JHS system with teachers' qualifications supports higher instructional quality and ultimately leads to better student learning. A key factor contributing to misplacement, particularly at the primary level, is the shortage of subject-specialist teachers, especially in rural schools. Administrators often resort to placing teachers based on availability rather than subject expertise, leading to assignments that prioritise logistical convenience over instructional competence (Ampofo et al., 2020). Additionally, a lack of accurate and up-to-date data on teacher qualifications in centralised placement systems results in uninformed and sometimes arbitrary deployment decisions (Odoom & Ayebi-Arthur, 2022). These systemic inefficiencies underscore the need for improved teacher data management and a more needs-based approach to placement. Furthermore, the placement process at the basic school level is frequently influenced by administrative discretion rather than pedagogical merit. The study supported the conclusions of Adusei and Owusu (2021), who emphasise that this tendency undermines teacher motivation and instructional efficiency. The consequences are particularly severe in primary education, where foundational skills are developed. Poor alignment between subject teachers and their teaching assignments can result in long-term academic deficits for students (Akyeampong et al., 2018).

To conclude, the study identified teacher misplacement, particularly at the primary level, as a critical challenge affecting the delivery of quality education in Wa Municipality. While JHS placements showed more effective alignment with teacher qualifications, the primary level suffers from systemic misalignments caused by a combination of generalist teacher preparation, shortages of subject specialists, and non-pedagogical placement decisions. Addressing these issues through improved teacher training, better data systems, and more transparent, competency-based placement policies is essential for strengthening foundational education and achieving quality and equity in education.

Table 2: Subjects that often experience misplacement

Category of subjects	Frequency	Percent
Mathematics	42	9.7
English Language	27	6.3
Social Studies	165	38.2
Science	22	5.1
Religious and Moral Education	76	17.6
Ghanaian Language	41	9.5
Computing	59	13.7
Total	432	100.0

Research Question 3: How does misplacement affect the teaching and learning quality?

The results indicated that a majority of teachers are not content with their subject assignments. With a mean score of 2.159 (below the criterion mean of 2.5), most teachers disagreed or strongly disagreed when asked if they were content with their assigned subjects. Similarly, enthusiasm levels are low (mean of 2.287 and 2.372 across related questions), suggesting a lack of intrinsic motivation. This misalignment between teachers' expertise and their subject assignments can lead to dissatisfaction and reduced classroom performance (Adusei & Owusu, 2021).

Many teachers expressed feeling upset and stressed due to their assigned subjects. The mean response for being upset was 2.273, indicating moderate agreement that subject misplacement negatively affects their emotional state. Additionally, teachers reported feeling nervous and stressed when preparing lessons (mean of 2.270). This emotional strain can contribute to burnout and reduced teaching efficacy (Rahimi et al., 2023). According to Ampofo et al. (2020), emotional well-being is crucial for maintaining high teaching standards, as stressed teachers often struggle to engage students effectively.

Teachers' confidence in handling assigned subjects also scored below the criterion mean (2.189). Confidence is a critical factor in effective teaching, and a lack of it can undermine instructional quality. Misplaced teachers may face challenges in content delivery and assessment, which affect student learning outcomes (Mensah, 2021). The lower confidence levels reported align with findings from Osei and Amankwah (2021), who noted that teachers placed outside their specialisation often experience professional insecurity, impacting their pedagogical effectiveness.

Interestingly, teachers demonstrated better emotional regulation in class (mean of 1.817 for controlling irritations

and anger). Despite their discontent and stress, many teachers manage to maintain professionalism, which is a positive indicator of their commitment to teaching. However, this self-regulation may mask underlying dissatisfaction that could affect long-term retention and performance (Timperley et al., 2023).

Teachers who lack contentment and enthusiasm are less likely to deliver engaging lessons, directly affecting student achievement (Akyeampong et al., 2018). Continued misplacement can lead to increased turnover rates, as dissatisfied teachers may seek other opportunities where their skills are better utilised (Gyampo, 2021). The emotional and professional responses of teachers in Wa Municipality underscore the importance of aligning subject assignments with teacher expertise.

The data from this study revealed that differentiated instruction is rarely employed by teachers in Wa Municipality, as evidenced by a mean score of 1.81 for assigning tasks based on student abilities and 2.04 for giving advanced students extra tasks. This finding confirms existing literature, such as Mensah (2022), which attributes limited use of differentiated instruction in similar contexts to challenges such as large class sizes, lack of training, and insufficient resources. Furthermore, this study corroborates Tomlinson's (2014) assertion that differentiated instruction is vital for addressing diverse learning needs and promoting equity in the classroom. However, the infrequent application of this approach implies that systemic barriers continue to undermine its implementation, thereby hindering inclusive education practices.

Teachers' moderate focus on presenting and reinforcing proven concepts, with mean scores of 1.82 and 2.08, respectively, aligns with Hattie's (2009) argument that effective reinforcement is critical for enhancing understanding and retention. However, the relatively low scores suggest that concept reinforcement in these classrooms may lack depth or consistency, likely due to curriculum constraints or inadequate pedagogical support. These findings partially confirm Hattie's emphasis on the importance of varied instructional strategies while highlighting gaps in their application in practice.

Similarly, the moderate implementation of practices that encouraged critical thinking, such as asking students to justify answers (mean score of 1.96) or discover their own mistakes (2.12), supports Brookfield's (2017) assertion that fostering critical thinking promotes deeper learning and problem-solving skills. However, the data suggest these practices are inconsistently applied, confirming Rahimi and Alavi's (2021) argument that the absence of a supportive classroom environment and limited teacher training can hinder the development of higher-order thinking skills. This highlights a significant gap in teacher preparedness for cultivating critical thinking among students.

The data also showed moderate levels of fostering positive teacher-student relationships (mean of 1.95) and establishing clear classroom rules (1.99). These findings support Marzano and Marzano's (2003) emphasis on the importance of positive teacher-student relationships in creating an effective learning environment. However, the relatively low scores indicate a need for improvement in building trust and maintaining behavioural expectations, highlighting the role of mentorship programs and peer coaching as suggested by Osei (2020). Additionally, the low emphasis on maintaining complete silence (mean of 1.92) reflects a flexible classroom environment, which, if managed well, could enhance student engagement.

The low mean score of 1.80 for noticing when students are struggling highlights a significant gap in teacher awareness and responsiveness, a finding that confirms Darling-Hammond's (2010) argument about the importance of timely intervention to prevent learning gaps. This underscores the need for professional development focused on formative assessment and student monitoring, consistent with Adusei and Owusu's (2021) recommendation for targeted teacher training to improve instructional quality.

In conclusion, this study validated much of the existing research on the challenges and limitations of current teaching methods while offering new insights into the specific barriers faced in the Wa Municipality. Tackling these challenges requires targeted professional development, resource allocation, and strategies to promote critical thinking and differentiated instruction, which are essential for improving educational results.

Table 3: Teachers' emotional and professional responses to subject assignment

Teachers' Emotional and Professional Responses to Subject Assignment	Strongly Agreed	Agreed	Disagreed	Strongly Disagreed	Mean	Std. Deviation
I am content with the subject I have been placed to teach.	33	99	204	96	2.159	.913
I am enthusiastic about the subject I have been assigned to teach.	55	95	201	81	2.287	.856
I am enthusiastic about the subject I have been assigned to teach.	80	100	153	99	2.372	.914

I am upset as a result of the subject I have been assigned to teach.	65	95	165	107	2.273	1.031
I am proud of the subject I have been assigned to teach.	68	73	203	88	2.280	.998
I feel nervous and stressed when preparing to teach or assess the subject I have been assigned to teach.	34	152	143	103	2.270	.962
I feel confident about my ability to handle the content, assessment, and learning resources of the subject you have been assigned to teach.	69	49	209	105	2.189	.980
I have controlled my irritations and anger in class when teaching your assigned subject.	48	57	95	232	1.817	1.040
Mean of Means					**2.21**	**0.961**
Criterion Mean		**2.5**				

Table 4: Teacher approaches to instruction and classroom dynamics

Teacher Approaches to Instruction and Classroom Dynamics.	**Strongly Agreed**	**Agreed**	**Disagreed**	**Strongly Disagreed**	**Mean**	**Std. Dev.**
I give students assignments of different levels of difficulty based on their abilities	22	55	175	180	1.81	.845
I see it as my job in the classroom to present and teach proven concepts	24	49	185	174	1.82	1.821
I discuss general and current topics with my students even outside my lesson plan	10	114	164	144	1.97	1.976
In my classes, the types of tasks are repeated to solidify what my students have learned	40	80	188	124	2.08	.915
In my class, the students should find out for themselves why something is wrong	42	103	156	131	2.12	.957
I like to give the faster students extra tasks to challenge them.	27	121	130	154	2.04	.941
I often ask students to justify their answers with arguments	3	115	179	135	1.96	.779
Everyone in my class knows the “rules of the game”	13	93	203	123	1.99	.788
I summarise the material so that my students will remember it better	17	45	190	180	1.76	.790
I think absolute silence in the classroom is important	24	86	155	167	1.92	.896

I quickly notice when a student is having trouble in class	10	48	220	154	1.80	.722
There's a friendly, trusting relationship between me and my students	38	51	172	171	1.95	1.635
Mean of Means					**1.94**	**1.088**
Criterion Mean		**2.5**				

CONCLUSIONS AND IMPLICATIONS OF THE STUDY

The study emphasised the vital role of proper teacher placement in providing high-quality education, which is closely connected to Sustainable Development Goal 4 (SDG 4), aimed at ensuring inclusive and equitable education for everyone. When teachers are assigned to roles that do not match their qualifications or expertise, it results in lower-quality teaching and poor academic performance among students. This mismatch is especially noticeable in rural areas, like Wa Municipality in Ghana, where the shortage of qualified teachers worsens educational inequalities.

Improper teacher placement also harms teacher morale and motivation. Teachers who are not assigned to roles that match their training may feel job dissatisfaction, leading to higher turnover rates, which further destabilises the teaching workforce. Additionally, professional development programs might not be as effective if teachers are not in positions that suit their expertise. Teachers in such roles face considerable challenges in implementing the curriculum effectively, especially in basic schools where foundational skills need to be built across subjects.

In line with SDG 4, this study emphasises the need for targeted teacher placement strategies that align teachers' qualifications with school needs to enhance teaching quality, reduce turnover, and improve student outcomes. Addressing misplacement and ensuring that teachers are equipped to teach in areas where they are most qualified is essential for achieving equitable and quality education for all students.

LIMITATIONS

The study focused on the Wa Municipality in Ghana's Upper West Region, which may limit its generalizability to other regions or educational contexts. Teacher placement dynamics can vary widely between urban and rural areas or across regions with different socio-economic and political conditions.

The study used a cross-sectional design, so it may not have captured long-term impacts on student achievement and teacher performance. Longitudinal studies would be needed to observe these effects over time.

AREAS OF FURTHER RESEARCH

Further research could explore teacher placement and its impact on educational quality in other regions of Ghana or across different countries. Comparative studies could help identify region-specific challenges and best practices that can be adapted to improve teacher placement policies at a national or global level.

Additionally, future studies could employ longitudinal designs to investigate how teacher placement affects teacher retention, job satisfaction, and student achievement over time. This would provide deeper insights into the long-term benefits or drawbacks of strategic teacher placement.

DECLARATIONS

The authors declare that the research was conducted without any commercial or financial relationships that could potentially create a conflict of interest.

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT COFERENCE PROCEEDINGS

Policy formulation and implementation: Prospects and challenges of Ghana's free Senior High School policy in Lawra, Upper West Region

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A B S T R A C T

Most studies on the Free Senior High School (SHS) policy in Ghana exclude Northern Ghana (Upper West, Upper East, and Northern Region), which benefited from the Northern scholarship before the Free SHS policy. This study aimed to conduct an in-depth analysis of the policy's key 'pillars' of eliminating cost barriers, expanding infrastructure, improving quality and equity, and developing employable skills, to understand contextual implementation prospects, realities, and challenges. We adopted a case study design that enabled semi-structured interviews, focus group discussions, and observations to collect qualitative data for analysis. Three senior high schools were purposively sampled in the Lawra Municipality of Ghana. We interviewed 200 respondents, including heads of schools and teachers (implementers), as well as parents and students (beneficiaries) of the policy, respectively. The policy's implementation resulted in removing cost barriers for parents and a corresponding increase in enrolment. However, it was found that the implementation was done without sufficient consultation with stakeholders, and intractable infrastructure deficits and financial difficulties. Given this, we recommend reviewing the policy where all policy aspects and stakeholder engagement are given equal priority. The government should adequately support the implementation of the Free SHS Policy with funds.

INTRODUCTION

Education is a fundamental human right and a necessity for survival (Boakye, 2019). Due to its impact on a nation's socio-economic growth and development, governments and international organisations consider education a human right, not a privilege. Among such declarations are the 1948 UN Declaration of Human Rights, the 1959 Declaration of the Rights of the Child, the 1966 International Covenant on Economic, Social and Cultural Rights of the Child, and the Sustainable Development Goals (SDGs), goal 4, which aims to ensure inclusive and equitable quality education and lifelong learning opportunities for all by 2030 (United Nations, 2016). These declarations made it mandatory for member countries to implement programmes and policies towards achieving the right to education.

Education is essential to building human capital, reducing poverty and inequality, and promoting social mobility (Addo, 2019). Many countries have benefited significantly from the contribution of educated elites to their country's developmental agenda and have instituted measures to reduce illiteracy and school dropout rates to achieve the rights to education and development (Asumadu, 2019). For this reason, the United Nations mandates member countries to take practical steps to remove all barriers to access to education. Thus, developing countries, including Ghana, have purposefully evolved and implemented policies to improve their educational systems (Addo, 2019, p. 77). For instance, Article 38, Clause 2 of Ghana's 1992 Constitution mandates the "provision of free, compulsory, and universal basic education" (p. 34). Consequently, the Government of Ghana implemented free Compulsory Basic Education (fCUBE) in 1995, which covered eleven years of universal basic education, including two years of kindergarten, six years of primary, and three years of junior high school (Nurudeen et al., 2018). Subsequently, this was complemented by the introduction of capitation grants, school feeding, free uniforms, and exercise book policies to increase enrolment, attendance, and retention of pupils. According to Manu (2020), countries that have made senior high school (SHS)

education free in Africa include Seychelles, Mauritius, Uganda, Kenya, and, recently, Ghana. According to Kyei-Nuamah and Larbi (2022), key reasons for the Government's introduction of the Free Senior High School Policy (FSHSP) in the 2017/2018 Academic Year were to achieve access and quality. It was further proposed that all financial barriers parents and guardians encounter in getting their wards through SHS be removed. The Upper West Region benefited from the Northern Scholarship, a form of free education, before the nationwide introduction of the Free SHS policy. However, scholars have yet to assess the prospects and implementation realities of the Senior High School policy in the context of the Upper West Region. The questions to be asked are: how different is the FSHS policy from the Northern scholarship that the Upper West Region benefited from? Was the introduction of the Northern scholarship unable to increase enrolments in schools and reduce the financial burden on parents? This paper aims to gain an understanding of the prospects and challenges of Ghana's Free Senior High School Policy in the context of the Lawra Municipality in the Upper West Region.

The paper is organised as follows: Section 2 reviews literature on the politics of free senior high school policy in Ghana and the theoretical framework. Section 3 presents the methods. Section 4 provides the results. Section 5 offers a reflection of the findings for policy implications. Section 6 provides the conclusion of the study.

LITERATURE REVIEW

The Politics of the Free Senior High School Policy (FSHSP) in Ghana

Wealthy nations like the United States of America (USA) and Russia introduced educational policies focusing on large-scale expansion, universal coverage, and unrestricted access to secondary education. This significant growth in the United States took place 40–50 years before a similar expansion of the European education system (Goldin, 2001). In developed countries, the state partially or fully finances secondary education. Section 7 of the 1994 Act of the United Kingdom requires the government to provide full funding for education through secondary schools. The Japanese government's financial strategies for education include provisions for free instruction up to secondary level, making it compulsory for school-age children to receive government-funded education (Nyaga, 2005). Similarly, the US government can levy taxes and collect funds to support education thanks to the Welfare Clause, Article 1, Section 8 (Nyaga, 2005). In 2000, China explored and abolished the education tax and prohibited schools from charging farmers additional fees to implement tax reforms in rural communities.

Despite the continent's vulnerability, several African nations, including Kenya, Uganda, and Tanzania, adopted a single type of Free Secondary Education (FSE) with varying success. To increase enrolment, complete primary education by 136%— an 80% decrease in the primary to secondary school transition rate— and to meet President Yoweri Museveni's 2006 campaign pledge of free secondary education for all citizens, Uganda introduced the Fee-Free Secondary Education policy in 2007— a first for a Sub-Saharan African country (Essuman, 2018; Werner, 2011). Similar to Ghana's Free Senior High School Policy, those in Uganda, Kenya, and Tanzania also aim to enhance quality and expand access, particularly for students from low-income families, and are implemented as national government election-year commitments. The distinction is that Tanzanian, Kenyan, and Ugandan policies are partial, while Ghana's is entirely free.

Article 25(1)(b) of Ghana's 1992 Constitution stipulates that "secondary education in its different forms shall be made generally available and accessible to all by every appropriate means, and in particular, by the progressive introduction of free education" (Republic of Ghana, 1992). The codification of the introduction of progressively free education from primary to senior high school in the 1992 Constitution was not holistic, but rather a piecemeal approach. This left successive governments with discretion in implementing this constitutional requirement (Manu, 2020). Mention can be made of the rolling out of redistributive policies, such as the Northern Scholarship for students from Northern Ghana and the Ghana Cocoa Marketing Board scholarship (MOE, 2018b). These interventions were geared towards fulfilling this progressive free SHS education. As Nurudeen et al. (2018) explain, in 2013, the Government of the National Democratic Congress (NDC) initiated the construction of 200 new community day senior high schools and completed 123, with the remaining at different levels of completion at the time the government was exiting power in 2016. In the 2015/16 academic year, the NDC Government introduced a Progressively Free Senior High School Policy (PFSHSP) to absorb some expenses of day students in public SHSs (Ministry of Finance, 2016). This involved providing partial financial support to day students to cover fees for examination, entertainment, library, Students Representative Council (SRC), sports, culture, and co-curricular fees for 320,488-day students in public Senior High Schools. This was extended to cover 120,000 students in boarding SHSs in the 2015/16 academic year (Tamanja & Pajibo, 2018). The intent was to gradually absorb the fees and eventually provide free SHS education. The implementation of the PFSHSP was also in response to Article 25(1) (b) of the 1992 Constitution of Ghana, which absorbed all recurrent fees in SHSs and was further expanded due to an increase in enrolment from the 2007/08 to 2015/16 academic year. Upon its introduction, many students who were placed could not be enrolled due to financial problems (MOE, 2018a), as shown in Figure 1.

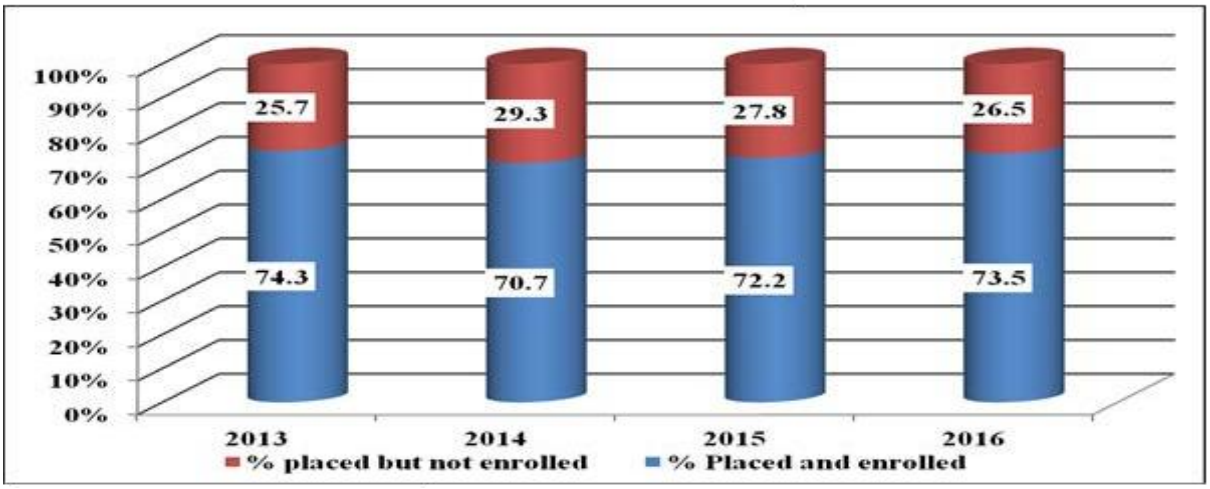

Figure 1: 2013 to 2016 enrolment trend in SHS

Source: MOE (2018a)

Figure 1 indicates 25.7% candidates who were placed, but could not enroll in 2013 SHSs, which increased to 29.3% in 2014. In 2016, there was a decline in percentage (26.5%) due to issues like access, cost of transportation, and the ability of affected students to afford the prospectus needed for their SHS education (MoE, 2018a). Addo (2019) upheld that this enrolment trend for basic education certificate examination (BECE) candidates eligible for enrolment into SHSs does affect their placement. This prompted the government intervention with the FSHSP to curb this situation. The New Patriotic Party (NPP) implemented the FSHSP in 2017 as a replacement for the previous government's progressive free senior high policy (MoF, 2018). This policy offers universal access to SHS education to all Ghanaian students. The expenses/fees it absorbed include tuition, library, boarding, science laboratory, examination, utility, meals for both boarders and day students, Parents Teachers Association (PTA), and free textbooks for all at the SHS level (MoF, 2019; Nurudeen et al., 2018).

Alongside the implementation of the FSHSP, there was a promise to raise the quality of education from basic to SHS level by refining basic education to cover SHS and to include courses like agricultural science and vocational courses. Implementing this policy relieved parents and guardians by removing all Ghana Education Service (GES) approved fees and providing free uniforms, textbooks, and Physical Education (P.E) vests and exercise books (MoF, 2019). This implies that students were admitted or enrolled into SHSs without paying school fees, alongside the purchase of teaching and learning materials.

Characteristics and prospects of the Free Senior High School Policy (FSHSP)

The Free SHS policy implemented in 2017, the study's backdrop, aims to protect vulnerable populations from financial barriers to education, ensure equitable access, and make education free for all citizens. The policy's objectives include guaranteeing equity, improving quality, lowering costs, improving infrastructure, and reforming TVET institutions. Ghanaian youth and young adults in public second-cycle institutions can access the policy, which covers tuition and boarding costs for three years, providing infrastructure and learning materials. This makes SHS education accessible and free to all citizens, regardless of financial status. The government acknowledges the policy's significant contribution to making SHS education free. The government plans to absorb GES-approved fees, improve infrastructure, and enhance academic quality and equity, reducing rural-urban migration, dropout rates, and congestion.

The policy has benefited the Ghanaian populace, parents, students, and especially the rural poor. It has increased accessibility to SHS education, reduced fees, provided books and food, and other educational services. Parents now have their wards attending free education, making it a desirable policy. Enrolment in SHS increased substantially from 17% in 2017 to 31% in 2018, as shown in Figure 2.

