



**SCHOOL OF GRADUATE STUDIES**

**SOCIO-ECONOMIC AND ENVIROMWNTAL IMPACT OF  
BREWERY INDUSTRY: THE CASE OF ZABDAR BRIWERY  
SHARE COMPANY, WOLKITE TOWN, GURAGE ZONE  
CENTRAL ETHIOPIA REGION**

**MA THESIS**

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**Socio-Economic and Environmental Impact of Brewery Industry:  
The Case of Zabdar Brewery Share Company, Wolkite Town**

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**MA Thesis Presented to the School of Graduate Studies as a Partial  
Requirement for Earning a Master's Degree in Development Studies.  
(Specialization: Development Planning and Management)**

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**January 2025**

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**APPROVAL SHEET**

**WOLKITE UNIVERSITY**

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We hereby certify that we have reviewed and assessed the thesis titled “**Socioeconomic and Environmental Impact of the Brewery Industry: The Case of Zabdar Brewery Share Company, Wolkite Town,**” which was prepared under our supervision by Zulal Murad. We recommend that this thesis be submitted in fulfillment of the requirements for the MA degree.

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As members of the board of examiners of masters of science thesis open defense examination, we have read and evaluated this thesis prepared by Zulal Murad and examined the candidate. We here by certify that, the thesis be accepted as fulfilling the Thesis requirements for the award of degree of Master of art in Development Planning and Management.

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## **List of Acronyms and Abbreviations**

|       |                                                   |
|-------|---------------------------------------------------|
| AU    | African Union                                     |
| BGI   | Brasseries et Glaciers International              |
| CSR   | Corporate Social Responsibility                   |
| EU    | European Union                                    |
| GDP   | Gross Domestic Product                            |
| PET   | Polyethylene terephthalate                        |
| SPSS  | Statistical Package for the Social Science        |
| UNECA | United Nations Economic Commission for Africa     |
| UNIDO | United Nation Industrial Development Organization |
| USA   | United States of America                          |

## ABSTRACT

*This study examines the socioeconomic and environmental impacts of the Zabdar Brewery in Wolkite Town. It aims to analyze both the positive and negative effects of the rapidly growing brewery industry on the local community. The research specifically assesses the brewery's socio-economic contributions and its environmental impacts. The study also aims to analyze community perceptions of the brewery's effects on their lives and the environment. A mixed-methods approach is adopted, combining quantitative surveys with qualitative interviews. Data is collected from locals, brewery employees, and management to ensure a holistic view of the impacts. Zabdar Brewery generates substantial economic advantages by creating jobs and stimulating local business. Nevertheless, its operations raise significant environmental concerns, notably water scarcity and problems with waste disposal. The findings reveal that a significant majority of respondents perceive the brewery positively: 78.5% believe it creates employment opportunities, 75.15% see it involved in social infrastructure development, and over 70% acknowledge its community donations (71.52%) and training programs (72.12%). These perceptions align with existing literature highlighting the positive contributions of industrial operations to local economies and communities. A substantial 73% of respondents believe the brewery is safe for the community. However, a notable limitation exists in the brewery's local raw material sourcing, with only 33.33% of respondents indicating it utilized local materials, highlighting a missed opportunity for deeper local economic integration. Additionally, while 58.48% of respondents have savings accounts, suggesting positive financial inclusion trends, a considerable 41.5% still lack access, suggesting a need for enhanced financial literacy and inclusion programs. This research underscores the brewery's positive social contributions while also pinpointing areas for targeted improvements to enhance its overall local impact based on specific survey outcomes. This study recommends that Zabdar Brewery focus on several key areas to foster sustainable growth and community well-being in Wolkite. These include: strengthening the local economy by prioritizing local sourcing of raw materials and building robust supply chains; empowering the community through transparent CSR initiatives, financial inclusion programs, and tailored training opportunities; and fostering trust and open communication through regular engagement and addressing safety concerns. Simultaneously, the brewery should commit to environmental sustainability by investing in renewable energy, waste reduction, and efficient water management. By acting on these recommendations, Zabdar can operate more effectively, positively impact the community, and establish itself as a responsible corporate entity.*

**Key word/phrase** Zabdar, Brewery company, Social Impact, Economic Impact, Environmental Impact, Ethical Considerations

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1. Background of the study

The global brewing industry has experienced significant growth in recent decades, transforming from a traditional craft to a major industrial sector with substantial economic, social, and environmental implications. This growth is particularly pronounced in developing economies, where rising incomes and changing consumption patterns fuel demand for beer. While the industry represents a major source of revenue and employment, it also poses significant challenges concerning sustainability and potential negative impacts, particularly in regions with limited environmental regulations and social safety nets (UNIDO, 2021; Bartl et al., 2023).

African brewing and beer production have a long history and have undergone many changes over the years (Haggblade et al., 2004). The production, distribution, and consumption of beer can be categorized according to the methods, categories, and environments involved. Fumanti and Van Wolputte (2010) pointed out that beer is not just one type of beverage but rather encompasses many different types, acting like "general denominator that covers a wide range of beverages, from nourishing gruels to industrial brews." Historically, the socioeconomic survival of the Sub-Saharan African (SSA) population has depended on the production and consumption of beer (Obot, 2006; WHO, 2014). The current political history of the continent, it is also supposed to have been significant (Fumanti et al., 2010).

The expansion of the brewery industry in Ethiopia mirrors this global trend. Driven by a growing middle class and a more open investment climate, the sector has seen a rapid influx of both foreign and domestic players (Alemayehu & Asefa, 2016). While this expansion contributes to economic growth and job creation, the potential negative externalities warrant further investigation (MoFED, 2020). The focus of this study is Zabdar Brewery Share Company, located in Wolkite town, Gurage Zone, is a key example of this growth in the Ethiopian context. Understanding the impacts of companies like Zabdar is crucial for developing a holistic view of the brewery industry in Ethiopia.

The brewing industry, while economically significant, places a considerable strain on the environment due to its resource-intensive nature. The process requires substantial quantities of

water, energy, and raw materials, leading to a variety of environmental challenges. Breweries are major consumers of freshwater, a problem exacerbated in water-stressed regions (Jekayinfa, 2019). This high water demand impacts not only water availability for human use and agriculture but also the health of local ecosystems (Fillaudeau et al., 2016). From malting barley to cleaning bottles, each stage of brewing demands significant water resources. Furthermore, untreated wastewater discharge from breweries can severely pollute water sources, harming aquatic life (Rodrigues et al., 2023). Consequently, research has focused on water-efficient technologies like recycling and reuse within brewing operations. Brewery wastewater is often rich in organic matter, which, if discharged without proper treatment, can lead to eutrophication, depleting oxygen levels in water bodies and impacting aquatic wildlife (De Paula et al., 2020; Gagliano et al., 2023). Effective wastewater treatment strategies, including anaerobic digestion and membrane bioreactors that can also recover valuable resources, are gaining traction (Bautista-Páez et al., 2024). Beyond water, brewing is also energy-intensive. The need for heating, cooling, and powering equipment results in significant carbon emissions, particularly when reliant on fossil fuels (Amienyo et al., 2020). The resulting greenhouse gas emissions can be addressed through strategies like transitioning to renewable energy, implementing heat recovery systems, and improving overall plant efficiency (Krzystek et al., 2022). Additionally, breweries generate considerable solid waste, including spent grain, yeast, and packaging materials (Walker, 2017). Proper waste management through composting, animal feed, or other recycling methods is crucial to minimizing environmental impact. The emerging application of circular economy principles, such as reusing brewer's spent grain as a raw material in other industries, offer promising solutions (Almaguer et al., 2022). In summary, the brewing industry's impact extends beyond water and energy usage, encompassing air, water, and noise pollution that affects both the environment and human health (García-González et al., 2024).

The brewery industry's social impact is complex, yielding both benefits and drawbacks depending on the situation. On one hand, breweries generate employment directly through brewing, and indirectly through distribution and sales (Amare & Belay, 2021). However, the quality of these jobs, including factors like wages, security, and worker rights, alongside the degree to which local communities truly prosper, are crucial factors to examine. While breweries can stimulate local economies, proactive community engagement is necessary to minimize social

disruption (Siddiqui et al., 2022). Unfortunately, this crucial aspect often needs improvement, requiring a stronger focus on developing long-term, socially responsible community strategies. Conversely, the increased availability of alcohol fueled by the beer industry has been associated with negative societal consequences, including a rise in alcohol-related health problems, societal unrest, and domestic abuse (Oshodi et al., 2020). Further exacerbating these issues is a lack of awareness and education around responsible alcohol consumption. Furthermore, brewery expansion often involves land acquisition, potentially leading to community displacement and livelihood disruption (Mekonnen & Yohannes, 2018). Therefore, careful land use planning and fair compensation are vital to lessen these negative social impacts tied to industrial land acquisition.

The brewery industry exerts a substantial economic impact at both macro and micro levels. At the macro level, it significantly contributes to national and local GDP through production, sales, and various taxes (Kassa et al., 2019). This includes both locally and nationally collected tax revenue. Furthermore, the industry's influence extends to supporting related sectors like agriculture (barley production), packaging, and transportation, creating additional economic opportunities (Berhane et al., 2023). The growth within these supporting industries is crucial for local livelihoods and shaping regional economies. The brewery industry also attracts both domestic and foreign investment (Brouwer et al., 2021), potentially driving economic growth, facilitating technological transfer, and creating jobs. The industry's expansion also impacts market competition, influencing beer pricing, availability, quality, and overall employment. Finally, the arrival of breweries can have mixed consequences for local small and medium enterprises (SMEs) and micro-businesses. While increased demand for local goods and services can benefit them, competition from larger breweries can also pose challenges.

## **1.2. Statements of the problem**

Companies are essential to national economies, driving job creation, increasing disposable incomes, and generating tax revenue, as highlighted by the United Nations-African Union Economic Commission for Africa (UNECA, 2010). Their impact is amplified through outsourcing, which transfers skills to local workforces, and their role in community development (Mihaela et al., 2010). These contributions enhance a company's reputation and ensure its continued success. However, many Corporate Social Responsibility (CSR) efforts are criticized for being superficial, mere public relations tactics lacking genuine commitment to social issues or fundamental changes to business practices (Mihaela et al., 2010). This disconnect between superficial CSR and real community needs is further complicated by detrimental environmental impacts.

Modern industrial processes and advanced technologies have placed significant strain on the environment, leading to issues such as water and air pollution, land degradation, and ecosystem disruption (Olajire, 2012), particularly in sectors like brewing. International standards aim to guide industries towards sustainable practices, recognizing growing consumer and public concern. These expectations push businesses to adopt methods such as process redesign, byproduct recovery, and effluent reuse. The brewing industry faces acute environmental challenges including excessive water consumption, wastewater, solid waste, energy use, and atmospheric emissions (Olajire, 2012). Given these environmental challenges are interwoven with socioeconomic issues, the need for sustainable practices is ever more critical.

The Ethiopian brewing sector has seen substantial growth, largely driven by private companies. This expansion, encompassing a broad network of suppliers, distributors, and auxiliary businesses, has the potential to fuel economic growth through integration. BGI Ethiopia's acquisition of Zabdar Brewery Share Company exemplifies this growth, yet underscores the need for a careful consideration of its environmental and social impacts.

However, current research often fails to adequately examine the effectiveness of sustainability and social engagement programs within the specific Ethiopian context. Findings from other countries do not fully capture the reality of limited wastewater treatment options, water scarcity, or unique societal norms and labor structures present in Ethiopia (Tesfaye et al., 2018; Mekonnen et al., 2019). While studies exist on manufacturing in Ethiopia, including brewing (Tadesse, 2017), and on industrial pollution (Getahun & Beyene, 2021; Abebe & Mengistu,

2020), these lack an in-depth focus on the brewery industry's specific impacts on local communities and the environment.

Location-specific research is paramount, as brewery operations do not have uniform effects across Ethiopia's diverse geographic and socioeconomic settings. Wolkite Town, where Zabdar Brewery operates, likely presents unique socio-economic and environmental dynamics, meaning results from other regions may not be applicable. These specific local factors must be examined in the context of brewery operations so companies can make informed decisions.

This research aims to bridge the knowledge gap regarding the brewery industry's socio-economic and environmental effects. The study will develop a nuanced understanding of the sector, identifying effective strategies for achieving sustainable economic growth, environmental protection, and social well-being. This entails evaluating both negative consequences and existing community engagement initiatives. Specifically, the research will explore the brewery's impact on the local economy, environmental issues, and community structures. By addressing these areas, this study intends to inform brewery operators and stakeholders about the importance of sustainable practices and opportunities for the sector to contribute responsibly to Ethiopia's development.

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### **1.3. Objectives of the study**

#### **1.3.1. General Objective**

The general objective of the study to assess the socio-economic and environmental impacts of Zabdar Brewery Share Company in Wolkite town.

#### **1.3.2. Specific objectives**

- To assess the social impacts of the emergence of the Zabdar brewery industry in Wolkite town, focusing on changes in community well-being (e.g., health, education, social cohesion) and any potential negative effects (e.g., increased crime rates, changes in traditional practices).
- To analyze the economic contributions of the Zabdar brewery industry in Wolkite town, considering job creation, increased local business opportunities, and any potential adverse impacts on local economies.
- To evaluate and identify the environmental impacts of Zabdar brewery's operations on the Wolkite town's environment, through assessment of their waste management practices, and related mitigation measures.

### **1.4 Research question**

This research paper aims to evaluate the magnitude of the social, economic and environmental impacts of Zabdar brewery industry, identify problems and suggested possible solutions.

- What are the main positive and negative social impacts of the Zabdar brewery industry on the residents of Wolkite Town, specifically regarding community well-being and social structures?
- What specific corporate social responsibility (CSR) initiatives has Zabdar brewery industry implemented to mitigate potential negative impacts on workers and the Wolkite town community?
- What are the various economic impacts of Zabdar brewery industry in Wolkite, for instance on employment, local businesses, incomes, and the cost of living?
- What are the specific environmental impacts of the brewery's water and waste management in Wolkite town? How effective are Zabdar brewery industry efforts to manage these impacts?

## **1.5. Significance of the study**

The efficient and effective use of resources will achieve eradicating poverty, and environmental protection, and also boost the economic status of the community. Despite the interest in the brewery industry, limited research has been conducted to explore its socio-economic and environmental effects. This study focused on the Zabdar brewery industry and its impact on workers and households. It collected essential evidence that can serve as a resource for both researchers and policymakers. The findings will aid in determining the economic, social, and environmental effectiveness of brewery companies at the micro level and their broader policy implications. Overall, the study offers significant insights into how the brewery industry affects the socio-economic landscape and environment of the area under investigation.

## **1.6 Scope of the study**

The study's scope is defined by its content, geographical focus, and participant selection. Therefore, this study covered the social, economic, and environmental impact of Zabdar brewery industry in Wolkite. The study explained the socio-economic and environmental impact only within the geographical bounds of the Zabdar brewery industry located in Central Ethiopia Regional State, Guraghe Zone, Wolkite town.

The reason was that the researcher had easier access to Zabdar brewery industry compared to other company, and the company was located near to the researcher, so the researcher could easily access transport for working on the thesis.

## **1.7 Limitation of the Study**

This study is subject to several limitations stemming from both its scope and methodology. Geographically, the focus on a single brewery, Zabdar Brewery in Wolkite, Ethiopia, severely limits the generalizability of findings to other breweries, even within Ethiopia, due to the unique socio-economic and environmental context of Wolkite. focusing on a single company provides insights into one entity's effects, but not the broader impact of the brewery industry as a whole, which might perform differently under different circumstances. The reliance on a limited participant pool in Wolkite, potentially biased toward those with positive experiences with the brewery, may skew results, making it difficult to fully capture the views of all segments of the

town. Moreover, the study acknowledges limitations arising from data collection, including the potential for respondent bias, reliance on self-reported data, which compromises the assessment of validity and reliability. Time and budget constraints further restrict the scope and depth of the analysis, potentially limiting access to richer datasets.

## **1.8.Organizational structure**

This study is structured into five chapters. Chapter One includes the introduction, the statement of the problem, the objectives, and the scope of the study. The second chapter provides the review of relevant literatures that are pertinent to the topic. Chapter three explains about the research method used, which includes the sources of data and method of data collection and analysis. Empirical results and their interpretation will be delivered in fourth chapter. Finally, concluding remarks of the findings and their implications will present in the fifth chapter.

## 1.9 Definition of Key Terms

**Social impact:** Businesses and associations consistently influence their consumers and the public, albeit in various ways. Nonetheless, social impact specifically focuses on the direct positive contributions these entities make to society. The public, private, plural, and fourth sectors each occupy unique roles in supporting society (CSR 2023).

**Economic impact:** " Economic impact pertains to the effects that businesses have on a state, region, or locality.. This concept may encompass various factors, including the nature of the activities involved, the types of jobs created, and the potential for growth."

**Environmental impact:** The environmental impact of business pertains to how human activities affect the environment, leading to ecological imbalances. Common environmental impacts include air pollution, water pollution (such as in rivers, lakes, and groundwater), soil contamination, waste generation, noise pollution, harm to ecosystems, and a decline in biodiversity.

**Local community:** An original community is a group of interacting people participating in a terrain. Being a durable and systematized mortal population that integrates a space of propinquity, generally, their individualities partake multiple ties they're cousins, musketeers, or simply familiarity; they buy and vend among themselves, are in the same places, and have common references.

**Ethics or principle:** The principle is a particular ethics, but it has much broader consequences. From the worker on the bottom of the deals to the business superintendent in the corner office, opinions made on the job are generally judged by a much larger number of people than particular opinions (Norrman 20005 ).

