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UNDERSTANDING INFORMAL BUSINESSES: PERCEIVED PRICE POSITION, BUSINESS PRACTICES AND FIRM PERFORMANCE

BY

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DECLARATION

I, CALEB OWUSU KWAKU ACHEAMPONG do hereby declare that this thesis is based on my own research work under the supervision of my supervisors. No part of this work has been submitted to this university or any other university for an academic award. All references used in this work are duly acknowledged.

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DEDICATION

This work is dedicated to the Lord God Almighty, my parents, and all who have contributed to my academic success.

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ABBREVIATIONS

AfDB - African Development Bank

GLSS - Ghana Living Standards Survey

GSS - Ghana Statistical Service

IFS - Informal Firms Survey

ILO - International Labour Organization

OLS - Ordinary Least Squares

PPP - Perceived Price Position

RBV - Resource-Based View

SMEs - Small and Medium Enterprises

2SLS - Two-Stage Least Squares

WBES - World Bank Enterprise Survey

ABSTRACT

The informal sector plays a critical role in the economy of many developing countries. The sector contributes significantly to both employment and GDP. However, very little is known about why they remain informal, particularly because of the challenges they face related to profitability and resilience. Using comprehensive informal sector data from Ghana, the study first examines whether informal businesses perceived price position (PPP) impacts their profitability and resilience. The study further explores whether the mechanism is through better or worse business practices (such as stock control, financial planning, marketing, and costing). There are theoretical reasons to expect PPP to positively or negatively impact business practices. By employing a Two-Stage Least Squares (2SLS) regression model, the study examines how PPP influences business practices and consequently, how business practices impact the profitability and resilience of informal businesses. The findings show that firms that perceive their prices to be the same as their formal competitors, as well as firms with no defined price position, have poorer business practices. In contrast, firms that perceive their prices to be lower than those of their formal competitors have better business practices. Moreover, firms that perceive their prices as higher than those of their formal competitors have even better business practices than firms that perceive their prices as lower. The study also finds heterogeneous impacts of business practices on the profitability and resilience of firms in the informal sector. Specifically, stock control emerged as a key driver of profitability, whereas financial planning was found to be essential for resilience. This suggests that profitability is more immediately influenced by operational efficiencies, such as stock management, whereas resilience is influenced by longer-term strategies such as financial planning.

These findings provide policymakers with practical guidance for strengthening the informal sector. Specifically, the results point to the need for interventions that improve stock management practices to boost profitability and promote financial planning support to build resilience. Policies that expand access to affordable inventory tools, provide financial management literacy support, and offer tailored capacity-building initiatives can directly enhance the performance of informal firms. A potential barrier to any designed intervention will be literacy and technology gap. Interventions should be designed taking into account language and general literacy problems. Overall, policymakers can foster a more sustainable and competitive informal sector that contributes meaningfully to employment generation and long-term economic development.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Since the 1970s, the informal sector has been recognized as a critical source of employment, particularly in developing countries (Hart, 1973; Günther & Launov, 2012). Often referred to as the traditional, black, or hidden economy (Hart, 1973), the informal sector plays a vital role in economic development (Kusi et al., 2015). Globally, the informal sector accounts for 61% of the employed population, equating to approximately two billion people (ILO, 2018). In Sub-Saharan Africa, the informal sector contributes about 55% of GDP and employs around 80% of the workforce (AfDB, 2013). In Ghana, as of 2024, the informal sector employed approximately 80% of the workforce and accounts for 27% of GDP with an average growth rate of 3.4% (GSS, 2025).

Despite its significant role in economic development, particularly in developing nations, the informal sector is complex and multifaceted. Defining the scope of firms that constitute this sector has posed challenges for scholars (Williams et al., 2016). The difficulties in measuring the shadow economy, often referred to as the informal sector, stem from problems of definition (Schneider & Enste, 2000). Williams and Bezeredi (2018) define the informal sector as enterprises and entrepreneurs who do not register with or declare some or all production and/or sales to, the authorities for tax, benefit, and/or labour law purposes when they should do so. According to the Ghana Statistical Service Business Report (GSS, 2016), an informal entity is

an establishment that does not have professionals keeping its accounting records. Informal businesses are generally small-scale, often family-based, and lack formal records and documentation. This sector spans a wide range of activities, including street vending, retail, and services such as hairdressing salons, dressmaking, and mechanics. The informal sector provides essential goods and services to local communities, meeting immediate needs while offering employment opportunities and contributing to economic growth.

While much research has focused on measuring the size of the informal sector and identifying which firms fall within it (Williams et al., 2020), recent studies have shifted to exploring other latent characteristics of informal enterprises. These include the factors influencing the performance of informal businesses (Kusi et al., 2015), the reasons behind informality (Günther & Launov, 2012), the demographics of informal entrepreneurs (World Bank, 2021), and the risks associated with the informal sector (Ansong, 2021).

Recent studies, such as one conducted in Mozambique by Aga et al. (2021), reveal that informal firms tend to have significantly lower sales, profits, and productivity compared to their formal counterparts. This aligns with earlier research findings indicating that informal businesses are often less profitable and productive (Kusi et al., 2015; Wangari, 2014). Furthermore, studies suggest that informal businesses are generally not resilient and are more vulnerable to economic shocks (Adom et al., 2020; Akuoko et al., 2021; Wangari, 2014). For example, Kusi et al. (2015) identified that informal businesses have a 60% likelihood of failure within the first five years of establishment. The COVID-19 pandemic exacerbated these challenges, as lockdowns disrupted business operations and pushed informal business owners into extreme poverty (Adom et al., 2020; Akuoko et al., 2021).

Despite these challenges, some scholars argue that certain individuals actively choose to work in the informal sector due to perceived benefits that they see as comparative advantages over formal sector employment (Danquah et al., 2021; Günther & Launov, 2012). This perspective contrasts with the view that people work in the informal sector primarily because they are marginalized from the formal sector due to a lack of required skills or educational qualifications. These individuals are often referred to as "necessity entrepreneurs," in contrast to "opportunity entrepreneurs" in the formal sector (Acs, 2006).

Some of the perceived advantages of working in the informal sector include reduced bureaucracy, operational flexibility, less business regulation, and pricing advantages (Danquah et al., 2021; Günther & Launov, 2012). With a focus on pricing advantages, a recent World Bank Enterprise Survey (2021) revealed that some informal businesses perceive themselves as having a pricing advantage over their formal counterparts. This perception, referred to as Perceived Price Position (PPP) in this study, may arise from factors such as lower overhead costs, flexibility in pricing, and the ability to bypass formal regulations and taxation in the informal sector (Gultom, 2020). This perceived advantage gives informal businesses a strategic position, allowing them to offer more appealing prices to consumers (Rashid, 2019). This belief influences their pricing strategies and market behaviour, shaping their approach to product or service valuation within their operational landscapes (De Toni et al., 2017).

Understanding the concept of PPP is crucial for comprehending how informal businesses perceive their market position and navigate pricing structures and business practices to establish competitive positions. This strategic positioning, driven by perceived advantages, is instrumental in improving performance and enhancing resilience. This study aims to explore

how informal businesses in Ghana leverage their perceived pricing advantage to maintain competitive positions and its overall impact on their performance and sustainability.

1.2 Statement of the Problem

The informal sector plays a pivotal role in Ghana's economy, providing livelihoods for the majority of the workforce and contributing significantly to employment and GDP. Yet despite its importance, informal businesses are often characterized by low profitability, limited growth, and weak resilience when confronted with shocks. These challenges are not only firm-level concerns but also broader developmental issues, as the performance of the informal sector directly affects poverty reduction, household welfare, and national productivity. Understanding the factors that shape profitability and resilience in this sector is therefore central to Ghana's economic development agenda.