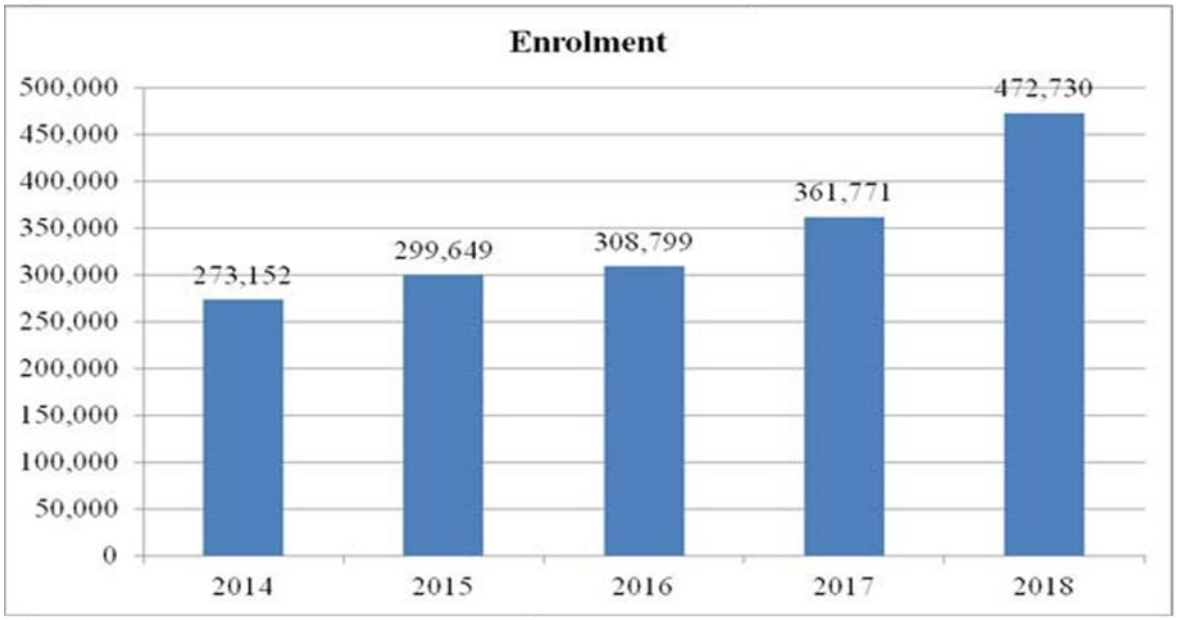

Figure 2: 2014 to 2018 enrolment trend in SHSs

Source: Adopted from Ministry of Education (2018)

Theoretical framework

Figure 3 illustrates Gerston's (1992) theory of public policy implementation, which served as the theoretical framework for this study.

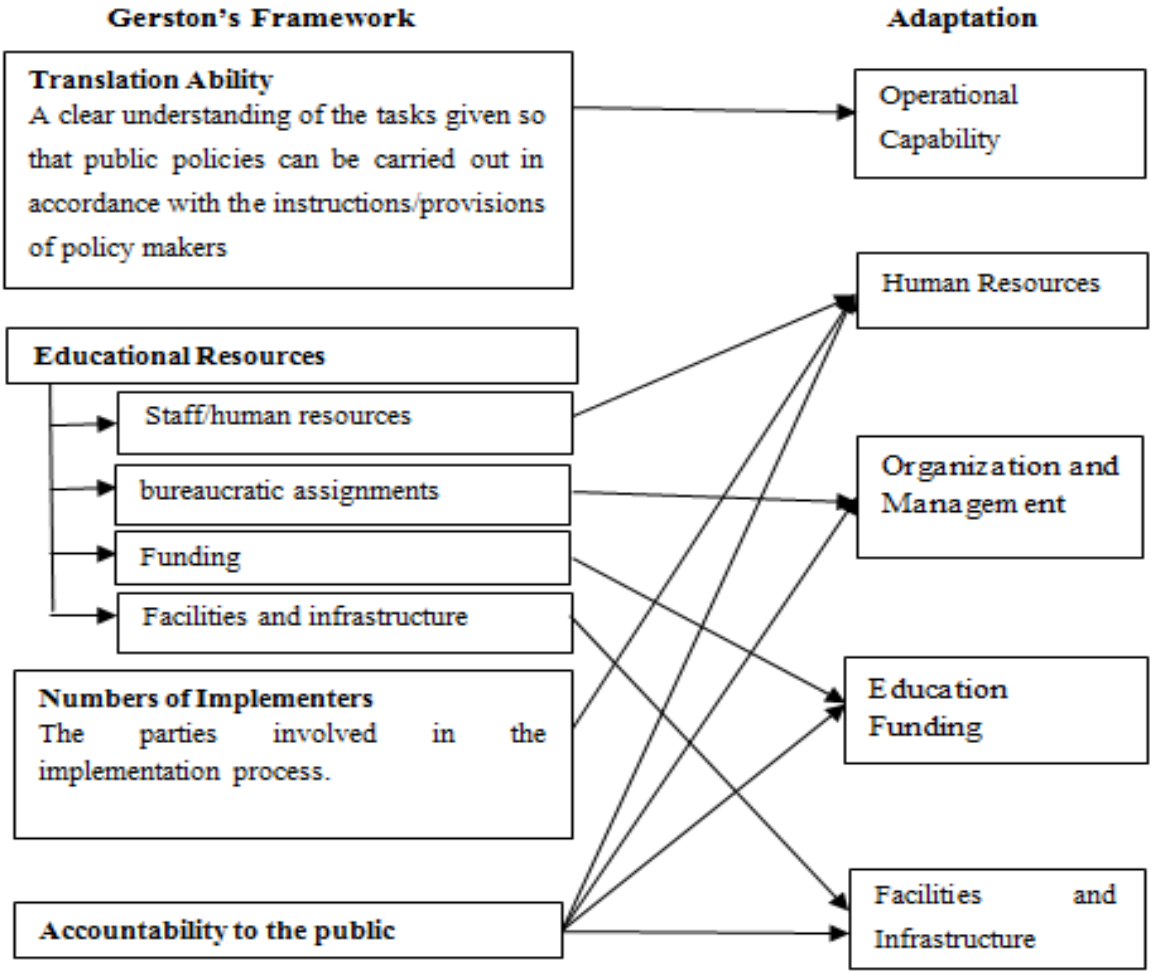

Figure 3: Framework for Educational Policy Implementation
Source: Adopted from Muhdi (2019: 2725)

Gerston (1992) emphasises four key factors for successful policy implementation: translation ability, resources, limited players, and accountability. Translation ability involves executing policy ideas and decisions. Educational resources include personnel, finances, and logistics. Limited players refer to the few institutions and personnel mandated to implement the policy, reducing competition and duplication. Accountability ensures probity and accountability in the implementation process. Gerston's theory is most suitable for implementing education policy, like the FSHSP, as it requires resources and infrastructure to achieve policy goals without straining existing structures. Imbalances in implementer involvement and government commitment lead to inefficiencies in policy implementation.

METHODS

The study used a case study design for an in-depth assessment of the FSHSP. This design is suitable for investigating the phenomenon and has advantages like lower cost, shorter time, and extracting superior concepts (Witell et al., 2020). The study used a purposive sample of three beneficiary Public Senior High Schools from three communities in the Lawra Municipality. The total participants were 200: 100 students, 50 teachers/Headmasters (including CHASS executives at the regional level), and 50 parents. Slovin's formula determined the number of each category.

Table 1: Sample Distribution

Details of Categories Sampled			
School	Students	Teachers/Headmasters	Parents
Birifo SHS	20	10	10
Eremon SHTS	30	15	15
Lawra SHS	50	25	25
Total	100	50	50

SHS: Senior High School SHTS: Senior High Technical School

Source: Field Survey (2022)

Primary data was obtained from students, parents, and teachers through focus group discussions and interview guides. Six focus group discussions were held with students from three selected SHSs. Interviews were conducted with parents and teachers using an interview guide. An observation checklist was used to identify challenges during FSHSP implementation. Field notes and audio recordings were taken and transcribed multiple times by each researcher. The data was analysed thematically to highlight patterns. Content analysis was used for secondary data analysis (Lune & Berg, 2017). Repeated checks were conducted with key informants and focus group discussants to ensure reliability. The findings reflected the participants' opinions, as the researchers had no personal interest in the outcomes.

RESULTS

The FSHSP aimed to reduce parental financial burden by eliminating fees for SHS enrolment. Nearly 98% of the 50 parents interviewed agreed that government funding enabled their children to enrol in SHS. Some in-depth interviews revealed how government funding facilitated their children's enrolment in SHSs.

> *"The Free SHS policy has helped my ward enrol in boarding school. As a peasant farmer, I couldn't afford a mattress, uniforms, or other fees, but the policy made enrolment more affordable for me".*

> *"With the introduction of the Free SHS policy, I purchased only the items outlined in the prospectus, and my ward was enrolled".*

Parents' financial burden is noticed to have decreased, leading to improved access to SHS education. While some rejected the idea of paying to enrol their children, others felt they had to buy essentials like mattresses, uniforms, and tracksuits. Some parents also had to pay for elective textbooks. However, the burden was reduced for parents in the Lawra Municipality, which provided free uniforms, books, house vests, school clothes, and abolished the Parent Association levies.

Some parents capture these in the following words:

> *"I did not pay school fees, but bought elective textbooks, a table and a chair, and a mattress to enrol my ward."*

Another responded,

> *"Though I bought elective textbooks and furniture, the introduction of the Free SHS policy has cancelled PTA dues and school fees, thereby reducing my financial burdens."*

Some students supported the parents' reports, while others gave mixed responses, suggesting ways to address gaps and whether nonpayment of fees alone is enough to ensure equitable access to SHS education.

> *If I had to pay fees, I couldn't attend school. It was difficult for my parents to obtain my complete prospectus and certain foods, like gari".*

> *"If there had been fees, I would have attended school. My folks have the means. My parents are government employees and business owners, so, they have the money to cover my tuition and purchase all the books I'll need".*

"I was admitted as a day student far from my home District, and my parents paid GH¢750.00 for rent to accommodate me. They equally paid for my feeding and beddings".

The inconsistent replies suggest a 'target financing' gap in policy creation and execution. The policy's objective was to reduce resource allocation inequality, not to target the poor and marginalised.

Another prospect was increased enrolment. The study found a significant increase in enrolment across the country from 2017 to 2021, as shown in Table 2 and Figure 4.

Table 2: Enrolment Trends from 2015/2016 to 2021/2022 Academic Years

Academic Year	Registered	Placed	Enrolled	Placed but not Enrolled	%age Placed but not Enrolled
2015/16	440,469	415,012	299,649	115,649	**27.80%**
2016/17	461,009	420,135	308,799	111,336	**26.50%**
2017/18	468,060	424,224	361,771	62,453	**14.70%**
2018/19	521,811	486,641	433,819	52,822	**10.90%**
2019/20	512,083	459,912	404,856	55,056	**11.90%**
2020/21	533,693	494,530	405,000	89,530	**19.40%**
2021/22	555,353	*Admissions were still in progress at the time of the study*			

Source: MOE (2018a)

Table 2 shows that whereas the percentage of students placed nationally, but not enrolled, decreased considerably from 27.80% to 11.40% from 2015/2016 to 2019/2020 academic years, the percentage of those who were placed and enrolled also increased significantly nationwide since the introduction of the FSHSP in Ghana (see Figure 4).

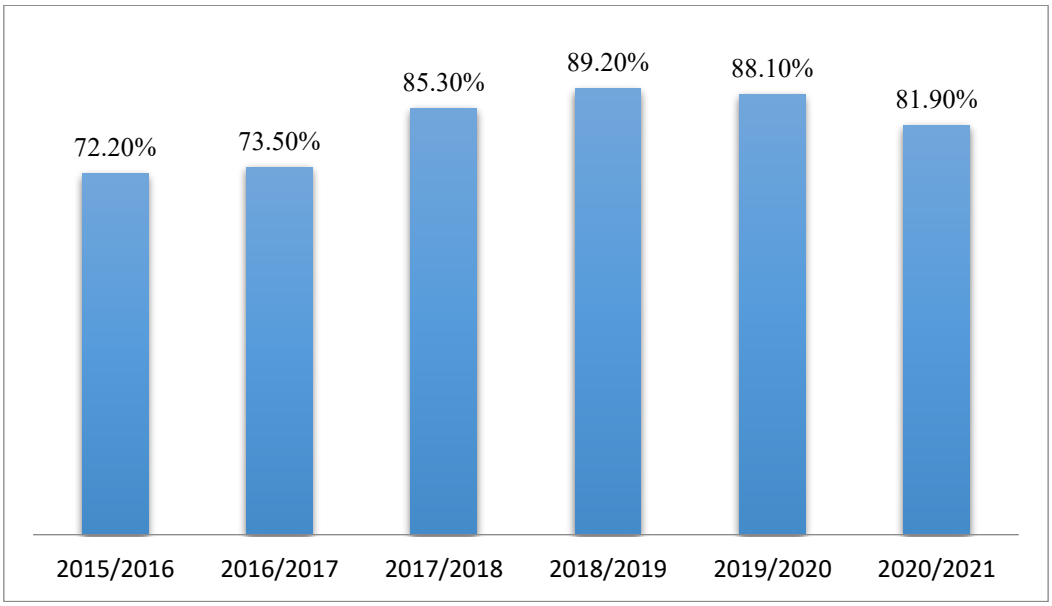

Figure 4: Percentage of enrolment from 2015/2016 to 2020/2021 Academic Year
Source: MOE (2018b)

From Figure 4, enrolment rose from 72.20% in the 2015/2016 academic year to 89.20% in the 2018/2019 academic year, but slightly declined by 1.00% in the 2019/2020 academic year. It further fell to 81.90% in the 2020/2021 academic year. Nonetheless, one can still conclude that enrolment has an overall increase compared to the period before the FSHSP (MoE, 2018a; MoE, 2018b). This is supported by statistics from the Municipal Education Office (MEO), Lawra. Specifically, the enrolment of students into SHSs in the Lawra Municipality increased from 1,080 in the 2017/2018 academic year to 2,497 students in the 2018/2019 academic year (MEO, 2022).

Stakeholders interviewed had this to say:

"Since the government pays for tuition and boarding, the programme has allowed more JHS graduates to pursue higher education at the SHS level. The enrolment of students in senior high schools was predicted to rise before the policy's introduction."

"The introduction of the Free SHS policy has led to a tremendous increase in enrolment in SHS, but with a great demand on infrastructural facilities, classrooms, and dormitories, including enhancing efficient teaching and learning."

"The increase in enrolment in schools due to the introduction of the policy has brought numerous challenges upon the government, ranging from the recruitment of qualified teachers to handle the large

number enrolled, provision of teaching and learning materials, to providing adequate funding for schools and feeding."

Educators confirmed an increase in enrolment, leading to increased demand for boarding and congestion in boarding schools. Some schools converted classrooms into boarding facilities, reducing classroom spaces.

Respondents on teacher recruitment intimated that:

"Many qualified teachers await posting to schools where they are needed, but the recent recruiting process placed untrained individuals in subjects unrelated to their degrees.".

"Teachers are being posted to schools to teach subjects they didn't study at university. My school had political science, basic education, and physical education graduates teaching maths, English, and social studies. What results can we expect from students after senior high school?"

Teacher recruitment is crucial for the Free SHS programme, as it helps to fill gaps and improve teaching and learning. However, despite recruiting more teachers, the Ghana Education Service faces challenges with the quality of its educators and their subject qualifications, leading to some secondary schools rejecting teachers. For example, graduates in non-science fields were appointed to teach subjects in secondary schools, which undermines the programme's goal of achieving quality education. Additionally, the Free SHS policy was implemented without adequate infrastructure, such as classrooms and dormitories, to accommodate the increased student enrolment, which educators interviewed unanimously agreed was a problem.

Highlighting the challenges faced in implementing the free SHS policy, one headmaster intimates that:

The government's inconsistent implementation of the policy is clear. Schools lack science and ICT laboratories and teaching tools, despite procuring tablets for students. They incur debt and neglect this necessary infrastructure. Students face underfeeding and intermittent breaks due to an inadequate food supply. How will these schools utilise the tablets? The headmaster laments.

Most projects (dormitories and classrooms) under the Free SHS policy remain unfinished, causing congestion in classrooms and dormitories. Not all schools received projects. In Lawra Municipality, many structures started, but contractors left due to unpaid bills. Plates 1, 2, and 3 show the government's failure to meet infrastructural needs, leading to the introduction of the SHS Double Track Calendar, as illustrated in Figure 5.

Plate 1: A classroom block under construction in Birifo SHS
Source: Field Reports from Brifo SHS, 2022

Plate 1 shows a classroom block under construction at Birifor SHS. The government project, which started in 2022, has stalled.

Plate 2 in Eremon Senior High Technical School shows another abandoned infrastructure.

Plate 2: A 12-unit classroom block at Eremon SHTS
Source: Field Reports from Eremon SHTS (2022)

Plates 2 and 3 depict an unfinished 12-unit classroom block and the Boys' Dormitory block at Eremon SHTS. Additionally, the school lacks a decent dining hall, an administration block, and an assembly hall.

Plate 3: Boys' Dormitory block at Eremon SHSTS
Source: Field Reports from Eremon SHTS, 2022

The infrastructure deficit compelled the government to introduce the Double Track Calendar in some schools, as shown in Figure 5.

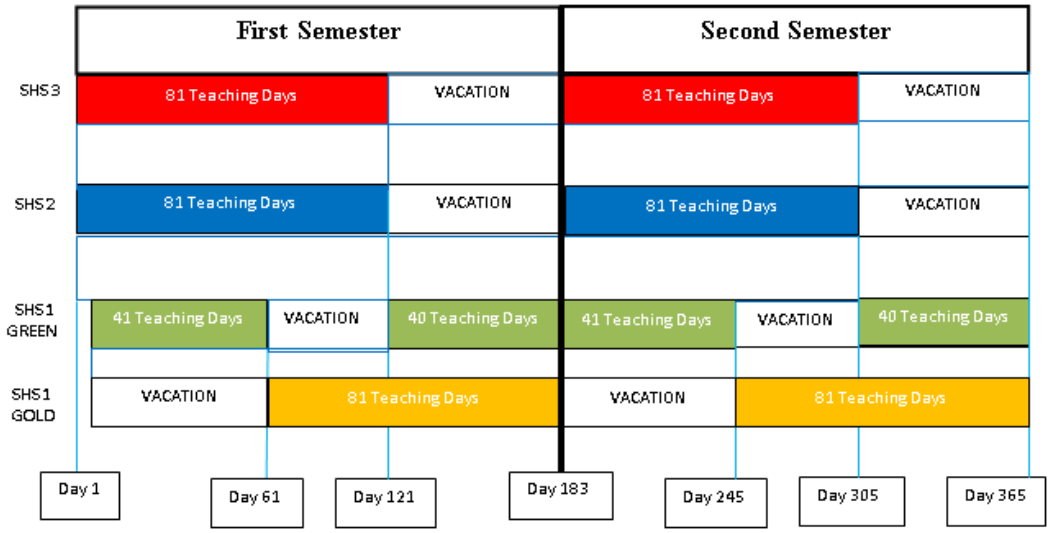

Figure 5: SHS Double Track Calendar

Source: Adopted from Ministry of Education (2018b).

Figure 5 shows an 81-day reduction in Form 2 and Form 3, while Form 1 students in both Green and Gold Tracks spend 41 days each. This allows a single SHS to run two batches of students in different intervals within a year, accommodating more students with smaller classes.

Similarly, the Government hasn't addressed schools' infrastructure challenges in the 2021/2022 academic year. This is disguised as the Double Track System, as shown in Figure 6.

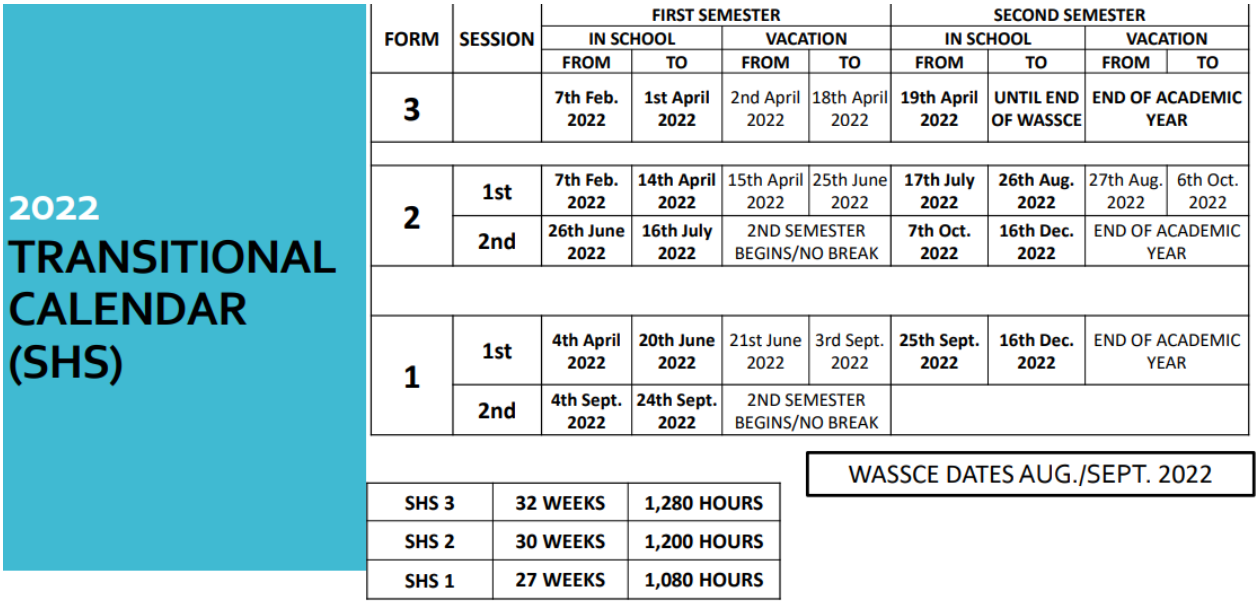

Figure 6: SHS Transitional Calendar
Source: Ministry of Education (2022)

Figure 6 shows the SHS Transitional Calendar, which shows the challenges that the same student no longer tracks at different periods but comes together and reports to school. In contrast, another year group remains at home.

The policy aimed for equitable access to education, allowing students to choose four secondary schools regardless of their background or location. However, some students were admitted as day students requiring parental funding, while others, despite passing, were not placed and had to self-place or seek protocol admission, leaving their preferred schools.

> *"I had to use self-placement to get admitted as a day student into this school, which is far from my hometown, since I did not get into any of the schools I had chosen."*

> *"I secured admission to SHS with an aggregate of 48, but missed out on the Technical Course I desired. My parents had to pay GH¢600.00 for accommodation near the school."*

> *"Despite being accepted into my preferred school, I was required to bring a study table and chair due to furniture shortages. Additionally, my parents were asked to pay GH¢350.00 for a student's bed."*

> *"I was placed as a day student in my first-choice school, but protocol placement gave me boarding status, though in a boarding school, which meant I missed my first choice. My parents couldn't have afforded hostel fees as a day student."*

> *"I was admitted to my first-choice school as a day student, but my parents have to pay for my daily transportation and food. I walked to and from school when I couldn't afford the fare. Being a day student is challenging because it affects my studies due to tiredness."*

> *"My parents bought me a bicycle to help me commute to and from school as a day student. They still help me with my daily expenses."*

On average, the FSHSP scored 91% in terms of equitable access. However, a parent pointed out that this doesn't fully reflect the situation.

> *"Inequality persists because some wards still owe money to get them to school. Rural SHSs lack infrastructure, so many students refuse to enrol".*

Another parent said:

> *"The government should improve the infrastructure of rural secondary schools to ensure all schools, regardless of location, are of equal quality".*

The unfair system is worsened by many learners attending distant day classes, creating access gaps. Headmasters also say students are placed in categories (A, B, C, D, and E), with the best students in A and B and the worst in C, D, and E.