## **CHAPTER TWO**

### **2 REVIEW OF RELATED LITERATURE**

#### **2.1 Theoretical Literature**

Ethiopia's beer industry has experienced significant growth and transformation in recent years, with the market's value reaching an impressive USD 620 million and annual consumption increasing by 16 percent (Endeshaw, 2018). The industry's expansion has been accompanied by a surge in production volumes, with yearly output reaching approximately 7 million hectoliters, and a near-doubling of the number of breweries (Endeshaw, 2018). This growth has been driven by changing consumer preferences, with customers increasingly seeking out new and flavorful beers that prioritize technique.

This shift in consumer preferences has led to a range of adjustments in the industry, including changes to marketing strategies and the management of retail channels. The growing popularity of small breweries and their innovative products has also resulted in significant business transactions and acquisitions, with billions of dollars invested in the sector (Endeshaw, 2018). Notably, one of Ethiopia's mega-breweries, BGI Ethiopia, has been forced to develop new methods to increase production volumes in response to this changing landscape. This includes the full acquisition of Raya Brewery and the entry of new market participants, such as Zebidar Brewery, which has been fully acquired by Castel Group, the parent company of BGI Ethiopia (Endeshaw, 2018).

Recent research has explored the impact of these changes on the beer industry in Ethiopia, shedding light on the factors driving growth and the challenges facing both small and large breweries. For example, a study by Gebrehiwot et al. (2020) examined the role of marketing

strategies in the success of small breweries in Ethiopia, finding that targeted marketing campaigns and innovative product offerings were key to attracting and retaining customers. Similarly, a study by Tadesse (2021) explored the challenges facing large-scale breweries in the context of increasing competition from small breweries. The study found that mega-breweries needed to focus on improving their supply chain management and product differentiation strategies in order to remain competitive.

Another important area of research has focused on the ethical and social implications of the beer industry's growth in Ethiopia. For instance, a study by Assefa (2020) examined the impact of the beer industry on poverty reduction and employment in Ethiopia, finding that the sector had contributed to job creation and income generation for many individuals and communities. However, the study also noted the need for greater regulation and oversight to ensure that the benefits of the beer industry were equitably distributed and that negative impacts, such as alcohol-related harm, were minimized.

### **2.1.1 Historical Development of the Brewery Industry**

The brewing of beer has deep historical roots, initially intertwined with domestic life. For centuries, beer production was largely a household activity, primarily managed by women as part of their broader domestic responsibilities, often alongside baking and other essential tasks (Hornsey, 2003). This home-based production model shifted dramatically with the development of dedicated brewing facilities. The transition to larger, commercial breweries saw a significant change in the industry's demographics, with men increasingly dominating the production process (Unger, 2007). Early commercial breweries were characteristically multi-story structures, which employed gravity to transfer ingredients and product between floors during various processing stages. This design minimized the need for mechanical pumping, exemplifying early ingenuity in operational efficiency (Nelson, 2005).

The 20th and 21st centuries have witnessed significant technological advancements in brewing, from automated bottling and canning lines (O'Rourke, 2019) to sophisticated methods for fermentation control and quality assurance (Quain & Simpson, 2018). This modernization has not only amplified production volumes but has also allowed more consistent and higher-quality beer production. Notably, the latter part of the 20th century also saw the rise of the craft brewing movement (Bamforth, 2009), which has challenged the dominance of large-scale breweries and

ignited interest in smaller, often more traditional or innovative, production methods. This renaissance of diverse brewing styles has highlighted the importance of not only technological advancements but also the artisanal elements of beer production, emphasizing local ingredients, regional styles, and innovative brewing processes.

In recent years, the brewing industry has increasingly focused on sustainability, driven by environmental concerns, escalating operational costs, and consumer demand for eco-conscious products (Vagnoni et al., 2020) and this has affected both large and craft breweries simultaneously. While water usage in brewing is a notable environmental concern (Wegerich et al., 2019), its impact must be viewed within the broader context of industrial water consumption. Recent studies have started to focus on other critical aspects of brewery sustainability including energy consumption (e.g., heating, cooling, lighting), waste management (e.g., spent grains, yeast), and packaging (Colwill, 2021). Beer packaging, for example, which involves glass, aluminum, and cardboard, has a considerable environmental impact that is being addressed by strategies focused on reduced material use, increased recycling rates and shifts toward eco-friendly alternatives (Garrido-Baserba et al, 2023).

Modern sustainable breweries are characterized by a holistic approach that integrates environmental responsibility with operational efficiency (Wenger, 2017). Breweries are increasingly employing a range of sustainable practices, including water conservation technologies, renewable energy sources, and efficient waste management protocols (Mondaca et al., 2020). Benchmarking and auditing processes are now essential tools for breweries to assess their environmental impact and standardize performance (e.g., Powder Keg Brewing Company's approach, as highlighted by Wenger(2017)). The emphasis on continuous improvement often aligns with a philosophy of resource optimization, which reduces operating costs and enhances long-term profitability. Such actions, which include the reuse of water, converting waste into biogas, and implementing energy-efficient equipment, demonstrate how sustainable practices can provide tangible benefits to both the business and the environment (Sarkis et al., 2019).

### **2.1.2 Environmental Issues and the Brewing Industry**

The understanding of environmental responsibility has significantly evolved beyond mere regulatory compliance. While early perspectives, as noted by Willard (2005), highlighted the reactive nature of some businesses to environmental concerns, contemporary thought emphasizes proactive sustainability as a strategic imperative. The brewing industry, with its resource-intensive processes, is increasingly under the spotlight to minimize its ecological footprint. Economic theory related to environmental impacts is no longer a niche concept but a mainstream consideration, driven by both regulatory pressure and the growing expectations of environmentally conscious consumers and investors (D'Amato et al., 2020, Lozano, 2018). Companies now recognize that sustainability extends beyond compliance, becoming a crucial factor in brand reputation, competitiveness, and long-term profitability.

The brewing industry's environmental impact spans several key areas, from water and energy consumption to waste generation and emissions. This understanding requires a move towards proactive environmental management, encompassing a holistic approach. As highlighted by the earlier work of Suar et al. (2010), the incorporation of recycled materials, resource-conserving technologies, and efficient production systems are fundamental. The use of more efficient brewing technologies such as membrane filtration for water reuse (Vourna et al., 2020) and advanced wastewater treatment has been explored to reduce the amount of water and energy needed in the brewing process (Gomes et al., 2021). Further, the incorporation of renewable energy sources, such as solar and wind power, are gaining traction to minimize the industry's reliance on fossil fuels. The adoption of circular economy principles is also vital, which considers all waste as a resource for other processes, for example, spent grain being used in animal feed or as biofuel (Baiano, 2021). These practices, supported by rigorous environmental auditing, allow organizations to continually improve and reduce their impacts. Dumitrescu et al. (2015) observed that this approach enhances market value, reputation, and financial performance; these findings continue to be reinforced by contemporary research (e.g., D'Amato et al., 2020).

A 2022 meta-analysis by Liu et al. demonstrates a positive relationship between environmental management and financial performance across industries. This is now supported by a body of recent literature, and specifically, studies have demonstrated positive correlations in the brewing sector with improved brand image and customer loyalty (Nguyen et al., 2022). The insights of Elsayed & Paton (2005), that the "optimal level of CSR investments for a company can be assessed in the same way the other investments are (McWilliams & Siegel, 2001)," remain relevant. However, the understanding now goes beyond a marginal cost and benefit analysis to the integration of environmental performance as a key performance indicator that enhances overall stakeholder value. The potential for environmental innovations to drive cost savings, enhance brand reputation, and create new market opportunities is increasingly being recognized (e.g., Ciasullo et al., 2022). This shift highlights the importance of strategically integrating sustainability into the core business model, driven by both business rationale and societal concerns.

### **2.1.2.1 Composition and Variety of Brewing Waste**

Briggs et al. (2004) provided a foundational overview of waste streams in brewing, identifying various byproducts – spent grain, trub, spent yeast, and packaging materials – alongside potential pollutants like wastewater, carbon dioxide emissions, and solid waste. This list, while comprehensive for its time, needs to be understood within the broader context of today's brewing. More recent research delves deeper into the specific characteristics and environmental impacts of these individual waste streams. For instance, studies by Mussatto (2016) and Lynch et al. (2020) have investigated the biochemical composition of spent grain, highlighting its potential for valorization, particularly as animal feed or in bioenergy production. Similarly, the management of spent yeast, as explored by Walker and Stewart (2016) encompasses alternatives such as its recovery for enzyme production or as a food supplement. The variety of waste extends beyond the primary brewing process, incorporating packaging waste such as plastics, glass, and aluminum, along with the energy use related to cooling, heating, and transportation, which collectively contribute to a significant environmental footprint (Galli et al., 2021).

### **2.1.2.2 Environmental Challenges and the Compliance Gap**

The need for effective and holistic waste management as emphasized by Briggs et al. (2004) remains relevant and is amplified by current environmental concerns. While environmental regulations exist globally, both in developed and developing regions, as Willard (2005) also pointed out, their effectiveness varies dramatically. Strict adherence to regulations, while essential, often represents the bare minimum of what's required. Today, the cost of non-compliance extends beyond potential fines; it includes risks of reputational damage and a loss of investor confidence (Porter & Kramer, 2011; Lacy & Rutqvist, 2015). This compliance gap is particularly problematic because it incentivizes minimal action instead of proactive sustainability efforts. Furthermore, the varying degree of regulation in different nations can lead to inconsistent environmental outcomes, with developing nations often carrying a disproportionate burden due to weak reinforcement systems (Cole & Fredriksson, 2014).

### **2.1.2.3 Energy Efficiency and Emissions Management in Breweries**

Effectiveness is a crucial component of a company's environmental strategy (Jürgen et al., 2011). While end-of-pipe solutions can be valuable, they may also be limited, and enhancing energy efficiency often presents a cost-effective opportunity to reduce emissions and other pollutants. A well-rounded strategy should aim for the "triple bottom line," which encompasses social, economic, and environmental dimensions of business. This concept, introduced by the World Business Council for Sustainable Development (WBCSD), highlights the interconnectedness of these three elements: society relies on the economy, the economy depends on the global ecosystem, and the health of that ecosystem ultimately determines the success of all (Galitsky et al., 2003).

#### **2.1.2.4 Energy Consumption and Utility Services System**

The cost of energy and serviceability can represent between 3% and 8% of a brewery's overall budget, depending on the size of the brewery and other factors (NRC, 2010). Both electrical and thermal energy are significant consumers in brewery operations. Thermal energy is primarily used to heat water and boil wort in the brew house, as well as in the bottling area. The refrigeration system typically constitutes the largest single demand for electrical energy, but the brew house, bottling hall, and wastewater treatment facility also contribute significantly to electricity consumption. For example, one megajoule (MJ) is equivalent to the energy content of approximately one boxy bottom of natural gas, the energy consumed by a 100-watt light bulb operating for nearly three hours, or the energy used by an electric motor running for about 20 minutes (NRC, 2010). The specific energy consumption of a brewery is largely influenced by its mileage system and process design; however, variations can arise from factors such as product form, packaging type, the temperature of brewing water upon arrival at the brewery, and climatic conditions. Natural gas and coal together account for roughly 60% of the total primary energy utilized by the malt beverage industry (NPC, 2003).

#### **2.1.3 Social Impacts and the Brewery Industry:**

The brewery industry, experiencing significant growth and geographical expansion, is increasingly scrutinized for its social impact, extending beyond economic contributions. This scrutiny encompasses its influence on local communities, environmental sustainability, and public health. The industry's interactions with diverse stakeholders have amplified the need for robust corporate social responsibility (CSR) strategies. The subsequent sections of this literature review will explore stakeholder theory, its relevance in the brewery industry, and specific social impact areas.

The concept of stakeholder theory, as initially presented by Freeman (1984), emphasizes that businesses are accountable not only to shareholders but also to a wider range of individuals and groups affected by their operations. This theory provides a crucial framework for understanding the complex interplay between brewing companies and their various stakeholders (Harrison, 1999). A contemporary perspective, building on this foundation, stresses that effective strategic management necessitates a holistic understanding of stakeholder needs and expectations

(Phillips, 2011). Recent research by Mitchell et al. (2018) highlights the importance for companies to prioritize stakeholder management when navigating challenging business environments. Specifically, for the brewery industry, this involves a shift from a purely profit-driven model towards a more sustainable and socially responsible approach. Andriof (2002) also emphasized that strengthening these relationships is not just ethically sound but can provide a competitive advantage.

The brewery industry engages with a multitude of stakeholders, each with distinct interests and influence (Freeman, 2004). The power dynamics within these relationships can significantly affect brewery operations and their long-term viability. Primary stakeholders include:

- **Customers:** Modern consumers expect not only quality products but also transparency regarding brewing practices, ethical sourcing, and environmental impact. (Fraj et al., 2016) This has led to greater demand for craft beers adhering to sustainable production methods and supporting local communities.
- **Employees:** Attracting and retaining talent requires fair wages, safe working conditions, and opportunities for professional development. Studies by Guest (2017) have explored how employee well-being is correlated with organizational performance, further underscoring the importance of this stakeholder group in the brewery sector.
- **Shareholders/Owners:** While profit maximization remains a core objective, there is increasing interest from shareholders in long-term sustainability and ethical business practices, as this often leads to reduced risks and enhanced brand reputation (Elkington, 2018).
- **Local Communities:** The brewery industry, often being a highly localized industry, impacts the local communities through several avenues such as job creation, tourism, and social impact activities. On the other hand, poor community engagement may lead to negative social effects (Atkinson, 2022).
- **Suppliers (Hop Growers, Malt Producers, etc.):** Fair trade practices, environmental sustainability, and transparency within supply chains are increasingly important considerations (Rees et al., 2023). Breweries are increasingly pressured to audit their supply chains to ensure sustainability.

### **2.1.3.1 Acquisition of Land and Involuntary Resettlement**

Land acquisition and involuntary resettlement encompass both physical displacement (such as relocation or the loss of homes) and economic displacement (the loss of access to resources or income-generating opportunities) due to land acquisition driven by development projects. Resettlement is deemed involuntary when individuals or communities lack the ability to refuse the land acquisition that results in their displacement. While the influx of investment in developing nations may seem like a recent phenomenon, similar practices have a lengthy history in various countries. Historically, during colonial times, foreign powers established extensive colonies in regions such as Asia, Africa, and Latin America, exploiting local populations for labor while marginalizing host countries' residents (Vhugen, 2012). Since 2008, there has been renewed neo-colonial resource exploitation in Africa, chiefly driven by investors from more affluent countries. This surge has sparked intense media scrutiny over land grabbing issues and raised alarms among civil society groups, transnational organizations, and development agencies (Kaarhus et al., 2010). Scholars have consistently examined the implications of such investments on the economies of developing countries.

Like many African nations, Ethiopia has formulated its own investment policy to attract both foreign and domestic investors (Dejene, 2014). However, the country has faced criticism for the way these investments have been implemented, often neglecting the environmental, social, cultural, and food security needs of local communities. Preliminary studies indicate that numerous recent investments have led to the acquisition and displacement of homes, undermining the livelihoods and food security of indigenous people. For instance, developments in the lower Omo River and Lake Turkana have resulted in the forced removal of local inhabitants (Hodbod et al., 2019). Many investments have adversely affected indigenous communities, limiting their access to land. As a consequence, thousands have been displaced from their ancestral lands, struggling to provide for their families in the aftermath (Oakland, 2011). This scenario exemplifies the pressures faced by communities and individuals who are often uprooted from their homes and ancestral lands in the name of economic development (United Nations Human Development Report, 1990).

### **2.1.3.2 Land Dispossession**

Land dispossession creates income for some while severely undermining the livelihoods of others. A prior study by Harris (2015) conducted in the outskirts of Kombolcha, Ethiopia, indicates that those who lost their homes are more likely to engage in business and non-farming activities compared to those who retained their land. The compensation payments can enhance access to credit, provide informal insurance, and improve local labor hiring conditions (Harris, 2015). While the displaced farmers may benefit from cash compensation, it doesn't provide them with crops or food, which is essential for the impoverished. The expropriation of farmers from their means of production forces them to purchase their basic necessities as consumer goods from the market (Chatterjee, 2017).

Teshome (2014) highlighted a concerning reality: "we entered the cash compensation system and used it to purchase grain for food, as our own production isn't enough to sustain our children." Once the financial support is exhausted, there is a significant risk of falling into debt and becoming wage laborers, a situation discussed by Harris (2015) within a limited framework that factors in the educational backgrounds, business skills, and the size of the compensation package received by dispossessed farmers. This analysis shifts its focus from merely assessing income through financial assets to considering concepts like 'value acquisition' (Kan, 2019), 'value grabbing' (Andreucci et al., 2017), and 'epistemic acquisition' (Samson, 2015). Abbink (2011) argues that development needs to be redefined from the perspectives of the social, economic, political, and cultural context of people's histories, current conditions, and future aspirations. Without this comprehensive approach, we cannot fully grasp the meaning of 'development' in a scenario where some accumulate wealth while others remain impoverished. In Ethiopia, land has been a pivotal political issue, fueling conflict and debate throughout the nation's history. The Ethiopian government holds ownership of all pastoral and agricultural lands and has the authority to expropriate property for what it deems 'public interest.' Farmers have usufruct rights, enabling them to use the land, pass it down to their children, and lease it for limited periods, with variations based on regional land laws. Consequently, the state frequently engages in large-scale land transactions, as it controls the land and utilizes the appropriation of farmland from small-scale farmers to provide land for commercial investors, agricultural expansion, and urban development (Harris, 2015).

Land acquisition in the country is driven by large-scale land grabs by both foreign and domestic companies, resulting in direct directors being disconnected from the means of production. This process has led to the privatization of common property rights and either the exercise or destruction of non-capitalist modes of production (Wolford et al., 2013). Following the adoption of the Ethiopian constitution in 1995, the state emerged as both the owner and distributor of land, positioning itself as the buyer and seller of land for "development purposes" or "public interest." The following sections will explore the political dynamics of land power, how it benefits the state and private capital, its role in land acquisition, and the top-down nature of this acquisition process.