Existing studies have shed light on why businesses remain informal, emphasizing motivations that range from necessity, as posited by segmentation theory, to strategic choice, as explained by the comparative advantage hypothesis (Lewis, 1954; Acs, 2006; Günther & Launov, 2012; Danquah et al., 2021). Other works have documented the substantial disparities in profitability and productivity between informal and formal firms (Aga et al., 2021; Adom et al., 2020; Akuoko et al., 2021). While these contributions are valuable, they leave unresolved the question of how informal businesses perceive their price position relative to formal competitors, and how these perceptions influence the adoption of practices that drive profitability and resilience.

Perceived Price Position (PPP) is an important but underexplored dimension in the literature. PPP captures how informal businesses view their relative standing in the marketplace, reflecting both structural conditions and strategic interpretations of competitiveness. This perception influences core business practices, marketing, stock control, financial planning, and record-keeping, that in turn, shape firm performance. Yet empirical evidence on the mechanisms linking PPP, business practices, and outcomes remains sparse, particularly in Sub-Saharan Africa.

A second gap arises from how business practices are treated in the literature. Most studies rely on aggregated indices to measure managerial or operational quality. While useful, these composite measures obscure the distinct contributions of individual practices. For instance, stock control may have a direct and immediate effect on profitability, while financial planning is more closely tied to resilience. Aggregating these dimensions risks masking such differences, thereby limiting both theoretical insights and practical guidance. If left unaddressed, this creates a problem in the literature: policymakers and practitioners cannot discern which practices are most critical for boosting profitability or safeguarding resilience, and researchers cannot refine theories that account for the multidimensional nature of business practices.

This study departs from previous work by disaggregating business practices into four components, marketing, stock control, financial planning, and record-keeping, as proposed by the IFS. By examining how each dimension interacts with PPP to influence profitability and resilience, the study takes a more nuanced approach that responds directly to the gaps identified in the literature. In doing so, it advances academic understanding of informal sector dynamics and provides targeted insights for policy interventions aimed at strengthening the performance and sustainability of informal businesses in Ghana.

1.3 Research Objectives

The primary objective of this study was to examine the impact of perceived price position and business practices on the profitability and resilience of informal businesses in Ghana.

The specific objectives were:

i. To examine the impact of perceived price position on business practices and profitability of informal firms.

ii. To examine the impact of perceived price position on business practices and resilience of informal firms.

iii. To examine the heterogeneous impact of various business practices on the profitability and resilience of informal firms.

1.4 Research Questions

To effectively address the research objectives outlined in the preceding section, the following research questions are formulated. These questions aim to guide the inquiry into the relationship between perceived price position, business practices, and the performance outcomes, namely, the profitability and resilience of informal firms in Ghana.

i. What is the impact of perceived price position on business practices and profitability of informal firms?

ii. What is the impact of perceived price position on business practices and resilience of informal firms?

iii. Is there a heterogeneous impact of the various business practices on the profitability and resilience of informal firms?

1.5 Significance of the Study

The informal sector, which accounts for approximately 85% of employment in Ghana as of 2018, is complex and multifaceted (Williams et al., 2016; Williams & Kosta, 2020). This study aims to illuminate the intricate dynamics of informal business performance and resilience, with a specific focus on the concept of perceived price arbitrage. This research will contribute to the existing body of literature by providing a deeper understanding of how informal businesses in Ghana navigate market challenges and leverage perceived pricing advantages to enhance their competitiveness.

The insights derived from this study have the potential to inform policymakers, helping them design targeted interventions that promote the formalization, performance, and resilience of informal enterprises. Additionally, informal business owners can benefit from actionable insights that guide strategic decision-making, fostering improved performance and sustainable growth within the sector.

1.6 Scope of the Study

The study focuses on three major cities in three regions of Ghana: Accra (Greater Accra Region), Kumasi (Ashanti Region), and Tamale (Northern Region). This geographic scope covers the southern, middle, and northern belts of the country. The study is limited to the informal sector in Ghana, using data from the 2022 World Bank Enterprise Survey (WBES).

1.7 Organisation of the Study

This thesis is structured into five chapters. Chapter One introduces the study, including the background, problem statement, research objectives, research questions, significance, scope, and organisation of the study. Chapter Two presents a literature review, providing an overview of the informal sector, preferences for formalization, business performance, and resilience, along with a discussion of relevant theoretical and empirical studies. Chapter Three covers the methodology used in the study, detailing the econometric model, impact evaluation technique, variables, and data sources. Chapter Four presents and explains the results of the study. Finally, Chapter Five summarizes the findings, and offers recommendations for policy and further research aimed at improving the performance and resilience of informal businesses.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides a comprehensive review of the literature related to the key themes of perceived price position, business practices, and firm performance within the informal sector. The chapter is structured first to provide an overview of the business landscapes in developed and developing countries, focusing on Ghana. It then delves into the theoretical foundations underpinning the study, including theories of pricing, business practices, and firm performance. The chapter also integrates theories of segmentation and comparative advantage to provide a deeper understanding of the dynamics at play in the informal sector. Following this theoretical review, the chapter presents empirical studies that explore the relationships between pricing strategies, business practices, and firm performance in the informal sector. The chapter concludes with a theoretical framework that integrates the reviewed theories and provides a foundation for the empirical analysis in subsequent chapters.

2.1 Formal vs. Informal Business Landscape

2.1.1 Overview of Business Landscapes in Developed and Developing Countries

The distinction between formal and informal sectors is pivotal in economic analysis, particularly within the context of developing countries where the informal sector often constitutes a substantial portion of the economy. In developed nations, the formal sector predominantly shapes the business landscape, characterized by robust legal and regulatory frameworks that meticulously govern business operations, taxation, labour practices, and

access to finance (International Labour Organization [ILO], 2018). The informal sector, while present in these economies, is typically smaller and more regulated, usually confined to specific niches such as domestic work, small-scale retail, and certain service-oriented industries (Schneider, Buehn, & Montenegro, 2010).

Conversely, in developing countries, the informal sector plays an immensely significant role in both employment and economic output. This sector encapsulates a broad spectrum of activities, ranging from street vending and small-scale manufacturing to unregistered service provision and agricultural work. The dominance of the informal sector in these regions is often attributed to the formal sector's inability to absorb the burgeoning labour force, especially in rapidly urbanizing areas, alongside the high levels of poverty and limited access to education and skills training (Williams, 2014). The informal sector's accessibility is further enhanced by its low barriers to entry, minimal capital requirements, and the absence of stringent regulatory oversight, making it an attractive option for individuals and households seeking to generate income (Günther & Launov, 2012).

2.1.2 The Informal Sector in Developing Countries

In developing countries, the informal sector is not merely a fallback for those unemployed but frequently represents the primary means of livelihood for a substantial portion of the population. This sector is particularly prominent in regions like Sub-Saharan Africa, where it accounts for over 80% of total employment in some countries (ILO, 2018). The significance of the informal sector is further underscored by its considerable contribution to Gross Domestic Product (GDP), which can range from 25% to as much as 65%, depending on the country and the methodology employed in measuring informal economic activity (Schneider et al., 2010).

Characteristically, the informal sector in developing countries is dominated by small-scale, family-owned businesses that operate with minimal capital and often without formal business licenses or registration. These enterprises are predominantly concentrated in sectors such as retail, agriculture, construction, and services (De Soto, 1989). Despite their informality, these businesses play a vital role in supplying goods and services to local communities, particularly in regions where formal businesses are either scarce or non-existent (Chen, 2012). The informal sector's ability to meet the immediate needs of local populations, coupled with its adaptability to the fluctuating demands of the economy, makes it a cornerstone of economic activity in these regions.