The Free SHS programme has benefits, but it also has problems with how it is implemented. For example, some schools do not have the same facilities as others, and some students do not get free sanitary pads and other things they

need. The government could help by covering the cost of these things.

Challenges facing the FSHSP implementation

The implementation of the FSHSP in the Lawra Municipality faced several challenges. One was the delayed disbursement of funds to SHSs. The Conference of Heads of Assisted Senior Schools (CHASS) executive in the region noted that the problematic disbursement since 2021 resulted in SHSs going an entire semester without funds for students' feeding. Another CHASS executive stated that recurrent funds for various activities, including sports, culture, entertainment, the National Science and Mathematics Quiz, and national events, have not been allocated for over a year.

Furthermore, funds released for perishables have been erratic, with all Forms never receiving them simultaneously. Another challenge was the delayed and untimely supply of foodstuffs to SHSs. A student discussant highlighted the feeding challenges faced by the Free SHS program since 2021 due to the government's inability to release funds promptly.

During an interview, a parent highlighted the challenges of providing adequate nutrition for students due to financial constraints, which have negatively impacted schools.

A CHASS executive said:

> *"The government owes food suppliers over GHS 500 million, forcing them to withdraw services and causing a feeding crisis in schools nationwide. The shortage is due to the government's inability to adjust prices to meet the rising food costs".*

The erratic transfer of government funds to schools has made it challenging to purchase perishables for feeding students, increasing the government's indebtedness to the schools. The food supply to schools has been irregular since 2021, and prevailing market prices for foodstuffs have been soaring. The National Food Buffer Stock Company Limited, the mandated government agency to procure and supply foodstuffs to schools, adopted conditional sales to make up for losses. This led to suppliers reducing the kilograms of items in a bag supplied to schools to cater for losses in prevailing market prices. The study reveals that the Buffer Stock Company Limited has not been able to supply all food items at its prices for each academic year. A sample of National Food Buffer Stock Company Limited prices for the 2022 academic year is shown in Table 3.

Table 3: Approved suppliers' food prices for the 2022 academic year

No.	Commodity	Unit of Measure	ALL UNITS IN GH₵		
			Suppliers Price List (SOUTHERN)	**Suppliers Price List (NORTHERN)**	Prevailing Market Prices as of August 2022
1	Maize	100kg Bag	280.00	290.00	500.00
2	Gari	100kg Bag	500.00	500.00	600.00
3	Beans	100kg Bag	600.00	600.00	720.00
4	Peanut	100kg Bag	600.00	600.00	800.00
5	Millet	100kg Bag	420.00	420.00	560.00
6	Vegetable Oil	25ltr Gallon	310.00	310.00	390.00
7	Palm Oil	25ltr Gallon	210.00	210.00	250.00
8	Margarine	10kg Bucket	145.00	155.00	210.00
9	Tin Tomato	2.2kg Carton	135.00	135.00	175.00
10	Flour	50kg Bag	296.00	296.00	495.00
11	Tin Milk	160g Carton	133.00	133.00	132.00
12	Sardine	200g Carton	170.00	170.00	180.00
13	Mackerel	425g Carton	170.00	170.00	270.00
14	Sugar	50kg Bag	270.00	270.00	380.00
15	Soya Beans	100kg Bag	270.00	300.00	600.00

Source: National Food Buffer Stock Company Limited (2022)

The National Food Buffer Stock Company Limited has been unable to deliver food supplies to schools on time, preventing the preparation of balanced meals for students. This delay is due to the company's procurement regulation, which requires food items to be delivered to each school. However, the company keeps these items at specific locations and orders school headmasters to collect them at their own cost of transportation. As a result, the quality of some food items supplied has been compromised. Students are forced to accept whatever food is provided, as they will not receive any food if they refuse.

The FSHSP in the Lawra Municipality faced admission challenges. A Headmaster complained that the lack of a cutoff grade point led to the admission of weak students into SHSs. A parent pointed out that the same SHS curriculum standard is expected of all students, so many weak students fail their examinations.

FSHSP beneficiaries don't have grade cutoffs, so schools can admit students with low grades in SHSs. This lowers the quality of students expected to meet the curriculum standards of the second cycle. Centralising staff recruitment was a problem when implementing the FSHSP. Despite the rise in student enrolment and the retirement of many non-teaching staff, recruitment has been slow, putting pressure on the limited staff. Centralising recruitment and postings also affects the even distribution of teachers among schools. This deprives Regional and District Directors of the opportunity to ensure the recruitment and posting of qualified teachers equitably across schools.

School vacations pose challenges for the FSHSP. Uncertain reopening dates, piecemeal vacations, and long holidays lead to student truancy. This can result in pregnancy, early marriage, school dropout, or adverse attitudes towards schooling. A headmaster adds that *"the implementation of the Double Track System or the Transition System allows the school to operate with a set of students in different intervals within a single school, which puts undue pressure on staff who do not run shifts".* The all-year-round school session, designed to cope with rising enrolment, has a notable effect on staff health. Some staff members are limited in supply and cannot take turns off, regardless of the student batch. This happens when Regional Directors, District Directors, or school authorities lack the power to recruit or replace retired staff. Consequently, kitchen staff, house masters or mistresses, school management, and some teachers have worked all year round.

During the rollout of the FSHSP, excluding parent associations (PAs) from policy implementation posed a challenge. Parents expressed concern that the implementation process hindered PA effectiveness. The government took on responsibilities like infrastructure development, logistics, teaching, and learning resources, which PAs felt were not their own. Additionally, the government no longer requires PAs membership for admitted students, limiting parental collaboration and hindering the government's expansion of senior high education in Ghana. This freedom has left parents with the option to contribute to school development or neglect their children's education due to perceived financial obligations.

IMPLICATIONS OF THE STUDY

Policymakers and analysts must consider the interests and values of policy advisors when evaluating the policy environment. The financial demands of FSHSP in Ghana, including classroom and dormitory congestion, have placed a recurring cost on the government. Expenditure on the policy has risen steadily, from GH₵480 million in 2017 to GH₵2.4 billion in 2020, and is expected to increase drastically in 2022. Ghana, like many middle-income countries, faces developmental issues and uncertainties such as fluctuating commodity prices, inflation, currency devaluation, and monetary policy instability, which hinder consistent funding for such programmes. For instance, inflation rose from 14% in 2017 to 54% in 2023, negatively impacting budget allocations and projections. Gerston's (1992) theory of public policy implementation emphasises the need for adequate resources, including personnel, finances, logistics, and equipment, to effectively execute educational policies like the FSHSP in Ghana.

Despite challenges faced by the FSHSP since its implementation, it has achieved significant successes, including increased enrolment (2016-2020: 308,799-405,000 students) as reported by the Ministry of Education (MoE, 2018a-2018b). The policy's removal of cut-off points expanded access to SHS/TVET education, leading to an increase in boarding house admissions and revitalising communities. It also improved Ghana's literacy rate, providing opportunities for impoverished students to attend endowed schools for development. The policy has relieved parents of financial burdens by reducing their educational expenses. Parents no longer have to pay for school recurrent and feeding fees (Tamanja & Pajibo, 2018; Addo, 2019).

Furthermore, the policy has led to infrastructure development and logistics provision. In some schools, it has resulted in the construction of dormitories, classrooms, assembly halls, furniture, steel beds, and mattresses. Core textbook supplies have also improved significantly (Manu, 2020).

The government has covered all student fees for their parents through funds allocated for feeding and recurrent expenditures, despite challenges in policy execution. This has lessened the burden on heads of SHSs and their accountants to chase parents and wards for fees. Consequently, students arrive at school early, unlike during the fee-paying system or the era of the progressive free senior high policy. This has enabled students to attend school regularly with greater comfort.

National Food Buffer Stock Company Limited has been the sole food supplier to schools since 2017, and the government pays for it. Heads no longer have to go through rigorous procurement procedures, and food suppliers no longer chase heads for money. This addresses Gerston's theory of public policy implementation factor of translation ability, where implementing agents execute policy ideas and decisions.

However, the Free SHS Policy could not achieve its goals without increased resources and infrastructure. Lack of these

resources stresses existing structures, leading to implementation challenges. Imbalances in the involvement of implementers and the lack of social capital from the government also lead to inefficiencies and pose challenges, as Ghana is experiencing today.

CONCLUSIONS

The implementation of the FSHSP faces challenges in choosing the right approach. It was carried out using a top-down method instead of the bottom-up or a combined approach, with the Ministry of Education and Ghana Education Service (GES) as the main actors, focusing on factors that can be controlled centrally. A combined approach would have been better, allowing for the integration of micro-level variables from the bottom-up method and macro-level variables from the top-down approach to capitalise on their advantages. Using a top-down approach resulted in the removal of Parent Associations (PAs) and the restriction of administrative and financial powers of Headmasters at the school level. The Free SHS policy has not completely removed financial barriers for parents, although GES-approved fees were absorbed, nor has it improved school infrastructure. Efforts to enhance educational quality through providing teaching and learning materials were not successful. However, the policy has successfully increased enrolment in SHSs nationwide.

RECOMMENDATIONS

Weak students should be given a year's repetition or paid remedial lessons to catch up with average students. Career guidance should be introduced at the JHS level to help students choose SHS programmes. The government should provide adequate funds for timely school planning, including recurrent and perishable items for both day and boarding SHSs. The government should liaise with development partners to fund stalled school projects, reducing facility congestion. Prioritise staff accommodation to monitor and supervise students, reducing indiscipline. This will ensure equitable allocation of infrastructure projects to schools with increased enrolment. Deepen decentralisation to allow parent associations and SHS authorities to solve local challenges. Collaborate to identify and solve problems, and recommend solutions to the GES Management. Develop policies to empower, regulate, and finance parent associations to initiate and complete projects. Make membership compulsory for all parents with wards in schools and deepen financial commitment to school development.

LIMITATIONS

The study's limited scope to one municipality and its qualitative nature prevent comparison between other metropolitan areas, municipalities, and districts, hindering the understanding of FSHSP's implementation prospects and challenges. Further research is needed in this area.

DECLARATION

The authors report that there are no competing interests to declare.

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Financing inner-city developments: Understanding the role of faith-based actors in Wa, Ghana

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A B S T R A C T

The growing need for investments in inner-city development requires solid financing and collaboration of all stakeholders, including institutions and individuals. Consequently, private partnership arrangements are considered one of the critical ways of facilitating and financing such developments, and the church has emerged as an important actor in recent times. Yet, there has been little consideration of the role the church is playing in inner-city developments, particularly in secondary cities. This paper examines how the church facilitates and finances inner-city development projects on vacant land in the central business district of Wa, Ghana. In doing so, the paper draws together theoretical resources and qualitative research methods, including observations and in-depth interviews with thirty (30) key stakeholders who were purposively selected. Conceptually, the paper analysed the nature of negotiations for inner-city space utilisation and how the financing of building developments in the central business district of Wa has been shaped and is being shaped by the partnerships between the church and private individuals. Overall, the findings demonstrate the development of vacant lands into mixed uses, including stalls, stores, and offices. The paper examines three financing modalities: church financing, private contractor financing, and individual financing. In the end, a case is made for the nuanced role of the church-private individuals' partnership, which we may more lucidly take into account in theorising the nature of financing and negotiations for space to reshape the notion of inner-city developments in contemporary cities, and also open up possibilities for exploring other sustainable alternative financing approaches.

1. Introduction

Globally, there has been a growing interest in expanding investment in urban areas and the financialisation of urban development, both of which introduce new business logic into the production of the built environment and shape urban outcomes (Robinson, Harrison, Shen, & Wu, 2021). Urban areas are thus experiencing great changes regarding the location and function of land uses, especially in inner-city centres (Farjam & Motlaq, 2019). The "inner city" is a traditionally "closed", well-functioning, defining urban centre that used to permeate divergent key urban services and served as an economic and socio-cultural hub (Wiegandt, 2000). Meanwhile, inner-city areas frequently face significant challenges, including unemployment, poverty, inadequate infrastructure, social exclusion, and limited resources (Vidal, 2001; Levine, 2000), which often hinder sustainable development and social cohesion in many parts of the world and especially the developing countries (Sianes & Vela-Jiménez, 2020). The development and revitalisation of inner cities can increase urban housing stock, promote social integration and cohesion, reduce land consumption, and facilitate easy access to social amenities for sustainable urban development (Abubakari, Hussain, Arhin, Paul & Uwayisenga, 2023). Inner-city development is, therefore, a key part of urban development strategies in most cities for sustainable urban development (Abubakari *et al*., 2023).

Achieving inner-city development, or at least establishing the potential for it to be realised, entailed some institutional measures, innovations, and creativity in sourcing financing. Thus, while traditional development approaches have been

implemented, innovative financing mechanisms are needed to address these complex issues and stimulate sustainable development, particularly in the sub-Saharan region of Africa where Ghana is located (Raney & Raveloharimisy, 2016). It is believed that by partnering with government agencies, NGOs, and the private sector, faith-based organisations (FBOs) can play a crucial role in financing and implementing inner-city development projects (Mutemwa, Hattingh-Rust & Hatting, 2018; Taylor, Paul & Hulme, 2003). Consequently, FBOs have emerged as significant actors in addressing such challenges to ensure development in many global cities (Vodo, 2016), particularly in the sub-Saharan region of Africa, where Ghana is located (Msebi & Beukes, 2024). They possess unique characteristics, such as strong social networks, trust, and legitimacy, which can be leveraged to mobilise resources and implement development projects (Vidal, 2010). Their contributions, therefore, thrive in several ways, including resource mobilisation through donations and fundraising (World Bank, 2022), social capital and trust (Tarpeh & Hustedde, 2021), community engagement and empowerment (Chowdhury, Wahab & Islam, 2019), capacity building (Owens, 2004), provision of social service (Jahani & Parayandeh, 2024), advocacy and policy change (Simbi, 2013), and infrastructure development (Olarinmoye, 2012; Raney & Raveloharimisy, 2016). Faith-based partnerships, therefore, offer a promising avenue for financing and implementing inner-city development projects (Turner Haynes, 2021; Vodo, 2016). Thus, they usually collaborate with government agencies, private sector entities, and community organisations to provide a powerful approach to city development projects (World Bank, 2022; Chowdhury, Wahab & Islam, 2019).

These partnerships typically leverage the resources, expertise, and networks of diverse stakeholders to address inner-city issues, achieving sustainable and impactful outcomes. However, while many cities continuously experience some growth, significant disparities persist between the central business district and the peri-urban areas. Previous studies have highlighted the potential of faith-based partnerships in addressing urban development challenges (Meyer & David, 2003), with little attention paid to inner-city development projects. Existing literature on financing inner-city development in Ghana has focused on inner-city regeneration and its challenges (Amoah & Owusu-Sekyere 2019); traditional and innovative financing mechanisms – development funds and taxes (Asumadu, Quaigrain, Owusu-Manu, Edwards, Oduro-Ofori, & Dapaah, 2023); financing urban shelter – individual loans (Sao 2013); informal strategies of funding for housing in inner-city (Adade, Kuusaana, Timo de Vries & Gavu, 2022); downgrading of inner-city neigbourhoods (Arguello, Grant & Oteng-Ababio 2013); land-based financing through collaboration between state and non-state actors (Biitir, Aziabah & Ayitio 2022); and building resilience in inner-cities (Adamtey, Mensah & Obeng 2021). However, there has been little systematic and nuanced consideration of the role of faith-based partnerships in inner-city development. Therefore, the ultimate question remains: How do FBOs contribute to financing inner-city development projects in Ghana?

Inner-city development has thus become an "intentional" urban development intervention (Abubakari *et al*. 2023) and is hence being adopted by various governments around the globe. In Ghana, the Ministry of Inner-City and Zongo Development was established in 2017 to facilitate a broad-based infrastructure, social, and economic development of inner-City and Zongo communities within the context of inclusive, resilient, safe human settlements and sustainable urban development (Brady & Hooper, 2019). The Government of Ghana remains the leading financier of the Ministry of Inner-City and Zongo Development. As part of efforts toward inner-city development, Ghana has adopted various policy measures and strategie**s,** including the National Urban Policy Framework and Action Plan (2012), the National Housing Policy (2015), and other related national-level policies (Abubakari *et al.,* 2023**)**. Wa, the capital of the Upper West Region of Ghana, is an example of an inner-city area grappling with development challenges. FBOs in Wa, such as the Seventh-Day Adventist Church, the Catholic Church, and the Methodist Church, to be specific, have a substantial presence and influence within the Wa Municipality. By leveraging their unique strengths and resources, the government and private individuals' partnership with these FBOs contributes to sustainable urban development, poverty reduction, and social cohesion in cities. Therefore, by understanding the dynamics of these partnerships, policymakers and development practitioners could devise strategies to harness the potential of FBOs and contribute to the revitalisation of inner-city development accordingly. From the foregoing, this study aims to explore the role of the church, the potential of innovative financing mechanisms, and the opportunities of partnerships, and to develop effective strategies for their collaboration with private individuals in ensuring sustainable inner-city development in Wa, Ghana. This study employed constructivists' philosophy and we built our analysis across the following themes: Selection and Financing modalities - how the project is conceived & how it is financed; Constructional arrangements - how the development has been enabled through creative negotiations; Ownership arrangements - how the project is being used to cover the costs of development; Financing Potentials; and Challenges. The rest of the report highlights understanding inner-city development financing approaches, participatory inner-city development in action, and financing inner-city development: examining the role of faith-based partnerships.

2. Literature Review

2.1 Conceptualising the term 'Inner-city' development

Over the years, inner-city centres have gained the attention of researchers and policymakers regarding the transformations unfolding in these parts of the city. It is usually the first and oldest settlement area of the city. The inner city, sometimes referred to as "the centre, city centre, urban core, or town centre," can be described as the spatial, political, and cultural heart of a city. According to Pesch (2018), the inner city is characterised by a high structural density, an intensive mixture of functions, and a high concentration of goods and services. Historical buildings and public spaces are visible features that shape its identity. Relatedly, inner-city development is described as both a guiding principle of spatial and urban development and a planning strategy (Reiß-

Schmidt 2018). Reiß-Schmidt (2018) further opined that inner-city development focuses on the structural (re)use of unused or underused land within developed and contiguously built-up areas.

The term is also associated with the (re)development of vacant lots in the built-up area, plots that are not being optimally used and which thus have the potential for redevelopment or further densification, derelict sites that were formerly used for industrial or commercial purposes, the sites of former railway infrastructure or airports, as well as deserted military sites. Given the aforementioned, the inner-city has been an important place in the city where various actors from the financial, retail, transport, and logistics sectors compete for scarce spaces to drive innovations. Ruess et al. (2022) observed that traditionally, the inner-city plays both local and supra-regional supply and trade function that goes beyond daily needs and serves as an attraction and unique selling point of the city centre that continues to attract attention in terms of investments.

2.2 Understanding inner-city development financing approaches

Cityscapes worldwide are changing dramatically due to extreme population shifts, unbridled densification, and rapid economic expansion and investments from both governments and non-governmental actors (Salem & Tsurusaki, 2024; Goerzen, Asmussen, & Nielsen, 2024). As a result, cities' growing needs and demands, particularly in the inner-city centres, are critical to neighbourhood spatial development. Urban population growth (Angel, Parent, Civco, Blei, & Potere, 2011) influences the physical expansion of cities, including the inner-city centres, leading to an increase in per capita living space (Wolff, Haase, & Haase, 2018). The inner-city space growth is, therefore, a key part of the urban development agenda in the 21st century. Inner city space development follows these morphological shifts aforementioned.

According to Hutton (2009) and Abubakari et al. (2023), countries embarked on inner-city development and revitalisation to expand their social, economic, and civic infrastructure. Among other things, inner-city development ensures the maximum availability of social and economic physical infrastructure services for the survival of its residents. The complexities surrounding inner-city growth and development validate the inadequacy of space to accommodate the increasing number of physical infrastructures from the government and the private sector (Korah & Cobbinah, 2024). Consequently, inner-city development has evolved into a deliberate urban intervention; neglecting it would constitute a significant planning error (Cheng, 2012; Abubakari *et al.*, 2023). Therefore, practitioners, developers, planners, and others must spearhead the agenda of financing the structure of urban spaces to accommodate diverse physical development.

Following this, physical development actors in cities of the Global South aim to uphold specific social and economic infrastructure agreements that drive their respective economies. Physical development has typified a spatial transformation, anchoring the growth of these cities. For instance, the government, through its institutional structures, is responsible for funding physical development in cities, such as schools, hospitals, parks, roads, and other residential and commercial facilities, to meet the basic needs of the citizenry. Also, the private sector, including individuals, non-governmental organisations, and faith-based organisations (churches), offers a similar physical support system to increase the availability and coverage of these basic facilities. Focusing on the private actors, faith-based organisations (churches) play a significant role in financing the physical infrastructure development of inner cities. Over the years, this has significantly contributed to the development and revitalisation of inner cities.

Religious institutions are quite important in the political and socio-economic aspects of society. The role of the church in an urban setting is impacted by the demands imposed by concurrent processes of urbanisation. The provision of physical infrastructure for both profit and non-profit justifications has become part of the church's new fundamental mandate (Beaton & Wagener, 2010). Car parks or transport hubs, stands, shops, schools, parks, housing units, and other hospitality services (such as hotels and guest houses) are examples of inner-city infrastructure that have been distinctive to churches recently. Generally, religious organisations utilise inner-city infrastructure to leverage urban environments. In the words of Cantor, Englot & Higgins (2013), the church acts as an anchoring factor for the expansion of physical infrastructure in urban areas. The church is more than just a place of spiritual bliss in many cities. It is a powerful force that creates a complex synergy that represents social harmony, economic development, and environmental balance (Puppo, 2021). The relationship between urban socioeconomic development and the church creates an intriguing scene that shapes and advances progress. For instance, religious infrastructure components have substantial economic value in addition to being popular tourist destinations. Opuni-Darko (2024) and Mian (2008) defended the shift in the function of religious organisations from offering spiritual guidance to offering social and commercial services for financial gains. This indicates that the church's role in promoting social progress and economic empowerment extends beyond its spiritual purpose.

3. Methods and materials: Inner-city development in action

3.1 The study: context and methods

The study was conducted in the Wa, located in the Upper West Region of Ghana, where the contribution of faith-based organisations towards inner-city development is observable. Wa City thus serves as a vital centre for essential services, including healthcare, education, finance, and administration, facilitating resource mobilisation and community development, contributing to the smooth operations among faith-based organisations. Wa city is dominated by the Islamic religion. Christianity also thrives, and the city can boast of numerous established churches. The Metropolis, which spans approximately 1,180 square kilometres, accounting for about 32% of the region and 2.5% of the

nation, is located between latitudes 10° and 2° north and longitudes 2°45′ and 2°15′ west, with a total land area of 2,503 square kilometres (Aabeyir & Aduah, 2012). It is bordered by the Nadowli District to the north and the Wa East and West Districts to the south, east, and west (see Figure 1).