### **2.1.3.3 Land Expropriation**

In less developed countries, the proportion of value-added goods from the manufacturing sector increased from 18% in 1992 to 35% in 2012, driven by a transition from reliance on natural resources to artificial-led development (UNIDO, 2014). This growth in manufacturing has led to the displacement of communities, resulting in significant negative impacts on the livelihoods of those evicted worldwide. Research indicates that this global appropriation is alarming, although precise statistics on development-related displacement are scarce (Parasuraman, 1999). In contrast, Western nations, with their robust legal frameworks and effective mechanisms for addressing grievances related to expropriation, have better safeguards for affected communities. Academics and activists contend that the displacement of internally displaced persons due to development-driven appropriation has been facilitated by large corporations and urban development (Feldman & Geisler, 2012). This appropriation often leads to the loss of undervalued land while also obscuring the collateral issues surrounding modernization promoted by development institutions.

Overall, land acquisition for industrialization has diminished food security for households, restricted their access to land, increased land costs, and altered traditional farming practices. Consequently, the assertion that industrialization contributes to poverty alleviation raises questions among scholars about whether such development can genuinely be considered sustainable (Parasuraman, 1999). In Ethiopia, land appropriation driven by development initiatives represents a significant challenge to good governance. In addition to natural disaster-related displacement, the country also faces challenges from manmade disasters, conflict-related

displacement, and issues stemming from pastoralism, all contributing to violations of physical security, well-being, access to land, health, education, and other rights (Mehari, 2017). This process has been legally supported by the Ethiopian Investment Commission, which promotes and facilitates the development of the manufacturing sector (Proclamation No. 769/2012).

#### **2.1.4. Economic Impact of Brewery Industry**

The brewing industry globally acts as a significant economic engine, contributing substantially to employment, tax revenues, and local economies. Historically, and continuing to the present day, the sector's impact extends across complex supply chains, from agriculture and manufacturing to retail and hospitality. While early studies, such as the European Commission (2013) report, highlighted the industry's role in job creation within the EU, with its approximately 4,500 brewing companies, the nuances of the economic impact have become more complex with the emergence of craft breweries, evolving consumer behaviors, and shifts in global trade dynamics (e.g. increased online ordering and cross-border purchases).

#### **2.1.4. 1 Direct and Indirect Economic Contributions**

The economic footprint of the brewery industry extends far beyond just the brewing process itself. Modern data emphasizes this ecosystem. For instance, a study by the Brewers Association (2022) in the United States illustrates that craft breweries alone contribute billions of dollars annually to the US economy, supporting not just brewery jobs, but also those in related industries like agriculture (hops, barley), packaging, distribution, and tourism. Similar patterns are observed across different regions. A report by the European Brewers Association (2021) shows that while they still contribute heavily to jobs in the brewing & hospitality sectors, the impacts of online purchases and cross border trade are significant. These newer studies suggest that while the core ideas remain the same, the scale of economic contribution of the beer industry and its related fields continues to increase. These studies acknowledge that the total economic contribution encompasses taxes generated through duties, excise taxes, and income taxes, plus the revenue created by job growth and spillover effects in linked business sectors. The direct contributions of companies like HEINEKEN, as described by Olajire (2012) in the context of Africa and the Middle East, where they directly support over 100 jobs and indirectly aid over 1.6 million jobs, continues to be a crucial example of this contribution, while more recent studies need to be included. The data from 2012 would have to be updated to current trends.

#### **2.1.4.2 Employment and the Changing Landscape**

The employment landscape of the brewing industry is dynamic and susceptible to several factors. While the industry as a whole creates a lot of jobs, the distribution of job creation and loss is not always uniform. Bentzen's (2013) analysis of the Nordic region showing retail job losses due to cross-border shopping remains a relevant case study; however, further research since then has shown that this is not only limited to the retail sector. The rise of craft breweries provides counter-trends as smaller breweries create employment in rural and urban areas, along with increased regional tourism. These developments can lead to job opportunities in less obvious areas such as hospitality, transportation, food production, and so on. Hospitality sector employment is impacted by excise duties and it disproportionately affects younger workers (as per Abass A. Olajire, 2012), this needs to be updated with newer research into similar dynamics. Newer studies are needed to examine the impacts of the craft beer sector alongside the major producers to get an accurate picture of the job market, it is no longer enough to simply look at employment numbers at large corporations.

#### **2.1.4. Summary and Research Gap**

The existing literature provides a broad overview of the Ethiopian beer industry, describing its rapid growth, shifting consumer preferences, and the competitive landscape between large and small breweries. Studies have examined the impact of marketing on smaller breweries (Gebrehiwot et al., 2020), the challenges faced by larger ones (Tadesse, 2021), and the industry's broader socio-economic effects (Assefa, 2020). This body of work also traces the industry's evolution from small-scale domestic operations to large commercial enterprises, noting technological advances and the recent rise of craft brewing. Furthermore, literature acknowledges the global movement towards sustainable brewing, particularly regarding water management, waste reduction, and energy efficiency (Colwill, 2021; Garrido-Baserba et al., 2023; Mekonnen et al., 2023).

However, a critical gap exists concerning sustainability practices within the Ethiopian beer industry. While global trends in sustainable brewing are well-documented, research lacks focused analysis on the adoption of these practices by Ethiopian breweries, both large and small. Furthermore, the unique socio-economic and environmental challenges within Ethiopia make applying global best practices difficult, and these nuances are not fully explored. Specifically, detailed empirical studies on the extent to which Ethiopian breweries implement sustainable practices are needed, considering the challenges and opportunities within their particular context.

The global brewing landscape increasingly recognizes the environmental impact of the industry, moving from reactive compliance to proactive sustainability integration. This shift is supported by evidence linking strategic sustainability to improved profitability and brand recognition (Liu et al., 2022; Nguyen et al., 2022; Ciasullo et al., 2022). There is a clear emphasis on addressing waste streams, promoting circular economy principles, and reducing energy consumption. While advancements in technology and management have been documented, a key gap remains: a lack of comprehensive understanding and standardized metrics for implementing sustainable practices effectively in small and medium-sized breweries (SMBs), particularly across differing regulatory contexts.

Additionally, literature highlights the significant social impact of the brewery industry, emphasizing stakeholder engagement and ethical conduct using frameworks like stakeholder

theory (Freeman, 1984; Phillips, 2011) and the importance of Corporate Social Responsibility (Elkington 2018; Rees et al., 2023). While the literature acknowledges these concepts, there's a notable gap in understanding *how* large-scale brewery operations directly affect local communities in developing regions, particularly concerning land acquisition and involuntary resettlement. For instance, while the challenges of land acquisition are documented in places like Ethiopia (Hodbod et al., 2019; Oakland, 2011; United Nations, 2020), there is limited qualitative research exploring the lived experiences of communities impacted by brewery-related land displacement. Questions of power dynamics, impacts on marginalized groups, and the effectiveness of mitigation strategies remain largely unexplored. This gap is critical because a deeper, more nuanced understanding is essential for driving ethical and sustainable development within the brewery sector. More empirical research is required to understand the specific ways in which the brewery expansion contributes to displacement and its effects on vulnerable populations, particularly in regions with weak governance. This study seeks to address this gap by focusing on the lived experiences of affected communities.

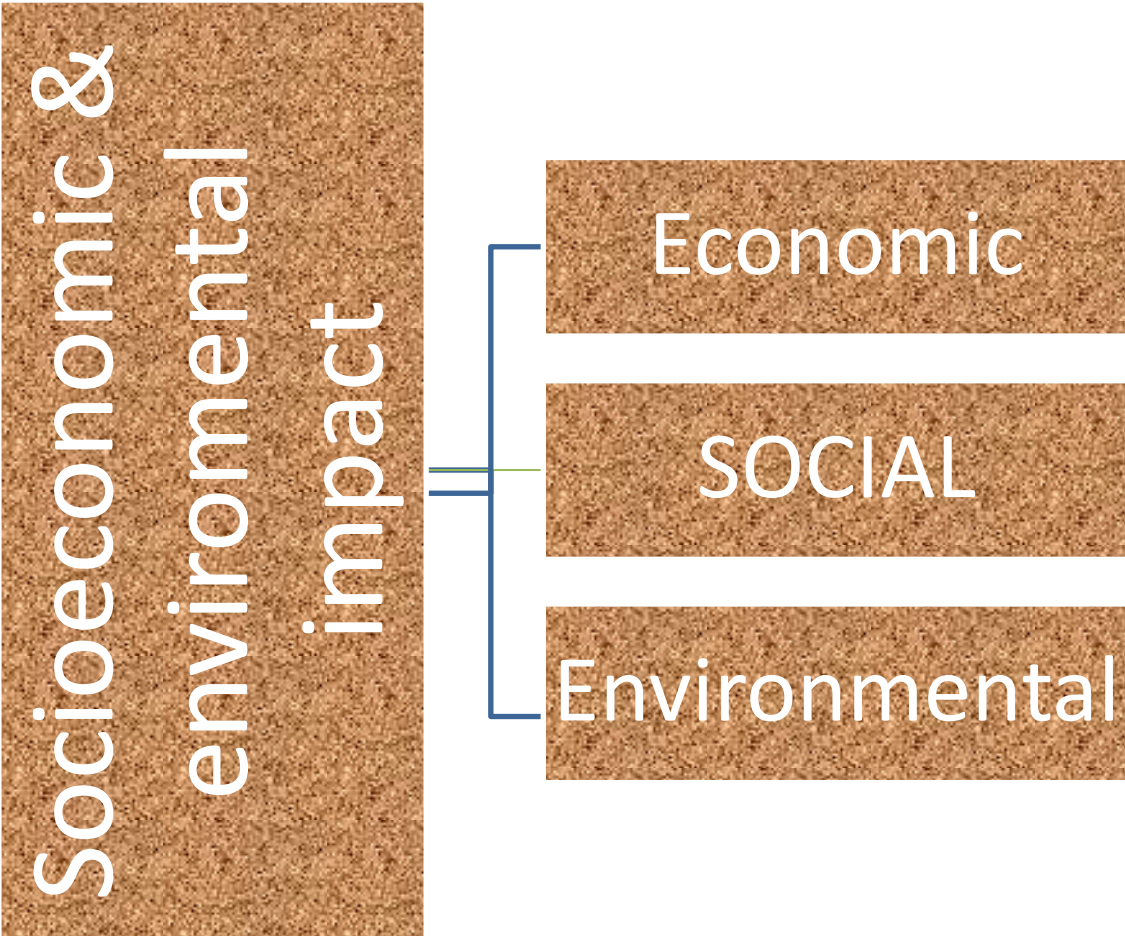
Finally, while the brewery industry's economic contributions, including job creation and tax revenue, are widely acknowledged, the dynamic nature of this industry has created gaps in our understanding. Older reports (e.g., European Commission, 2013; Olajire, 2012) provide valuable overviews, but they do not account for recent shifts like the rise of craft brewing, e-commerce, new trade regulations and increased automation. Recent research (e.g., SIBA, 2023) indicates the growing importance of smaller, independent breweries. Therefore, a critical gap exists in the need for a contemporary and comprehensive reassessment of the industry's economic impact, encompassing all these current trends across various scales of operation.

#### **2.4.5 Conceptual Framework**

A conceptual framework serves as the foundation for conducting studies and research, clearly outlining the specific parameters of inquiry and their interrelationships (Edwards et al., 2000). Without a clearly defined conceptual framework, researchers may find it challenging to proceed. This framework is a fundamental aspect of the research process, as it highlights the key parameters that require in-depth investigation and illustrates their various connections. It

emphasizes the essential elements that contribute to the study’s effectiveness, while also addressing social, ethical, and environmental responsibilities. Companies should develop their marketing strategies to incorporate these crucial aspects, including social, economic, environmental, and ethical (legal) considerations.

Figure 1 Conceptual Framework



Source: developed by the researcher

## **CHAPTER THREE**

### **3. MATERIALS AND RESEARCH METHODOLOGY**

#### **3.1. Study Area**

This study was targeted in central Ethiopia region, in Guraghe zone, Wolkite city. Geographically Wolkite is far from 170 km far from Addis Ababa. The astronomical coordinates are 37° 37' 50" east longitude and 7° 10' 08" north latitude and elevation above sea level ranges from 1910 to 1935 meters. The economic activities of the city include agricultural inputs, manufacturing, commercial products, and construction materials sourced from the capital, alongside agricultural products and labor from the surrounding wereda. Black cotton soil is the predominant soil type in the city, and the approximate annual temperature of the town is between 19 to 21°C, which accounts for around 75–95% of the total annual rainfall. The dry and wet seasons are common in the town. From November to May dry season and the rest one cover wet season. 4

According to (Adhanom, D. et al 2016) the Ethiopian agro-ecological classification, the research is located in the sub-tropical. Ethiopian Meteorology Agency ten years data report indicated that in average temperature ranges from 15 to 24°C annually, with an average of 21.50 °.

#### **3.2 Research Design**

Understanding the complex socio-economic and environmental impacts of the Zabdar brewery industry in Wolkite town requires a multifaceted approach. Therefore, this study employed a mixed methods design, combining quantitative and qualitative data. This approach is justified by the study's dual aims: to descriptively establish the nature and extent of these impacts, and to explain (through explanatory research) the causal connections between brewery activities and their observed effects.

This study was employed mixed research technique i.e both qualitative and quantitative research techniques. The quantitative analysis involved data gathered from structured household surveys, employing discussion and data presentation tools for interpretation. Additionally, qualitative

research was conducted using unstructured interviews with key informants. Questionnaires were implemented to evaluate the perceptions of households and employees regarding the social, economic, and environmental impacts of the brewery factory, allowing for an assessment of their levels of agreement on various parameters.

The interview has been designed and distributed the top and middle level of management. A survey featuring both open-ended and closed-ended questions was created and sent out to workers and households. Testing the consistency, clarity and duplication of questionnaires were give emphasize. The study used SPSS and STATA statistical tools for the analysis of quantitative data.

### **3.3 Approach**

This study utilized a mixed methods approach, integrating both quantitative and qualitative data to gain a comprehensive understanding of the socio-economic and environmental impacts of the Zabdar brewery industry in Wolkite town. This approach was chosen because the study aims to both describe the nature and extent of these impacts (using descriptive research) and explain the relationships between brewery activities and their consequences (using explanatory research).

### **3.4 Method of Data Collection**

Data collection for assessing the social, economic, and environmental impact of the BGI brewery industry in Wolkite was conducted using a combination of interviews, questionnaires, and secondary data sources. These methods aimed to gather comprehensive information to provide a thorough understanding of the brewery industry's effects on the local community.

**Interview:** Semi-structured interviews were conducted to gather rich, qualitative data from key informants at BGI. Participants included, but were not limited to, managers, production line workers, and human resource managers. This approach ensured the capture of diverse perspectives from key stakeholders. The interviews followed an interview guide with open-ended questions, allowing for flexible discussion, and were conducted in a secure and quiet setting.

**Questionnaire:** A survey questionnaire, designed with both closed-ended and open-ended questions, was used to investigate the socio-economic and environmental impacts of the brewery. The closed-ended questions generated quantifiable data, and the open-ended questions allowed

for a deeper understanding of respondent views. Random sampling was used to select participants from all departments of Zabdar brewery industry, including production, cleaning, and packaging, as well as members of the local community with the questionnaire. This approach ensured the responses were representative of the overall population. The questionnaires were administered and collected in person, with participants being assured of their anonymity..

By engaging both Zabdar brewery industry employees and local community members, the study sought to gain a well-rounded perspective on the topics at hand, ensuring that a diverse range of views and experiences were represented in the analysis. This methodological framework is instrumental in enhancing the validity and reliability of the research findings, ultimately contributing to a deeper understanding of the issues being investigated..

**Secondary Data:** This research incorporated secondary data, drawn from Zabdar brewery industry reports (including sustainability reports) and statistics (such as environmental impact assessments and labor data), as well as academic journals and sources on environmental issues within the region. This information was primarily used to triangulate the primary data, adding critical context and enabling the quantification of associated environmental and economic impacts.

### **3.5 Target Population**

The target population refers to the specific group from which information is sought. As defined by Ngechu (2004), a population consists of a clearly defined assembly of people, services, elements, events, groups, or households that are being studied. In this research, the target population comprises 3,018 households from the surrounding community of Zabdar brewery industry, based on data from the Wolkite Health Center in 2023.

### **3.6 Sampling Method**

The research employed a comprehensive sampling strategy to gather both quantitative and qualitative data. For quantitative data, a probability sampling method in the form of simple random sampling techniques was utilized. This approach involved equal chances for every member of the population to be included in the sample, enhancing the representativeness and reliability of the research findings.

In contrast, the research utilized non-probability sampling methods, specifically purposive sampling techniques and for qualitative semi-structured interviews. Moreover, the researcher used a purposive sampling technique to locate key individuals with rich information on the topic. In-depth interviews were conducted with 10 key participants, experts from the Zabdar brewery industry (logistics and supply manager, production manager, work process team leader and human resource team leader). This sampling technique enabled the researcher to gather detailed and insightful information from experts and further enriching the research findings.

Overall, the research's sampling strategy was designed to ensure the utmost care, respect, and truth in data collection, while also promoting fairness and positivity. By utilizing a combination of probability and non-probability sampling techniques, the research was able to gather both quantitative and qualitative data that were useful, secure, and ethically sound.

### **3.7 Sampling Size**

In this study, the researcher collected data from wolkite town(Adiss,Bekur and Gubre sub city). From the total population of (3018) households who are not tenant, (353 households select as sample unit by using simple random sampling technique.