2.1.3 Focus on Ghana

In Ghana, the informal sector is an indispensable component of the national economy, providing jobs and livelihoods for a significant portion of the population. As of 2017, the informal sector employed approximately 71.3% of Ghana's workforce, according to the Ghana Living Standards Survey (GLSS 7, 2017). The sector encompasses a wide array of activities, including trading, manufacturing, services, and small-scale agriculture. The prominence of the informal sector in Ghana is driven by several factors, including rapid urbanization, the formal sector's inability to generate sufficient jobs to accommodate the growing labour force, and the relatively low levels of education and skills among much of the population (Baah-Boateng, 2015).

Despite its critical role, the informal sector in Ghana faces numerous challenges that hinder its growth and development. One of the most significant challenges is limited access to finance. Informal businesses often find it difficult to secure loans from formal financial institutions due

to their lack of collateral, inadequate financial records, and the perceived high risk associated with lending to informal enterprises (Aryeetey, 2008). Consequently, these businesses rely heavily on personal savings, informal credit systems, or microfinance institutions, which frequently charge higher interest rates (World Bank, 2011). This financial constraint limits their ability to expand, innovate, and improve their business operations.

Regulatory challenges also pose significant barriers to the growth of informal businesses in Ghana. Many of these businesses operate without formal registration or licenses, which excludes them from legal protection and access to government support programs (World Bank, 2011). This lack of formalization not only restricts their ability to enter formal contracts and access public procurement opportunities but also limits their potential for growth and scalability (Sleuwaegen & Goedhuys, 2002).

Competition is another critical issue faced by informal businesses in Ghana. These businesses often compete with both other informal enterprises and formal businesses that have better access to resources such as capital, technology, and skilled labour. Additionally, they face competition from imported goods in domestic markets, which can be particularly intense in urban areas where informal businesses are concentrated. This competition often leads to low profit margins and high failure rates among informal businesses (Chen, 2012). The informal sector's resilience, however, lies in its flexibility and adaptability, which allow it to thrive despite these challenges.

Understanding the dynamics of the informal sector in Ghana is crucial for developing policies that can support its growth and integration into the broader economy. This includes addressing

the challenges of access to finance, regulatory barriers, and competition, as well as recognizing the sector's potential for contributing to national economic development.

2.2 Theoretical Review

2.2.1 Theories of Pricing and Market Positioning

Pricing strategies are a cornerstone of business success, applicable across both formal and informal sectors. According to traditional economic theory, pricing is determined by the interplay of supply and demand, with prices settling at an equilibrium point where the quantity demanded by consumers matches the quantity supplied by producers (Stigler, 1961). However, the reality of pricing is far more intricate, involving a complex interplay of factors such as cost structures, perceived value, competitive dynamics, and market positioning (Nagle & Müller, 2017).

Competition-Based Pricing is rooted in industrial organization theory, which emphasizes the importance of rival firms' pricing decisions in shaping market outcomes. In highly competitive markets, firms may perceive their position as lower-priced relative to competitors to attract demand, while in differentiated markets, firms may perceive themselves as able to sustain a higher price position due to unique features. Its strength lies in explaining the relative nature of PPP, which is inherently comparative. However, the model assumes rational behaviour and well-functioning markets, conditions that may not hold in informal economies where information asymmetries and liquidity constraints prevail.

Cost-Plus Pricing represents one of the simplest and most widely applied strategies, where firms calculate prices by adding a mark-up to costs. In informal businesses, this may shape

perceptions of whether their prices are higher or lower than those of formal competitors. Its strength lies in operational feasibility, particularly for small firms with limited analytical capacity. However, its weakness is that it ignores consumer demand and willingness to pay, potentially creating a mismatch between actual prices and perceived positioning. In addition, poor record-keeping among informal firms often limits their ability to assess true costs accurately, which may distort PPP assessments.

Value-Based Pricing argues that customers' perceptions of value relative to price are central to demand. Informal businesses that believe they provide superior value may perceive their prices as higher yet justified, while those that see themselves offering less differentiation may perceive their prices as lower to remain competitive. This theory highlights the link between PPP and marketing or customer engagement practices. Its limitation is that value perceptions are subjective and unstable, especially in low-information environments typical of informal markets.

Closely related is Signalling Theory, which posits that prices can act as signals of quality when other information is scarce (Wolinsky, 1983). Informal firms that perceive their price position as higher may interpret this as a signal of superior quality relative to formal competitors. However, such signals may fail in markets where imitation is easy or trust is low. Imkamp (2018) however argues that, price-quality correlations can be typically low, suggesting that prices are better indicators of scarcity rather than quality.

Reference Price Theory suggests that buyers evaluate prices against internal standards or external benchmarks, or the seller's price image (Hamilton, 2024). For informal businesses, PPP is often formed by comparing their own prices to those of formal competitors in the same

product category. This theory underscores how PPP emerges as a cognitive anchor for both firms and consumers. Its strength is in explaining how mental benchmarks shape perceptions, but its weakness lies in the instability of reference points in highly volatile or inflationary contexts.

From a behavioural perspective, Firms that perceive themselves as charging higher prices may fear consumer backlash if those prices are seen as unfair. Relatedly, studies on price fairness perceptions emphasize that customers respond negatively to prices they perceive as unjust (Ohlwein & Bruno, 2025). These insights show how PPP must be carefully managed to maintain customer loyalty and long-term resilience.

Taken together, these theories present both overlaps and contrasts. Competition-based and cost-plus approaches explain the structural underpinnings of how PPP may be formed, while value-based, signalling, and reference price theories focus on the perceptual side of firms interpret and position themselves relative to competitors. Fairness perceptions add a behavioural dimension, showing that PPP is not just a strategic choice but also one that interacts with consumer psychology. Overlaps exist where signalling, value-based, and reference price theories converge on the importance of perceptions, while cost-plus and competition-based theories converge on structural determinants of positioning.

PPP captures not the actual prices charged but how informal firms perceive their relative standing compared to formal competitors. These perceptions may be influenced by cost-plus or competition-based logics, but their implications are mediated through perceptual and behavioural mechanisms such as signalling, reference pricing, and fairness judgments. In this way, PPP functions as a bridge variable: it reflects how informal firms interpret their

competitive environment and, in turn, how those interpretations shape business practices. This framing aligns directly with the study's objective of examining how PPP influences business practices, and how those practices affect profitability and resilience. By integrating structural, perceptual, and behavioural theories of pricing, the thesis extends classical and contemporary pricing thought into the underexplored context of informal businesses in Ghana.

2.2.2 Theories of Business Practices and Firm Performance

The relationship between business practices and firm performance is a central focus of management theory, offering insights into how businesses can achieve and sustain competitive advantages. One of the most influential frameworks in this domain is the Resource-Based View (RBV) of the firm, which posits that a company's competitive advantage is rooted in its possession of unique resources and capabilities that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). According to RBV, firms that harness these resources, whether they be tangible assets, such as equipment and technology, or intangible assets, such as knowledge, expertise, and entrepreneurial skills, are better positioned to achieve superior performance relative to their competitors.

In the informal sector, where resources are often limited, the principles of RBV are particularly relevant. Informal businesses may lack access to the formal financial systems, advanced technology, or skilled labour that formal businesses enjoy. However, they can still achieve competitive advantages by leveraging other resources, such as local market knowledge, personal relationships with customers, and flexible business practices. These intangible assets can be critical in navigating the challenges of the informal economy and sustaining business operations in a competitive environment.