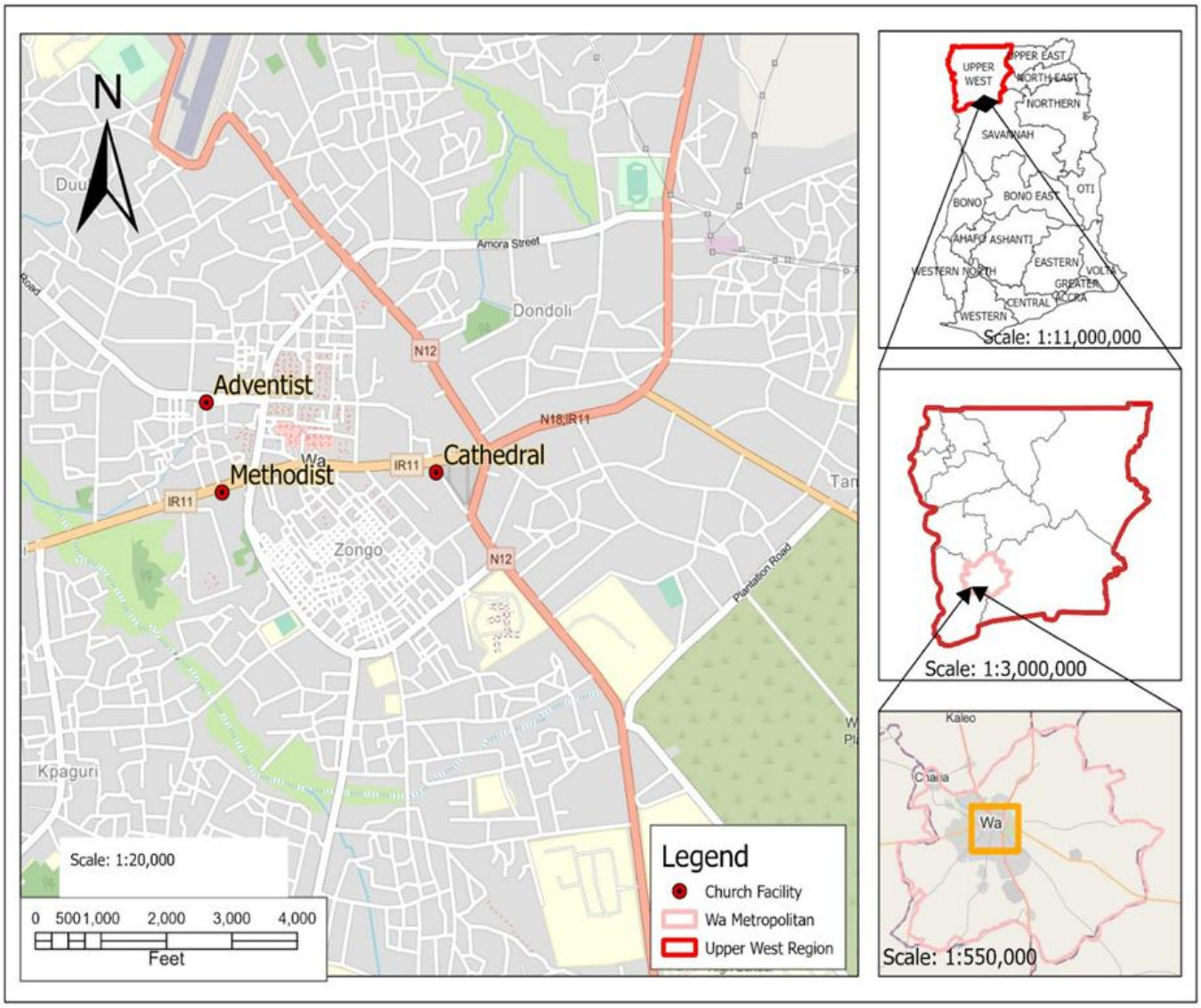

Figure 1: Map of Wa Municipality with Wa City
Source: Authors' Construct

This study employed a qualitative research approach, which adopts a multiple-site case study methodology [the Seventh Day Adventist church, the Catholic church, and the Methodist church] for the analysis and referencing regarding the relevance of faith-based organisations in inner-city development. Such comparative studies are rare – the research effort required is nuanced, with diverse actors involved. These case studies have been purposefully selected to bring into view financing strategies relevant to inner-city developments in an emerging secondary city. Triangulation was conducted on interview data gathered between February and May 2024 from purposively selected Thirty [30] key informants, including Church Elders [8], Pastors [3], Private contractors [9], Stall operators [8], and Land Use and Spatial Planning Authority (LUPSA) staff [2]. Detailed site observations and drawing on the broader academic and popular literature enabled the researchers to embark on Thematic Analysis (Crewswell 2013) to come out with the findings and accordingly draw solid conclusions together with recommendations. Thinking comparatively in this study across the three cases, offering the researchers the platform to question and speak to one another, expanded the analytical repertoire on each case, as well as informing the overall analysis. This was especially the case in thinking about the interests and agency of the church, and the implications of different forms of financing arrangements, including revenue streams from the development activities and direct land value capture (Robinson, Harrison, Shen & Wu, 2021).

4. Results: Financing inner-city development: examining the role of the church

This paper considers three illustrative examples of financing inner-city development from the perspective of the role of the church in a rapidly urbanising city, Wa. The cases are the Seventh Day Adventist, the Methodist, and the Catholic Church, located in the central business district. The dynamic partnerships and participation of these churches in the

development of spaces in the inner city are key to our argument, as discussed in the subsequent sections. Doing so, we bring into view the urban development financing processes that are at work in shaping inner city developments by diverse actors, including the complexities of negotiating the construction and ownership models, potentials, and associated challenges. Deploying a rigorous comparative framing, we highlight the value of comparative analysis, which opens up the diverse and distinctive manifestations of inner-city developments – a key component of urban development to recast understandings of urban development financing practices and actors involved to reflect the diversity of urban experiences (Lauermann, 2018).

4.1 Land Ownership Arrangements at the Three Multiple Sites

To understand the nature of land ownership, it is important to examine the land ownership arrangements and criteria that the churches deploy for selecting financiers. The main rationale was to get a sense of what the land ownership looks like, the processes and guiding parameters these churches used to settle on a financier and financing arrangements, as well as how these issues shape the construction processes. The interviews revealed that the three urban spaces under study, situated in the central business district and hosting various infrastructural developments, were purchased, acquired, and owned by these churches. Here, an Elder of the church, a member of the project committee, referred to the church as a 'land speculator.' He stated that "the church did not just buy what they needed at the time, but they bought more acres of land which they intended to lease for other purposes".

Central to the land acquisitions by the churches are the construction of religious, residential, and educational infrastructure to serve the needs of the churches and the neighbourhoods in which they are found. It became evident from the interviews that the lands were largely acquired originally to build church auditoriums, offices to host church workers, mission houses to accommodate ministers, as well as to construct school facilities. A church Elder who was at one time Chairperson for the project committee indicated that "the church initiated the land acquisition and processed all the required documentation to secure the ownership of the land." He further explained that "building a place of worship, a residence, and offices to host the reverend minister were the key reasons for acquiring the acreages of land in the central part of the city. Additionally, constructing schools was mainly considered a critical corporate social responsibility." To him, it was 'all about securing a strategic location that serves a mix of the church's needs, period." However, over time, it became necessary for the church to consider other sources of funds to support its activities.

An official at the Land Use and Spatial Planning Authority stated that "Most of the churches own lands in prime areas in the city." Indeed, the churches were very strategic in terms of the size and locations of the lands they acquired to make the church facilities accessible to their members." Observed more generally is the fact that similar to the development of 'new towns, churches usually used their lands as their initial capital for leveraging funds, following which they leased their lands to private financiers for commercial and residential projects through competitive bidding at a higher market price (Lin, 2014; Shen & Wu, 2017; Wu & Phelps, 2011). It became evident that even though many of the interviewees indicated that the churches benefited from some preferential treatment due to their religious status, the acquisition and ownership of the lands had not been smooth. Over the years, all the churches have experienced encroachments and related legal issues from different actors. According to an Elder we interviewed, "there have been serious encroachments on the church's land by both individuals and organisations that the church is currently engaging them for appropriate settlements. A Resident Minister cited how "a family approached the church for a lease renewal and renegotiation which has ended up in court due to some disagreements among the family members." These respondents' narratives on encroachments and related litigations in courts are not positive experiences. But rather a more chaotic tale of land ownership that has resulted in unmanageable costs and discomfort in safeguarding their interests. The impact of this kind of disagreement on social relations and the relationship between the churches on one hand and the communities and individual families on the other hand is a critical area for future research.

4.2 Unpacking the Diverse Financing modalities and construction practices

In examining what the role of faith-based actors might offer a conception of financing arrangements for inner-city developments; a different mix of financing approaches was deployed by the churches to fund the infrastructure developments. The findings indicate that the financing modalities and construction practices can be categorised principally into three categories. The first category refers to the financing and construction arrangements by the Catholic church. It revealed the church as the only financier that raised all the required funding in cash from their offerings, tithes, and donations, and used the church's project committee to supervise the construction of the stalls and stores. The Project Committee Chairperson remarked: "The church solely financed the construction of the stalls and stores at the frontage of the chapel. To do so, a dedicated special fund and committee were set up to achieve this goal," he concluded. Informing the logic of this model are the social and economic drivers of both the church and its members, who require secure sources of income and livelihoods to support their well-being. While the church considered the construction of the stalls and stores as a key form of investment to create a sustainable source of income for the church, it is also meant to provide economic spaces that can host the livelihoods of interested church members.

In the second case involving the Seventh Adventist Church, the church, through its project committee, engages a private financier to discuss the formalities regarding the type of structure to construct, the materials to use, and the ownership arrangements. What follows after reaching an agreement is that the private contractor/financier raises the initial capital in the form of cash. Here, the church offers 'land as their capital' for the construction (Shen & Wu, 2017). Before the construction process starts, the churches usually help with the

acquisition of building permits from the Municipal Planning unit. The first task of the financier is to raise money, mobilize the human resources [artisans], and supervise the construction process. This arrangement is termed build-operate-transfer (BOT). It involves an agreement between the church and a private contractor/financier where the private financier provides the financial and technical investments to construct the infrastructure, owns and uses the infrastructure for a stipulated number of years, and then returns it to the church as the original owner.

In the third scenario, which involves the Methodist church, individual church members used their financial resources to fund the construction of the infrastructure. As part of the arrangement, these individuals convert the amounts used for the construction into rent to the church until it is exhausted, and then they continue paying the rent to the church as long as they occupy the space. The three illustrative models demonstrate inner-city development as a patchwork of varied financing arrangements driven by different actors and interests. The form of financing selected by the church is a collective decision from the church's project committee. Relatedly, an Elder who is the Chairperson of a church project committee stated that "the selection of a private financier is based on capacity, competence, and trust." These mutually exclusive financing practices thus shape inner-city development that is unfolding in Wa from the perspective of faith-based actors.

The construction of stalls, stores, and offices is an important driver of the business model in all three selected cases – but each has approached the question of construction, ownership model, and cost-recovery differently, depending on the particular ownership arrangements reached between the parties, with different outcomes in each case (Robinson *et al*. 2021). The three case studies offer a microcosm of how faith-based actors participate in inner-city developments, driven by economic, social, and religious considerations and gains. These financing and construction practices are pragmatic approaches to inner-city development, demonstrating the key role faith-based actors play in collaboration with other stakeholders.

4.3 Infrastructure ownership practices and Actors' shared interests

One of the dominant questions that emerged during the interactions and interviews was how the constructed infrastructure comprising stalls, stores, and offices was shared and managed by the church and private financiers/contractors in the three selected cases. To address the question of how the constructed developments are shared and ownership practices, it is necessary to unpack the physical developments on the different parcels of land in the inner-city of Wa. This study can identify an eclectic array of ownership practices. The type of inner-city development and the nature of the financing both have significant implications for ownership practices and the shared interests of the actors. However, the interests of the church in maximising the gains from incomes from the developments through negotiations with financiers regarding the profitability and viability of the investments in the development projects often result in some common assumptions and outcomes. Operationally, the discursive ownership practices and interests are manifested in various ways as discussed in subsequent sections.

4.3.1 Build-Operate and Transfer scenario

As stated earlier, in the build-operate and transfer scenario, the church and the private financier/contractor agreed on a forty-nine (49) year contract, after which the property is supposed to revert to the church as the original owner. The three-storey building contains forty-three (43) stalls/stores/offices. Out of the forty-three (43) stalls/stores/offices, the private financier/contractor owned thirty-three (33) whilst the church owned ten (10) with a ratio of 3:3:4. This ratio implied that the church owned three each of the stalls/stores/offices on the first and second floors as well as four (4) of same at the ground floor. An interviewee, who is an Elder and member of the Church's project committee, stated that "the sharing and ownership arrangement was reached between the church and the private contractor/financier after a detailed cost-benefit analysis was conducted to ensure a win-win outcome for both parties". It became evident that while the private contractor/financier offered his stalls/stores/offices to the highest bidder, the church, on the other hand, strictly offered their stalls/stores/offices to church members. The latter's decision is based on religious and needs-based considerations. An Elder intimated that "the doctrine of the church frowns upon the conduct of business on Saturdays because we are Adventist. So, it will not allow any occupant of their property to operate their businesses on this day.

Due to this doctrinal issue, the church's project committee decided to allocate the church's slots of the stalls/stores/offices mainly to church members to avoid any conflict." Additionally, the type of business of the prospective tenant is key in the decision to rent the space or not.

4.3.2 Church financing and ownership

In this scenario, the Church, as the sole financier of the construction of the building infrastructure, owns the entire project. In this sense, the allocations of the project for rent are conducted through its project committee. The Chairperson of the project committee indicated that "from the onset, the church's decision to engage in the project of constructing stalls and offices was to generate socio-economic returns to support the church's finances and members' economic well-being. Here, the prospective tenants [mainly church members] are required to submit applications to the church's project committee.

Plate 1: Build-Operate and Transfer inner-city financing arrangement- SDA Church

Plate 2: Church Financing and Ownership, inner-city financing arrangement - Catholic Church

This is followed by the conduct of interviews to assess and select the right tenants. The rent amount is determined by the size of the stalls/stores/offices. After the interviews, successful members are offered spaces. According to the Chairperson of the project committee, "church members who express interest in renting and occupying the facility must be members of good standing who belong to a group/society in the church." Tenants are required to pay their rent to the church on an annual basis.

4.3.3 Collaborative inner-city financing arrangement between the church and church members

The ownership scenario is based on land finance, where the Church used the land as the initial capital to leverage financing sources, following which the Church leased its land for commercial uses through the construction of stores/stalls/offices. Here, individual church members are offered pieces of land to construct the stalls/stores/offices using their financial resources. The church, through its project committee, evaluates to ascertain the total construction costs. Then, the tenant is allowed to use the total costs of the constructed stalls/stores/offices to offset the rent for the corresponding number of months/years.

Plate 3: Collaborative inner-city financing arrangement between the church and church members- Methodist Church

In the view of an Elder of the church, this arrangement has resulted in varied conflicts. First, there are situations where church members who were offered the space in turn provided the space to non-church members who usually act contrary to the church's conditions. Second, some church members have refused to pay their rent after exhausting the total costs they incurred in the construction process.

5. The churches' role in inner-city development

It is not our intention to romanticise the role of the church in financing and facilitating inner-city developments. Instead, this paper offers the building blocks and nuanced alternatives. The study provides evidence that the church plays a key role in financing and facilitating urban development, particularly inner-city development. There is no doubt that a properly managed role of the church holds great promise for urban development in general.

One of the key issues in this study is the nuanced ways the church collaborates with different stakeholders to finance, facilitate, and implement the practice of inner-city developments. Three main approaches emerged from this study: the church as the sole financier; the church collaborates with an external financier, thus contractor/financier; and the church collaborates with internal financiers, thus church members. In all these scenarios, the key drivers are social, economic, and religious factors. These approaches are a convergence of interests between the interests of the church on one hand and those of the other actors on the other hand. The issue is not limited to only the benefits to the church but also about creating an enabling environment that promotes the livelihood and well-being of urban residents, particularly church members. Like all private-led projects, it does not work for everyone, everywhere, at all times, and contexts. Notwithstanding the key role of the church as discussed, the rationalities need to be evaluated, as should the kind of potential and benefits the church and the other stakeholders are trying to achieve.

It has been shown that the church's role in financing and facilitating inner-city development is primarily a necessity-driven practice. All three cases used in this study provided evidence that revealed that generating a sustainable source of income to support church activities was key in the decision to participate in inner-city development projects, where land is used as capital to either attract financiers or generate income. This rules out the typical bureaucracies, as in the case of most state-led urban developments. These forms of inner-city development financing create opportunities for some urban residents who ordinarily would not have access to urban space to create sustainable sources of livelihoods because they are deemed to lack the capacity and influence to secure spaces at the individual level. This is made possible because of the focus and interests of the church and the limited bureaucracies involved in securing access to such projects for personal use.

The paper notes that there is a diversity of strategic goals and actors' interests, which became evident both across and within different contexts. Also, across all three cases, we discern a wide range of church ambitions that shaped not only the nature of inner-city development but also the design of the financing approaches. In all the cases in this study, the interests of the church in value creation to support their activities through different financing mechanisms shaped the varied pathways of financing the inner-city development in each context. This was observed in all three cases, as we pointed out in the discussions, but is evident in the case where the church is the sole financier, which was a strongly church-led initiative. Urban development actors can expand on the diverse roles of the church and financing approaches that align with the tenets of neo-liberalization (Berrisford, Cirolia, & Palmer, 2018). The observations from the cases where the church collaborated with different actors in financing and implementing the inner-city developments opened up nuanced insights with a strong interest in generating sustainable sources of income. Consequently, the income received from renting out the properties has become a key source of income generation for the churches. Here, the church acted both as an enabler and a mobiliser by facilitating the realisation of different interests and ambitions by securing significant gains from galvanising the interests of other stakeholders. The paper argues that any theorisation of private-led interest in urban development, particularly inner-city development, needs to acknowledge and work with this diversity of private financing approaches and interests. The choice of a particular strategy should depend on the specific context. This means that even in the city, contexts differ socially, economically, spatially, and temporally.

Separating key functions of the church according to the ways they engage with different actors also emerged as a strategy of coordination with their respective project committees as supervisors and managers, and the church-owned projects as market actors. The financing and implementation of developments rest on leveraging the church's land assets. In collaboration with varied actors, the inner-city development projects were successfully constructed. The developments we observed are intended to generate income and create socio-economic opportunities as well as allow development financing to be quickly recouped (Robinson *et al*. 2021). A complex ecosystem of different financial actors and sources of finance, and practices for enabling development work together to actualise the inner-city developments in Wa. This calls for understanding what is unfolding and revisiting state-centred to private-led approaches to embrace alternatives to inner-city developments.

6. Concluding remarks, implications, and recommendations

The case studies we have discussed in this paper have been drawn into comparative reflections across four key themes: land ownership arrangements in each specific context; the diverse financing modalities and construction practices, how distinct financing models shape infrastructure ownership and actors shared interests; and the wider role of the church in inner-city development. We have observed the diverse ways in which the church deploys varied models in the development of vacant lands, which is a key component of inner-city development in each context. Our analysis benefited from a starting point that sketched the specificity of each inner-city development to generate comparative insights. Particularly, the nuanced shared interests and role of the church have become apparent. In the case of build-operate and transfer, the church's interest is to partner a private financier/contractor to develop the infrastructure to serve the interests of both parties; in the case where the church is the sole financier, it draws on its financial resources to construction and achieve wider socio-economic and developmental goals and where the church's interest is in direct value extraction from their land, they mainly offer land to their members to develop them into commercial areas to achieve residual socio-economic goals as well as draw rents to support its financial obligations.

The grounds for comparing these distinct cases from different contexts are hinged on shared features of financing inner-city developments. The findings from these cases bring to view nuanced financing arrangements with the church playing key roles. In each case, the developments required marshalling diverse financing, construction, and ownership arrangements. It has also highlighted the coordination among a multiplicity of actors and their diverse and shared interests. Through the findings from this comparative study, this paper seeks to contribute to the critical analysis of inner-city development, in particular, the role of the church in facilitating and financing such developments.

The development arrangements that are forged in each case in this paper are driven by specific financing configurations that reflect the nuanced roles of the church in different inner-city development scenarios. It is apparent that all three cases of inner-city developments occurred within a shared urban problem, thus financing the inner-city developments through the value generated by the new development itself (Robinson *et al.* 2021) and the nuanced role of the church. The paper has highlighted in each of the case study analyses discussed above the comparative insights as they emerged across the three distinct cases, or drawing from one case to inform analysis of the other cases. Overall, the comparative analysis opens up a theorisation of the wider contributions to financing inner-city development with a specific focus on the role of the church and the potential to build an in-depth understanding of inner-city development from specific urban development outcomes

rather than focusing the discourse on the role of the state. Additionally, the comparative analysis presents the implications of the different financing arrangements emerging in each of the cases for the outcome of the inner-city developments. Methodologically, we have shown how comparative analysis can provide scope to build insights across diversity by treating urban development outcomes as specific (Robinson et al. 2021).

In conclusion, this paper has made a case for the nuanced role of the church in the wider urban development discourse with a specific focus on financing inner-city developments that we may more lucidly take into account in theorising the nature of financing to reshape the notion of inner-city developments in contemporary cities. Additionally, the paper highlights the possibilities for exploring other sustainable alternative financing approaches for inner-city developments. By considering comparative analysis across different contexts, the paper notes that inner-city development financing needs to embrace a range of regulatory contexts and path-dependent funding forms. If these case studies offer a vivid and particular example of financing inner-city developments, it nonetheless prompts the question of what a more general conception of inner-city development might afford, of what these financing practices might bring to how inner-city urban development is conceived. The paper considers how comparative reflection across the three case studies builds conceptual insights from the specific experience of a rapidly urbanising context. This is especially helpful in considering the question of inner-city urban development financing and urban development strategy more generally.

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2024 SDD-UBIDS RESEARCH AND DEVELOPMENT COFERENCE PROCEEDINGS

Adopting e-participation in decentralised planning: Development planners' perspectives on barriers and prospects in northern Ghana

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ABSTRACT

In an ICT-driven era, e-participation platforms are essential for shifting from technocratic to collaborative planning. In sub-Saharan Africa, while e-participation broadens stakeholder involvement, research on its use in decentralised planning is limited. This paper highlights the barriers and opportunities associated with adopting e-participation initiatives in northern Ghana, using the lived experiences of planning officers. Using a qualitative research approach that involved key informant interviews with District Planning Officers from Metropolitan, Municipal, and District Assemblies (MMDAs) and Regional Planning Officers in Northern Ghana, the study demonstrates that planning officers utilize e-participation tools for engagement. Still, their use is constrained by barriers such as poor infrastructure, weak institutional capacity, low digital literacy, and trust issues. The increase in smartphone ownership, internet access, and supportive policies offers opportunities to integrate e-participation with traditional methods. This study argues that successful e-participation in Ghana depends on more than just technological advancements; it also requires institutional reforms, capacity-building, and equity considerations. It advances theory by positioning e-participation within hybrid and equity-sensitive governance frameworks, while offering policymakers practical guidance on inclusive digital planning.

1. Introduction

E-participation in local planning and governance is gaining significance in developing countries as a key strategy to enhance citizen engagement. (Akmentina, 2023; Faganello et al., 2025). This is because participation constitutes an essential element of democratic systems, serving to reinforce democratic processes within the public sphere and promote inclusivity at the local level. (Bénit-Gbaffou, 2008; Booher, 2004). Noteworthy practices of participation began and gained prominence at the local or municipal level, exemplified by participatory budgeting (Lassou et al., 2024). Progress in Information, Communication, and Technology (ICT) development, coupled with governments' expanding implementation of e-governance (i.e., the utilisation of ICTs in governmental operations and service delivery), has led to heightened adoption of e-participation for public engagement. (Ayodele et al., 2025; Faganello et al., 2025; Houghton et al., 2014). Countries in North America, Europe, and Southeast Asia have made significant progress in citizen engagement, transparency, and accountability using e-participation (Conroy & Evans-Cowley, 2006; Fredericks & Foth, 2013; Musiał-Karg & Kapsa, 2019). Consequently, the literature on planning is beginning to address the integration of e-participation (i.e., the application of ICTs to facilitate citizen engagement within a broader e-governance framework) in the planning process. (Shahab et al., 2021; Wilson et al., 2019).