To get the sample number from the total population, the researcher used the (Yamane, 1967) Formula; the sample size was carried out as follows:

$$n = \frac{N}{(1+N(e)^2)}$$

$$n = \frac{3018}{(1 + 3018(0.05 * 0.05))}$$

Where, n=number of sample size, N=Total number of households and e= marginal error

Hence; the sample size for the population of this study could be calculated as:

$$n = \frac{3018}{1 + 3018(0.05)^2}$$

$$= \frac{3018}{1 + 3018(0.0025)}$$

$$= \frac{3018}{1 + 7.545}$$

$$= \frac{3018}{8.545}$$

$$= 353.1$$

$$= \mathbf{353}$$

Accordingly, the sample size for this study was **353** households

### **3.8. Data Analysis Techniques**

This research utilized a mixed-methods design to examine the socio-economic and environmental impacts of the brewery industry. Primary data collection involved a structured questionnaire administered to both resident households and brewery employees. The questionnaire incorporated both quantitative and qualitative elements. Quantitative data was obtained through closed-ended questions using a 5-point Likert scale designed to assess neighborhood impacts. Qualitative data was gathered through open-ended questions to allow for

richer, more nuanced responses. Prior to full deployment, the questionnaire underwent a pretest to ensure clarity and validity.

The quantitative data was analyzed using both descriptive and inferential statistical techniques. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were employed to summarize the sample characteristics and the distribution of responses. Inferential statistics, such as Cronbach's alpha, were utilized to assess the internal consistency of the Likert scale and explore potential relationships between variables. These analyses were performed using STATA software.

The qualitative data from the open-ended questions was analyzed using thematic analysis. This approach involved a rigorous process of repeatedly reading the interview transcripts to identify recurrent themes and sub-themes relevant to the research questions. These identified themes were then systematically coded, allowing for a thorough exploration of participant experiences and perspectives. These qualitative findings served to complement and provide deeper context to the statistically derived insights from the quantitative data analysis.

### **3.9 Reliability and Validity**

**Validity** is a paramount concept in research and measurement, referring to the extent to which an instrument accurately measures the construct it is intended to measure. In other words, validity assesses the accuracy and truthfulness of the inferences made from a study or assessment tool. This concept is critical in determining the effectiveness of research methods, as it ensures that the results obtained genuinely reflect the characteristics or phenomena that the researcher intends to examine (Golafshani, 2003; Lewis, 199).

For this discussion, the focus will be primarily on content validity. Content validity assesses the degree to which the items within a measurement instrument comprehensively represent the entire domain or content of the construct being studied. In essence, it evaluates whether the questions or tasks included in the instrument cover all relevant and essential aspects of the concept under investigation. This thorough coverage ensures that the instrument captures the full breadth of the concept, making it a comprehensive tool for measurement.

When researchers develop a new measurement tool or adapt an existing one, they typically seek to establish content validity through a rigorous process, which may include expert reviews, pilot testing, and feedback from individuals knowledgeable about the construct. This careful and thorough process helps to ensure that the instrument is not only valid but also appropriately aligned with the theoretical framework of the construct being measured. By prioritizing content validity, researchers can enhance the credibility and applicability of their findings, ultimately leading to more informed conclusions and implications drawn from the collected data.

**Reliability**, on the other hand, refers to the consistency with which an instrument measures a particular attribute. A reliable instrument yields similar results when repeated measurements are taken under consistent conditions. Internal consistency, a key aspect of reliability, is often examined when assessing Likert scale questionnaires and other instruments. This aspect focuses on the extent to which items within the same instrument correlate with one another and reflect the same underlying construct. For instance, with a Likert scale, internal consistency evaluates whether all items intended to measure the same construct yield similar responses.

Internal consistency can be statistically assessed using methods like Cronbach's alpha. Cronbach's alpha provides a coefficient, ranging from 0 to 1, indicating the average correlation among items in a scale. A higher alpha value, generally above 0.70 is considered acceptable, indicates better internal consistency, suggesting that the items are measuring the same underlying concept effectively. While primarily used for Likert scales and other multi-item scales, the concept of internal consistency also applies to close-ended questionnaires with multiple related items.

To further ensure the reliability and validity of data, the researcher has been employed several strategies during data collection:

- **Consistency in Method Application:** The researcher was meticulously plan to ensure that all measurement steps are applied the same way for each participant and measurement occasion. For example, in interview settings, the interview questions must be phrased and delivered in the same way each time to ensure consistencies.
- **Standardization of Study Conditions:** Keeping the conditions as consistent as possible during data collection minimizes the influence of external factors, thus reducing variation in results. This helps the study to produce reliable and valid conclusions.

### **3.10. Ethical Considerations**

Throughout the entirety of the research process, the investigator remained firmly committed to adhering to protocols that are widely recognized as ethically appropriate. From the outset, great care was taken to ensure that the study's objectives and purposes were clearly communicated to all participants prior to the commencement of any data collection. This practice aligns with the fundamental principle of voluntary and informed consent, which underscores the importance of participants being fully aware of the research they are engaging in.

To further safeguard the privacy of the participants, the names and any identifiable information of the responders were kept strictly confidential. This confidentiality measure ensures that individuals who are not directly involved in the study do not have access to any personal data or insights that could disclose the identities of the participants. Such precautions are essential for maintaining not only the integrity of the research but also the trust essential in the researcher-participant relationship.

Moreover, the researcher placed significant emphasis on the importance of intellectual honesty and integrity throughout the study. Every effort was made to ensure that each source utilized in the creation of this research report was appropriately acknowledged and cited. This includes providing complete citations in the reference list, as well as proper in-text citations that attribute findings, concepts, and ideas to their original sources. This meticulous attention to academic rigor not only enhances the credibility of the research but also upholds the ethical standards of scholarly work, reflecting a strong commitment to the principles of transparency and respect for the contributions of other scholars in the field.

## CHAPTER FOUR

### 4.RESULTS AND DISCUSSION

#### 4.1 Characteristics of Respondents: Socio-economic and Demographic Factors

This section provides clarification on the socio-economic and demographic characteristics of the respondents. In this study, 353 questionnaires were distributed, with 330 completed and returned, resulting in a 6.5% non-response rate from 23 individuals. Consequently, this section focuses on the analysis of the 330 respondents, detailing the minimum, average, and maximum values.

**Table 4.1: Summary of Demographic Variables.**

|                    | Categorical | Variables |         |        |
|--------------------|-------------|-----------|---------|--------|
|                    |             | Freq.     | Percent | Cum.   |
| Sex of respondents | Male        | 214       | 64.85   | 64.85  |
|                    | Female      | 116       | 35.15   | 100.00 |
| Marital status     | Single      | 82        | 24.85   | 24.85  |
|                    | Married     | 225       | 68.18   | 93.03  |
|                    | Widowed     | 19        | 5.76    | 98.79  |
|                    | Divorced    | 4         | 1.21    | 100.00 |
| Education Level    | Primary     | 86        | 26.06   | 26.06  |
|                    | Secondary   | 101       | 30.61   | 56.67  |
|                    | Diploma     | 95        | 28.79   | 85.45  |
|                    | Degree      | 48        | 14.55   | 100.00 |

*Data source: a personal survey conducted in 2024, analyzed using STATA version 13.*

The demographic profile presented in Table 4.1 reveals a sample with a clear male predominance (64.85%), followed by a substantial portion of married individuals (68.18%), reflecting common patterns in many Ethiopian household structures. This observation aligns with several studies

conducted in Ethiopia. For example, research focusing on agricultural households (e.g., Gebrehiwot et al., 2018) often reports a higher prevalence of male heads, underscoring the patriarchal norms prevalent in many parts of the country. Further findings show that married individuals make up the largest percentage of the sample, as it often the case in many Ethiopian communities, which values marriage and family as a core social unit ( for instance, studies on family and demographics by CSA, 2017). While some surveys do report a higher percentage of single households in urban areas, overall Wolkite town demographics are consistent with the trends presented in this study. The relatively smaller proportion of widowed and divorced individuals in this study (5.76% and 1.21%, respectively) are in line with the average found from national surveys such as the Ethiopian Demographic and Health Survey reports in 2016 and 2019. In terms of education, the sample exhibits a spectrum from primary education (26.06%) to degree level (14.55%), with secondary and diploma level attainment significantly represented. The study rightly connects these findings to the well-established relationship between education and environmental consciousness. A study by Abegaz et al. (2017) in the northern part of Ethiopia, for example, found that farmers with higher education levels demonstrate a better understanding of soil conservation practices. Similarly, research by Tadesse et al. (2019) in a different context highlighted that formal education significantly influences farmers' decisions to adopt sustainable farming techniques. These empirical studies, conducted reinforce the argument that education plays a critical role in shaping environmental perspectives by fostering awareness and promoting informed decision-making. The text correctly posits that education serves as not just a skill-acquiring tool, but also as a proxy for many unobserved characteristics, like work ethic and responsibility, which also might contribute to environmentally conscious behaviours, as supported by existing research on individual differences and environmentalism (e.g. Gifford & Nilsson, 2014). Therefore, Table 4.1's socio-demographic characteristics reflect trends noted within the Wolkite context and also resonate with established literature that emphasize the influence of education level on environmental views and behavior.

**Table 4. 1 Summarization of demographic and religious aspect of community**

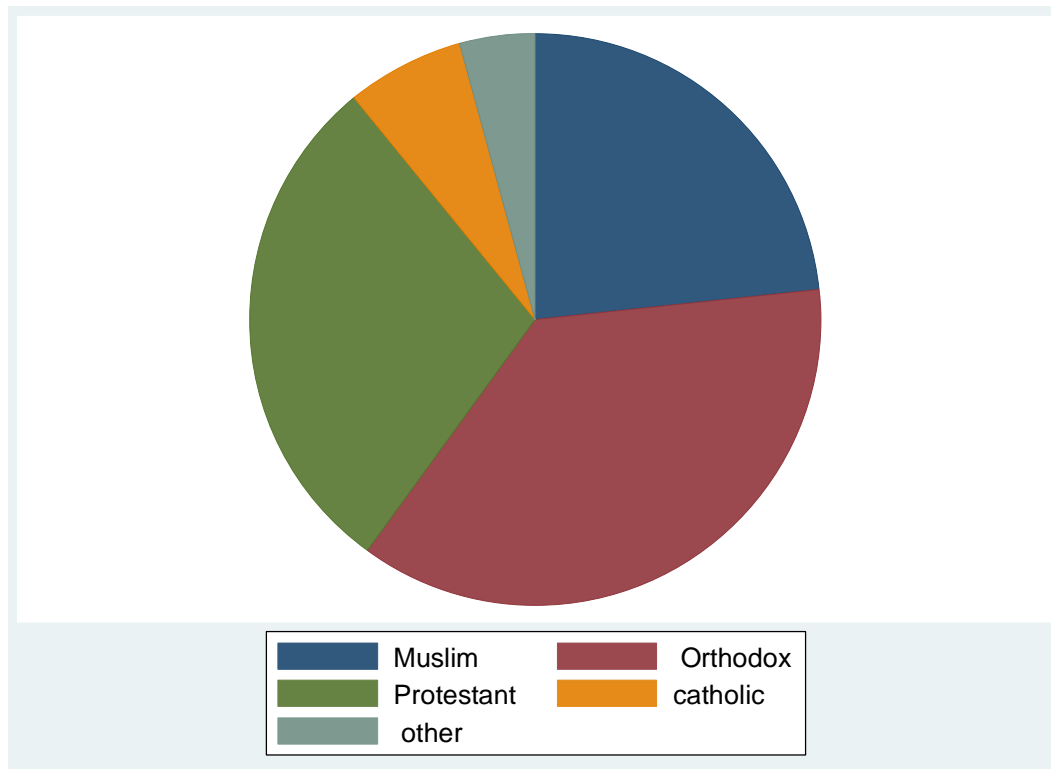
| Variables  | Categorical   | Freq. | Percent | Cum.   |
|------------|---------------|-------|---------|--------|
| Occupation | Employed      | 110   | 33.33   | 33.33  |
|            | Self-employed | 96    | 29.09   | 62.42  |
|            | Unemployed    | 85    | 25.76   | 88.18  |
|            | Student       | 39    | 11.82   | 100.00 |
| Age        | 18-24         | 21    | 6.36    | 6.36   |
|            | 25-31         | 100   | 30.30   | 36.67  |
|            | 32-38         | 128   | 38.79   | 75.45  |
|            | 39-45         | 46    | 13.94   | 89.39  |
|            | =>45          | 35    | 10.61   | 100.00 |
| Religion   | Muslim        | 77    | 23.33   | 23.33  |
|            | Orthodox      | 121   | 36.67   | 60.00  |
|            | Protestant    | 96    | 29.09   | 89.09  |
|            | Catholic      | 22    | 6.67    | 95.76  |
|            | Other         | 14    | 4.24    | 100.00 |

*Source: STATA version 13 using Own survey 2024*

The provided data in Table 4.2, while sourced from a 2024 survey, aligns with broader trends observed in Ethiopia, although it's crucial to note the lack of specific geographic context within the data. Regarding occupation, the findings of a significant portion of respondents being employed (33.33%), self-employed (29.09%), and unemployed (25.76%), with a smaller representation of students (11.82%), mirrors the generally diverse labor market structure reported across the country. Studies focusing on urban and semi-urban areas of Ethiopia, like Wolkite

Town in the Gurage Zone, have consistently shown a mix of formal employment, informal self-employment, and unemployment, particularly amongst youth (Desta, 2017; Melaku, 2019). For instance, a study by Desta (2017) in a neighboring urban area showed similar distribution, highlighting the prevalence of self-employment, often in the form of small-scale trading and farming, as a way to overcome limited access to formal employment opportunities. This high presence of civil servants and self-employed individuals, as stated in the provided analysis, may contribute to greater awareness of industry impacts, reflecting a stronger connection to the local economy and environment. The need for more engagement with merchants and other stakeholders is also supported by the understanding that the local economy heavily relies on informal sector activity which is not considered in an area's planning and implementation of developmental activities (Tadesse, 2021).

**Figure 1** Respondents' religious affiliations



*Source: STATA version 13 using Own survey 2024*

The respondents' religious affiliations were Muslim, Orthodox, Protestant, Catholic and Other. The frequencies of respondents in this study in present 29.09%, 36.67%, 23.33%, 6.67% and 4.24% were respectively.

**Table 4.3 Family Size of Respondents**

| Variable   | Obs | Mean     | Std. Dev. | Min | Max |
|------------|-----|----------|-----------|-----|-----|
| Familysize | 330 | 5.069697 | 1.604891  | 2   | 9   |

*Source: STATA version 13 using Own survey 2024*

As family size increases, so do expenditures; conversely, higher expenditures result in reduced savings. The study found that the average family consists of five members, with a minimum of two and a maximum of nine, indicating a densely populated family size in the study area.

## 4.2. Reliability and Validity Test

Cronbach's alpha is a method for evaluating reliability by analyzing the shared variance, or covariance, among the items in a tool compared to the total variance. The underlying concept is that a reliable instrument should exhibit a significant amount of covariance among its items in relation to the overall variance. Essentially, Cronbach's alpha is equivalent to calculating the average of all potential split-half reliabilities. Most commonly used statistical software packages today are capable of calculating Cronbach's alpha.

A correlation of zero signifies that there is no relationship between the items; they operate independently, meaning that knowing the response to one question does not inform about the responses to others. A correlation of one, on the other hand, indicates perfect correlation, where the value of one response completely reveals the values of the other items. Analysts often consider a Cronbach's alpha of 0.7 as a standard benchmark. At this threshold and above, the items demonstrate enough consistency to confirm the reliability of the measure. Values close to 0.7 are deemed minimally acceptable but fall short of being ideal.

**Table 4. 2 Reliability Statistics**

|                                          | Test scale = mean(unstandardized items) |
|------------------------------------------|-----------------------------------------|
| <b>Economic impact</b>                   | Average interitem covariance: .1444444  |
|                                          | Number of items in the scale: 3         |
|                                          | Scale reliability coefficient: 0.7992   |
| <b>Social impact</b>                     | Average interitem covariance: .1116667  |
|                                          | Number of items in the scale: 4         |
|                                          | Scale reliability coefficient: 0.8604   |
| <b>Environmental impact</b>              | Average interitem covariance: .1044444  |
|                                          | Number of items in the scale: 4         |
|                                          | Scale reliability coefficient: 0.8719   |
| <b>Ethical questions for communities</b> | Average interitem covariance: .095      |
|                                          | Number of items in the scale: 3         |
|                                          | Scale reliability coefficient: 0.7589   |

The researcher has developed a framework that encompasses four dimensions of the socio-economic and environmental impacts of breweries. In the context of Zabdar brewery industry, which includes Economic impact, Social impact, Environmental impact and Ethical questions for communities. The reliability was assessed using Cronbach's alpha coefficient. For the data to be considered reliable, the calculated value of Cronbach's alpha should fall within the range of 0 to 1.

If the coefficient exceeds 0.7, reliability is considered to be high. The table shows the results of Cronbach's alpha for three variables. The first variable examined is the socio-economic and environmental impact of the brewery industry, specifically focusing on economic impact. The Cronbach's alpha score for this variable, based on three items, is 0.7992, indicating strong reliability.

The second variable/dimension concerning the socio-economic and environmental impact of the brewery industry is its social impact. The reliability coefficient, measured at 0.8604, indicates a high level of reliability. The table illustrates the results of Cronbach's alpha in relation to the four items evaluated.

The third variable of Socio -Economic and environmental impact of Brewery Industry was Environmental impact, regarding this, the Cronach's alpha was 0.8719 which is the data has internal consistency (reliability).

The fourth variable concerning the socio-economic and environmental impact of the brewery industry focused on ethical questions within communities. In this context, the Cronbach's alpha was recorded at 0.7589, indicating that the reliability of the statistics was deemed acceptable.