Building on the RBV, Dynamic Capabilities Theory emphasizes the importance of a firm's ability to adapt, innovate, and reconfigure its resources in response to a changing environment (Teece, Pisano, & Shuen, 1997). This theory is particularly pertinent to the informal sector, where businesses often operate in highly volatile and uncertain environments. Firms that can develop dynamic capabilities such as the ability to quickly adjust pricing strategies in response to market fluctuations or to adopt new business practices that improve efficiencyvare more likely to sustain a competitive advantage over time (Teece, 2007).

For example, smaller firms in the informal sector often display a remarkable ability to adapt their operations in response to changes in market conditions, such as shifts in consumer demand or fluctuations in the availability of inputs. Asche et al. (2018) highlighted that these smaller firms can be nimbler in adjusting their pricing and operations, enabling them to capitalize on short-term opportunities that larger, more bureaucratic firms might miss. This adaptability is a key component of dynamic capabilities and is critical for survival in the often-turbulent informal economy.

Resilience Theory further complements these frameworks by focusing on a system's capacity to absorb shocks, adapt to changing conditions, and maintain core functions (Holling, 1973; Walker et al., 2004). In the context of informal businesses, resilience is the ability to continue operating despite the many challenges that such businesses face, including economic downturns, supply chain disruptions, and sudden shifts in consumer demand. Resilience is not just about survival; it is about thriving in the face of adversity.

For informal businesses, building resilience often involves developing effective business practices that can buffer against external shocks. For instance, sound financial management,

including maintaining adequate cash reserves and managing credit carefully, can help businesses weather economic downturns. Strategic planning, such as diversifying product lines or expanding into new markets, can also enhance resilience by reducing dependency on a single revenue stream (Berkes & Ross, 2013). These practices are vital for informal businesses that lack the safety nets and formal support structures available to their formal sector counterparts.

2.2.3 Theories of Segmentation and Comparative Advantage

The Segmentation Hypothesis and Comparative Advantage Hypothesis offer critical perspectives on why individuals and firms might opt to remain within the informal sector, despite its inherent challenges. The Segmentation Hypothesis, originally introduced by Lewis (1954), posits that informal employment often serves as a fallback option for individuals who are excluded from formal employment opportunities. This theory suggests that the informal sector acts as a safety net for those who encounter significant barriers to entry into the formal labour market, such as insufficient education, lack of relevant skills, or systemic discrimination (Fields, 2005). Within this framework, the informal sector is viewed as a segment of the economy where workers are compelled to participate due to a lack of viable alternatives in the formal sector.

Conversely, the Comparative Advantage Hypothesis, articulated by Heckman and Hotz (1986), offers a different viewpoint by proposing that informal employment can also be a deliberate and strategic choice. This theory suggests that certain individuals or firms may prefer the informal sector because it offers unique advantages that align with their personal or business goals. For instance, the flexibility, autonomy, and lower regulatory burdens of the informal sector can be appealing, particularly for those who prioritize control over their work

environment or who seek to maximize utility through higher earnings, better work-life balance, or the pursuit of entrepreneurial opportunities (Maloney, 2004).

When applied to informal businesses, these theories help to illuminate why some firms might choose to remain informal, even when there are apparent benefits to formalization. The Comparative Advantage Hypothesis, in particular, provides a useful lens for understanding how perceived price position—how businesses perceive their pricing relative to competitors—can influence their decision to stay informal. Businesses that believe they hold a favourable perceived price position may see little motivation to formalize. These firms might assess that they can successfully compete within their existing market niche without incurring the additional costs and complexities associated with formal registration, regulation, and compliance.

This connection between perceived price position and the preference for remaining informal underscores a strategic calculus where businesses weigh the perceived benefits of staying informal—such as flexibility in pricing and avoiding regulatory costs—against the potential advantages of formalization. By maintaining their informal status, these businesses may be leveraging their perceived competitive advantage to sustain profitability and resilience, thereby avoiding the constraints that formalization might impose.

2.3 Empirical Studies

2.3.1 Pricing Strategies and Market Success

Pricing strategies are a fundamental determinant of business success, especially in highly competitive markets. In the formal sector, businesses often employ sophisticated and

multifaceted pricing strategies that consider a broad spectrum of factors, including production costs, market demand, consumer behaviour, and the competitive landscape (Nagle & Müller, 2018). These strategies are typically categorised into several types:

- **Cost-Based Pricing:** This approach involves setting prices based on the cost of production plus a predetermined profit margin. It ensures that all costs are covered while allowing the business to achieve its desired profit levels.

- **Value-Based Pricing:** Prices are determined based on the perceived value of the product or service to the customer, often resulting in premium pricing for goods or services that are considered superior in quality or uniqueness.

- **Competitive Pricing:** In this strategy, prices are set relative to competitors' prices, with businesses positioning their offerings as more affordable or offering better value compared to rivals (Kotler & Keller, 2016).

These strategies are often employed in combination, allowing formal businesses to fine-tune their pricing models to maximise profitability while maintaining market competitiveness.

The effectiveness of competitive pricing as a strategy is well-documented across various sectors. Studies have consistently shown that businesses capable of competing effectively on price tend to achieve higher sales volumes, stronger customer loyalty, and increased market share (Porter, 1980; Kohli & Suri, 2011). In the formal sector, competitive pricing is often used alongside other marketing strategies, such as product differentiation and branding, to create a compelling value proposition for consumers.

In contrast, the informal sector, characterised by its lack of regulatory oversight and formal business structures, often relies on more straightforward pricing strategies. Here, price competition is frequently the primary means of differentiation. Informal businesses must navigate markets where customers are sensitive to price changes, making competitive pricing a critical factor in the business's survival and success (Nichter & Goldmark, 2009). Unlike formal businesses, which may have the resources to engage in complex pricing strategies, informal businesses often adopt a more reactive approach, adjusting prices in response to market conditions and competitor actions.

In the informal sector, pricing strategies are heavily influenced by a combination of practical constraints and market realities. The cost of inputs, the intensity of competition, and the purchasing power of consumers are all critical factors that inform pricing decisions. Given that many informal businesses operate in environments where customers prioritise price over other attributes, even slight variations in pricing can significantly impact sales volume and business viability (Chen, 2012).

For many informal businesses, the imperative to remain competitive in price-sensitive markets means that pricing decisions must be carefully calibrated. This often involves balancing the need to attract price-conscious consumers with the necessity of covering costs and generating sufficient profit to sustain the business. In highly competitive markets, informal businesses may resort to aggressive pricing tactics, such as undercutting competitors, to capture or maintain market share. However, such strategies can be risky, potentially leading to unsustainable profit margins if not managed carefully (Nichter & Goldmark, 2009).

Moreover, the informal sector's inherent flexibility allows these businesses to quickly adjust prices in response to shifts in market conditions, such as changes in consumer demand or input costs. This adaptability, while advantageous, also requires a keen understanding of local market dynamics and consumer behaviour to ensure that pricing strategies align with business objectives and market realities.

2.3.2 Perceived Price Position and Business Practices in the Informal Sector

Perceived price position refers to how a business evaluates its pricing in relation to that of its formal sector competitors. In the informal sector, where market dynamics and competitive pressures are distinct from those in the formal economy, perceived price position can significantly influence a business's strategic decisions and operational practices. For example, studies have shown that formally registered firms which consider informal firms as competitors often experience lower sales growth and profitability, highlighting the impact of competition across sectors (Williams et al., 2020).

Although the literature directly addressing perceived price position is sparse, studies on pricing strategies offer valuable insights into how these perceptions can shape business practices. Businesses that view their pricing as neutral relative to formal competitors may exhibit complacency in adopting effective business practices. Conversely, firms that perceive their prices as either higher or lower than those of their competitors are likely to adjust their strategies accordingly. For instance, businesses that perceive themselves as having a higher price position may intensify efforts in areas such as cost management, efficient stock control, and aggressive marketing to justify their prices and attract a broader customer base (De Toni et al., 2017). Thus, perceived price position not only reflects a business's market standing but

also acts as a catalyst for a range of business practices aimed at sustaining or enhancing competitive advantage in the market.