Growing interests in collaborative and interactive approaches to planning, combined with the incorporation of ICT into public planning, have increased efforts by planners to enhance citizen participation (Houghton et al., 2014; Innes, 1995). This strategy aims to strengthen public support for planning initiatives and help identify potential areas of conflict. Consequently, interest in e-participation platforms within planning practice has grown globally, supported by a substantial body of literature that highlights its potential benefits, including enhancements in legitimacy and transparency, breaking geographical barriers, and broadening the scope of stakeholders involved in planning decision-making (Anindito et al., 2022; Wilson et al., 2019). For instance, Indonesia's e-Musrenbang system exemplifies successful e-participation in development planning, enabling community involvement and helping ensure openness and

responsibility during the planning stages. (Anindito et al., 2022).

While extensive and historically supported research has been conducted on digital engagement in planning within developed countries (Akmentina, 2023; Bouregh et al., 2023; Conroy & Evans-Cowley, 2006; Damurski, 2012; Kubicek, 2010), studies in Ghana and other African nations are limited and still evolving. (Anaafo & Appiah Takyi, 2021; Haruna et al., 2021; Musakwa & Moyo, 2020; Okrah, 2024). This creates gaps between the popular rhetoric and the actual field realities across diverse contexts. To date, although technology has become an essential part of most functions within urban environments in Ghana, little is known about what barriers inhibit urban planners from utilising ICT tools to engage citizens in their planning processes and the prospects for their adoption in decentralised planning processes. This study fills the gap by analysing data from development planners in northern Ghana's Municipal and Metropolitan Assemblies (MMAs), focusing on their views on barriers and facilitators for adopting e-participation tools in planning decision-making. This is particularly important considering the different contexts and challenges that MMAs encounter. Therefore, it is essential to identify the specific barriers and prospects within various local authorities to tailor e-participation strategies that accurately address local needs and circumstances.

In Ghana, public participation has become crucial in the country's development since it adopted a decentralisation system in 1988 and established a decentralised planning system in 1994 with the passage of the National Development Planning System Act of 1994 (Act 480). Subsequently, there has been significant progress in implementing e-government initiatives, with e-participation regarded as a key initiative for promoting good governance and economic growth (Kyere & Gyamea Kumah, 2017). Additionally, the introduction of the Ghana E-Interoperability Framework (E-GIF) provided a robust ICT environment that can be leveraged to implement e-participation (National Information Technology Agency, 2014). Based on the provisions of the Local Governance Act of 2016 (Act 936), Metropolitan, Municipal, and District Assemblies (MMDAs) are responsible for formulating and implementing development plans and programs within their respective jurisdictions. Furthermore, the 2016 National Development Planning (Systems) Act designates MMDAs as planning authorities, obligating them to develop plans through a participatory process and to adhere to the guidelines established by the National Development Planning Commission (NDPC). Despite these policies and legislation, citizen involvement in decision-making through digital platforms remains limited, with scant documented evidence of e-participation adoption and benefits (Anaafo & Appiah Takyi, 2021; Okrah, 2024). Given that Northern Ghana is underdeveloped and has limited planning capacity (Oteng-Ababio et al., 2017), this research seeks to investigate the barriers and opportunities to incorporating electronic participation into decentralised planning in Northern Ghana. The paper answers two key questions: First, what barriers hinder the uptake of e-participation in decentralised planning in Northern Ghana? Second, what are the prospects for integrating e-participation into decentralised planning in Northern Ghana? The paper is organised as follows. After this introduction, section two reviews the literature on the relevance, barriers, and prospects of integrating e-participation into decentralised planning. Section three discusses the study's setting and methods, while sections four and five present and analyse the study's results and conclusions.

2. E-participation in planning: Relevance, barriers and prospects

E-participation entails utilising information and communication technologies, especially internet-based tools, to broaden and transform citizen involvement in consultative processes. (Sanford & Rose, 2007). In the context of planning, e-participation involves using digital tools to involve citizens in urban development planning processes. (Anaafo & Appiah Takyi, 2021; Shahab et al., 2021). Research indicates that it was created to address the limitations of conventional, sluggish participatory planning approaches by enabling public participation in data gathering and collaborative knowledge creation. (Cooper & Balakrishnan, 2013; Turken & Eyuboglu, 2021). In general, e-participation allows citizens to communicate, deliberate, and influence planning decisions through digital tools. The widespread presence of the internet and mobile communication technologies in today's world has made it simpler for leaders and their communities to connect. Furthermore, it has offered stakeholders more opportunities than ever to engage and collaborate with planners on planning-related matters. (Wilson et al., 2019).

E-participation is increasingly recognised as a vital way to improve transparency, citizen engagement, inclusivity, and accountability across various planning settings (Anindito et al., 2022; Ninčević Pašalić & Ćukušić, 2024; Shahab et al., 2021). Research indicates that e-participation tools enhance the diversity and effectiveness of informing and consulting processes, especially when integrated into blended strategies (Akmentina, 2023; Conroy & Evans-Cowley, 2006; Onyimbi et al., 2018). For instance, Akmentina (2023) highlights how ICT-enabled engagement becomes a vital part of planning when used together with deliberative practices. Meanwhile, Onyimbi et al. (2018) demonstrate that Short Message Service/Unstructured Supplementary Service Data (SMS/USSD) and email can boost citizen participation by making access and communication more convenient for everyone. It can thus be inferred from multiple studies that digital tools including web-based Participatory Geographic Information System, 3D city models, Participatory Planning Support Systems (PPSS), web portals, emails, SMS/USSD, mobile and internet calls via smartphones, websites/e-government tools, and digital social media content creation and sharing tools, when used in planning can contribute to democratising planning, improving accessibility to information, and attracting broader interest groups – including both experts and non-experts – to participate in generating and co-creating planning knowledge (Akmentina, 2023; Anaafo & Appiah Takyi, 2021; Bouregh et al., 2023; Koekoek et al., 2009; Saad-Sulonen, 2012). These tools can be designed as location-based interactions, playful interfaces, and game elements to promote engagement (Turken & Eyuboglu, 2021). Recent trends in e-participation indicate that e-participation tools can be employed across various

stages of the planning process, including information provision and access, consultation and deliberation on planning issues, empowering stakeholders to co-produce planning decisions, and evaluating the outcomes of such decisions(Bouregh et al., 2023; Lim & Yigitcanlar, 2022). Anaafo and Appiah Takyi (2021), based on current mobile data subscription and penetration rates in Ghana, argued that e-participation tools can be effectively used in three main areas: "problem reporting, facilitating public meetings and charrettes; and consensus building" (Anaafo & Appiah Takyi, 2021, p. 9) to foster greater citizen involvement. Lin (2022) also revealed how social media offers various support functions for collaborative planning through a four-function typology: "information sharing, social networking, citizen participation, and communication" (Lin, 2022, p. 3).

Although e-participation offers significant opportunities for citizen engagement in planning processes, there are opposing perspectives on its potential to introduce population bias due to digital divides. (Lin & Kant, 2021). Various studies spanning Africa and other developing regions have identified multiple and interrelated barriers hindering the implementation of digital participation initiatives in planning, as categorised and presented in Table 1.

Table 1: Primary barriers to integrating e-participation in Africa

Category/Type	Obstacles to implementing e-participation
Technological/Infrastructure challenges	Limited/unreliable internet access (Okrah, 2024; Silva, 2013) Inadequate ICT infrastructure and power supply issues (Alfiani et al., 2024; Enaifoghe & Ndebele, 2023) Digital divide issues (Anaafo & Appiah Takyi, 2021; Ochara, 2012) Technical capacity constraints of planners (Alfiani et al., 2024; Musakwa & Moyo, 2020)
Socio-cultural barriers	Limited public awareness (Alfiani et al., 2024; Anaafo & Appiah Takyi, 2021) Resistance to change (Molobela, 2025) Language barriers/digital illiteracy (Anaafo & Appiah Takyi, 2021; Enaifoghe & Ndebele, 2023) Minimal civic engagement (Ndiege, 2020)
Institutional/governance barriers	Low strategic prioritization of e-participation (Ndiege, 2020; Ochara, 2012) Inadequate multisectoral coordination (Nirmani, 2025) Poor organizational culture and leadership support (Enaifoghe & Ndebele, 2023; Musakwa & Moyo, 2020) Limited enabling Legal and regulatory policies (Meiyanti et al., 2018)
Data Access/Security challenges	Data security and privacy/trust concerns (Agbozo et al., 2019; Katzef et al., 2022) Data accessibility challenges (Alfiani et al., 2024; Nirmani, 2025; Silva, 2013)

Among these, technological and infrastructure barriers present significant challenges. These obstacles hinder citizens from accessing digital platforms and services, engaging with the government, and participating in decision-making processes. It is therefore unsurprising that various studies have identified inadequate ICT infrastructure (e.g., reliable internet and telephone networks, electricity, secure platforms, and appropriate hardware/software), limited internet access and affordability challenges, deficiencies in digital literacy and skills, and insufficient technical capacity, among other factors, as significant barriers. (Alfiani et al., 2024; Molobela, 2025; Musakwa & Moyo, 2020; Okrah, 2024). Molobela (2025) reveals that the quality of ICT infrastructure and the digital gap significantly affect the adoption and use of e-participation platforms in South Africa. Similarly, Krishnan et al. (2017) noted that, apart from government assistance, the quality of ICT infrastructure is directly linked to a nation's preparedness to implement various e-participation features, such as e-information, e-consultation, and more.

The successful implementation of electronic participation systems critically hinges not only on a robust ICT infrastructure but also on a nuanced understanding of socio-cultural factors that influence citizen engagement through e-participation. While predominantly framed as an ICT infrastructural or technological challenge, recent scholarship indicates that factors such as citizens' digital literacy, social influence, normative frameworks, and cultural perceptions of privacy are crucial in either enabling or hindering e-participation (Anaafo & Appiah Takyi, 2021; Enaifoghe & Ndebele, 2023; Ndiege, 2020). Enaifoghe and Ndebele (2023) particularly highlight that linguistic barriers, illiteracy, lack of awareness, and the digital divide are just as significant as ICT infrastructural gaps in shaping public attitudes and behaviours towards digital engagement. Therefore, policymakers and practitioners must move beyond a purely technological approach and adopt a holistic view that incorporates socio-cultural factors, especially in contexts such as Africa, where these elements strongly influence participation patterns.

The discussion of technological and socio-cultural barriers is closely intertwined with governance-related barriers, including organisational culture deficiencies, strategic planning shortcomings, and inadequate policy and regulatory frameworks. (Meiyanti et al., 2018; Musakwa & Moyo, 2020;

Ndiege, 2020; Nirmani, 2025; Ochara, 2012). These issues are compounded by limited political commitment, poor leadership, and weak sectoral collaboration, which collectively hinder the advancement of e-participation initiatives. Musakwa and Moyo (2020) found that despite widespread smartphone adoption and increased internet access, challenges such as inadequate training, resource constraints, and organisational culture issues continue to impede the effective application of e-participation tools in developing countries. Similarly, Ndiege (2020) observed in the context of Kenya that e-participation remains underprioritized and inadequately integrated into national strategic documents, thereby limiting its adoption.

Ensuring access, safeguarding, and securing data pose significant challenges to launching e-participation initiatives in Africa, primarily because they influence public trust in ICT systems. (Haruna et al., 2021; Katzef et al., 2022; Molobela, 2025). Empirical evidence indicates a positive correlation between citizens' willingness to utilise e-government services, their participation in e-participation activities, and their level of trust in government institutions (Adnan et al., 2022). For example, Katzef et al. (2022) report that the deployment of the GovChat platform in Cape Town encountered challenges related to trust and confidentiality, largely due to concerns over user anonymity, which ultimately affected citizen engagement. Consequently, the successful execution of e-participation depends on local authorities building trust and confidence among citizens by prioritising security and privacy enhancements in technological frameworks. Drawing on the existing literature, it is evident that the identified barriers are frequently interconnected, contributing to a cyclical pattern of digital marginalisation across numerous African contexts. For example, deficiencies in technological infrastructure not only compound organisational and socio-cultural challenges but also reinforce digital exclusion by limiting access to ICT and impeding capacity-building initiatives. Furthermore, resource constraints within organisations restrict both technological acquisition and the training necessary for effective utilisation, thereby establishing a self-reinforcing feedback loop that sustains low adoption rates and exacerbates digital divides.

While various interconnected impediments to the implementation of e-participation have been discussed earlier, existing scholarly work (Okrah, 2024; Oni et al., 2020; Onyimbi et al., 2018) has also identified significant opportunities for e-participation in Africa and other developing regions, especially in the context of recent progress in ICT. The proliferation of internet access and smartphone usage, along with the adoption of a "mobile-first" culture and platform diversity—including 3D models, SMS/USSD, Web 2.0, social media, and various digital platforms—has proven to be a significant opportunity that can be leveraged to promote electronic participation initiatives. (Bawack et al., 2018; Ndiege, 2020; Onyimbi et al., 2018). In regions with limited connectivity, USSD/SMS-based participation mechanisms remain a viable means to extend outreach to rural and low-income populations. In Kisumu, Kenya, Onyimbi et al. (2018) found that integrating 3D web models and USSD/SMS platforms can effectively enhance citizen engagement, particularly when these tools are adapted to meet local needs and contextual considerations. Furthermore, the increasing government interest in implementing e-participation initiatives—such as e-government platforms and policy frameworks like the New Urban Agenda—along with existing e-participation systems and policy frameworks, constitute promising foundations for the broader adoption of e-participation (Haruna et al., 2021; Musakwa & Moyo, 2020; Okrah, 2024; Oni et al., 2020). This, coupled with rising literacy levels and expanded access to technical expertise, is anticipated to open up exciting new possibilities for e-participation applications. (Anaafo & Appiah Takyi, 2021). Additionally, citizen engagement and the willingness to adopt electronic participation mechanisms are pivotal determinants for the effective deployment of digital participatory platforms in African contexts. Empirical research across various urban settings—encompassing South Africa, Kenya, Ghana, and Nigeria—indicates that citizens generally demonstrate positive attitudes and a predisposition towards engagement via digital modalities. (Haruna et al., 2021; Musakwa & Moyo, 2020; Onyimbi et al., 2018). Notably, Bouregh et al. (2023) observed that individuals from diverse demographic backgrounds express a readiness to participate in e-engagement initiatives, particularly concerning local governance issues. These findings indicate that, subject to the availability of adequate ICT infrastructure, increased digital literacy, and proactive engagement from urban planners and municipal authorities, the implementation of e-participation tools has significant potential to enhance participatory planning processes and support traditional participation methods, creating a multi-channel communication system for planning in Africa and other developing countries.

It is essential to highlight that, although there is widespread recognition of the interconnectedness of e-participation barriers and emerging prospects, a significant gap persists in the nuanced understanding of the structural challenges and opportunities that affect the effective integration of e-participation initiatives into decision-making across different contexts. (Kubicek, 2010; Musakwa & Moyo, 2020). This knowledge gap emphasizes the urgent need for targeted research to identify these context-specific barriers and explore opportunities. This observation is particularly significant given the empirical research evidence. (Anaafo & Appiah Takyi, 2021) suggests that the incorporation of electronic participation initiatives into Ghana's decentralized planning system is still in the nascent stages of development.

3. Study context and methods

3. 1 The study context

The study was conducted in Northern Ghana, focusing on Metropolitan and Municipal Assemblies. Northern Ghana is in the upper part of Ghana and comprises the Northern, Upper East, Upper West, North East, and Savanna regions (See Figure 1).

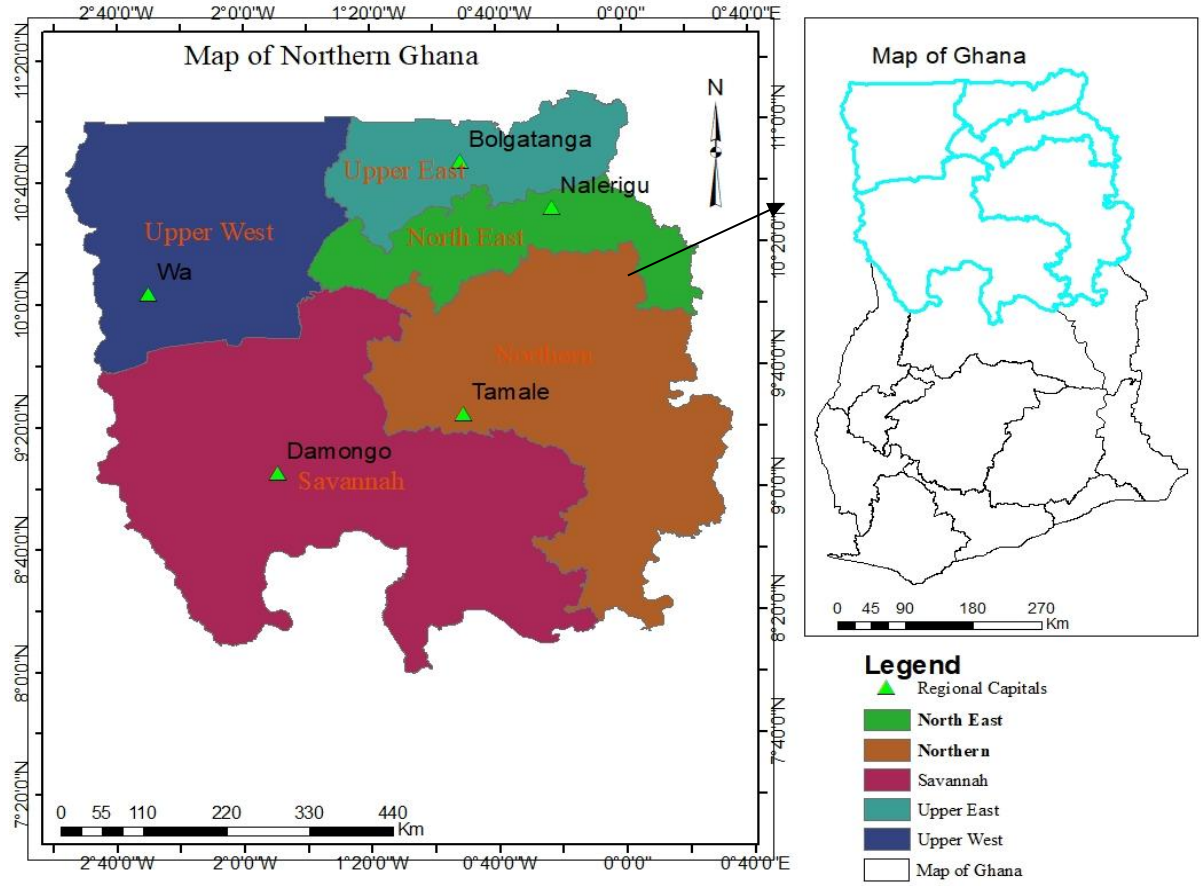

Figure 1: Map of administrative regions in Northern Ghana in Ghana Map

The selection of Northern Ghana as the study area is due to the limited scientific and scholarly work on electronic participation initiatives in planning in this region, except for a few studies (see Fuseini et al., 2025; Okrah, 2024). Thus, e-participation has been under-researched in this region, despite the ongoing technological development across Ghana. Furthermore, the study is limited to Metropolitan and Municipal Assemblies (MMAs) in Northern Ghana. Compared to District Assemblies, MMAs have an advantage in e-participation due to larger urban populations, higher literacy rates, better ICT infrastructure, and widespread mobile devices and computers among residents. (World Bank, 2025). Consequently, limiting the research to MMAs rather than the broader category of MMDAs is both economically prudent—given the vast nature of the region and research resource limitations—and strategically beneficial, as MMAs are inherently more predisposed to embracing and effectively utilising e-participation tools, thereby maximising successful implementation and sustainable digital engagement.

3.2 Methods

The study used a qualitative approach based on phenomenology. Phenomenology depicts how individuals experience a phenomenon firsthand, as described by the participants. (Neubauer et al., 2019; J. A. Smith, 2004). The study targeted Development Planning Officers (DPOs) of MMAs in Northern Ghana. These DPOs, serving as secretaries to the Metropolitan/Municipal Planning Coordinating Units (MPCUs), play key roles in initiating, preparing, and consolidating district development plans. They are expected to consult relevant stakeholders within their jurisdictions during the development of the MPCU's draft plan (Republic of Ghana, 2016). Consequently, their experiences with adopting e-participation for stakeholder engagement during the planning process are particularly significant. While the perspectives of other key stakeholders, such as citizens, Assembly members, and other heads of departments of the MMAs, are undoubtedly important, this study distinctly emphasises the critical insights of planning officers, a group less studied in e-participation research. These professionals play a crucial role in initiating and coordinating stakeholder engagement throughout the planning process. By focusing on their experiences, the study aims to provide a detailed and tailored institutional understanding of the opportunities and challenges involved in deploying e-participation tools during planning consultations.

Semi-structured interviews were conducted with twenty-four purposively selected Planning Officers serving as key informants (See table 2). The sample comprised nineteen Planning Officers from all Metropolitan and Municipal Assemblies (MMAs) in Northern Ghana, alongside five Regional Planning Officers, each representing one of the five Regional Planning and Coordinating Units within the region. The study participants were purposively sampled because of their extensive expertise and vital roles in initiating and coordinating stakeholder engagement. These participants also provide essential technical support during the planning stages of the MMAs, ensuring that their plans align with the national guidelines issued by the NDPC. In each of the 19 MMAs, the most senior planner (by rank) was contacted for the study. However, in a few cases where the most senior planner was

unavailable, another planning officer was delegated to participate in the semi-structured interviews.

Table 2: Distribution of study participants

Region	Number of Participants
Northern	7
Upper East	5
Upper West	6
North East	3
Savanna	3
Total	**24**

Face-to-face interviews were used primarily, except in a few instances where scheduling difficulties necessitated telephone interviews. The interviews generally covered the types of electronic participation platforms/tools used, planners' experiences with e-participation, key challenges, and prospects for the adoption of digital participation in the preparation of development plans and other planning activities. The interviews lasted between 60 minutes and 90 minutes. Participants' consent was obtained prior to recording the interviews.

Reflexive Thematic analysis using Braun and Clarke's protocol (Braun et al., 2016; Braun & Clarke, 2006, 2019) was utilised to examine, analyse, and develop themes from the data. The process involved familiarising with the data by re-listening to the interview recordings to ensure accuracy and reading the transcripts repeatedly, making notes during the familiarisation process. Next, initial latent and semantic codes were developed from the transcriptions by organising data items into meaningful groups. Later, themes and sub-themes were created by grouping similar items. These themes were examined to ensure there was sufficient data to support each one, overlapping themes were merged, and a final set of themes and sub-themes was established. The final themes included 'Technology and Infrastructure, Institutional Capacity and Leadership, 'Digital Literacy and Inclusivity, 'Navigating Security and Trust Concerns, Mobile phone and internet access,' and 'Enabling Governance Frameworks. The thematic analysis followed an iterative protocol, involving ongoing cycles of reviewing both the entire data set and specific coded extracts to ensure coherence and consistency. Illustrative quotes and codes exemplifying these themes were extracted and included in the findings.

4. Results and discussion

4.1 Planning practitioners' perspectives on barriers to e-participation

The study participants were predominantly male, accounting for 87.5% with females comprising 12.5%. The respondents occupied various positions within the Local Government Scheme of Service and Promotion System, including Senior Development Planning Officers (46%), Principal Development Planning Officers (29%), Chief Development Planning Officers (21%), and Development Planning Officers (4%). The most frequently employed e-participation tools, as reported by the participants, are depicted in Figure 2. WhatsApp is the most widely used platform, with 20 of the 24 planning officers reporting using it for their planning activities.