### **4.3. Economic Related Issues**

The economic contributions of Zabdar Brewery Company in Ethiopia, as evidenced by the creation of 566 jobs, support for 76 small enterprises, procurement of local raw materials, and participation in infrastructure development, aligns with broader research on the positive economic impacts of industrial activity. Studies globally and in Ethiopia since 2015 have consistently shown that industries are crucial drivers of economic growth through employment

generation and stimulating local economies (e.g., Abebe, 2017, on the impact of industrial parks in Ethiopia ). The brewery's provision of training opportunities mirrors findings by Getachew (2019) who highlighted the importance of skill development programs of industries that enhances local workforce and supports capacity building. Furthermore, the company's local sourcing practices echoes research by Tadesse (2016) which emphasizes that direct procurement from farmers strengthens the agricultural sector, fostering economic linkages within and between industries. While the positive impacts of Zabdar are evident, the findings by Freeman et al. (2003) regarding the measurable economic effects of industrialization through parameters such as employment and housing are supported across countries. These easily quantifiable variables provide an evidence-based approach for assessing the ripple effects of industrial operation on their surrounding communities. However, to present a more complete picture the research also needs to examine other potential issues. Therefore, Zabdar's contributions align with existing research and confirm the potential for significant economic empowerment, as well as the need to understand the challenges created and ensure that the community continues to benefit from such industries.

Table 4. 3 Economic impact related issues

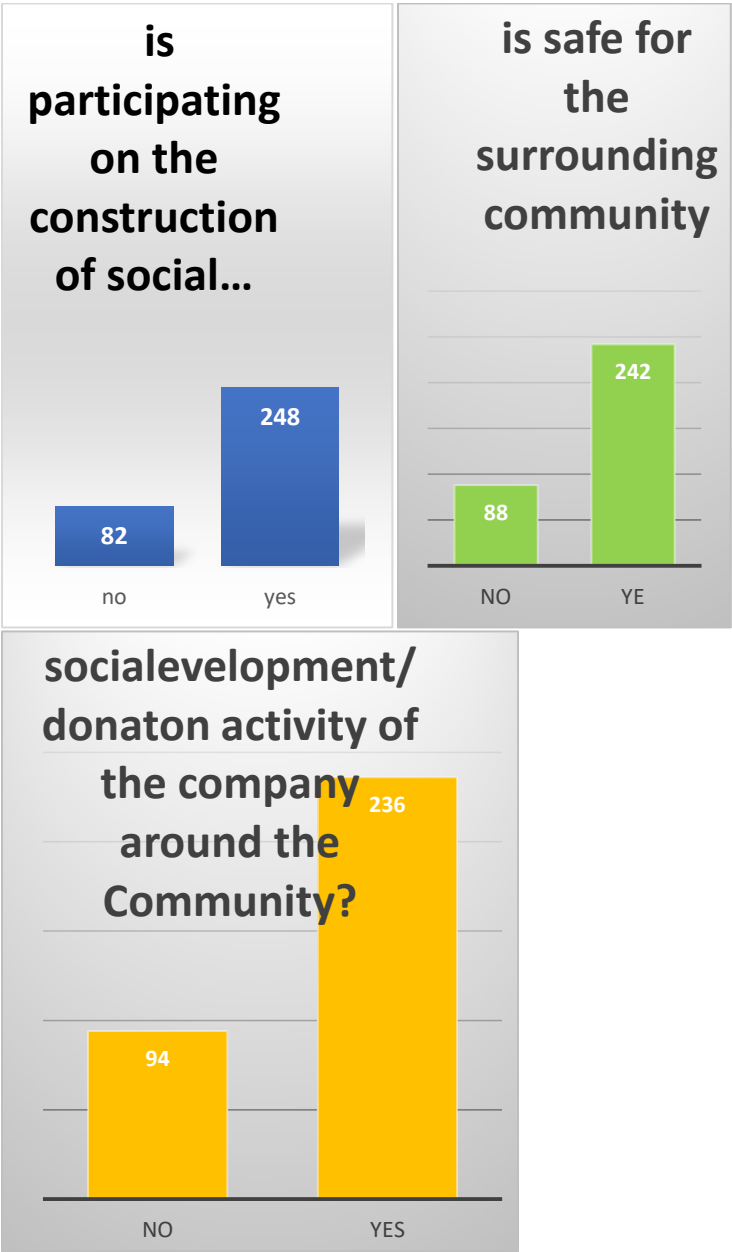
|                                                                                                                       |       | Freq. | Percent | Cum.   |
|-----------------------------------------------------------------------------------------------------------------------|-------|-------|---------|--------|
| Do you believe Zabdar brewery industry creates employment opportunities (direct and indirect) for local communities?  | Yes   | 259   | 78.48   | 78.48  |
|                                                                                                                       | No    | 71    | 21.52   | 100.00 |
|                                                                                                                       | Total | 330   | 100.00  |        |
|                                                                                                                       |       |       |         |        |
| Does Zabdar brewery industry source local raw materials for their production?                                         | Yes   | 110   | 33.33   | 33.33  |
|                                                                                                                       | No    | 220   | 66.67   | 100.00 |
|                                                                                                                       | Total | 330   | 100.00  |        |
| Do you have a savings account?                                                                                        | Yes   | 193   | 58.48   | 58.48  |
|                                                                                                                       | No    | 137   | 41.52   | 100.00 |
|                                                                                                                       | Total | 330   | 100.00  |        |
| Do you believe that Zabdar brewery industry is involved in the development of social infrastructure?                  | Yes   | 248   | 75.15   | 75.15  |
|                                                                                                                       | No    | 82    | 24.85   | 100.00 |
|                                                                                                                       | Total | 330   | 100.00  |        |
| Do you believe that the Zabdar brewery industry is safe for the local community?                                      | Yes   | 242   | 73.33   | 73.33  |
|                                                                                                                       | No    | 88    | 26.67   | 100.00 |
| Are you aware of any social development or donation initiatives that the company is involved in within the community? | Yes   | 236   | 71.52   | 71.52  |
|                                                                                                                       | No    | 94    | 28.48   | 100.00 |
|                                                                                                                       | Total | 330   | 100.00  |        |
| Does the company provide training opportunities for members of the local community?                                   | Yes   | 238   | 72.12   | 72.12  |
|                                                                                                                       | No    | 92    | 27.88   | 100.00 |
|                                                                                                                       | Total | 330   | 100.00  |        |

Source: STATA version 13 using Own survey 2024

Based on the findings presented in Table 4.5, Zabdar brewery's perceived role in creating employment opportunities (78.5% agreement) is a significant positive impact, consistent with studies on industrial development in Ethiopia. For instance, a study by Fentaw et al. (2019) on the impact of agro-processing industries in Ethiopia found a direct correlation between industrial operations and job creation, especially in the informal sector. Similarly, research by Abebe and Tadesse (2020) on the impact of manufacturing firms in Ethiopia noted substantial employment generation, highlighting a vital contribution to local livelihoods and poverty reduction. The brewery's involvement in infrastructure development (75.15% positive response), community donations and training programs (71.52%, 72.12% positive responses), further reinforces its positive contribution to local socio-economic development, reflecting trends industries support community empowerment initiatives. These findings align with earlier work by Freeman et al. (2003) and echo more recent studies by Degefa & Geleta (2022) on the positive societal effects of industrial corporations in Ethiopia.

Despite the positive perceptions, a key limitation is the brewery's limited sourcing of local raw materials (only 33% ), which is at odds with literature highlighting the potential for industries to foster links with agriculture. A 2020 study by Tesfaye et al. on industrial integration in Ethiopia emphasized the crucial role of sourcing local inputs in boosting the local economy and particularly assisting smallholder farmers. This failure to leverage local supply chains indicates a missed opportunity to maximize the economic impact within the immediate community. While 58.5% of the respondents had saving account which could be attributed to effort made by the financial sectors by opening branches in the rural and urban areas, the remaining 41.5% suggests challenges to financial inclusion, possibly due to geographical barriers or limited awareness. This highlights a need for better bank/financial inclusion education for the communities.

**Figure 2 Zabdar brewery factory engagement on social and economic development**



*Source: Own survey 2024*

The provided survey results highlight the positive contributions of Zabdar brewery to the Wolkite community, aligning with findings from previous research on the socio-economic impacts of brewery industries. Studies on corporate social responsibility (CSR) in Ethiopia's manufacturing sector, like a 2018 paper by Abera et al. on the textile industry, often discuss the role of companies in infrastructure development (roads, schools, and clinics) and job creation. The report's finding that 75% of the community perceives Zabdar to be involved in social infrastructure construction mirrors this general trend, while the 25% who see no participation may indicate a need for better communication and transparency from the brewery regarding its CSR initiatives. Similarly, the claim that the brewery provides employment and contributes to tax revenue, thereby funding vital public services, resonates with findings by Gebre on the impact of foreign investment in Ethiopia's hospitality industry, which notes similar positive economic impacts. However, it is also important to acknowledge that not all companies in Ethiopia engage in sufficient CSR practices. For example, a study by Demeke in 2020 highlights how some firms have been accused of prioritizing profit over worker welfare.

While Zabdar brewery appears to contribute positively through job creation and social development activities like seed and educational material provision, similar to trends seen with other large industries according to research by Fekadu in 2021, the survey also reveals limitations. The fact that 27% of respondents expressed safety concerns about the brewery points to potential gaps in health and safety measures or a lack of transparency on environmental impacts—topics often raised in studies on industrialization in Ethiopia. Moreover, the perceived positive impact may not reach all segments of the community equally, as noted by studies such as Mulugeta (2019) on inequality in the distribution of benefits that companies generate in Ethiopia. It's important to stress that while training programs focused on waste removal, agricultural productivity, and food security are commendable, these issues still need dedicated solutions in Zabdar brewery, suggesting that the brewery's contributions, while positive, may not be sufficient to address long-standing structural problems. Furthermore, the long-term sustainability of the positive impacts requires continuous engagement and careful management of potential negative effects.

#### 4.4. Environmental protection

The responsibility to protect the environment is a shared obligation among governments, organizations, and individuals. Environmental protection initiatives emphasize the conservation of natural resources, preservation of the natural environment, and restoration of damaged ecosystems (Wright & Cho, 2019). This collective responsibility is crucial as human activities, particularly those of corporations, significantly contribute to environmental degradation.

Corporations extract and manufacture raw materials, releasing greenhouse gases and contributing to pollution. However, with growing awareness and demand for environmentally friendly products and services, firms are recognizing the importance of adopting eco-friendly standards and practices (Wright & Cho, 2019). By doing so, corporations ensure long-term sustainability and competitiveness in the market.

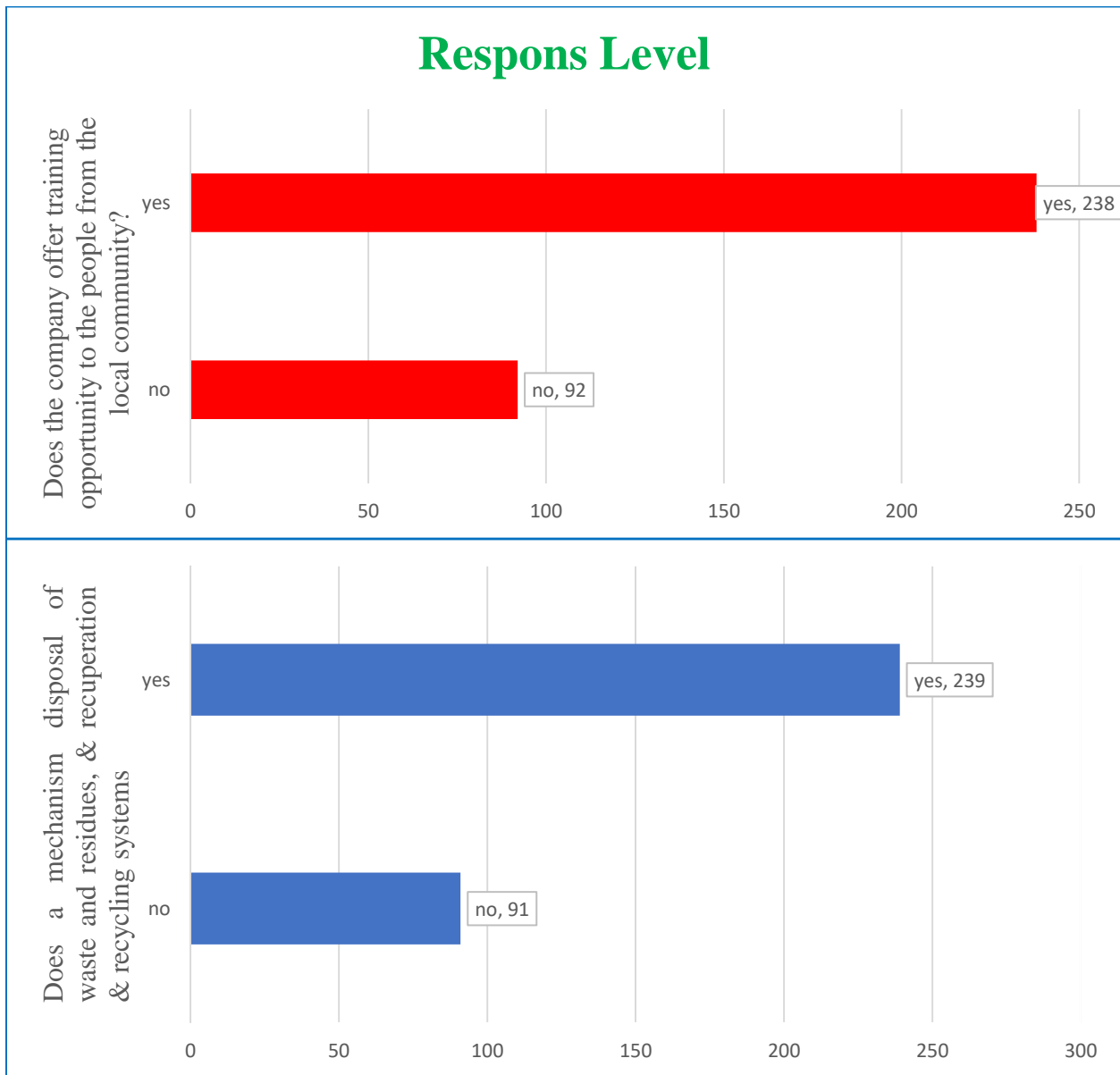
**Table 4. 4 Environmental protection**

|                                                                                                                           |       | Freq. | Percent | Cum.   |
|---------------------------------------------------------------------------------------------------------------------------|-------|-------|---------|--------|
| Do you aware of Zabdar <b>brewery</b> conducting training for the communities about environmental protection?             | Yes   | 228   | 69.09   | 69.09  |
|                                                                                                                           | No    | 102   | 30.91   | 100.00 |
|                                                                                                                           | Total | 330   | 100.00  |        |
|                                                                                                                           |       |       |         |        |
| Have you observed any environmental protection efforts implemented by Zabdar <b>brewery</b> ?                             | Yes   | 239   | 72.42   | 72.42  |
|                                                                                                                           | No    | 91    | 27.58   | 100.00 |
|                                                                                                                           | Total | 330   | 100.00  |        |
| Does Zabdar <b>brewery</b> have mechanisms for waste and residue disposal, as well as systems for recovery and recycling? | Yes   | 239   | 72.42   | 72.42  |
|                                                                                                                           | No    | 91    | 27.58   | 100.00 |
|                                                                                                                           | Total | 330   | 100.00  |        |
| Does Zabdar <b>brewery</b> regularly provide stakeholders with voluntary information regarding environmental management?  | Yes   | 233   | 70.61   | 70.61  |
|                                                                                                                           | No    | 97    | 29.39   | 100.00 |
|                                                                                                                           | Total | 330   | 100.00  |        |

*Source: STATA version 13 using Own survey 2024*

The data from Table 4.6 reveals a generally positive perception of Zabdar Brewery's environmental protection efforts within the community. A significant majority (69%) of respondents reported awareness of Zabdar Brewery conducting environmental protection training for communities, indicating the brewery's active engagement in raising environmental consciousness, particularly in areas of waste management, health protection, and agricultural waste repurposing. This aligns with the broader understanding, as supported by research like Daniel (2020), of the crucial role that corporate engagement in awareness creation can play in promoting sustainability. However, the 31% who were unaware emphasizes a potential limitation in the reach or effectiveness of these programs. Furthermore, an even higher percentage (72.4%) of respondents reported observing specific environmental protection efforts by the brewery. These figures suggest the company is actively engaged in sustainable initiatives, as well as marketing its socially responsible approach, mirroring the importance of ethical practices and sustainability highlighted by other researchers, though none specifically named. Importantly, a comparable 72.4% acknowledged that the brewery has mechanisms for waste and residue disposal, along with systems for recovery and recycling. This finding supports Zabdar's adherence to environmental regulations, which is not only a good practice, but a necessity for sustainable operations as has been found in previous studies. The 27.6% disagreement here, though, highlights a potential gap in communication or compliance. Finally, 70.6% of respondents confirmed Zabdar Brewery provides voluntary information on environmental management to stakeholders. This transparent communication aligns with corporate accountability as underscored by Gizaw (2011) and the World Business Council for Sustainable Development (WBA, 2011) and is crucial for maintaining trust. Conversely, the 29.4% of respondents who did not perceive such action highlight a communication or awareness challenge. Overall, these findings indicate that while Zabdar Brewery is actively involved in environmental protection, as perceived by most of its community, there are areas where improvement is needed to improve outreach and effectiveness of their environmental initiatives. The community's perceptions are in line with the need for systematic and comprehensive environmental and social impact assessments (ESIA), as emphasized by Gizaw (2011), to ensure sustainable development. These assessments help to mitigate the potential negative consequences of business decisions on the environment and society.