2.3.3 Business Practices and Firm Performance

Business practices are central to the performance and resilience of firms, particularly in the informal sector, where resources are often constrained, and the market environment can be volatile. By focusing on key business practices such as stock control, financial planning, record keeping, and marketing, informal businesses can enhance their operational efficiency and competitive standing. Each of these practices plays a distinct role in shaping business outcomes, and their effective implementation can lead to significant improvements in firm performance.

Effective stock control is crucial for managing inventory levels, reducing waste, and ensuring that products are available when customers need them. In the informal sector, businesses that implement sound stock control practices are often better able to manage their resources, reduce costs, and improve efficiency (McKenzie & Woodruff, 2015). Empirical evidence suggests that businesses with better stock control practices tend to achieve higher performance, as they can more effectively balance supply and demand, minimize stockouts, and reduce excess inventory (Anderson, Fitzsimons, & Simester, 2006). This practice is particularly important for businesses in competitive markets, where efficient stock management can directly impact profitability.

Financial planning involves developing strategies for managing a business's financial resources, including budgeting, forecasting, and cash flow management. In the informal sector, financial planning is critical for ensuring that businesses can meet their financial obligations,

invest in growth opportunities, and manage financial risks (Nichter & Goldmark, 2009). Studies have shown that businesses engaging in regular financial planning are more likely to achieve better performance, as they can make informed decisions about resource allocation, pricing, and investment (McKenzie & Woodruff, 2015). Effective financial planning can also enhance a firm's resilience, enabling it to withstand economic fluctuations and unexpected challenges.

Marketing practices, including customer relationship management, branding, and promotion, are critical for attracting and retaining customers in the informal sector. Effective marketing strategies can help businesses differentiate themselves from competitors, build brand loyalty, and increase sales (Kotler & Keller, 2016). Studies have shown that businesses investing in marketing are more likely to achieve better performance, as they can more effectively reach their target audience, respond to customer needs, and build a strong brand presence (McKenzie & Woodruff, 2015). In the informal sector, where formal advertising channels may be limited, creative and targeted marketing efforts can significantly impact a firm's success.

Accurate and consistent record-keeping is essential for tracking financial transactions, monitoring business performance, and ensuring compliance with regulations. In the informal sector, where access to formal financial services is often limited, good record keeping is particularly important for securing credit, managing cash flow, and planning for the future (McKenzie & Woodruff, 2015). Empirical studies have shown that businesses with strong record-keeping practices are more likely to achieve better performance, as they can more effectively manage their finances, reduce errors, and make informed decisions (Bruhn, Karlan, & Schoar, 2018). Moreover, good record keeping can provide the data needed for strategic decision-making, further enhancing a business's ability to compete and grow.

Each of these business practices plays a vital role in the overall performance and resilience of informal businesses. By focusing on these areas, firms can better position themselves to compete in the market, manage risks, and capitalize on opportunities for growth.

2.3.4 Resilience and Business Continuity in the Informal Sector

Resilience is a crucial determinant of the sustainability and longevity of informal businesses, especially when confronted with economic shocks such as recessions, market volatility, or natural disasters. The ability to withstand and adapt to these challenges is what distinguishes resilient businesses from those that falter in the face of adversity. Businesses that successfully build resilience through sound business practices—such as robust financial management, strategic planning, and diversification—are more likely to not only survive but also thrive in challenging environments (Berkes & Ross, 2013). Empirical evidence supports this, showing that resilient businesses are better equipped to recover from setbacks, maintain operations, and continue their growth trajectory despite external pressures (Walker et al., 2004). For informal businesses, which often operate with limited resources and under uncertain conditions, resilience is not just an advantage but a necessity for continuity and success.

Business practices are instrumental in fostering resilience among informal businesses. For instance, firms that engage in regular financial planning are better positioned to manage cash flow, anticipate potential risks, and respond proactively to market changes (McKenzie & Woodruff, 2015). This planning allows businesses to allocate resources efficiently, prepare for downturns, and seize opportunities for growth even during challenging times. Moreover, businesses that invest in stock control and marketing are better equipped to maintain customer relationships, manage inventory efficiently, and adapt to shifts in consumer demand (Nichter

& Goldmark, 2009). Effective stock control ensures that businesses can meet customer needs without overextending resources, while strategic marketing helps sustain customer engagement and loyalty, even in fluctuating markets. By adopting and consistently applying these business practices, informal businesses can build a foundation of resilience that supports their long-term sustainability and continuity, enabling them to navigate the uncertainties inherent in their operating environments.

2.4 Theoretical Framework

The theoretical framework for this study integrates the theories discussed in the previous sections, including the Resource-Based View (RBV), Dynamic Capabilities Theory, Resilience Theory, the Segmentation Hypothesis, the Comparative Advantage Hypothesis, and theories of pricing and market positioning. Together, these theories provide the foundation for understanding the relationships between perceived price position (PPP), business practices, and firm performance outcomes, profitability and resilience, within the informal sector.

At the core of the framework is Perceived Price Position (PPP), defined as how informal businesses perceive their prices relative to those of formal sector competitors. PPP does not represent the actual price set by the firm but the perception of relative price position. This perception is influenced by two contextual factors: Price Policy and Preferences for Formalization. Price policies such as regulations, tax regimes, and market norms establish the external environment in which firms interpret their price position. Preferences for formalization, on the other hand, reflect firm-level strategic choices and constraints. Businesses that prefer to remain informal may do so because they perceive competitive advantages (Comparative Advantage Hypothesis), or because barriers prevent them from entering the

formal sector (Segmentation Hypothesis). PPP therefore reflects both external constraints and internal strategic orientations.

Business Practices are the mechanisms through which PPP affects firm outcomes. The framework identifies four critical practices: marketing, buying and stock control, financial planning, and record keeping. Firms that perceive themselves as lower-priced relative to formal competitors may adopt aggressive marketing strategies to capture cost-conscious customers, while firms perceiving themselves as premium-priced may emphasize quality signaling and customer relationship-building. Stock control practices are similarly linked to PPP, as firms perceiving themselves as competing on price efficiency must minimize waste and stockouts, while firms sustaining higher PPP must ensure consistent product quality and availability. Financial planning and record keeping are also central, reflecting the RBV's emphasis on organizational capabilities and Dynamic Capabilities Theory's emphasis on adaptive responses. Firms that systematically plan finances and keep accurate records are better positioned to adjust to shifting perceptions of relative price position.

These business practices feed into Firm Profitability and Business Resilience, the key dependent variables. Resilience Theory emphasizes that firms able to adapt to shocks, such as COVID-19, through effective practices are more likely to sustain operations despite external disruptions.

The causal logic of the study suggests that PPP influences business practices by shaping how firms interpret their competitive stance, and in turn, these practices determine performance outcomes. The framework also highlights feedback effects: profitability and resilience can

influence future perceptions of price position, reinforcing or reshaping how firms view themselves relative to formal competitors.

The conceptual framework illustrated in Figure 1 provides a visual representation of these relationships. At the core of this framework is the informal business's decision-making process regarding PPP. Informal businesses assess their pricing strategies relative to their formal sector competitors, leading to a perceived price position that either strengthens or weakens their business practices and translates into varied levels of profitability and resilience.