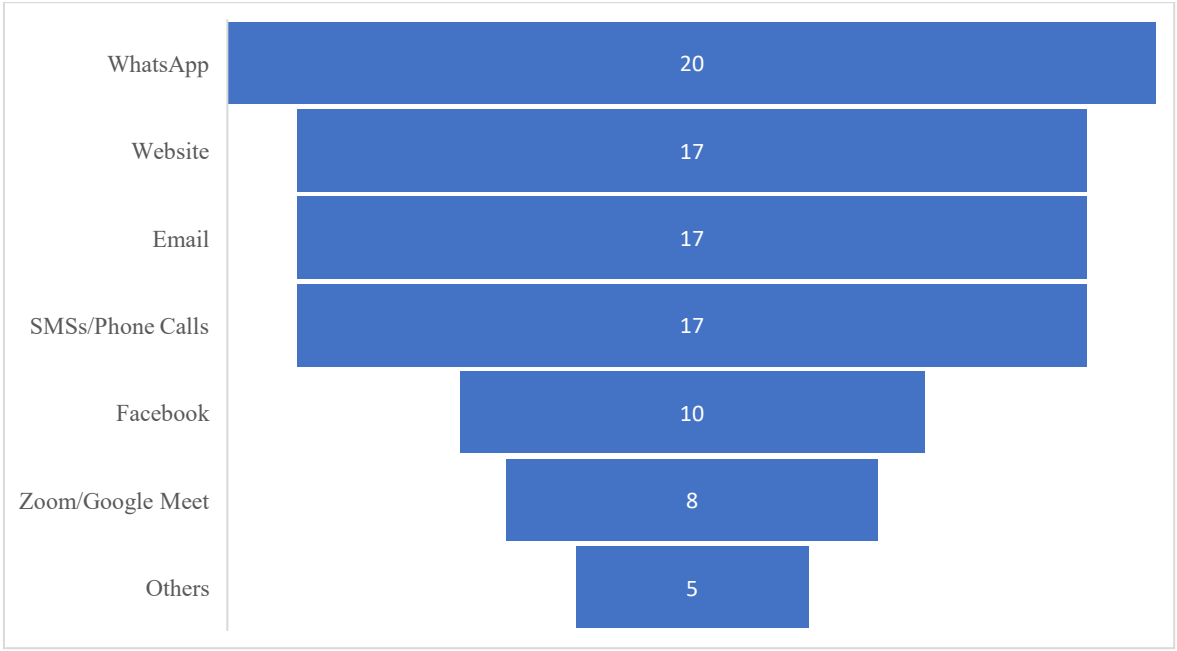

Figure 3: E-participation tools used by planning officers in northern Ghana

When asked about their experiences with e-participation tools for planning decision-making, some respondents remarked:

> *"I have some experience with e-participation. We occasionally hold Zoom sessions for our planning meetings, but this is limited to Assembly-level stakeholders. WhatsApp platforms are established for various interest groups to facilitate communication, share information, and resolve issues. For example, Assembly Members have their platform for disseminating information and addressing issues. Similarly, there are platforms for Heads of Departments, General Assembly Staff, and other stakeholders, which we use to engage these stakeholders regarding various planning decisions." (Principal Development Planning Officer, Northern Region, February 2023).*

> *"In our planning work, we use WhatsApp and Emails for sharing information such as guidelines for preparing development plans, annual reports, and invitations for planning meetings. This allows us to avoid unnecessary back-and-forth and facilitates the planning process by enabling officers to send plans and planning-related documents to relevant agencies at a distance with reduced costs. We also use SMSs and telephone calls to collect community data and receive complaints." (Senior Development Planning Officer, Upper West Region, February 2023).*

The primary barriers associated with these tools, as identified by the participants, have been categorised into 'technology and infrastructure challenges,' 'institutional capacity and leadership constraints,' 'digital illiteracy,' and 'engagement, trust and privacy issues.

Technological and infrastructural constraints

All planning officers interviewed mentioned limited availability and unreliability of ICT infrastructure as key challenges to implementing e-participation in Northern Ghana. Infrastructure, including telephone networks, internet broadband networks, electricity, data centres, servers, as well as various software and related equipment, was identified as a critical determinant influencing the adoption or rejection of e-participation at the MMA level.

> *"Due to limited internet coverage in certain areas of this Municipality, e-participation may not be accessible to all. Usually, one or two people in a location may want to participate, but they may lack network access or internet connectivity. In such cases, going online would prevent them from participating." (Development Planning Officer, Savanna Region, March 2023).*

> *"Many communities face challenges due to poor internet and telephone coverage, and some even lack access to electricity. Even where infrastructure exists, issues like unreliable power and weak internet due to low bandwidth make it hard to stay connected. We also don't have enough computers in the office. These difficulties significantly hinder our ability to use digital participation tools effectively during planning consultations." (Chief Development Planning Officer, North East Region, March 2023).*

These challenges extend beyond northern Ghana to many cities in Africa. Various studies (See, Alfiani et al., 2024; Anaafo & Appiah Takyi, 2021; Enaifoghe & Ndebele, 2023) have documented the issues' scope and impact. A major factor is the uneven distribution of infrastructure and resources, which is concentrated in administrative centres and affluent areas, leaving low-income and rural communities at a disadvantage. These marginalised areas lack essential infrastructure, such as broadband, reliable electricity, and affordable digital devices—computers, smartphones, and tablets —that are crucial for digital participation. (Shahab et al., 2021). This highlights the pressing need for tailored efforts to address ICT infrastructural deficits, promoting the uptake of e-participation tools for inclusive development planning to take place.

Institutional capacity deficits and leadership challenges

From the perspective of planning officials within the studied MMAs, institutional capacity and leadership limitations constitute fundamental barriers to the successful execution of electronic participation initiatives. These planners consistently underscore the inadequacy of institutional resources—including trained personnel, financial resources, and broader enabling frameworks such as policy guidelines and legislative structures—as critical impediments to initiating and maintaining meaningful online engagement with stakeholders for participatory planning.

> *"Although our planning legislation and local governance laws encourage citizen participation, the term 'electronic participation' isn't explicitly highlighted in these laws. It should be incorporated into the guidelines issued by the NDPC for the preparation of decentralised plans, outlining how to design, implement, and evaluate e-participation tools for citizen engagement in planning. Of course, this will also mean that the Assembly must devote resources to e-participation and train planning officers on how to effectively use these tools, as we currently lack the necessary training or technical skills to navigate e-platforms effectively." (Senior Development Planning Officer, Upper East Region, March 2023).*

Furthermore, these constraints are often exacerbated by leadership deficiencies, wherein decision-makers may lack the strategic vision, political will, or commitment necessary to embed digital participation into routine planning practices (Ndiege, 2020; Ochara, 2012). Some respondents observe a perceived insufficiency in leadership commitment to cultivating e-participation within the MMAs. They suggest that the predominant focus is directed toward electoral gains rather than the strategic advancement and implementation of technological initiatives. Consequently, even when technocrats endeavour to promote initiatives such as e-participation, these efforts often lack adequate support and are frequently marginalised.

> *"Currently, our biggest challenge is gaining genuine leadership and political commitment across several key*

areas of our development plans. Many of our issues with e-participation are linked to political leadership, as most leaders don't prioritise these initiatives. Even when efforts are made, leaders often dismiss them if they don't serve their interests or help them gain votes." (Senior Development Planning Officer, Savanna Region, March 2023).

Thus, in the context of northern Ghana, practitioners view e-participation as being at risk of being sidelined by competing institutional priorities, especially in the current resource-constrained environment, where digital initiatives are not regarded as essential to service delivery. This undermines the institutionalisation of participatory practices. Such perspectives align with wider debates on participatory planning, which emphasise that meaningful participation relies not only on technological infrastructure but also on the commitment of institutions to embed such innovations into everyday planning practice. (Enaifoghe & Ndebele, 2023; Musakwa & Moyo, 2020).

Digital literacy gaps

Although electronic participation is seen as an effective method to involve many stakeholders in planning consultations, planning practitioners noted that digital illiteracy among some community members remains a significant obstacle to e-participation in their MMAs.

"Many communities are enthusiastic, yet many people still lack the skills to navigate digital platforms or understand online planning information. When we set up online forums or send out surveys, only a small number of knowledgeable and tech-savvy residents usually respond. For many, especially those in rural areas, lacking digital skills can leave them silent, which might result in planning outcomes that only reflect a small part of the community." (Principal Development Planning Officer, Northern Region, February 2023).

For planning practitioners, digital illiteracy presents a dual challenge: not only does digital illiteracy exclude significant segments of the population—particularly older adults, rural residents, and marginalised groups—but it also undermines the inclusivity and representativeness of participatory processes. As such, planners often feel compelled to rely on traditional face-to-face engagement methods alongside digital tools to ensure wider community involvement.

"We cannot overlook digital participation, but we must not also assume everyone is prepared for it. In our Municipality, many residents still struggle with basic digital skills, so if we rely solely on online platforms, we may end up excluding many people. That is why we combine face-to-face meetings with digital tools. Although it may not be perfect, this hybrid approach ensures that no one is entirely excluded from the planning process." (Chief Development Planning Officer, North East Region, March 2023).

Although this hybrid approach helps reduce exclusion somewhat, it also weakens the efficiency and transformative potential of e-participation. The practitioner insights align with broader discussions in the literature on the digital divide and participatory governance. (See: Molala & Makhubele, 2021; Ochara, 2012; Zara, 2024), which emphasises that technological tools can reinforce social inequalities if not paired with intentional capacity-building efforts. Therefore, in Northern Ghana, without targeted investments in digital literacy skills training and supportive institutional frameworks, e-participation risks reinforcing existing disparities—benefiting only a digitally skilled minority—rather than fostering inclusive and democratic planning outcomes.

Security concerns and trust deficits

For some planning practitioners, the level of public trust in the government influences their acceptability and utilisation of electronic participation platforms. When citizens fully trust local planning authorities, online engagement is likely to be fully adopted. Certain individuals are reluctant to engage with digital participation tools due to concerns over data abuse, internet fraud, and the security of governmental ICT systems. These concerns are exacerbated by a general mistrust of institutions, with citizens often doubting whether their input will influence planning decisions or if participatory exercises are merely symbolic gestures for planners to check off. A planning officer remarked:

"People in our communities often share their concerns about sharing their views online. They worry about their information being misused or ignored. Many prefer face-to-face meetings because they can see who is listening and get immediate feedback. ...But, if we build more interest and trust in the government, e-participation could be a much more convenient and cost-effective alternative to travelling for in-person meetings. Without better data security and clear follow-up on their input, it's hard to reassure citizens that e-participation is safe and valuable." (Chief Development Planning Officer, North East Region, March 2023).

These perspectives align with growing concerns in the broader e-participation discourse in Africa, highlighting that the sustainability of online citizen engagement depends partly on how the public views the government's trustworthiness, transparency, and effectiveness of its feedback. (Agbozo et al., 2019; Katzef et al., 2022; Ochara & Mawela, 2015). In settings with low institutional trust, citizens are less inclined to use new participatory platforms, especially digital ones that require sharing personal data. This problem is especially significant in Ghana, where persistent decentralisation challenges and limited local government capacity hinder the institutionalisation of such initiatives. (Adu et al., 2018; Dzakaklo et al., 2023). Accordingly, although concerns over security and trust serve as significant impediments, they also open avenues for reform—namely, through enhanced data protection measures, increased transparency, and the integration of feedback mechanisms into planning processes.

4.2 Leveraging e-participation prospects for inclusive decentralised planning

In general, when asked about the feasibility of adopting e-participation into planning activities at their MMAs, the majority (83%) of planners interviewed supported the idea

that e-participation can be used in decentralised planning. According to one planner:

> *"For me, e-participation is very doable, especially after COVID-19 showed new ways to engage in decision-making. We started using tools like Zoom, enabling remote, face-to-face interactions and recording participation for transparency." (Principal Development Planning Officer, Upper East Region, March 2023).*

The current use of some e-participation platforms in district-level planning shows potential that can be tapped to expand and integrate e-participation initiatives into decentralised planning. It is important to recognise that, although some MMDAS have adopted certain e-participation initiatives, some planning officers argue that fully implementing e-participation at the Assembly level may not be feasible due to network challenges. Nonetheless, combining traditional methods with electronic participation will be the most effective approach.

In addition to emerging e-participation initiatives that can be expanded to boost participation in decentralised planning, planning officers noted the extensive use of mobile phones in their MMAs as a significant opportunity to strengthen e-participation within decentralised planning. During interviews, participants from Assemblies such as Bawku, Kassena-Nankana, Jirapa, Sagnerigu, West Gonja, West Mamprusi, Yendi, Wa, Sissala East, Nandom, Builsa North, as well as the Upper West and Northern Regional Planning and Coordinating Units, highlighted that mobile devices, particularly smartphones, are already deeply embedded in the daily practices of key stakeholders. A planner explained,

> *Almost all Assembly Members have smartphones and can easily communicate and use them. Additionally, most people, especially the youth in the municipality, own smartphones that they use for various purposes, including complex tasks. Therefore, I believe this presents an opportunity for e-participation implementation (Senior Development Planning Officer, Upper West, March 2023).*

Compared to resource-heavy electronic platforms, scholars view mobile phones as a more accessible and cost-effective tool for engagement, information sharing, and feedback through SMS, social media, and calls. (Anaafo & Appiah Takyi, 2021; Ndiege, 2020; Onyimbi et al., 2018). This is particularly relevant given the increasing mobile ownership and internet usage in urban Ghana, although coverage still needs to be expanded. As of June 2019, the National Communications Authority (2020) reports that 82.0% of adults owned mobile phones and 55.6% used the internet, mainly via mobile devices. In Northern Ghana, where infrastructure and institutional support are limited, leveraging the widespread availability of mobile phones could be the most effective way to strengthen decentralised e-participation efforts. Nonetheless, to achieve this, deliberate institutional planning is essential to develop mobile-friendly engagement platforms, promote inclusivity across demographic groups, and integrate mobile participation into official planning processes. Without these measures, mobile devices may continue to be underused resources rather than valuable tools for meaningful citizen involvement.

Additionally, planning officers highlighted the existing legal framework that mandates participatory planning, along with strategic digital institutions such as the Ghana Investment Fund for Electronic Communications, the National Communications Authority, the National Information Technology Agency (NITA), the Ghana Digital Economy Policy & National Strategy, and the Open Government Partnership, as offering a solid foundation for integrating e-participation into decentralised planning:

> *"I find hope in the fact that our Local Governance and planning laws, like Act 936 of 2016, Act 480 of 1994, and Act 925 of 2016, include explicit provisions that support participatory planning and inclusive decision-making. This legal backing truly empowers planners to promote e-participation confidently." (Principal Development Planning Officer, Northern Region, February 2023).*

In the Upper West Region, a respondent indicated that:

> *"The Ghana Investment Fund for Electronic Communication (GIFEC) is supporting Assemblies to improve network connectivity in communities by erecting communication masts to boost connectivity and supporting the Municipalities by establishing and equipping community centres." (Senior Development Planning Officer, Upper West, March 2023).*

These laws and strategic initiatives, including the newly developed Ghana Digital Economy Policy & National Strategy and the Open Government Partnership, are driving a strategic push to digitalise participatory planning processes in Ghana. However, to realise these opportunities, efforts should concentrate on implementing these frameworks at the MMAs levels—using mobile tools, digital platforms for localised open-government action plans, and civic-state digital collaborations. These coordinated efforts can greatly improve inclusive, transparent, and digitally facilitated citizen participation in local planning in Ghana.

5. Conclusions and policy implications

This study explores the challenges and opportunities of utilising electronic participation in planning and decentralised decision-making systems in northern Ghana, based on the experiences of planning officers. The study demonstrates that planning officers currently utilise e-participation tools for various engagement processes. However, they remain in limited use due to barriers such as inadequate ICT infrastructure, weak institutional capacities, limited digital literacy, and concerns about trust and security. It also suggests that while adopting some e-participation tools and the increasing use of mobile phones and mobile internet offer new opportunities for public involvement, they may also create new access inequalities due to digital divides, thus failing to address key questions about who participates on e-participation platforms. Therefore, e-participation should complement existing traditional participatory planning methods rather than replace them, as citizens who are

uninterested in conventional methods may not engage simply because online options are available.

To address the identified barriers, we recommend providing continuous digital skills training for planners, implementing digital literacy awareness programs for citizens, and developing comprehensive guidelines for electronic participation in planning activities. This can be achieved by leveraging the existing E-Government Interoperability Framework and the NDPC guidelines for preparing district medium-term development plans. Therefore, the NDPC should identify and recommend some emerging e-participation technologies for public involvement in their guidelines to MMAs. This will promote the adoption of e-participation by MMAs in planning decision-making. These efforts should be supported by strategic investments in ICT infrastructure and by stringent government data protection and security measures to promote the wider adoption of mobile-based technologies in electronic planning engagement.

Regarding the study's contributions, it advances both scholarly discourse and policy debates related to e-participation. Scholarly, it broadens the limited body of research on digital participation in planning within Africa by foregrounding planners' perspectives, a group often overlooked in digital participation research, and offering insights into institutional and professional dynamics that shape digital engagement in northern Ghana. In doing so, it contributes to theories of participatory governance by situating e-participation within hybrid and equity-sensitive governance models, while highlighting the mediating role of planners in receiving, synthesising, and translating citizen inputs into concrete planning decisions. From a policy perspective, the study offers practical insights for enhancing e-participation in northern Ghana, including capacity-building for planners, clear policy guidelines, citizen digital literacy programmes, and secure digital engagement. Additionally, by identifying barriers and opportunities, the findings provide a framework for developing inclusive and scalable e-participation strategies for Ghana and other emerging urban areas.

While the study offers valuable insights, it's important to recognise that focusing only on planners is a significant limitation. This approach overlooks the perspectives of other key stakeholders, such as citizens, community organisations, Assembly members, and technology providers, all of whom play crucial roles in understanding the barriers and opportunities to digital engagement. Such a narrow scope can bias the analysis, limiting considerations of inclusivity, trust, and representation. To address this, future research should adopt a multi-stakeholder, comparative approach, examining how various actors and contexts interact to promote or hinder e-participation in planning.

Declaration

The authors declare no potential conflict of interest.

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Growing cities, shrinking farms: Exploring the dynamics of youth participation in peri-urban agriculture in Bamahu, North-Western Ghana

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ABSTRACT

The rapid encroachment of urban areas into peri-urban zones is (re)shaping food systems, livelihoods, and the dynamics of youth participation in agriculture. This study explores the forces influencing youth engagement in peri-urban agriculture in Bamahu, using a qualitative approach and a case study design. In-depth interviews were employed with twelve youth (n=12) and key informants (MOFA officers: n=2; adults: n=6), guided by data saturation. Findings reveal a gradual resurgence of youth interest in farming, envisioned as part of a dual-income strategy that combines agriculture with non-farm activities. While farming remains valued for its long-term benefits, persistent barriers undermine meaningful participation. Gerontocratic land practices marginalise youth from household decision-making, shrinking access to farmland through sales to developers, rising input costs and mechanisation, and inadequate transportation options for reaching distant farms persist. Current peri-urban development efforts do little to intentionally integrate youth into agricultural value chains or provide mentorship opportunities. In conclusion, sustaining youth engagement in peri-urban agriculture requires targeted institutional support, safeguarding farmland from urban encroachment, and deliberate efforts to foster intergenerational partnerships in land governance. Reorienting youth aspirations to regard agriculture as a profitable pathway for upward mobility is also crucial for sustaining youth engagement and ensuring food security.

1. Introduction

Agriculture remains a key sector not only for ensuring food security but also for economic development in many developing countries (Praburaj, 2018; Pawlak & Kołodziejczak, 2020). By fulfilling economic, social and ecological functions, agriculture holds considerable potential for advancing several targets of the 11th Sustainable Development Goal (SDG). These targets, according to the United Nations (2020), include minimizing the adverse environmental impact of cities (target 11.6), providing access to green spaces (Target 11.7) and fostering resource use efficiency in cities (Target 11b).

Africa has vast arable lands and a youthful population, and this holds the potential for Africa not only to ensure food security for its people but also to play a crucial role in the global food system. But this is checked by myriad challenges from climate change and infrastructural gaps to inadequate policies, and these require proactive and innovative solutions (European Commission, 2023). The sub-Saharan Africa (SSA) region accounts for more than approximately 13% of the global population and this is projected to be 22% by 2050 and undernourishment has been a long-standing challenge, with uneven progress across the region due to slow progress towards food security which is attributed to low productivity of agricultural resources, high population growth rates, political instability and civil strife. Vast regional differences exist, and the success achieved in countries with stable political conditions, economic growth and expanding agricultural sectors suggests that appropriate governance systems, institutional capacities, and macroeconomic, structural and sectoral policies can work together to improve food security on a long-lasting and sustainable basis, according to OECD/FAO (2016).

In Ghana, agriculture is the cornerstone of the economy, significantly contributing to employment and overall national development. However, in the face of rapid urbanization in most parts of the country (Ghana Statistical

Service, 2022), many regions continue to face significant challenges in sustaining agriculture due to unregulated urbanization. Within this context, peri-urban agriculture (PUA) emerges as both a vital opportunity and a contested arena that has received significant attention for some time now in scholarly research and policy realms as it has been reported that the findings of national censuses, household surveys and research projects suggest, that up to two-thirds of urban and peri-urban households in developing countries are involved in agriculture (FAO, 2001). Peri-urban agriculture encapsulates the cultivation of crops and livestock rearing in areas transitioning from rural to urban. It represents a critical interface where the challenges of urban expansion intersect with the opportunities for sustaining food production and livelihoods (Bonye et al., 2021). It is noteworthy that these challenges are further compounded by the rapid spatial and socio-economic transformations occurring in peri-urban zones lately in peri-urban areas like Bamahu, a fringe community near Wa in Ghana's northwestern region.

In the Bamahu enclave, studies by Bonye et al. (2020) and Toku et al. (2024) emphasize how rapid urbanization has led to the conversion of agricultural land into residential and commercial spaces and non-farm livelihoods. By the nature of these conversions and dispossessions, access to land for farming is increasingly becoming a huge challenge for many populations. For many young people, the situation of problematic access to farmland is exacerbated by financial constraints (Anyidoho et al., 2012; White, 2015), which make acquiring land and investing in agricultural activities increasingly difficult. Additionally, systemic issues such as limited access to markets, insufficient technical training, and a lack of institutional support hinder their ability to access land (see Proctor & Lucchesi, 2012; Yeboah et al., 2017). Beyond these structural barriers, the literature also highlights that social and cultural attitudes contribute to the land access challenges (Sumberg et. al., 2017; Korankye et al., 2019). Studying the everyday economic marginality and configurations of masculinity among youth in Ghana, writers such as Dery (2019) found that many youths perceive farming as labour-intensive and low-income occupations, unsuitable for modern aspirations. These combined factors illustrate the persistent portrayal of reduced interest and disengagement of young people in peri-urban agriculture in Ghana within the broader literature.

Despite the importance of understanding the dynamics shaping youth agricultural participation and their implications for food systems, there is a notable gap in the local literature. Most studies on land access, agricultural futures, and changing land use regimes in the Upper West region and the Wa municipality (Naamwintome & Bagson, 2013; Mwingyine, 2019; Bonye et al., 2020; Bonye et al., 2021) either generalize findings across rural and urban contexts or neglect the unique challenges of peri-urban areas and marginalized groups, such as youth. With a clear focus on youth, addressing this research gap is essential to uncover the socio-economic, cultural and institutional factors that influence their engagement in agriculture in such communities. Doing so provides critical insights for designing policies and interventions to enhance youth involvement in agriculture, thereby unlocking agriculture's potential for sustainable development. The urgency is heightened by the agriculture sector's role as one of the country's largest employers, offering significant opportunities to address persistent urban youth unemployment (Atiemo et al., 2020; Boakye, 2025).