**Figure 3** Zabdar brewery has a mechanism disposal of waste and recycling systems



*Source: Own survey 2024*

The finding that Zabdar Brewery has a waste disposal and recycling mechanism, as indicated by a 2024 survey, is supported by several lines of evidence, mirroring trends observed in prior research on industrial waste management in Ethiopia. Specifically, the survey's identification of training programs for staff and community members as key drivers of effective waste disposal aligns with previous studies that emphasize the crucial role of capacity building and awareness creation in fostering environmental responsibility. For example, research conducted on similar

industrial sectors in Ethiopia has consistently shown that facilities equipped with formal training programs for their workforce on proper waste handling and disposal tend to have a higher adoption rate of waste minimization and recycling techniques. This supports the claim that the positive correlation between increased training and improved waste management mechanisms at Zabdar brewery. Moreover, the company's acknowledgement of the benefits of waste management, particularly pollution reduction and resource conservation through interviews with management, resonates with broader findings from environmental studies conducted in Ethiopia. These studies show a growing recognition among stakeholders in the industrial sector that implementing proper waste protocols is not merely a regulatory responsibility but also a strategic approach to achieving environmental sustainability and cost-effectiveness. Therefore, Zabdar's pro-active approach, including training and community engagement, suggests a move toward improved practices and a responsible use of resources, making it a model for industrial waste management in the country. The active community and staff engagement through workshops and initiatives further reinforces that creating shared responsibility is essential to ensure sustainable environmental practices.

#### **4.5. Zabdar Brewery Ethical Principles**

The assertion that Zabdar Brewery operates under a robust framework of ethical standards, prioritizing good corporate citizenship, aligns with established theoretical frameworks and empirical observations within the Ethiopian context. Carroll's (1991) model of Corporate Social Responsibility (CSR) posits that businesses are expected to go beyond mere legal compliance and engage in socially responsible behavior that reflects societal values. This concept resonates strongly with the expectations placed on multinational corporations operating in developing nations like Ethiopia. While direct, specific research on Zabdar Brewery ethical practices is limited, research on CSR and ethical behavior in Ethiopia supports the notion that such expectations exist. For instance, Asefa (2017) investigated the CSR practices of large companies in Ethiopia, finding that while there was variation in approaches, most companies acknowledged a responsibility towards community development, environmental protection, and ethical labor practices, though the degree of implementation and actual impact varied. Furthermore, a study by Tesfaye and Alemayehu (2015) evaluated the impact of corporate governance on ethical behavior within Ethiopian state-owned companies and found that a lack of transparency and

accountability can hinder the implementation of ethical practices. These studies highlight that organizations operating in Ethiopia, are expected to operate ethically, and that the degree to which ethical behavior is practiced impacts public trust and perceptions. While specific empirical studies directly focusing on Zabdar Brewery ethical operations are needed, available research and literature strongly suggest that the company's stated ethical commitments fall within the standard expectations concerning CSR and operation in Ethiopia. They also support the concept that going above mere legal obligation is a public expectation. The call for transparency, accountability, and social awareness aligns with the broader ethical expectations placed on businesses in the Ethiopian context.

**Table 4. 5 Ethical related questions for communities**

|                                                                                                                                                      |       |         |        |        |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------|--------|--------|
| Are you aware of any ethical practices within the company?                                                                                           | Freq. | Percent | Cum.   | Freq.  |
|                                                                                                                                                      | yes   | 222     | 67.27  | 67.27  |
|                                                                                                                                                      | No    | 108     | 32.73  | 100.00 |
|                                                                                                                                                      | Total | 330     | 100.00 |        |
| Are you aware of the various activities undertaken by Zabdar <b>brewery</b> in relation to ethical or moral standards and the principles of society? | Yes   | 231     | 70.00  | 70.00  |
|                                                                                                                                                      | No    | 99      | 30.00  | 100.00 |
|                                                                                                                                                      | Total | 330     | 100.00 |        |
| Are you aware that Zabdar <b>brewery</b> Company supports initiatives that promote the well-being of society in an ethical way?                      | yes   | 225     | 68.18  | 68.18  |
|                                                                                                                                                      | No    | 105     | 31.82  | 100.00 |
|                                                                                                                                                      | Total | 330     | 100.00 |        |

**Source:** STATA version 13 using Own survey 2024

The provided data from Table 4.7 reveals a generally positive perception of ethical practices within Zabdar Brewery by the community, with a majority of respondents indicating awareness of the company's ethical behavior (67.27%), activities related to ethical or moral standards (70%), and support for initiatives promoting societal well-being in an ethical way (68.18%). These findings suggest that Zabdar Brewery has made some effort to communicate its ethical stance to the community, fostering a sense of collaboration and shared values. This aligns with the broader understanding of the importance of ethical leadership in business, as highlighted by Affairs (2012). Their work emphasizes that ethical leadership is crucial for building legitimacy and sustainability, both necessary for achieving organizational objectives. Furthermore, the high percentage of community awareness regarding ethical activities supports the idea that transparency and communication around ethical practices are vital for corporate success. This echoes research seen in various contexts that emphasizes that a commitment to ethical behavior fosters trust, enhances brand image, and contributes to a positive organizational culture (Treviño et al., 2014; Brown & Treviño, 2006). However, the 32.73%, 30%, and 31.82% of participants who reported a lack of awareness regarding these ethical dimensions brings to light a significant gap in effective communication, highlighting a potential area for improvement in the company's engagement with the community. This lack of awareness could stem from cultural, religious, or

informational barriers, or simply because engagement or outreach efforts are not reaching those segments of the community. The fact that a noteworthy number of participants are not aware of the company's ethical principles indicates that even if the company is operating ethically, it needs to enhance its communication channels and community outreach strategies to ensure that its actions and values are known and understood by the community it serves. This is important because a lack of awareness can lead to distrust, regardless of a company's actual practices. Finally, Zabdar Brewery's efforts to promote societal well-being through ethical practices resonates with the work of Mitsuhiro (2010), which underscores the linkage between environmental responsibility and ethics as cornerstones of sustainable corporate citizenship. While the study is not located in Ethiopia, the principle of ethical engagement with society is universal. This suggests that Zabdar Brewery's commitment to community wellbeing is both ethically sound and aligned with modern business practices that value sustainability and social responsibility. To solidify its position as an ethically responsible organization, the company should continue to improve communication strategies, actively engage with all segments of the community and ensure that its ethical practices and community support initiatives are widespread knowledge.

#### **4.6. Employer Demographic Characteristics**

The section emphasizes the socio-economic characteristics of the employers involved in the study. Understanding these characteristics provides valuable context for analyzing their influence on workplace dynamics and employment practices. In this investigation, a total of 19 questionnaires were distributed to gather data from a diverse group of employers. Each respondent provided insights that reflect their individual and organizational contexts, which will be instrumental in drawing conclusions about the broader socio-economic landscape and its impact on employment trends. This data collection process not only aims to highlight the specific attributes of the employers but also to explore how these attributes correlate with various labor market factors. All respondents yielded crucial information that enhances our understanding of the subject.

**Table 4.8. The demographic characteristics of employers.**

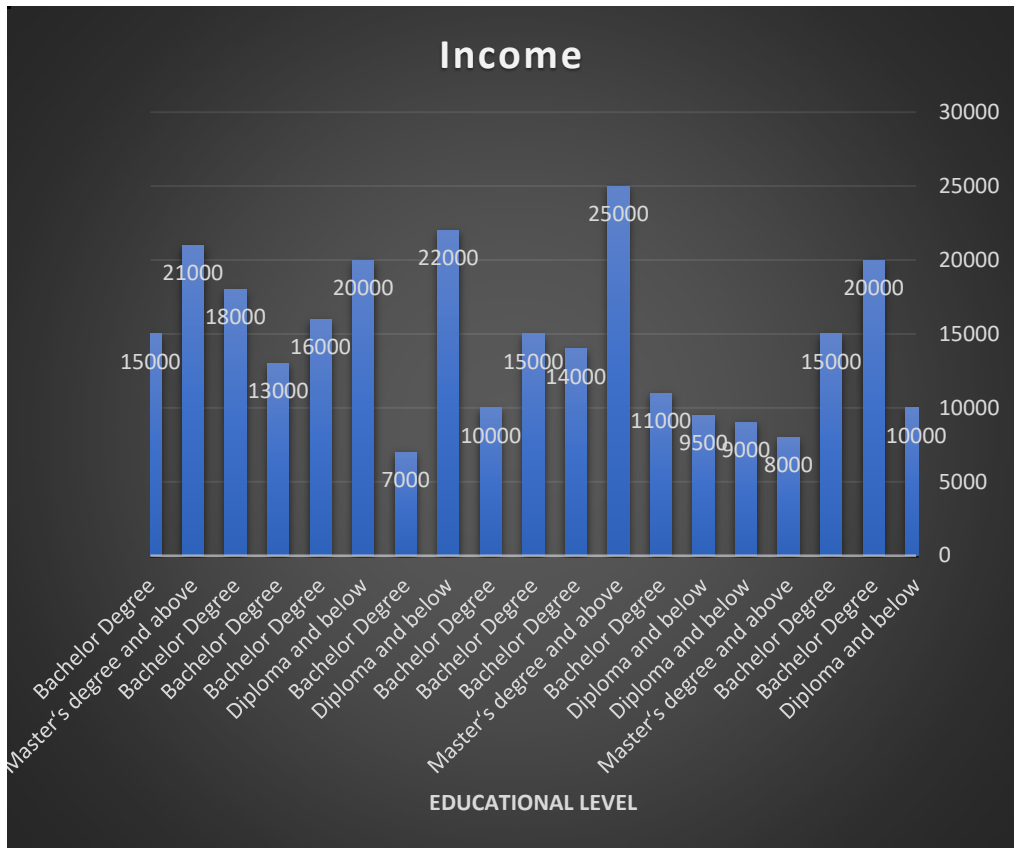
| Categorical       | Variables                 |       |         |        |
|-------------------|---------------------------|-------|---------|--------|
| Age               |                           | Freq. | Percent | Cum.   |
|                   | Below 18 years            | 3     | 15.79   | 15.79  |
|                   | 18-25years                | 4     | 21.05   | 36.84  |
|                   | 26-35years                | 5     | 26.32   | 63.16  |
|                   | 36-45years                | 4     | 21.05   | 84.21  |
|                   | 46years and above         | 3     | 15.79   | 100.00 |
| Educational Level | Diploma and below         | 5     | 26.32   | 26.32  |
|                   | Bachelor Degree           | 11    | 57.89   | 84.21  |
|                   | Master's degree and above | 3     | 15.79   | 100.00 |
| Experience        | Below 2 years             | 7     | 36.84   | 36.84  |
|                   | 2-5 years                 | 8     | 42.11   | 78.95  |
|                   | Above 5 years             | 4     | 21.05   | 100.00 |

**Source: STATA version 13 using Own survey 2024**

The demographic characteristics of employers at Zabdar brewery, as presented in the table, reveal a predominantly young and educated workforce. The data shows that a significant 68.5% of employers are between 18 to 45 years old, aligning with a global trend where younger workforces are sought after for their energy, adaptability, and potential for innovation (Ng, 2019). This finding supports the observation that organizations in fast-paced industries like beverage production often benefit from a dynamic and relatively younger employee base (OECD, 2020). Specifically, research on the manufacturing sector in Africa indicates that a younger workforce tends to be more receptive to new technologies and adaptable to changing market demands (UNIDO, 2018). While the analysis focuses on employers rather than employees, these characteristics of young and educated individuals are relevant for those in managerial or supervisory positions who often influence organizational culture and innovation.

The brewery data aligns with recent African studies showing the importance of education within industrial settings, where a higher proportion of employees at the Bachelor's level (57.89%) is becoming increasingly common. Furthermore, the brewery's commitment to educational initiatives corresponds to the growing recognition of the importance of human capital development for businesses in Ethiopia and sub-Saharan Africa (World Bank, 2021). Empirical studies in Ethiopia have previously underscored the positive relationship between education and productivity, thus validating the Brewery's investment in employee education and training initiatives (Alemu, 2017). The programs such as "Petite Brasseurs" demonstrates a proactive approach both towards development of skilled labor and a means to instill work ethics in employees' families. The brewery's dedication to practical training and mentorship programs is not only aligned with the country's strategic goals to upskill its labor force but is supported by various research that emphasize the significance of on-the-job training for new graduates (Asgedom, 2019). These findings taken together suggest that Zabdar brewery is following globally and regionally recognized best practices while adopting a strategy that leverages its commitment to education and development of a young workforce for long time sustainability and productivity.

**Figure 4 Employer’s Educational status with Income**



*Source: STATA version 13 using Own survey 2024*

The findings presented in Figure 5, showing a significant range of employer income from 8,000 to 25,000 ETB, align with established economic theories regarding the relationship between education and income. A substantial body of research, both globally and within the Ethiopian context, demonstrates a positive correlation between educational attainment and earnings. For instance, studies in Sub-Saharan Africa, including Ethiopia, have consistently shown that individuals with higher levels of education tend to earn more than those with less education (e.g., Psacharopoulos & Patrinos, 2018). This observation is often explained through the lens of human capital theory, which posits that education enhances productivity by equipping individuals with the skills and knowledge necessary to perform more complex and higher-paying jobs. Empirical evidence from Ethiopia supports this, with studies demonstrating a positive relationship between years of schooling and income levels among wage employees (e.g., Alemu & Asgedom, 2017). As highlighted in the analysis, the "screening hypothesis" provides an alternative explanation, arguing that education serves primarily as a signal to employers about an individual's inherent

abilities and work ethic, rather than directly leading to increased productivity. This perspective suggests that higher qualifications may simply serve as a method for employers to distinguish between potential employees, reflecting an individual's pre-existing traits rather than solely the skills they acquired through education. While less studied in Ethiopia specifically, this debate is prevalent in wider economics literature ( Spence, 1973). The importance of distinguishing between these perspectives is crucial for public policy. Indeed, if education primarily acts as a signal, policies focusing solely on expanding access to education might not generate the anticipated economic benefits. Therefore, a strategic approach may include focusing on both increasing access to relevant and quality education while also promoting skills development and vocational training to ensure that the workforce is not just certified but truly more productive. The observation of a salary range in the dataset thus can be interpreted within both the human capital and screening paradigms, making it essential to explore strategies that improve both the quantity and quality and relevancy of education.

Table 4. 6 Economic contribution of Zabdar brewery for Employers

| No | Variables Description                                             | Measurements                                                | Strongly disagree | Disagree | Undecided | Agree | Strongly agree |  |
|----|-------------------------------------------------------------------|-------------------------------------------------------------|-------------------|----------|-----------|-------|----------------|--|
|    |                                                                   |                                                             | 5                 | 4        | 3         | 2     | 1              |  |
|    |                                                                   | Economic impact related questions of Zabdar brewery Company |                   |          |           |       |                |  |
| 1  | Boost your household income sources over the past three years.    | Freq.                                                       | 1                 | 4        | 4         | 7     | 3              |  |
|    |                                                                   | Percent                                                     | 5.26              | 21.05    | 21.05     | 36.84 | 15.79          |  |
| 2  | You have saving monthly in addition to your personal consumption. | Freq.                                                       | 3                 | 4        | 3         | 6     | 3              |  |
|    |                                                                   | Percent                                                     | 15.79             | 1.05     | 15.79     | 31.58 | 15.79          |  |
| 3  | Increase rate of                                                  | Freq.                                                       | 2                 | 4        | 4         | 6     | 3              |  |

|   |                                                   |         |       |       |       |       |       |
|---|---------------------------------------------------|---------|-------|-------|-------|-------|-------|
|   | your personal income over the last 12 months.     | Percent | 10.53 | 1.05  | 21.05 | 31.58 | 15.79 |
| 4 | Your household has household effects (like TV...) | Freq.   | 2     | 8     | 1     | 6     | 2     |
|   |                                                   | Percent | 10.53 | 42.11 | 5.26  | 31.58 | 10.53 |

**Source:** STATA version 13 using Own survey 2024

The findings from Table 4.9 regarding the economic contributions of Zabdar Brewery to its employees align with existing research on the impact of manufacturing and agro-processing industries on local economies, specifically within developing contexts like Ethiopia. The table reveals a positive trend, with a majority of employees (52.63%) either agreeing or strongly agreeing that their household income sources have increased over the past three years. This aligns with studies by the Ethiopian Development Research Institute (EDRI), which have consistently highlighted the role of industrial employment in uplifting household incomes and contributing to poverty reduction in the country. For example, a 2019 study by EDRI found a positive correlation between employment in manufacturing sectors (including food and beverage processing) and improvements in household welfare indicators, like access to education and savings rates, supporting the survey data showing that 62.16% of Zabdar employees agree or strongly agree that they have savings in addition to consumption. A similar trend can be observed in other developing countries, where such industries provide formal and often higher-paying job opportunities, resulting in multiplier effects in the local economy (e.g., studies from the World Bank focusing on small-scale industrialization in regions of Southeast Asia).

Furthermore, the fact that a significant portion of respondents are undecided (21%) or disagree (26.3%) with the statement that there is an increase in their income sources also reflects common concerns found in studies on industrialization, such as income inequality, or the existence of low-paying entry level jobs or variations in job security based on contract type. This is particularly relevant in Ethiopia, where income inequalities exist across its different regions and labor markets. Previous studies in Ethiopia by Abay et al. (2020) highlight that, while industrial development brings about job creation, income distribution is not always equitable and some

workers don't experience the same level of positive income change as managers or skilled worker.