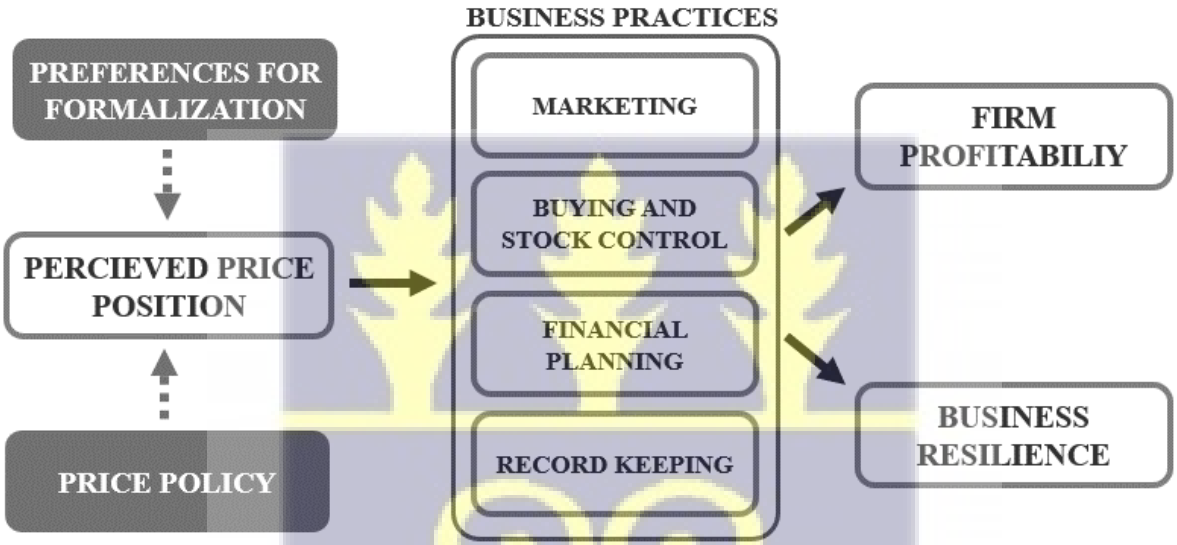

Figure 1 Theoretical Framework

Source: Adapted from McKenzie and Woodruff (2015)

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the detailed methodological framework employed in this study to investigate the relationship between perceived price position, business practices and business outcomes such as profitability and resilience among informal businesses in Ghana. The chapter discusses the rationale for utilising Two-Stage Least Squares (2SLS) regression to address endogeneity issues and improve the Ordinary Least Squares (OLS) estimates. Additionally, the study explores which components of business practices are impacted by perceived price position and subsequently impact profitability and resilience. The chapter outlines the empirical model specifications, the theoretical underpinnings of the methodologies used, and the steps taken to ensure robustness in the analysis.

3.1 Model Specification

The study is centred around understanding the relationship between perceived price position, business practices and two critical outcomes: profitability and resilience of informal businesses. These outcomes are essential understanding of the performance and sustainability of businesses in the informal sector, which employs a large number of people and operates under different conditions compared to the formal sector.

The study as a first step employs Ordinary Least Squares (OLS) regression to provide baseline estimates of the relationships between business practices, profitability, and resilience. OLS is

a widely used method in econometrics due to its simplicity and efficiency, assuming that the explanatory variables are exogenous (Wooldridge, 2010). While OLS serves as a useful starting point, its limitations in dealing with endogeneity necessitate the use of 2SLS to validate the findings.

The primary challenge in analysing these relationships using observational data lies in the potential endogeneity of the business practices variable. Endogeneity occurs when an explanatory variable is correlated with the error term in a regression model, leading to biased and inconsistent estimates (Nichols, 2007). This issue is particularly relevant in this study, where business practices may be influenced by unobserved factors that also affect profitability and resilience. Secondly, both outcome variables could also impact business practices (potential reverse causality). Precisely, highly performing and resilient informal firms may adopt business practices that differ from low performing and less resilient firms. Thirdly, it is possible that perceived price position (PPP) could impact both performance and resilience. However, we argue that PPP's impact on the outcomes is only through behavioural change, which is reflected in the type of business practices they adopt. Firms that perceive themselves as having a competitive price advantage may adopt strategies or practices to reinforce their price advantage, subsequently impacting business outcomes. Thus, we argue that perceived price position (PPP) could impact the performance and resilience only thorough business practices and not directly.

The study therefore employs Two-Stage Least Squares (2SLS) regression, using perceived price position (PPP) as an instrument for business practices. We will empirically test the appropriateness of PPP as an instrument. The Durbin-Wu-Hausman test was adopted to confirm the presence of endogeneity and to support the use of PPP as an instrument variable.

By using PPP as an instrument, the 2SLS approach helps to mitigate the potential bias caused by endogeneity, allowing for more accurate estimation of the impact of business practices on the outcomes of interest (Wooldridge, 2010).

The empirical analysis is structured around three primary objectives: (1) to evaluate the impact of PPP on business practices and profitability, (2) to evaluate the impact of PPP on business practices and resilience, and (3) to examine the heterogeneous impact of the various business practices profitability and resilience.

3.2 Ordinary Least Squares (OLS) Regression

3.2.1 Baseline Estimation with OLS

While the 2SLS approach is critical for addressing endogeneity, the study also employs OLS regression as a baseline method to estimate the relationships between business practices, profitability, and resilience. OLS is a widely used technique in econometrics due to its simplicity and efficiency under the assumption that the explanatory variables are exogenous. It estimates the parameters of a linear regression model by minimizing the sum of the squared differences between the observed and predicted values of the dependent variable (Wooldridge, 2010).

The OLS model is specified as follows:

$$PROFIT_i = \beta_0 + \beta_1 Business\_PRAC\_Index_i + \beta_2 X_i + \varepsilon_i \quad (1)$$

$$RESILIENCE_i = \gamma_0 + \gamma_1 Business\_PRAC\_Index_i + \gamma_2 X_i + \eta_i \quad (2)$$

where

$PROFIT_i$ represents the log of profit or loss of firm i

$RESILIENCE_i$ represents the resilience of firm i

$Business\_PRAC\_Index_i$ is the level of business practices

$\beta_0, \beta_1, \beta_2, \gamma_0, \gamma_1, \gamma_2$ represents the coefficients to be estimated,

ε_i and η_i are the error terms.

OLS provides a straightforward estimation of the direct relationships between the variables of interest. However, the validity of OLS estimates relies on the assumption that the explanatory variables are exogenous—an assumption that may not hold if business practices are influenced by unobserved factors that also affect profitability and resilience. Therefore, while OLS offers valuable insights, the results must be interpreted with caution and validated using 2SLS.

3.2.2 Assumptions and Limitations of OLS

OLS regression is based on several key assumptions that, if violated, can lead to biased or inefficient estimates. One critical assumption is that the explanatory variables are exogenous, meaning that they are not correlated with the error term in the regression model. If this assumption is violated, as might be the case with business practices, the OLS estimates will be biased and inconsistent, leading to incorrect inferences about the relationships between the variables.

Another important assumption of OLS is that there is no perfect multicollinearity among the explanatory variables. Multicollinearity occurs when two or more explanatory variables are highly correlated, making it difficult to isolate the individual effect of each variable on the

dependent variable. High multicollinearity can inflate the standard errors of the coefficient estimates, reducing the precision of the estimates and making it difficult to determine the significance of the explanatory variables.

OLS also assumes homoscedasticity, which means that the variance of the error term is constant across all levels of the explanatory variables. If the error terms exhibit heteroscedasticity, the OLS estimates will remain unbiased, but the standard errors will be incorrect, leading to invalid statistical inference. In such cases, robust standard errors or alternative estimation techniques may be necessary to obtain valid inferences (Wooldridge, 2010).