The purpose of this study is to answer the question: which forces shape youth participation in peri-urban agriculture in Bamahu? By addressing this question, the paper aims to contribute to ongoing discourse about youth engagement in (peri-urban) agriculture in the face of city expansion and agricultural land loss. Moreover, the study extends the theoretical ideas on sustainable livelihoods and agrarian transitions—key components of our theoretical framework—by foregrounding youth agency within contexts of structural constraints. More importantly, we contribute to debates on intergenerational equity and gender by showing how patterns of land access, control and transfer, mediated by patriarchy and age-based hierarchies, are (re)shaping the prospects of young men and women differently. Together, these insights underscore the need for youth-targeted land reforms and gender sensitive agriculture support initiatives that can safeguard food security and secure agriculture as a viable livelihood for future generations. The remainder of the paper reviews relevant literature on the dynamics of peri-urbanization and food systems, and the youth demographic within the broader debates about their participation in (peri-urban) agriculture. The study methods detailing the context, study design, and data collection and analysis processes are presented. The findings, discussions, conclusions and implications of the findings are also provided in that order.

2.1 Literature review

2.1.3 Theoretical framework

Four interrelated theoretical ideas foreground this study—the Sustainable Livelihoods Framework (SLF), Agrarian Transition Theory (ATT), Youth Empowerment Theory (YET) and insights from the gender/feminist scholars. The Sustainable Livelihoods Framework (SLF) provides a holistic lens for understanding how individuals and households mobilize various forms of capital, namely the human, natural, social, physical, and financial, to sustain their livelihoods (Chambers & Conway, 1992; and Scoones, 1998). In the context of peri-urban agriculture and the engagement of youth in it, the SLF helps to explore how youth utilize available resources, navigate constraints imposed by urban expansion, and adapt livelihood strategies to changing environmental and socio-economic conditions. This framework emphasizes resilience and adaptability, both of which are crucial for young farmers facing land scarcity and competition from non-agricultural land uses and more resource-endowed individuals seeking land.

While ideas of the Sustainable Livelihood focus on the assets, strategies, and adaptive capacities of youth in negotiating agricultural challenges, the Agricultural Transition Theory (ATT) shifts the focus to the broader structural transformations shaping these individual experiences. According to Byres (1996) and Bernstein (2010), notions of agrarian transition explain how agriculture is (re)configured under the influence of

economic change, demographic shifts and urbanization. This perspective explains how traditional farming systems evolve or decline when exposed to market integration, technological change, and policy reforms. In the study area (peri-urban Bamahu), the encroachment of urban development into agricultural land was observed in (Toku et al., 2024) This is indicative of a transition, where farming is increasingly shaped by urban market demands, diminishing land availability, and diversified livelihood patterns among youth. These mirror discussions within the theoretical ideas of diversified livelihoods (Bezu & Holden, 2014; Mwaura, 2017), which further highlight how some youth often aspire to construct a diverse portfolio of income sources, with farming inclusive, despite significant barriers to their agricultural participation. The Agricultural Transition Theory is not without weaknesses. Notably, while it highlights the structural forces (re)shaping agriculture and influencing youth livelihoods, it does not fully account for the agency of young people in responding to these changes. In this light, the Youth Empowerment Theory (YET) becomes relevant to this study.

Ideas of YET indicate that young people's active engagement in development processes depends on access to resources, participation in decision-making, and the acquisition of relevant skills (Zimmerman, 2000). In the context of peri-urban agriculture in the study area, the theory emphasizes youth as innovators, entrepreneurs, and change agents who can sustain agricultural production despite structural challenges. In Bamahu, this youth empowerment may involve enhancing access to land, promoting agricultural entrepreneurship, and providing platforms for youth participation in agricultural policy formulation. It may also entail enhancing their capacity to blend farming with complementary non-farm income activities, such as motorbike repairs, operating commercial tricycle-taxis, which are popular economic pursuits among many young people in the area.

Finally, our analysis also draws on insights from feminist and gender analysis. These perspectives highlight the intersecting power relations and inequalities that influence access and participation. It argues that policies and programmes aimed at encouraging youth involvement in farming and land-based transactions must also pay close attention to how social relations and social differences affect which young people can access certain work and entrepreneurial opportunities in peri-urban areas. This is especially relevant in a patriarchal context like the one we studied, where youths' daily attitudes and behaviour are shaped by masculine dominance and ageism. Overall, the theoretical foundations used provide a nuanced approach to understanding youth participation in peri-urban agriculture. This integrated framework enables a thorough analysis of how urban expansion and growth in Bamahu (re)shape agricultural opportunities and create challenges for young people.

2.1.1 Understanding the dynamics of peri-urban agriculture–a broader perspective

Peri-urban agriculture (PUA) has gained attention in many developing countries following the rapid urbanization of cities and its implications for food systems and sustainability (Lasisi et al., 2017; Chagomoka et al., 2018; Azunre et al., 2019). As indicated in the introduction, PUA refers to agricultural practices in areas on the outskirts of cities, where urban and rural features converge. It plays a crucial role in food security, employment and environmental sustainability in both developed and developing countries. While PUA serves as a buffer against food shortages in rapidly urbanizing areas, providing fresh produce and livelihood opportunities to urban and peri-urban residents (Tacoli, 2003), critical issues, including competition for land, water scarcity, and socio-economic marginalization of farmers, which characterize PUA, have received some scholarly attention for some time.

In Africa, the relationship between uncontrolled urbanization and urban agricultural land loss has been well-documented (Jayne et al., 2003; Headey & Jayne, 2014; Mubarak Lasisi et al., 2017). The study by Mubarak Lasisi et al. (2017), which aimed to determine the rate, pattern and effects of uncontrolled spatial expansion in the city, examined the trend in peri-urban communities. They discovered that city encroachment and expansions into vegetative land cover are greatly impeding agricultural activities and farm production. They advocated that key stakeholders, such as the government and land administrators, formulate and implement policies to mitigate or streamline it.

Likewise, trends in urbanization and urban food insecurity in sub-Saharan Africa (SSA) have stimulated critical debates around the potential benefits of urban agriculture to urban livelihoods. Scholars such as Potts (2013) and D'Alessandro et al. (2018) suggest that PUA can contribute to the food quantity, food quality and income needs of urban households. Triangulating research methods and methodologies, and critically examining the literature in Southern Africa, D'Alessandro et al. (2018) argued that peri-urban agriculture was a viable livelihood response to the complex challenge of feeding a burgeoning mass of urban residents amidst declining food production. Based on over 700 surveys with food vendors and consumers, as well as ethnographic research with farmers, Wessels & Hemerijckx (2024) show how a total of 70 per cent of all amaranths consumed in Dar es Salaam was found to be produced within the city. They showed that with an average distance travelled from farm to fork of 11 km, leafy vegetables have a strongly localized foodshed. The results showed the significance of urban areas in meeting their own food demands and emphasized the necessity to explicitly integrate food provisioning in the planning of growing African cities.

Some literature highlights factors shaping peri-urban agriculture and implications for food systems. As observed by Follmann et al. (2021), a key challenge of peri-urban agriculture across the global south was agricultural land conversion and peripheralization. Exploring the key barriers to (peri)urban agriculture in Sub-Saharan Africa, Davies et al. (2021) highlight challenges such as insecure land tenure, weak policy support, and economic constraints like limited access to credit and markets. Social and cultural perceptions, including stigmatization of urban farming and patriarchal norms restricting women's participation, further

hinder the sector. They observed that environmental issues, such as soil degradation and climate variability, compound these challenges. The authors called for multi-sectoral approaches, including policy reforms, infrastructure investment and inclusive practices to address these barriers and promote sustainable peri-urban agriculture in the sub-region. D'Alessandro et al. (2018) observed an apparent lack of political will necessary to promote peri-urban agriculture. D'Alessandro and colleagues attributed challenges to weak or absent policy frameworks in many African contexts, which resulted from an enormous capacity deficit.

2.1.2 Youth demographic and drivers of participation in peri-urban agriculture

Nearly 1 billion of the world's 1.2 billion youth aged 15-24 reside in developing countries (IFAD, 2019). Their numbers are growing far more rapidly in lower-income countries than in higher-income countries, particularly in rural areas. Investing in young people can yield boundless results in terms of poverty reduction, employment generation and food and nutrition security. Their energy and dynamism are needed to transform food systems. Youth are key to achieving the Sustainable Development Goals (SDGs) by 2030 and, indeed, to our planet's future. According to the Ghana Statistical Service, youth constitute a substantial portion of Ghana's population. A recent analysis indicates that about 57 per cent of the Ghanaian population resides in urban areas. Moreover, the 2021 population and housing census reveals that 60.5 per cent of individuals aged 15-35 live in urban areas (Ministry of Youth and Sports, 2022).

Given their substantial demographic profile, local youth participation in farming, much like any other economic activity, is crucial to ensuring intergenerational succession (White, 2015) and the future sustainability of food systems (Glover & Sumberg, 2020), particularly as the farming population ages. As older farmers retire or scale back their activities, younger generations need to engage in agriculture to sustain food production, maintain agricultural knowledge and contribute to rural economies. Without the active involvement of youth in farming, there is a risk of losing agricultural skills and facing a decline in food security. Moreover, there is a growing recognition of the potential of youth to transform farming through innovative practices, technology adoption, and entrepreneurial approaches (Leavy & Hossain, 2014; Geza et al., 2021). Therefore, fostering youth engagement in (peri-urban) agriculture is vital for the continuity and sustainability of farming.

Existing studies present a range of findings regarding the forces that shape youth participation in peri-urban agriculture. In Ethiopia, Fola et al. (2021) highlight peri-urban youth's limited access to credit as influencing their participation. Lack of land ownership, low returns, lack of market access, lack of credit access, invisibility of extension personnel, and the high cost of inputs were among the challenges faced by youth as observed in South Africa (Thibane et al. 2023). Their logit regression results further revealed that sex, years spent in school, age, membership of farm organizations, and farm size were positive influences for youth participation, while access to credit, access to extension services, and distance to market centres were negative influences for youth participation in micro- and small-sized agricultural enterprises.

Consequently, the socio-economic dynamics of peri-urban agriculture are complex, shaped by factors such as income level, access to resources, and market opportunities. Furthermore, young people face additional barriers, limited agricultural knowledge, and societal perception that agriculture is an unattractive career option (Bezu & Holden, 2014). A study by Geza et al. (2021) revealed that youth held pessimistic perceptions about agriculture's capability of improving their living standards. Also, from a policy perspective, the study revealed that current agricultural development programs do not adequately address structural issues underpinning youth participation in agriculture. Considering this, Geza and colleagues advocate integrated agricultural-based interventions that are context-specific as policy implementation, since this will enhance the involvement of youths in agriculture and thus promote meaningful youth participation in shaping future food systems. These challenges above signal the complexities of factors that discourage youth participation in peri-urban agriculture.

The institutional and policy context also plays a part in ensuring the success of peri-urban agriculture. Weak or absence of policies that integrate agriculture into urban planning leads to neglect of young people and the sector. In Ghana, Kuusaana & Eledi (2015) showed that policy frameworks remain inadequate in addressing the specific needs of peri-urban farmers, particularly youth. In the study on youth access to agricultural land in the peri-urban and rural contexts of Techiman, Kidido & Bugri (2020) identified several challenges to youth participation in agriculture. Their findings highlight that limited access to land, high land prices, and traditional land tenure systems pose significant barriers for young people in both peri-urban and rural areas. Additionally, their analysis emphasized the role of cultural norms and patriarchal structures that restrict youth, particularly young women, from inheriting or owning land. Their findings also pointed to the lack of financial resources and technical support as key factors limiting youth engagement in farming (see also: Kidido et al., 2017). In examining youth involvement and the factors hindering youth's involvement in agriculture in Ghana's Eastern region, Korankye et al. (2019) reported that most of the youth engaged in agriculture are male as compared to female, a disparity associated with the fact that agriculture in Ghana requires more physical strength.

In sum, the dynamics of peri-urban agriculture are shaped by the interplay of urbanization, socioeconomic, institutional frameworks and environmental conditions. While peri-urban agriculture holds immense potential for food security, it faces numerous challenges. Notably, frequent agricultural land conversions and limited access to resources among peri-urban dwellers, particularly youth, pose significant concerns. Consequently, the emergent concepts relevant to this current paper, as the literature review has shown, are summarized into a flow diagram/conceptual framework below.

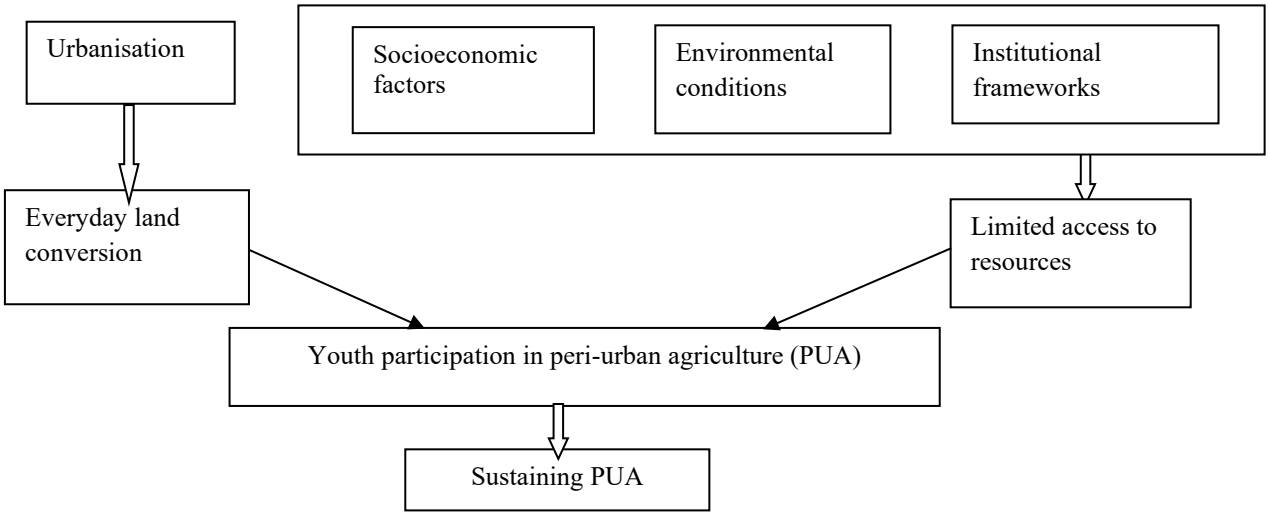

Figure 1: Factors shaping youth participation in peri-urban agriculture
Source: (Authors' Construct, 2025)

The flow chart in figure 1 shows how youth participation in peri-urban agriculture is influenced by the interaction of urbanization, socioeconomic conditions, institutional frameworks and environmental factors. Urbanization often leads to the conversion of farmland for non-agricultural uses, while socioeconomic, institutional and environmental constraints hinder access to essential resources such as land, capital, and markets. These twin pressures—i.e. land loss and resource scarcity—shape youth engagement in farming. Ultimately, the extent to which local youth can participate meaningfully in peri-urban agriculture has a direct bearing on the agricultural system's sustainability, particularly in land-constrained areas like Bamahu, where land scarcity is intensifying. The broader theoretical ideas also provide glimpses offering how to explain or understand the dynamics of youths' agricultural participation. In what follows, we provide a review of relevant theoretical frameworks deployed to aid our understanding and analysis of the issues.

3.1 Study setting and methods

3.2 Study setting

This study was conducted in Bamahu, a Ghanaian peri-urban community located in the Wa municipality of the Upper West region along the Wa-Kumasi trunk road. The Bamahu community has a total population of 4472 and occupies a total land area of 8719092.68 square meters (8.72km^2). This represents about 2 per cent of the Wa municipality's land area (579.86km^2). Following the relocation of the campus of the then University for Development Studies-UDS (now the Simon Diedong Dombo University of Business and Integrated Development Studies-SDD-UBIDS) in 2007, a groundswell of research has reported notable spatial and livelihood changes resulting from urban expansion and the establishment of growth centres (Buor & Konkor, 2016; Akrofi et al., 2019; Toku et al., 2024). Buor & Konkor's study (2016) revealed that the presence of the UDS has created new economic opportunities, encompassing small-scale businesses, porterage services, security services, and hostel management. Increasingly, demand for accommodation for students and staff alike resulted in land-use changes where several expanses of arable land were converted for residential purposes. For nearly two decades, settlements in the Bamahu enclave have grown and tend to engross the adjacent agricultural area. Moreover, with the prospects for growth resulting from the establishment of the university, several investors around real estate secured large tracts of land hitherto used for agricultural purposes. This has left farmers with limited opportunities to increase their output from the available arable lands. According to Buor & Konkor's (2016) study, one of the significant issues arising from the establishment of the University for Development Studies (UDS) was the community's loss of agricultural land.

Likewise, the Bamahu community, as in Figure 2 below, has since become a business incubation hub for residents and foreigners alike following changes in the economic composition of the suburb. Bamahu, once a thriving agricultural hub in the peri-urban areas of Wa Municipality, has undergone a significant transformation. According to commentators (Bonye et al., 2020; Toku et al., 2024), it has emerged as a commercial and residential centre, attracting migrant students, workers, and businesses. Current dynamics of land availability and land use changes in Bamahu highlight a growing challenge, where young people, often lacking the financial resources, institutional support and livelihood assets, are increasingly unable to effectively compete in the land market to cope with the changes and achieve their self-defined goals (Abass et al., 2013).

In the cultural context of Bamahu, the challenges faced by young people are further compounded by patriarchal and gerontological norms, which position them as subordinate to elders, leaving them with limited influence over family decisions and property. These societal dynamics underscore the importance of exploring how youth engage with agriculture and farming, particularly as they navigate the

evolving peri-urban characteristics of the Bamahu community.

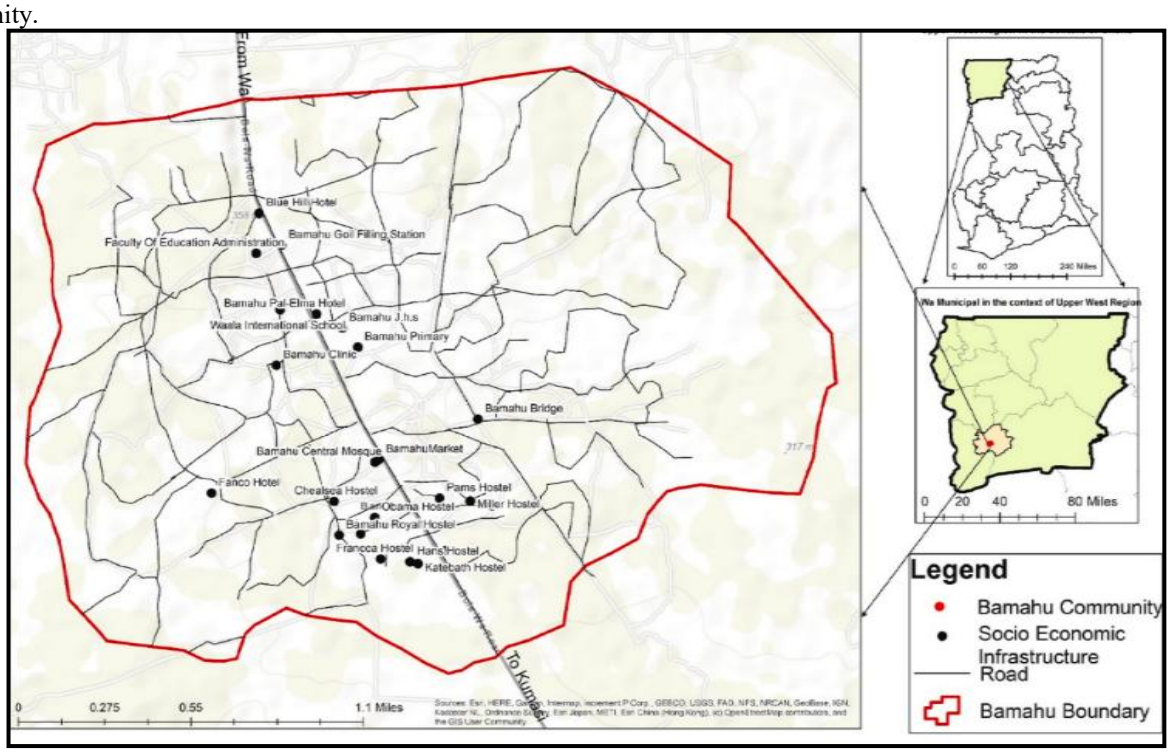

Figure 2: Map of the study area
Source: Toku et al. (2024)

In essence, Bamahu was selected for this study because, as highlighted in the extant literature (Bonye et al., 2020; Buor & Konkor, 2016), it is experiencing rapid urban growth and encroachment. While offering limited opportunities to absorb its growing youth population into urban employment, this expansion has also intensified competition for land, worsening the livelihood struggles of residents and vulnerable groups including the local youth. This makes it a crucial research site for exploring how to support young people in adapting to urbanization, minimizing its adverse effects, and contributing to sustainable community development.

3.2 Methods

The study utilized a qualitative research approach (Creswell, 2016) to explore the experiences and perceptions of youth in peri-urban agriculture and a case study design. Snowball and purposive sampling techniques were employed to recruit twenty (N=20) participants (including current and aspiring young farmers (n=12, parents (n=6 and MOFA staff(n=2). Following the ideas of Rossman & Rallis (2018), the snowball sampling began by initially contacting a gatekeeper (assemblyman). This was followed by identification and interaction with the youth participants. A closing interview question asked after each interview was: *"Who else could I speak with to learn more about this topic?* This concluding question led to the recruitment of additional participants until data saturation, where recruitment of additional participants added no new insights (Creswell, 2016; Flick, 2018).

Additionally, relevant actors (from MOFA and adult Parents) were purposively recruited as key informants to triangulate the findings from the youth while also having a more balanced perspective. Data were collected through semi-structured interviews, using an interview guide that focused on key themes such as perceptions about the current and prospects of agriculture, access to resources, and the role of the Indigenous knowledge system. Verbal consent was obtained from all research participants by assuring that their participation was entirely voluntary and that the information obtained would be used for this research only. Data were gathered from 26th December 2024 to 26th January 2025.

Together with audio recordings, research assistants made copious field notes (Creswell, 2016) during interview sessions to ensure accurate data capture. The field notes were later cleaned and analysed using thematic analysis (Brinkmann & Kvale, 2018), where key patterns and themes were identified, coded and categorized. This process enabled a deep understanding of the opportunities and challenges faced by youth engaging with (peri-urban) agriculture, particularly concerning issues such as resource access and land ownership. Guiding the coding process was the authors' manual iterative reading of the field notes and transcripts. Both inductive and deductive strategies aided the analysis. This means that, while we drew on the theoretical framework (literature), searching for evidence that was consistent or refuted extant argumentations to guide the analysis and shape the subsequent discussions, we also paid keen attention to discovering new insights from the data. This dual strategy was deemed relevant to aid understanding of our findings in relation to existing research—i.e. examining how the theoretical framework explains the findings while providing new insights that could extend scholarship in PUA. In adherence to ethical research practice, all names used in this research have been pseudonymized.