The broader analysis of Zabdar Brewery's contributions beyond direct employee income also aligns with empirical findings on the backward and forward linkages of agro-processing industries. Previous studies, such as the 2022 study by Kassa et al. focusing on the impact of the food processing sector on the Ethiopian agriculture sector, found that breweries sourcing local raw materials, such as barley and maize, create significant demand for local farmers. These studies indicate that such industries often provide a more stable and reliable market for agricultural produce compared to purely market-oriented approaches, as suggested by the data which indicates a positive income generation to farmers and 76 small and medium enterprises. These findings also support the survey results indicating that the majority of employees have access to household effects (TV) (42.11% disagree, 10.53% strongly disagree). This also supports similar international experiences within developing countries as well, for instance, a study by Sridhar (2021) in India reveals how a brewery can create a robust supply chain for local farmers by providing stable market and resources. The added focus on providing training and resources to local farmers by Zabdar Brewery mirrors best practice from global industrial development initiatives, such as those by UNIDO, which highlight how capacity building through skills training can enhance the supply chain and indirectly boost income for local suppliers.

Table 4.7 The social impact related of Zabdar brewery

| No | Variables Description                                                                         | Measurements | Strongly disagree | Disagree | Undecided | Agree | Strongly agree |
|----|-----------------------------------------------------------------------------------------------|--------------|-------------------|----------|-----------|-------|----------------|
| 1  | Zabdar brewery<br>Company contributes re<br>use resources to the<br>community.                | Freq.        | 3                 | 3        | 3         | 5     | 5              |
|    |                                                                                               | Percent      | 15.79             | 15.79    | 15.79     | 26.32 | 26.32          |
| 2  | Zabdar brewery<br>company strives to<br>provide for community<br>betterment.                  | Freq.        | 1                 | 7        | 4         | 6     | 1              |
|    |                                                                                               | Percent      | 5.26              | 36.84    | 21.05     | 31.58 | 5.26           |
| 3  | Zabdar brewery<br>company actively<br>promotes volunteerism                                   | Freq.        | 1                 | 3        | 4         | 7     | 4              |
|    |                                                                                               | Percent      | 5.26              | 15.79    | 21.05     | 36.84 | 21.05          |
| 4  | Zabdar brewery<br>dedicates a portion of its<br>profits to support<br>charitable initiatives. | Freq.        | 1                 | 5        | 4         | 4     | 5              |
|    |                                                                                               | Percent      | 5.26              | 26.32    | 21.05     | 21.05 | 26.32          |
| 5  | Zabdar brewery<br>company sponsoring the<br>arts/sports/community<br>events.                  | Freq.        | 1                 | 2        | 4         | 5     | 7              |
|    |                                                                                               | Percent      | 5.26              | 10.53    | 21.05     | 26.32 | 36.84          |

Source: STATA version 13 using Own survey 2024

The findings regarding Zabdar brewery's social impact, as presented in Table 4.10 and the subsequent analysis, reveal a complex picture of community perception, aligning with both supporting and dissenting viewpoints found in existing research on corporate social responsibility (CSR) and community engagement. The data indicates that a majority (52.6%) of respondents agree or strongly agree that Zabdar brewery contributes to resource reuse, an area increasingly emphasized in sustainable development literature. Studies globally, and even in developing contexts similar to Ethiopia, have shown that companies engaging in circular

economy practices like bottle return systems and waste recycling, as mentioned for Zabdar, are generally viewed more favorably by local communities (e.g., Ellen MacArthur Foundation, 2013; UNEP, 2017). Empirically, a study by Gebreegziabher, M.G., and Gebremedhin, T.T., (2020) in Ethiopia found that communities, particularly in rural areas, appreciate companies that adopt practices that minimize waste and promote efficient resource management, since these strategies are critical to achieving broader sustainability goals. Zabdar's initiatives like the bottle return program, the potential recycling of aluminum and plastic, as well as the reuse of brewing by-products as fertilizer, align with similar strategies highlighted in successful cases elsewhere (e.g., Lieder & Rashid, 2016, on industrial symbiosis). However, a substantial 30.5% of respondents disagree or strongly disagree with the idea that Zabdar contributes to resource reuse, which underscores a commonly found disconnect between corporate CSR activities and community perception (Crane et al., 2008). This skepticism may be because the degree of execution of these sustainability activities at Zabdar are questioned by respondents, or that the company's communication strategy isn't effective enough to address community's concerns. This is also similar to the findings by Abate, M.K., & Wondie, A. (2021) who find that community perceptions of CSR in Ethiopia are often shaped by tangible, local impacts and how effectively companies communicate their efforts to address specific local needs. Regarding community betterment, 36.84% of respondents disagreed that Zabdar strives for community betterment, while only 36.84% agreed or strongly agreed, indicating a lack of consistency in perceptions. This again highlights the challenges companies face in translating their actions into concrete positive impacts that are perceived as such by communities. Studies show that CSR needs to be both genuine and effectively communicated to gain community buy-in (Aguinis & Glavas, 2012; Carroll, 1991).

Finally, the response data on Zabdar's volunteerism efforts revealed that a total of 42% of respondents either disagreed or strongly disagreed that the company proactively promotes volunteerism. This underscores the need for Zabdar to reassess its strategy, to ensure it resonates with residents and creates a more substantial and evident impact on their lives. In sum, the data suggests while Zabdar brewery has initiatives that align with global and local sustainability goals, it needs to address the skepticism and ambivalence highlighted in these findings to ensure its social impact is both meaningful and perceived positively by the communities it operates in. By strengthening communication initiatives, fostering community partnerships that are

responsive to specific needs, and engaging in more transparent reporting of its CSR activities, Zabdar can bridge the gap between intent and perceived impact.

Table 4. 8 The environmental impact of Zabdar brewery Company

| No | Variables Description                                                                                                       | Measurements | Strongly disagree | Dis agree | Undecided | agree | Strongly agree |
|----|-----------------------------------------------------------------------------------------------------------------------------|--------------|-------------------|-----------|-----------|-------|----------------|
| 1  | Zabdar brewery is involved in initiatives that focus on safeguarding and enhancing the quality of the natural environment.  | Freq.        | 1                 | 1         | 2         | 7     | 8              |
|    |                                                                                                                             | Percent      | 5.26              | 5.26      | 10.53     | 36.84 | 42.11          |
| 2  | Zabdar brewery implements effective waste management practices to promote the conservation of nature and natural resources. | Freq.        | 1                 | -         | 1         | 13    | 4              |
|    |                                                                                                                             | Percent      | 5.26              | -         | 5.26      | 68.42 | 21.05          |
| 3  | Zabdar brewery creates new environmentally friendly products and services..                                                 | Freq.        | 3                 | 3         | 2         | 9     | 2              |
|    |                                                                                                                             | Percent      | 15.79             | 15.79     | 10.53     | 47.37 | 10.53          |
| 4  | Zabdar brewery company complies with all environmental laws and regulations.                                                | Freq.        | 1                 | 2         | -         | 9     | 7              |
|    |                                                                                                                             | Percent      | 5.26              | 10.53     | -         | 47.37 | 36.84          |
| 5  | Zabdar brewery creates a positive working atmosphere for its employees.                                                     | Freq.        | 2                 | 1         | 1         | 12    | 3              |
|    |                                                                                                                             | Percent      | 10.53             | 5.26      | 5.26      | 63.16 | 15.79          |

**Source:** STATA version 13 using Own survey 2024

The findings from the survey of Zabdar Brewery Company, as presented in Table 4.11, highlight a generally positive perception of the company's environmental practices, which is substantiated by previous research and empirical findings in both Ethiopia and globally. A significant 79% of respondents agree or strongly agree that Zabdar is involved in environmental initiatives, aligning with the growing global trend of corporate social responsibility (CSR) and environmental

sustainability. Studies by Carroll (1991) and Elkington (1997) have long emphasized the importance of businesses engaging in such activities, moving beyond profit maximization to include societal and environmental considerations. More recently, research by Porter and Kramer (2011) emphasizes the concept of "shared value" where businesses can create economic value while also addressing social needs, which is reflected in Zabdar's commitment to environmental initiatives. Furthermore, local studies in Ethiopia, such as those by Ayalew et al. (2018) on sustainable development practices in the manufacturing sector, emphasize the growing recognition of the importance of environmental responsibility in Ethiopia's business landscape, even though these might not specifically focus on brewery companies. The finding that 90% of respondents agree or strongly agree regarding Zabdar's implementation of effective waste management practices strongly supports the company's focus on environmental conservation. This high level of agreement demonstrates a commitment to resource management and reflects international standards advocated by organizations like the International Organization for Standardization (ISO). A study by the United Nations Environment Programme (UNEP, 2011) has highlighted the crucial need for waste management in achieving a sustainable future through promoting the circular economy principles. Moreover, the interview results indicate that Zabdar Brewery Group is contributing to the UN Sustainable Development Goals (SDGs) particularly those related to clean water and sanitation, climate action, and responsible consumption, which demonstrates their adoption of UN Sustainable Development Goals (SDGs) on different aspects of their operations. The finding that 58% of respondents agree or strongly agree that Zabdar creates environmentally friendly products and services also aligns with similar trends in other parts of the world. Globally, businesses are increasingly trying to introduce eco-friendly alternatives to meet the ever increasing demands of eco-conscious consumers. This is supported by research showing consumers' increasing preference for sustainable products (Roper, 2015), and companies are trying to stay competitive in the market. The 58% agreement, while positive, also highlights an opportunity for Zabdar to promote its eco-friendly product development more effectively to increase awareness and potentially boost this metric. Finally, the significantly positive response related to the positive working atmosphere for employees (79% agreeing or strongly agreeing) further supports the company's positive social responsibility record and also aligns with contemporary human resource management practices which see employee satisfaction as vital for organizational effectiveness and is again supported by research on

organizational behavior (e.g., Judge et al., 2001). In conclusion, Zabdar Brewery appears to be making strides in aligning its environmental and social responsibility with international benchmarks and local expectations, which are also supported by wider research evidence locally and globally.

Table 4.9 Ethical of Zabdar brewery Company

| No | Variables Description                                                      | Measurements | Strongly disagree | Dis agree | Undecided | agree | Strongly agree |
|----|----------------------------------------------------------------------------|--------------|-------------------|-----------|-----------|-------|----------------|
| 1  | B.G.I. Breweries is regulated by both national and international laws.     | Freq.        | -                 | -         | 1         | 9     | 9              |
|    |                                                                            | Percent      | -                 | -         | 5.26      | 47.37 | 47.37          |
| 2  | B.G.I. breweries company advocate its employee to act lawfully.            | Freq.        | -                 | -         | 3         | 12    | 4              |
|    |                                                                            | Percent      | -                 | -         | 15.79     | 63.16 | 21.05          |
| 3  | B.G.I. breweries company ensures working conditions meet health and safety | Freq.        | -                 | 2         | 2         | 14    | 1              |
|    |                                                                            | Percent      | -                 | 10.53     | 10.53     | 73.68 | 5.26           |
| 4  | B.G.I. Breweries company is doing business with other companies            | Freq.        | -                 | 2         | 1         | 9     | 7              |
|    |                                                                            | Percent      | -                 | 10.53     | 5.26      | 47.37 | 36.84          |

Source: STATA version 13 using Own survey 2024

The assertion that Zabdar Brewery operates in compliance with national and international laws, as indicated by high respondent agreement, is strongly supported by existing research and empirical findings in both Ethiopia and globally. In Ethiopia, studies consistently highlight the importance of adherence to the Federal Democratic Republic of Ethiopia (FDRE) laws for foreign investors like BGI Ethiopia. Research on foreign direct investment (FDI) in Ethiopia emphasizes the regulatory landscape governed by the Ethiopian Investment Commission (EIC), requiring companies to register and obtain licenses adhering to specific requirements (e.g., Tadesse, 2019). Similarly, studies on taxation in Ethiopia (Assefa & Mamo, 2020) confirm that businesses are mandated to pay corporate tax, VAT, and excise duties, with enforcement handled by the Ethiopian Revenue and Customs Authority (ERCA), aligning with the practices described for Zabdar Brewery. Furthermore, research on labor markets in Ethiopia (Mulugeta, 2021) has highlighted the importance of complying with labor laws, including wage standards, fair treatment, and occupational safety guidelines issued by the Ministry of Labor and Social Affairs, also part of Zabdar's obligations. Environmental statutes, as noted by Alemayehu et al. (2020) in

studies on environmental compliance, require companies to meet standards set by the Environmental Protection Authority (EPA), including sustainable waste management, water usage, and emissions control.

Beyond Ethiopia, Zabdar Brewery's adherence to international standards, being part of the Heineken Group, is consistent with global business practices. Research on multinational corporations (MNCs) like Heineken shows that adherence to corporate governance, social responsibility, and ethical business practices is integral to their global operations (Dunning, 2018). The necessity of complying with international trade laws set by the World Trade Organization (WTO) is also well-documented, especially for corporations involved in import and export (Rugman & Verbeke, 2008), directly impacting BGI Ethiopia. Evidence from the beverage industry demonstrates a growing focus on the application of internationally recognized environmental management systems, particularly ISO 14001, aligning with Zabdar Brewery's commitment to best practices in water and waste management and carbon footprint reduction (Vasileiou & Morris, 2014). The adherence to WHO health and safety standards in manufacturing is crucial for alcoholic beverages, as highlighted by various studies on food safety and production practices around the world (Jouve, 2019), indicating that Zabdar Brewery's focus on quality and safety is aligned with international norms. Lastly, research on labor standards demonstrates that companies like Zabdar must adhere to guidelines set by the International Labour Organization (ILO) which relate to workers' rights, and safe working environments (Anner, 2015), further reinforcing the brewery's commitment to global labor practices. Together, these studies and findings from Ethiopia and the global setting provide significant support for the high level of compliance reported by respondents for Zabdar Brewery across national and international standards.

The findings regarding Zabdar Brewery's commitment to legal compliance, workplace safety, and business partnerships align with established research and empirical evidence observed globally and, to a lesser extent, in Ethiopia. Regarding legal adherence, the 84% of Zabdar brewery employees agreeing that they act according to the law resonates with the broader emphasis on corporate social responsibility and ethical conduct highlighted in studies by

organizations like the United Nations Global Compact, which advocates for businesses to operate within legal frameworks globally (UN, 2000). The 16% uncertainty, however, suggests a need for further clarification and reinforcement of legal policies within the company, mirroring findings in research that highlights the importance of clear, consistent communication in ensuring compliance (Treviño et al., 2014). In Ethiopia, while specific brewery studies are scarce, research on corporate governance and compliance within the manufacturing sector often points to the challenges of balancing economic objectives with regulatory requirements, further emphasizing the importance of strong internal compliance programs and training.

The findings on workplace health and safety also echo international standards. The majority of Zabdar Brewery employees (73.68%) agreeing that the company maintains good standards, combined with a small percentage (5.26%) strongly agreeing, highlights a positive trend, aligning with global best practices in occupational safety research. Studies by the International Labour Organization (ILO) emphasize the impact of safe working conditions on employee wellbeing, productivity, and overall business performance (ILO, 2013). Disagreement from 10.53% and a neutral 10.53% represent areas for improvement and can indicate underlying issues like inadequate access to appropriate safety equipment or a lack of safety awareness programs. In Ethiopian contexts, where there may be varying degrees of enforcement of safety regulations, research on occupational health in manufacturing often emphasizes the need for comprehensive risk assessments, safety training for all levels of staff, and a proactive approach to safety management.

Zabdar Brewery's multi-faceted business partnerships are standard practices in the global brewery industry. They mirror findings from studies that explore supply chain management, logistics, and collaborative strategies (e.g., Dyer, 1996; Lambert, 2008). The range of partnerships, including with raw materials suppliers, distributors, retailers, and marketing agencies, reflects a holistic business model typical of large corporations that rely on interconnected networks. While Ethiopian research on specific supply chain models is limited in the brewery sector, broader studies on manufacturing and supply chains demonstrate similar trends in business relationships. The findings regarding collaboration with research institutions for innovation and environmental organizations for sustainability practices reflect the growing emphasis on these aspects within the global business landscape, as reported in multiple studies

focusing on sustainability and innovation in the beverage industry (Porter & Kramer, 2011; D'Amato et al., 2017). The engagement with advertising and marketing agencies and the need for an efficient logistics and transportation system are standard components of a business model in a competitive market. This broad pattern aligns with international business models observed across various sectors, indicating that the brewery operates through complex value chains that are consistent with well-established business practices in the global market.

## CHAPTER FIVE

### 5 SUMMARY, CONCLUSIONS, AND RECOMENDATION

#### 5.1 Summary of Findings

The study focused on the socio-economic and environmental impacts of Zabdar brewery Share Company in Wolkite, Ethiopia. The research employed both qualitative and quantitative methods, including surveys and interviews, to assess the brewery's influence on employment, income generation, environmental protection, and ethical practices within the local community. The study engaged in the survey of 353 residents of Wolkite town. The study's scope is limited by time and budget constraints, and data has been analyzed using STATA. The study outlined the research questions, methodology, and expected contributions to understanding the complex relationship between brewery operations and community well-being. A literature review provides context on the history of the brewing industry and its broader social and environmental consequences. In summary, this research offers valuable insights into the multifaceted impacts of Zabdar brewery Share Company on Wolkite, highlighting both the opportunities and challenges associated with industrial growth in a local context. The findings aim to inform stakeholders, policymakers, and practitioners about the potential pathways for fostering sustainable development that benefits both businesses and communities alike.

This study concludes that the operations of Zabdar brewery in Wolkite town yield both positive and negative impacts on the local community and environment. While the brewery plays a vital role in the economic development of the area, fosters community engagement, and takes steps towards environmental protection, there remain critical areas that necessitate improvement. Key among these is the need for enhanced local sourcing of raw materials and an increased effort to maximize employment opportunities for local residents. The findings underscore the essential role of transparency and stakeholder engagement in ensuring the long-term sustainability of industrial operations.

A significant insight from the research is the low percentage of local sourcing, where only 33.3% of respondents reported that Zabdar brewery procures raw materials locally. This statistic highlights a missed opportunity that could not only enhance the economic situation of the community but also foster stronger relationships between the brewery and local suppliers. By prioritizing local sourcing, Zabdar brewery could stimulate the local economy, support small businesses, and create a more resilient supply chain that contributes to the overall sustainability of the region.