Despite these limitations, OLS remains a useful tool for providing initial insights into the relationships between business practices, profitability, and resilience. The OLS results serve as a benchmark for the more sophisticated 2SLS analysis, helping to validate the findings and ensure their robustness.

3.3 Two-Stage Least Squares (2SLS) Regression

3.3.1 Addressing Endogeneity with 2SLS

The 2SLS regression technique is employed to address the issue of endogeneity and reverse causality. In 2SLS, the first stage involves regressing the endogenous variable (business practices) on the instrumental variable (PPP) and other control variables to obtain predicted values that are free from endogeneity bias. The second stage then involves using these predicted values to estimate their impact on the outcome variables (profitability and resilience).

The first-stage regression can be expressed as follows:

$$Business\_PRAC\_Index_i = \alpha_0 + \alpha_1 PPP_i + \alpha_2 X_i + \epsilon_i \quad (3)$$

where

$Business\_PRAC\_Index_i$ represents the business practices index for firm i,

PPP_i denotes the perceived price position of firm i,

X_i represents a vector of control variables, including gender, owner's age, education, location, industry, and firm age,

$\alpha_0, \alpha_1, \alpha_2$ represents the coefficients to be estimated,

ε_i is the error term.

In the second stage, the predicted values of business practices from the first stage are used to estimate their impact on the outcomes of interest:

Second Stage:

$$PROFIT_i = \beta_0 + \beta_1 Business\_PRAC\_Index_{hat,i} + \beta_2 X_i + \varepsilon_i \quad (4a)$$

$$RESILIENCE_i = \gamma_0 + \gamma_1 Business\_PRAC\_Index_{hat,i} + \gamma_2 X_i + \eta_i \quad (4b)$$

where

$PROFIT_i$ represents the log of profit or loss of firm i

$RESILIENCE_i$ represents the resilience of firm i

$BUSPRAC_{hat,i}$ is the predicted value of business practices from the first stage,

X_i represents a vector of control variables, including gender, owner's age, education, location, industry, and firm age,

$\beta_0, \beta_1, \beta_2, \gamma_0, \gamma_1, \gamma_2$ represents the coefficients to be estimated,

ε_i and η_i is the error term.

This two-stage process allows for consistent estimation of the impact of business practices on profitability and resilience, even in the presence of endogeneity. The 2SLS approach is particularly important in the context of this study, where the observational nature of the data makes it difficult to draw causal inferences without addressing potential biases.

3.3.2 Implementation of 2SLS

The implementation of the 2SLS model begins with the identification and validation of the instrumental variable, PPP. The relevance of the instrument is tested by examining the correlation between PPP and the business practices variable. A strong correlation indicates that PPP is a relevant instrument.

Once the instrument is validated, the first stage of the 2SLS regression is estimated, where PPP and the control variables are used to predict business practices. The predicted values from this first stage are then used in the second stage regression to estimate the impact of business practices on profitability and resilience. This method helps to ensure that the estimates of the impact of business practices are not biased by endogeneity, providing more reliable insights into the relationships between the variables.

The 2SLS methodology thus provides a robust framework for addressing the endogeneity issues that are common in studies of informal economies. By using an instrumental variable that is theoretically justified and empirically validated, the study can obtain more accurate estimates of the causal impact of business practices on profitability and resilience.

3.4 Heterogeneous Impact of Business Practices

To gain a deeper understanding of the heterogeneous impact of various business practices on profitability and resilience of the informal firms, this study disaggregates the business practices index into four distinct components: marketing practices, buying and stock control, costing and record-keeping, and financial planning. Each of these components is analysed separately to identify their individual impact on business outcomes.

3.4.1 Marketing Practices

Marketing practices involve the strategies and activities related to promoting and selling products or services. These include advertising, customer relationship management, market research, pricing strategies, and the development of promotional offers. In the context of informal businesses, effective marketing practices are critical for attracting and retaining customers, differentiating products from competitors, and ultimately driving sales and profitability (Duboff, 1992; Kotler & Keller, 2016).

The hypothesis is that firms with strong marketing practices will exhibit higher profitability and resilience, as these practices enable businesses to maintain a competitive edge in the market. By reaching a broader audience and understanding customer needs, businesses can

better position their products and adjust their strategies in response to market changes, which contributes to both financial success and the ability to withstand external shocks.

3.4.2 Buying and Stock Control

Buying and stock control practices encompass the management of procurement, inventory, and supply chain logistics. Effective stock control ensures that businesses can meet customer demand without overstocking, which helps to optimize costs, minimize waste, and reduce the risk of stockouts or excess inventory. These practices are particularly important in industries where inventory management is critical to operational efficiency and customer satisfaction (NdiranguKung'u, 2016).

This study hypothesizes that firms with robust buying and stock control practices will experience higher profitability and resilience. Proper inventory management not only reduces costs but also allows businesses to respond more flexibly to changes in demand or supply chain disruptions. By maintaining optimal stock levels and efficiently managing procurement processes, businesses can sustain their operations even during periods of economic uncertainty.

3.4.3 Costing and Record-Keeping

Costing and record-keeping practices are fundamental to financial management. These practices involve tracking expenses, managing budgets, preparing financial statements, and maintaining accurate records of all financial transactions. Effective record-keeping is essential for understanding the financial health of a business, making informed decisions, and ensuring compliance with tax and regulatory requirements (Sooriyakumaran et al., 2020).

The hypothesis is that firms with strong costing and record-keeping practices will demonstrate higher profitability and resilience. Accurate financial records enable businesses to monitor their cash flow, identify cost-saving opportunities, and plan for future investments. Additionally, well-maintained financial records provide a basis for securing external funding, as they enhance the credibility of the business in the eyes of potential investors or lenders. Firms that prioritize these practices are better positioned to navigate financial challenges and sustain long-term growth.

3.4.4 Financial Planning

Financial planning practices involve setting financial goals, forecasting future revenues and expenses, managing cash flow, and preparing for potential risks. These practices are crucial for long-term sustainability and growth, as they help businesses anticipate and adapt to changes in the market environment. Effective financial planning also involves creating contingency plans for unexpected events, such as economic downturns or disruptions in the supply chain (McKenzie & Woodruff, 2017; Sooriyakumaran et al., 2020).

This study hypothesizes that firms with comprehensive financial planning practices will exhibit higher profitability and resilience. By proactively managing their finances and planning for the future, businesses can better withstand economic shocks and capitalize on opportunities for expansion. Financial planning also enables businesses to allocate resources more efficiently, ensuring that they are well-prepared to meet their financial obligations and invest in growth initiatives.

3.4.5 Integration of Disaggregated Practices in Analysis

By disaggregating the business practices index into these four components, the study aims to identify which specific practices are most effective in driving profitability and resilience. The analysis of each component provides a detailed understanding of how various aspects of business management contribute to overall business performance. This approach allows for targeted recommendations for informal businesses, highlighting the practices that have the greatest impact on financial success and sustainability.

In the empirical analysis, the impact of each disaggregated practice on profitability and resilience is estimated using the 2SLS regression technique. The use of 2SLS helps to address any potential endogeneity concerns that may arise from the correlation between these practices and unobserved factors that influence business outcomes. By analysing the effects of each component individually, the study provides nuanced insights into the specific drivers of business success in the informal sector.

3.5 Definition of Variables

This section describes the dependent and independent variables used in the study and explains how they are measured. Table 3.1 provides a summary of all variables, indicating the measurement method and the data type or scale applied.