4.1 Results

4.2 Empirical Context and Analytical Framing

The study's respondents consisted of two main groups: youth and adults, all residents of Bamahu. The youth group comprised twelve (12) individuals, with seven males and five females, and their ages ranged from 25 to 34 years old. The adult group consisted of six individuals, comprising four males and two females, and their ages ranged from 38 to 56. In addition to these two groups, two staff members from the Ministry of Food and Agriculture (one director and one extension officer)—both males- were also consulted to provide expert insights and perspectives. During our initial engagements with gatekeepers, it was stated that the two institutional respondents played a crucial role in guiding and advising youth on the potential of agriculture as a viable and sustainable livelihood. Through training programmes, workshops, and practical demonstrations, they empowered young people to develop essential agricultural skills and access opportunities in the sector. These expertise and experiences uniquely positioned them to provide valuable insights and critical inputs to the findings of this paper. In what follows, the findings are presented and analysed under three themes: *youth participation in peri-urban agriculture: challenges and Resurgence, gender dynamics of youth agricultural engagement, and institutional dynamics of youth's agricultural participation.*

4.3 Youth participation in peri-urban agriculture: Challenges and resurgence

Our findings show that youth involvement in (peri-urban) agriculture in Bamahu is experiencing a shift, with many initially moving away from farming due to a combination of factors such as land scarcity, economic pressures, and the appeal of urban lifestyles. However, the current economic landscape, marked by high levels of graduate unemployment, has led to a resurgence of aspiration in farming among younger generations, transforming livelihoods in innovative ways. This trend is vividly illustrated by (Youth 1), a 32-year-old unemployed university graduate, who shared his experiences in an interview:

> *"[previously], youth were no longer interested in farming… but over recent years, because of economic hardship, and growing unemployment, particularly related to non-farm work, some youths have begun to pick up the hoe again as temporary economic activities." (Interview, 27.12.2024, Bamahu).*

An agricultural extension agent (AEA) asserted:

> *"Youth involvement in agriculture has been moderate, with some young people showing interest while others are hesitant due to various challenges. Although there is growing awareness about the benefits of agriculture, many still view it as labour-intensive and less profitable compared to other career options." (KII, 10.01.2025, Wa).*

Reflecting on agriculture in Bamahu and whether it appeals to young people, Youth 1 remarked:

> *"The agriculture here is purely subsistence. We just farm to use the proceeds from the farm to feed ourselves. As for youth involvement in agriculture, it is something else. I can say that here in this Bamahu community, one cannot find anyone within my age bracket who is into full-time agriculture. When I say my age mates I mean those within the 30s to 35s…) …my age mates are interested mostly in driving Yellow-Yellow [tricycle taxi] and engaging in fitting [motor repairs] since they can make some money daily from these ventures… farming does not offer immediate money which drives the youth)…for those individuals who are senior to us, majority of them have their primary source of income as agriculture."(Interview, 27.12.2024, Bamahu).*

The reflections suggest that, while farming was highlighted as a liminal opportunity for peri-urban youth, respondents also reaffirmed its significance as a vital livelihood source—with some respondents emphasizing its role in providing financial support for education and household sustenance. One adult male participant shared:

> *"…when my child wants to go to school, what I do is pick my farm produce and sell it."* (KII, 28.12.2024, Bamahu).

This view illustrates how farming augments educational opportunities. Additionally, the communal value of agriculture was also evident, with respondents noting the contribution of farming to food security sustenance as one remarked:

> *"The number of people who benefit from my farm produce may be more than ten) …in fact, some of my family members living in Wa township come to fetch some of the grains."* (KII, 28.12.2024, Bamahu).

Moreover, youth participation in farming was seen as crucial for transferring skills and ensuring generational continuity. Respondents, including a director of MOFA and adults, emphasized the importance of training younger generations in farming practices to guarantee long-term sustainability. The agriculture director supported this view, acknowledging that farming knowledge was typically passed down through hands-on learning from parents. Additionally, extension education and farmer-led demonstrations were cited as ways to effectively transfer traditional farming practices and bridge the knowledge gap between generations.

Interestingly, a consensus emerged from our data that youths have a strong preference for farming types that offer a better work-life balance, being less physically demanding and stressful. Specifically, youth tend to favour activities like vegetable farming, gardening, poultry, fish farming, and livestock production. These typologies were seen as more appealing to youths, highlighting additional complexities in their interests and aspirations in agriculture.

An agriculture director emphatically reinforced this notion, saying:

> *"To attract more young people to farming, investments should focus on dry-season irrigation, gardening, fish farming, poultry, and livestock*

production, which are more likely to resonate with them) … targeted input support for farming youth also could attract and keep more youth in farming." (KII, 20.01.2025, Wa).

Moreover, an extension officer (KII) at MOFA also foresaw a future where agriculture adapts to urbanization, becoming more technology-intensive with innovations like precision farming, greenhouse agriculture, and digital marketing driving a diversified livelihood strategy.

Furthermore, institutional stakeholders revealed that youth in areas like Bamahu and the municipality's peri-urban zones hold a positive view of agriculture and farming. A director from the Ministry of Food and Agriculture (MOFA) shared the ministry's perspective on the future of farming in these communities, stating:

"Ghana's agricultural future looks bright as its economic potential is increasingly acknowledged. A promising trend is emerging, where idle community spaces or undeveloped sites are being deployed for farming, such as vegetable gardens and backyard poultry. Strategic support and guidance can help make these initiatives sustainable, ensuring a stable food supply and driving economic prosperity." (KII, 20.01.2025, Wa).

These perspectives underscore an ongoing view of a possible resurgence of youngsters in agriculture. Despite the views of a possible resurgence of agriculture, particularly among youth, there was also a clear consensus among respondents that youth involvement in agriculture was hindered by numerous challenges. The lack of adequate land. A respondent attributed their family's land access challenges to dispossessions linked to the ceding of their land following the establishment of the University for Business and Integrated Development Studies (UBIDS). He also raises concerns with the increased rate at which land is being purchased for non-farm purposes for transactional and speculative purposes. This issue was highlighted by (Youth 2), a 29-year-old male, who expressed his limited interest in farming due to land grabbing, commodification, and takeovers, stating:

"…since the construction of UBIDS, my family have not had adequate land for farming (especially tree crops such as cashew and mango) … most of the land has been taken over by the university, and those lands outside the university site have been sold or taken by well-resourced hostel developers and university staff." (Interview, 30.12.2024, Bamahu).

The experience of (Youth 2) is not isolated, but rather a widespread issue affecting many farmers in the Bamahu area. The issue has become intergenerational, as traditional farming families are struggling to pass on their knowledge and skills to their children, marking a potential break in the agricultural tradition. This not only hampers youth engagement in agriculture but also perpetuates a cycle of dependence on others for land access in faraway places, which makes it cumbersome for youth. Consequently, the younger generation is growing up disconnected from farming—particularly tree cropping, lacking the knowledge, skills, and enthusiasm needed to carry on the family tradition.

Further exacerbating the issue is the financial barrier to successful farming. Rising costs of fertilizers, chemicals and tractor services make it increasingly difficult for young farmers to engage in productive agriculture. Idi lamented:

"The cost of fertilizers is too high for us…but as youngsters who lack secure access and control of resources, it becomes challenging to afford the required inputs even if you wish to farm." (Interview, 30.12.2024, Bamahu).

Officials at the Ministry of Food and Agriculture (MOFA) echoed this concern of obstacles, citing urbanization, high input costs, labour-intensive farming practices, and the lure of gold mining as major obstacles to youth engagement in agriculture in the community, stating:

"…Due to Urbanization, high cost of farming inputs, drudgery of farming activities, and emergence of Gold mining, youth are discouraged from engaging in agriculture") …Existing institutions are doing less than they are expected due to inadequate staff, logistics and external bodies' interference in their technical work." (KII, 20.01.2025, Bamahu).

Additionally, an extension officer also highlighted as follows:

"From my nearly decade-long experience working in this agricultural zone, I have consistently seen that access to land is a significant obstacle for young farmers. Many lack ownership rights, and leasing land can be prohibitively expensive. Traditional land tenure systems tend to favour older generations, making it tough for young people to acquire land for farming. The main challenges include restrictive land tenure policies, high leasing costs, legal complexities, and competition from other land-use sectors like real estate development." (KII, 21.01.2025, Bamahu).

Consequently, the issue of financial strain, compounded by limited institutional support, often forces youth to either scale down/shelve their agricultural activities or aspire to non-farming futures entirely, further limiting their potential for sustainable agrarian livelihoods. Moreover, the issue of unpredictable and extreme weather patterns, particularly the long dry spells, is also a major challenge for farmers and young farmers. A male parent interviewee (Parent 2) emphasized the disastrous effects of the 2024 farming season, where a prolonged dry spell caused severe crop failure for his household.

"The effect of the long dry spell for farmers during the 2024 farming season was disastrous. I lost a lot of investment in my small farm as many of my maize and groundnut farms dried up. I only managed to get 1 bag of maize from a field that gave me up to 5 bags under normal weather conditions." (KII, Parent 2, 30.12.2024, Bamahu).

This concern about environmental change was echoed by institutional stakeholders (MOFA), who highlighted the far-reaching consequences of climate change, including irregular rainfall patterns, on the community's agricultural sector. To counter this, MOFA stressed the need to tap into existing water resources (dams) and capitalize on government initiatives that support irrigation farming as a profitable venture, aiming to entice young people into the agricultural sector.

The excerpt provided above reveals the fragility of agriculture in the region to climate variability and the potential economic repercussions for young farmers when weather conditions damage their crops. This vulnerability is intensified by the power imbalance and limited resource access that young farmers face due to their subordinate cultural status. In this light, the resurgence of youth participation in agriculture, while promising, is not without difficulties. The land scarcity, economic constraints and weather challenges outlined above highlight the systemic barriers that prevent youth from fully engaging in farming in the Bamahu enclave.

4.4 Gender dynamics of youth's agricultural engagement

In Bamahu, gender plays a crucial role in shaping agricultural practices and perceptions. A clear consensus emerged among respondents on several key aspects of the complex relationship between gender and agriculture. A notable observation was that men predominantly control land and farming resources, relegating women to cultivate smaller, marginal plots, limiting the scope of their agricultural pursuits. While men are more likely to have control over larger tracts of arable land, women's participation is contingent on the permission of male family members or other male landowners. This disparity was highlighted by one interviewee (Parent 1), who stated:

> *"There are some crops that a woman cannot cultivate here because of the inadequacy of the land. If a woman were to farm, it would likely be okra or groundnuts…, women may not be able to farm things like tree crops or other long-term crops due to their poor security of land tenure." (KII, Parent 1, 30.12.2024, Bamahu).*

Similarly, an agriculture director echoed this sentiment during an interview, stating:

> *"Young men usually have more access to productive lands for farming than young women due to cultural barriers within the local settings." (KII, 20.01.2025, Bamahu).*

The excerpts above reflect the broader gender dynamics in the region, where traditional gender roles have constrained women's opportunities in agriculture. It also underscores the patriarchal nature of land ownership and access in the community, which limits women's independence in agricultural activities. Women's limited participation in agriculture is attributed to a combination of societal norms and physical land constraints, exacerbated by the growing trend of agricultural land being repurposed for non-agricultural activities, including university expansions, residential developments, fuel stations, and other commercial projects. Consequently, young girls face intersectional disadvantages, navigating both patriarchal inheritance norms and post-nuptial patrilocality. Corroborating this point, (Youth 1) argued that this cultural practice, which requires women to move to their husband's homes after marriage, results in a loss of access rights to land both at their marital homes and their natal homes. The gendered nature of land access and agricultural involvement in Bamahu reflects broader social structures that limit women's agency in economic activities. Although there are instances where adult women farm, these efforts are generally constrained by their dependence on men for land access. Although boys expressed some interest in pursuing agriculture in the future, with many considering it as a potential career path, this aspiration was noticeably absent among young girls, who did not express similar intentions or ambitions related to farming. This underscored a concerning gender gap in agricultural aspirations.

4.5 Institutional dynamics and youth's agricultural participation

Amidst the challenges posed by rapid land use changes in Bamahu, such as housing development, sand mining, and environmental degradation, to what extent have local institutions and government programs prioritized promoting youth participation in agriculture within the area's peri-urban landscape? Our analysis exposed clear institutional dynamics. Notably, institutional support for youth agriculture in Bamahu is minimal, and the impact of government and non-governmental organizations (NGOs) remains largely unfulfilled. (Youth 2) states in an interview as follows:

> *"This year, they came and wrote some names to help us with fertilizer... but I didn't benefit from it. I don't know where the support came from or who they were." (Interview, 27.12.2024, Bamahu).*

Youth 2's argument suggested that if the government could provide regular support, such as subsidized fertilizers and extension services, properly targeting interested youth, it would make a significant difference. Likewise, the absence of reliable institutional support from local authorities and agricultural ministries, such as MOFA, was underscored by an agricultural director. The director criticized government interventions as ineffective, poorly targeted, and overly politicized. Specifically, the director noted that these interventions often excluded young people, who lacked the necessary social, cultural, political, and financial capital to access agricultural resources and programmes. He stated:

> *"…planting for Food and Jobs, Rearing for Food and Jobs, Grow Ghana, etc.[exists] however, the effective implementation was an issue due to external interference by non-technical institutions [political actors]." (KII, 20.01.2025, Wa).*

The narrative above echoes concerns about the impact of political influence on agricultural programmes in Ghana, such as the Planting for Food and Jobs (PFJ) programme, which aimed to improve food security and create jobs.

Clearly, the impact of political interference on agricultural programmes becomes multifaceted. As exemplified in the excerpts above, it has led to poor targeting of interventions, excluding marginalized groups, such as young people, who lacked the necessary socio-cultural, political, and financial capital to access resources.

At the same time, there is a strong belief in the value of traditional farming knowledge, particularly regarding crop yield. Institutional stakeholders and other participants overwhelmingly agree on the benefits of traditional practices, such as mound cultivation for crops like maize and millet. Specifically, they note that crops grown using mounds tend to yield better results than those planted without them, particularly in the context of climate and environmental change. Yet our findings revealed a substantial disconnect between traditional practices and modern agricultural methods, hindering resilience, intergenerational knowledge transfer, and the long-term sustainability of agricultural systems.

An agricultural director noted:

> *"As climate resilience becomes increasingly crucial, integrating indigenous knowledge into modern agriculture is more valuable than ever. Yet, the loss of this knowledge is imminent due to insufficient support systems, including inadequate extension services, limited collaborations, and few farmer-led initiatives." (KII, 20.01.2025, Wa).*

Moreover, an extension officer at MOFA stressed that while indigenous knowledge systems are valuable, policies should also support training programs that integrate traditional practices with modern innovations. Furthermore, research and extension services should systematically document and promote successful indigenous practices, fostering a complementary approach that leverages the strengths of both traditional and modern methods.

Clearly, the involvement of youth is essential in safeguarding and transmitting traditional knowledge systems. Nonetheless, inadequate institutional backing and collaboration have caused this knowledge to dwindle, overshadowed by the growing adoption of modern farming practices, including herbicide application, which increasingly require substantial financial resources to access. Overall, the excerpts in this analysis reveal that youth are discouraged from pursuing farming due to two main factors: institutional obstacles that deny them access to agricultural support, and the inadequate integration of local knowledge into modern farming practices. In the context of "growing cities and shrinking farms", which seeks to bring to light how urbanization is leading to conversions of agricultural land to non-farm uses and the implications thereof, the findings suggest a need for caution. It demonstrates the need to enhance agricultural education, improve access to financing, and reform land access regimes. Additionally, integrating modern technology into farming practices will help revitalize the sector in ways that will attract youth to sustain production even in the context of shrinking farms. Addressing the underlying political and ecological vulnerabilities is equally crucial, particularly when targeting young farmers. This requires acknowledging and overcoming the complex barriers that youth face, including the lure of urban attractions and discriminatory cultural, political, and land access arrangements that push them away from farming.

5.1 Discussions

This study aimed to explore and understand the forces that influence youth participation in peri-urban agriculture in Bamahu, Ghana, to identify strategies to enhance their engagement in farming and improve livelihoods and agricultural productivity. The study's results confirm that limited access to land, financial constraints, and lack of institutional support are significant barriers to youth participation in peri-urban agriculture, as observed in earlier studies such as Bonye et al. (2020) and Kidido & Bugri (2020). These challenges are exacerbated by rapid urbanization, which leads to the conversion of agricultural land into residential and commercial spaces (Naab et al., 2013; Toku et al., 2024).

The loss of agricultural land, as noted by Kuusaana et al. (2022) and Bonye et al. (2021), poses a significant threat to the sustainability of peri-urban agriculture and the livelihoods of young people who depend on it. A critical question then arises: where do these youngsters turn when they are unable to access arable lands, a challenge explored by Kuusaana and Eledi (2015) in their study on Tamale's peri-urban dynamics? Our findings reveal that, in Bamahu's peri-urban context, youngsters facing land access barriers envision alternative futures. For boys, these aspirations include becoming mechanics or tricycle-taxi (popularly known as "yellow-yellow") drivers. In contrast, girls are said to foresee careers in dressmaking, hairdressing, or petty trading. Consistent with Kuusaana and Eledi's (2015) study in Tamale, our findings suggest that vulnerable groups, including women and youth, are often left with limited options for farming after being displaced by large-scale commercial land acquisitions. Typically, they are relegated to compete over marginal and less fertile lands, often situated in distant locations. Limited female participation in farming was also observed in Ghana's eastern region, as Korankye et al. (2019) found. These emphasize the broader gendered and generational exclusions in access to agricultural lands.

Social and cultural attitudes also play a significant role in discouraging youth participation in peri-urban agriculture. Many young people perceive farming as a labour-intensive and low-income occupation, unsuitable for modern aspirations (Dery, 2019). This perception is reinforced by the lack of recognition and support for agriculture as a viable career option (Fola et al., 2021). As argued by Bezu & Holden (2014), addressing these attitudes requires a fundamental shift in the way agriculture is perceived and valued by society. This is reinforced by our findings, which indicate a growing interest among youths in adopting modern, clean, and less labour-intensive agricultural typologies–including poultry, livestock and vegetable production.

The findings reveal how structural constraints, traditional knowledge and youth agency intersect to shape peri-urban

agricultural participation. They offer important insights that resonate and extend the theoretical tenets underpinning this study. Accordingly, youth participation in PUA has been shown as being simultaneously shaped by resource access, structural transformation and agency. For instance, taken in the context of the sustainable Livelihood framework (SLF), the evidence demonstrates how young people mobilize assets to sustain their livelihoods in the face of persistent land scarcity and resource constraints. Youth views highlight a tendency to rely on seasonal farming for household consumption or a return to farming, complemented by off-farm activities such as tricycle taxi (Yellow-yellow) operations, construction labour and motor bike repairs. This reflects attributes of adaptation which are consistent with SLF's emphasis on resilience and livelihood diversification (Chambers & Conway, 1992; Scoones, 1998). Yet the accounts of financial barriers—particularly the rising cost of fertilizer, tractor services and chemicals—underscore the fragility of these livelihood alternatives and how limited financial capital constrains youth capacity to optimize agricultural returns.

At the same time, the dynamics in the study area, as shown from the findings, also resonate profoundly with the Agricultural Transition Theory (ATT), which situates these challenges within broader processes of urban expansion and market restructuring. The conversion of farmlands into non-agricultural uses—e.g. filling stations, residential accommodations—coupled with changing youths' aspirations away from subsistence farming towards high-value or off-farm pursuits, mirrors wider structural changes highlighted in agrarian transitions literature (Byres, 1996; Bernstein, 2010). Clearly, youths' narratives suggest that farming is increasingly pursued as a liminal or fallback strategy, undertaken when urban wage labour is unavailable or a desired white-collar aspiration becomes unachievable.

This duality points to how agrarian livelihoods are being (re)configured in peri-urban contexts where demographic pressures and urban growth intensify competition over resources and redefine the viability of farming as a primary occupation. Nevertheless, the study's findings reveal that despite structural disadvantages, some youth actively reclaim or are preparing to reclaim agriculture as an economic opportunity, experimenting with vegetable farming cultivation, poultry and livestock. These initiatives suggest youth agency in (re)shaping agricultural futures, albeit within narrow opportunity structures. Evidently, institutional actors such as the agricultural extension agents (AEAs) play a pivotal role in supporting this empowerment by providing training and technological guidance. But the persistence of financial, technological and infrastructural barriers suggests that empowerment remains inadequate, requiring deliberate interventions to enhance access to resources and decision-making spaces (Zimmaman, 2000).

Finally, the findings also connect with the feminist and gender perspectives, highlighting how patriarchal norms, land inheritance practices and post-nuptial patrilocality intersect to further marginalize young women. As a synthesis, while ATT and SLF illuminate structural and resource aspects, gendered constraints expose how access to resources is differently distributed—privileging men and reinforcing women's secondary status in farming. This aligns with critiques that empowerment strategies must transcend technical fixes to address entrenched social relations that structure and mediate opportunity.

Overall, our integrated theoretical framework offers a multidimensional understanding of youth engagement in peri-urban agriculture. Arguably, the findings suggest that while peri-urban youth in Bamahu remain resource-constrained and structurally disadvantaged, they also demonstrate adaptive capacity and agency in negotiating agricultural opportunities. Policies aimed at revitalizing youth participation must therefore strike a balance between immediate livelihood support, acknowledge the need for structural transformations, and support youth empowerment initiatives. Policies must also adopt a gender-sensitive approach that tackles inheritance norms and land access inequalities disadvantaging young women. Promoting diversified livelihood strategies that blend farming with non-farm opportunities could better align with youth aspirations and enhance resilience. Interventions should enhance access to affordable inputs and mechanization services while safeguarding farmland from unchecked urban encroachment. At the same time, programmes must recognize and integrate traditional farming knowledge with modern practices to sustain productivity.

6. Conclusions

This study has provided valuable insights into the complexities of youth involvement in peri-urban agriculture in Bamahu, Ghana. The findings highlight the challenges that young people face in accessing land, resources, and decision-making power, which are exacerbated by urban expansion. Notwithstanding the challenges, the study reveals a promising trend: many peri-urban youths expressed a desire to participate in some form of agriculture in the future, whether as a primary or supplementary source of income. This emphasizes their recognition of a diversified livelihood portfolio, where individuals can harness the benefits of multiple income streams. Specifically, the concept of duality of incomes emerges as a vital strategy, projecting young peoples' ambition to balance the unpredictability of agricultural income with the stability of non-farm activities, thereby enhancing their overall resilience and well-being. The study's findings stress the imperative to intentionally support and/or integrate young people into agricultural value chains, with a focus on farming typologies like poultry, vegetable farming, and livestock production. These farming typologies are seen by many youngsters as less physically demanding and more socially acceptable, making them attractive options for young people who want to engage in agriculture without the traditional hardships and stigma. Moreover, poultry, vegetable farming, and livestock production are perceived as providing a more stable and quicker income stream compared to conventional farming. Furthermore, the persistence of gerontocratic practices, limited or unsecured access to family land, and inadequate transportation options are significant barriers that must be addressed. Considering the observed dynamics from the findings, interventions must go beyond rhetoric to tackle the practical and structural barriers faced by young people. Protecting farmland from encroachment in the face of

urbanization, ensuring affordable access to inputs and mechanization (capital), and integrating indigenous knowledge into modern farming practices are essential steps. Equally imperative is addressing gendered and generational inequalities in land rights as well as supporting diversified livelihood pathways that align with youth aspirations. Ultimately, as urban expansion encroaches on peri-urban zones, the future of peri-urban agriculture hinges on policies that not only reform structural barriers but also empower youth, ensuring that agriculture remains a viable livelihood and integral component in urban and city planning.

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