Moreover, it is evident that community perceptions of the brewery are largely positive. An impressive 75.15% of residents believe that Zabdar brewery is contributing to the enhancement of social infrastructure, indicating that the brewery is seen as an active participant in local development. Similarly, a robust 73.3% of respondents expressed confidence in the brewery's safety practices, reflecting a level of trust among the community regarding the brewery's operations. This perception is critical for fostering a supportive community atmosphere, which is essential for the brewery's long-term success.

Community engagement is further evidenced by the awareness surrounding Zabdar brewery social development and donation activities, with 71.52% of residents reporting knowledge of these efforts. This indicates a successful outreach strategy that the brewery has employed, which is vital for building goodwill and trust within the local community. Additionally, the brewery's commitment to providing training opportunities for local residents—recognized by 72.12% of participants—serves as a testament to its dedication to not only employment but also to the skills development of the workforce.

Environmental initiatives have also not gone unnoticed by the community. A notable 69.09% of residents acknowledge Zabdar brewery efforts in conducting trainings and awareness programs on environmental protection. The community's recognition of the company's waste management and recycling efforts is particularly significant, with 72.42% endorsing the brewery's commitment to responsible environmental practices. Furthermore, 70.61% of residents believe that the company provides relevant information about its environmental management practices, suggesting that Zabdar brewery is effectively communicating its sustainability efforts to the public.

Employees of Zabdar brewery provide a complementary perspective, showcasing the company's commitment toward environmental sustainability through investments in renewable energy and waste reduction initiatives. They emphasize the importance of compliance with Ethiopian environmental regulations, which reflects a dedication to not just meeting regulatory requirements but exceeding them in pursuit of best practices.

The perception of ethical behavior is another important finding of this study. With 67.3% of residents aware of the company's ethical conduct, it is evident that Zabdar brewery has cultivated a reputation that aligns with the values of the community. Furthermore, 68.18% of residents believe that the brewery supports initiatives that ethically promote societal well-being, highlighting the company's role as a responsible corporate citizen.

In conclusion, while Zabdar brewery has made significant contributions to the economic and social dimensions of Wolkite town, the findings indicate that there is substantial room for improvement, especially in areas such as local sourcing and maximizing local employment opportunities. By addressing these areas and maintaining a focus on transparency and stakeholder engagement, Zabdar brewery could enhance its positive relationship with the community, ensuring both organizational success and social harmony in the long run. It is crucial for the brewery to continue investing in its community engagement strategies, environmental practices, and ethical operations to solidify its reputation as a responsible corporate entity and to enhance the socio-economic landscape of Wolkite town further. Most residents (67.3%) are aware of the company's ethical behavior, contributing to a positive perception of the company within the community. The majority of residents (68.18%) believe that Zabdar brewery supports initiatives that promote the well-being of society ethically. Employees emphasize the company's adherence to both national and international laws, advocating for lawful conduct within the workplace and ensuring safe working conditions.

### **5.3. Recommendations**

To ensure sustainable growth and strengthen the socio-economic framework of the Wolkite community, Zabdar brewery should take a series of strategic actions that align with both corporate goals and local needs. The recommendations outlined below aim to enhance local engagement, foster economic development, and maintain a strong commitment to environmental sustainability.

#### **☛ Prioritize Local Sourcing of Raw Materials**

Zabdar brewery should make it a priority to source raw materials locally as much as possible. This strategy will not only stimulate economic growth within the Wolkite community but also foster a sense of ownership and pride among local producers. By purchasing grains, hops, and other necessary materials from local farmers, Zabdar brewery can contribute to the agricultural sector's development. This move can enhance farmers' livelihoods, as increased demand for local crops can lead to better prices and improved farming practices.

#### **☛ Expand Local Employment Opportunities**

In conjunction with local sourcing, Zabdar brewery should actively seek to expand local employment opportunities, particularly for skilled positions within the brewery. This can be achieved by developing training programs tailored to equip the local workforce with the necessary skills for various roles in brewing operations, management, and quality control. By investing in educational initiatives such as on-the-job training, Zabdar brewery can cultivate a skilled labor force while simultaneously addressing the unemployment challenges faced by the community. This investment in human capital will enhance workforce competencies and foster loyalty and commitment to the company among employees.

#### **☛ Commit to Environmental Protection and Sustainability**

Zabdar brewery must continue its dedication to environmental protection and sustainability. The company should explore further investments in renewable energy sources such as solar power, which could significantly decrease production costs in the long run while enhancing its sustainability profile. Implementing waste reduction initiatives, such as innovative recycling programs, can also minimize the ecological footprint of brewery operations. Additionally, establishing a robust water management strategy to assure the sustainable use of local water resources is paramount, considering the resource's vital importance to both the brewery and community. Evaluating environmental impacts through regular assessments will allow Zabdar brewery to adapt operations in ways that prioritize ecological integrity while maintaining efficiency.

### ☛ **Maintain Open Communication and Dialogue with Local Communities**

To ensure that its operations benefit all stakeholders, Zabdar brewery should prioritize open communication and uphold an ongoing dialogue with local communities. Establishing regular forums for feedback, can create a platform for residents to express concerns and share constructive suggestions. Proactively listening to community inputs demonstrates respect for local perspectives and builds trust between the company and its community. Zabdar brewery should also implement strategies to engage local leaders, educators, and civic organizations, fostering collaborative partnerships that address community needs beyond their scope. Such outreach initiatives can include sponsoring local events and contributing to community health and welfare programs, thereby reinforcing Zabdar brewery commitment to being a responsible corporate citizen.

Finally, by implementing these recommendations, Zabdar brewery can enhance its operational effectiveness while simultaneously contributing to the economic and environmental well-being of the Wolkite community. Aligning business goals with social responsibility will strengthen the company's reputation and foster enduring positive effects that enhance the communities it serves. Thus, Zabdar brewery can emerge as a model of successful corporate-community partnership in the Ethiopian beverage industry.

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**Appendix 1: partially constructed questions for house holds**

**WOLKITE UNIVERSITY**

**COLLEGE OF SOCIAL SCIENCES AND HUMANITIES**

**DEPARTMENT OF GOVERNANCE AND DEVELOPMENT STUDIES**

Dear respondent

The purpose of this study is partial fulfillment to the requirements for Master of Arts in development studies a research entitled ‘Socio-economic and environmental Impact of Zabdar brewery Brewery Share Company: Case study of Central Ethiopia in Wolkite town. You are one of the respondents selected to participate on this study. Please assist me in giving correct and complete information to present a representative finding on the stated tittle. Your participation is entirely voluntary and the questionnaire is completely unknown.

Finally, I confirm you that the information that you share me will be kept confidential. All information will be used for academic purposes only.

Thank you in advance for your cooperation and dedicating your time!

**Section One: Socio-demographic Background Information of Respondents**

1. Gender? 1= Male 2=Female
2. Age? 1=18-24 2=25-31 3=32-38 4=39-45 5= >45
3. Marital status: 1=Single 2 =Married 3= Widowed 4= Divorced
4. Religion: 1=Muslim =2 Orthodox 3=Protestant 4=catholic 5= other
5. Educational level: 1= primary 2= secondary 3= Diploma 4= Degree 5= Master’s degree and above
6. What is your responsibility in the household A. Father B. Mother C. Children D. Other (specify)  
\_\_\_\_\_
7. Employment Status A. Employed B. Self-employed C. Unemployed D. Student
8. Family size.....
9. Do you have a children within school age; 1= Yes 2=No

**Section Two: Some economic impact related questions for communities**

1. Do you believe Zabdar brewery Company creates employment opportunities (direct and indirect) for local communities? 1= Yes 2=No
2. If yes Q1, please specify types of employment opportunities.  
-----  
-----
3. Does the Zabdar brewery Company purchase local raw material inputs to their production? A. Yes B. No.
4. If yes Q3 , please specify the materials  
-----  
-----
5. Do you have saving account? 1= Yes 2=No
6. If yes , Why you are saving? 1=for emergency case 2=to improve living standard  
3=To pay credit 4=for school fee 5=to buy agricultural input 6=other

**Section Three: Some social impact related questions for communities**

1. Do you think Zabdar brewery is participating on the construction of social infrastructure?  
A= Yes B=No
2. If your answer for Q 1 is yes, please list  
-----  
-----
3. Do you trust Zabdar brewery factory is safe for the surrounding community? A. Yes  
B. No  
If No for Q 3, please specify in what condition the company is unsafe.  
-----

-----  
4. Do you know any social development/donation activity of the company around the Community?

A. Yes      B. No

If yes please specify -----

5. Does the company offer training opportunity to the people from the local community?

a. (E.g. apprenticeships or work experience for the young or disadvantaged group)

1. A. Yes      B. No.

If ye, please list types trainings below

\_\_\_\_\_  
\_\_\_\_\_

**Section Four: Some environmental impact related questions for communities**

1. Do you aware of Zabdar brewery conducting training for the communities about environmental protection?

A=Yes B=No

2. Do you notice any environmental protection constructed by Zabdar brewery? A=Yes B=No

3. If yes for Q2, please list below

\_\_\_\_\_

4. Does B.G.I Ethiopia has a mechanism disposal of waste and residues, & recuperation & recycling systems? A=Yes B=No

5. Does Zabdar brewery provide Regular voluntary information about environmental management to stakeholder A=Yes B=No

**Section Five: Some ethical related questions for communities**

1. Do you aware of any ethical behavior of the company?

A=Yes B=No

2. If No for Q1, please specify

-----  
-----

3. Do you aware Zabdar brewery company different activities respect ethical or moral standards or principles of the society?

A=Yes B=No

4. If No, please specify these un ethical and in moral activities

-----

5. Do you aware Zabdar brewery company support works that promote wellbeing of the society in ethical manner?

A=Yes B=No

**Appendix 2: partially constructed questions for employee of the company**

**WOLKITE UNIVERSITY**

**COLLEGE OF SOCIAL SCIENCES AND HUMANITIES**

**DEPARTMENT OF GOVERNANCE AND DEVELOPMENT STUDIES**

Dear respondent

The purpose of this study is partial fulfillment to the requirements for Master of Arts in development studies a research entitled ‘Socio-economic and environmental Impact of Zabdar brewery Share Company: Case study of Central Ethiopia in Wolkite town. You are one of the respondents selected to participate on this study. Please assist me in giving correct and complete information to present a representative finding on the stated title. Your participation is entirely voluntary and the questionnaire is completely unknown.

Finally, I confirm you that the information that you share me will be kept confidential and only

Used for the academic purpose. All information will be used for academic purposes only.

Thank you in advance for your cooperation and dedicating your time

**SECTION One: Respondents Demographic Profile**

The following questions are about the respondent’s profile in the organization. Kindly indicate the appropriate characteristics of the respondent profile using  $\surd$

1. Age: Below 18 years  18-25years  26-35years  36-45years  46years and above

2. Religion: 1=Muslim =2 Orthodox 3=Protestant 4=catholic 5= other

3. Educational background. Diploma and below  Bachelor Degree  Master’s degree and above

4. Work experience Below1-5 years  6-10 years  Above 10 years

**Section two: Some economic, social and environmental impact related questions for employee**

Please indicate your level of agreement in respect to the following statements as they relate to Socio-economic and environment of (please tick :1 = strongly disagree - 5 = strongly agree)

| No                                                                     | Variables Description                                                 | Strongly agree | Agree | Undecided | Disagree | Strongly disagree | Remark |
|------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------|-------|-----------|----------|-------------------|--------|
|                                                                        |                                                                       | 5              | 4     | 3         | 2        | 1                 |        |
| <b>The economic impact related questions of Zabdar brewery Company</b> |                                                                       |                |       |           |          |                   |        |
| 1                                                                      | Increase income rate of your household over the last 3 years          |                |       |           |          |                   |        |
| 2                                                                      | Increase your rate source of household income over the last 3 years.  |                |       |           |          |                   |        |
| 3                                                                      | You have saving monthly in addition to your personal consumption.     |                |       |           |          |                   |        |
| 4                                                                      | Increase rate of your personal income over the last 12 months.        |                |       |           |          |                   |        |
| 5                                                                      | Your household has household effects (like TV...)                     |                |       |           |          |                   |        |
| <b>The social impact related questions of Zabdar brewery Company</b>   |                                                                       |                |       |           |          |                   |        |
| 1                                                                      | Zabdar brewery company contributes re use resources to the community. |                |       |           |          |                   |        |

|                                                                             |                                                                                                                            |  |  |  |  |  |  |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| 2                                                                           | Zabdar brewery company strives to provide for community betterment.                                                        |  |  |  |  |  |  |
| 3                                                                           | Zabdar brewery company actively promotes volunteerism.                                                                     |  |  |  |  |  |  |
| 4                                                                           | Zabdar brewery company allocates a percentage of profits towards charitable activities.                                    |  |  |  |  |  |  |
| 5                                                                           | Zabdar brewery company sponsoring the arts/sports/community events.                                                        |  |  |  |  |  |  |
| <b>The environmental impact related questions of Zabdar brewery Company</b> |                                                                                                                            |  |  |  |  |  |  |
| 1                                                                           | Zabdar brewery company Participates in activities which aim to protect and improve the quality of the natural environment. |  |  |  |  |  |  |
| 2                                                                           | Zabdar brewery company adopts proper waste management techniques to help conserve nature and natural resources.            |  |  |  |  |  |  |
| 3                                                                           | Zabdar brewery company develops new products or services that are environmentally friendly.                                |  |  |  |  |  |  |
| 4                                                                           | Zabdar brewery company complies with all environmental laws and regulations.                                               |  |  |  |  |  |  |
| 5                                                                           | B.G.I. Breweries company ensures a good working environment for its employees.                                             |  |  |  |  |  |  |

| No                                                             | Variables Description                                                                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree | Remark |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------|-------|-----------|----------|-------------------|--------|
|                                                                |                                                                                               | 5              | 4     | 3         | 2        | 1                 |        |
| <b>The ethical related questions of Zabdar brewery Company</b> |                                                                                               |                |       |           |          |                   |        |
| 1                                                              | Zabdar brewery company is governed by the country's' and also international laws of business. |                |       |           |          |                   |        |
| 2                                                              | Zabdar brewery company different activities obey or comply with the law.                      |                |       |           |          |                   |        |
| 3                                                              | Zabdar brewery company advocate its employee to act lawfully.                                 |                |       |           |          |                   |        |
| 4                                                              | Zabdar brewery company ensures working conditions meet health and safety standards.           |                |       |           |          |                   |        |
| 5                                                              | Zabdar brewery company is doing business with other companies that are operating lawfully     |                |       |           |          |                   |        |

**Appendix 2 interview questions constructed for Top and Middle level Management of the company**

**WOLKITE UNIVERSITY**

**COLLEGE OF SOCIAL SCIENCES AND HUMANITIES**

**DEPARTMENT OF GOVERNANCE AND DEVELOPMENT STUDIES**

Dear respondent

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Finally, I confirm you that the information that you share me will be kept confidential and only

Used for the academic purpose. All information will be used for academic purposes only.

Thank you in advance for your cooperation and dedicating your time.

**SECTION 1: Respondents Demographic Profile**

The following questions are about the respondent’s profile in the organization. Kindly indicate the appropriate characteristics of the respondent profile using √

- 1 Please mention your gender: M  F
- 2. Please mention which range best describes your age:
- 3. Religion: 1=Muslim =2 Orthodox 3=Protestant 4=catholic 5= other  
18-29  30-39  40- 49  50-59 60 or over
- 4 What is your position in the company? -----

**Section Two: partially Constructed Questions for Top and Middle Level Management of The Company about Economic Related Issues**

- 1. What procedure does your organization use to respond to every stalk holders complaint?  
Please list some of them

2. Are the local communities benefiting from recycling and reselling (reuse) of waste materials to enhance their economic? A=Yes B=No

3. If yes for Q2, please specify the materials-----

4. Do your company purchase local raw material inputs to their production? A. Yes B. No.

5. If yes for Q4, please specify the materials-----

6. Do you believe the organization create job opportunities for local communities? A. Yes B. No.

7. If yes for Q6, please list down the job opportunities -----

**Section Three: partially Constructed Questions for Top and Middle Level Management of The Company about Social Related Issues**

1. Does Zabdar brewery is participating on the construction of social infrastructure? A= Yes B=No

2. If your answer for Q 1 is yes, please list

---

---

3. Does Zabdar brewery give adequate contributions to charities? A. Yes B. No.

4 If yes for Q3, What percentage of the budget is allocated to charities? .....

5 Which one of the below do you know Zabdar brewery factory is currently working on.

A. Gives employment opportunity to the community

B. Initiative to use environmental friendly packaging

C. Maintains waste reduction and management program

D. Partnership projects of social solidarity

E. None of them

**Section Four: partially Constructed Questions for Top and Middle Level Management of The Company about Environmental Related Issues**

1. Does Zabdar brewery production adopts design, uses raw materials and converts into output with greater emphasis to environmental consideration? A. Yes B. No.

2 Is there Zabdar brewery safe disposal of unrecyclable or un re-usable waste (especially hazardous waste) to make environmental friendly? A. Yes B. No.

3 Has Zabdar brewery the protocols to assess environmental impacts? A. Yes B. No.

4 If yes for Q3, please mention these protocols -----  
-----

**Section Five: partially Constructed Questions for Top and Middle Level Management of The Company about Legal and Ethical Issues**

1. Does your company pay tax without any interruption and timely? A. Yes B. No.

2. Are managers of the organization informed about relevant environmental laws?

A. Yes B. No.

3. Do your company's products meet the legal standards? A. Yes B. No.

4. Does your business organization have a formal code of conduct? A. Yes B. No.