Table 3. 1 Definition of Variables

Variable Name	Measurement Method	Data Type / Scale
Profitability	Log of reported profit/loss in the past month (LCU)	Continuous (Ratio)
Resilience	Multi-dimensional index based on: (i) change in sales due to COVID-19, (ii) adoption of adaptive strategies, (iii) workforce adjustments	Composite Index (0–5)
Business Practices Index	Mean score from 13 survey items covering marketing, stock control, costing/record-keeping, and financial planning; normalized 0–1	Composite Index (0–1, normalized)
Perceived Price Position (PPP)	Self-reported perception: lower, same, higher, or no defined position compared to formal competitors	Categorical (Nominal: 1=Lower, 2=Same, 3=Higher, 4=None)
Gender of Owner	Binary coding (1 = Female, 0 = Male)	Binary (Nominal)
Owner's Age	Reported in years	Continuous (Ratio)
Education	Highest level of formal education attained (none, primary, secondary, tertiary, etc.)	Categorical (Ordinal)
Industry	Sector of activity (1 = Manufacturing, 2 = Retail, 3 = Services)	Categorical (Nominal)
Location	Region where firm is located (1 = Accra, 2 = Kumasi, 3 = Tamale)	Categorical (Nominal)
Firm Age	Number of years the firm has been in operation	Continuous (Ratio)

3.5.1 Dependent Variables

This section describes the dependent variables otherwise known as the regressands and explains how they are measured. The dependent variables are firm profitability, and resilience.

Profitability

Profitability is a key metric used to assess the financial performance of businesses, indicating their ability to generate profits. In this study, profitability is calculated using the log of reported profit or loss in the past month in local currency units (LCU). Profit or loss represents the residual income after deducting all expenses from total revenue. This provides a measure of the business's bottom-line financial performance. A higher value reflects a higher level of profitability. This variable captures the financial health and success of informal businesses in generating profits from their operations. This measure is crucial for understanding the economic viability and sustainability of informal enterprises in the context of their operating environment.

Resilience

Resilience in the context of this study refers to the capacity of informal businesses to withstand, adapt to, and recover from external shocks and challenges, thereby maintaining their operations and performance in the face of adverse conditions. Specifically, this study conceptualises resilience as the ability of informal businesses to navigate and respond effectively to the impacts of the COVID-19 pandemic, a global crisis that has tested the adaptability and sustainability of enterprises across all sectors.

In operationalising this construct, resilience is measured through a multi-dimensional approach, incorporating various indicators that reflect the businesses' responses to the pandemic. These indicators include changes in sales volume, the implementation of adaptive strategies, and adjustments to the workforce. Each of these dimensions provides a different lens through which to assess the resilience of informal businesses.

The first dimension looks at the impact of COVID-19 on sales. This indicator captures the direct impact of the pandemic on business performance. A key aspect of resilience is the ability to maintain or recover sales levels despite the disruption caused by the pandemic. Businesses that have managed to sustain or quickly rebound in sales demonstrate a higher level of resilience, suggesting effective crisis management and the ability to adapt to rapidly changing market conditions. The second dimension focuses on the strategic responses businesses have adopted to cope with the challenges posed by the pandemic. These strategies include shifts to contactless sales methods, changes in products or services rendered, or location changes. The breadth and effectiveness of these adaptive strategies are critical indicators of a business's resilience, reflecting its ability to innovate and remain operational under pressure. The third dimension examines how businesses have managed their workforce in response to the pandemic. This includes decisions around layoffs and is a vital component of resilience, as they reflect a business's ability to maintain its operation even in adverse circumstances.

By examining these dimensions, resilience is measured as the extent to which businesses have successfully navigated the challenges posed by the pandemic, demonstrating their ability to adapt and survive in turbulent economic conditions. This measure provides valuable insights into the resilience strategies employed by informal businesses and their effectiveness in mitigating the adverse effects of external shocks. Understanding these strategies is crucial for developing policies and interventions that can support informal businesses in building resilience, ensuring their survival and growth in the face of future challenges.

3.5.2 Independent Variables

The informal sector is intricate in its characteristics. Effectively assessing the data from the informal sector will require taking into consideration the socio-economic characteristics of the business owners as well as the business environment and characteristics of the informal sector. The key independent variable used in this study is perceived price position. A number of variables were used to control for unobserved explanations in the dependent variable. The control variables are grouped into three categories - personal characteristics, firm characteristics and operational characteristics.

Business Practices

The Business Practices variable is a composite measure designed to capture the quality and effectiveness of business management and operational practices within informal enterprises. This index is constructed by aggregating responses to thirteen survey items that assess four (4) key aspects of business management: marketing practices, buying and stock control management, costing and record-keeping practices, and financial planning practices.

Marketing Practices: This aspect focuses on the strategies and actions businesses employ to attract and retain customers. It includes activities such as market research, advertising, promotion, and customer engagement. Specific survey items under this category assess whether businesses conduct regular market surveys, use promotional offers, and actively seek customer feedback to improve products or services. A higher score in this category reflects a business's ability to effectively position itself in the market and engage with its customer base.

Buying and Stock Control Management: This dimension evaluates how businesses manage their inventory and procurement processes. Effective stock control ensures that businesses maintain optimal inventory levels, reducing waste and stockouts. Survey questions in this category assess practices such as inventory monitoring, frequency of stockouts, and strategies for negotiating with suppliers. A high score in this area indicates that a business is proficient in managing its supply chain and maintaining a smooth flow of goods.

Costing and Record-Keeping Practices: Costing and record-keeping are crucial for maintaining financial health and transparency within a business. This aspect of the index assesses whether businesses keep detailed financial records, regularly track their expenses, and calculate costs accurately. Proper record-keeping is essential for informed decision-making and financial planning. The survey items under this category focus on whether businesses maintain written records of transactions, and budget for future expenses. A high score signifies robust financial management practices.

Financial Planning Practices: Financial planning involves setting financial goals and developing strategies to achieve them. This component of the Business Practices variable evaluates how well businesses plan for their financial future, including setting sales targets, budgeting for costs, and managing cash flow. Survey items assess whether businesses have written budgets, compare actual sales to targets, and plan for long-term financial needs. A higher score indicates that the business is proactive in planning its financial activities, which is crucial for sustainability and growth.

For each of the thirteen questions, respondents were given a score out of 100, reflecting the degree to which their business practices align with effective management standards. The scores from these thirteen items were then averaged to produce a mean score for each firm. To facilitate comparison and interpretation, the mean scores were subsequently normalized to range from 0 to 1, where a score closer to 1 indicates stronger adherence to effective management practices.

The Business Practices Index thus provides a comprehensive assessment of how well informal businesses implement essential management practices. By synthesizing multiple dimensions of business operations into a unified, normalized score, this index helps to identify the strengths and weaknesses in an enterprise's management approach.

This measure is critical for understanding the role of management practices in driving the profitability and sustainability of informal firms. It serves as a valuable tool for both researchers and policymakers who seek to enhance the performance of the informal sector by identifying areas where businesses can improve their management strategies. The index is particularly valuable in contexts where formal business training and support may be limited, as it highlights the impact of managerial capability on business outcomes.

Perceived Price Position (PPP)

Perceived Price Position (PPP) is a key independent variable in this study, representing how informal firms perceive their prices compare to prices of similar products or services offered by registered, formal businesses. This variable is crucial as it encapsulates the competitive positioning and pricing strategies that informal firms adopt within the marketplace. Informal businesses typically operate under different cost structures and regulatory environments

compared to their formal counterparts, which can lead to significant differences in pricing strategies. Informal business may perceive their prices as lower due to reduced overheads or tax burdens, potentially viewing this as a competitive advantage. Conversely, some may perceive their prices as higher due to inefficiencies, limited access to bulk purchasing, or higher risk premiums. By assessing PPP, this study aims to gain insights into whether informal firms believe they possess a pricing advantage or disadvantage compared to formal businesses, and how this perception influences their business strategies.

This perception of price position can significantly affect a range of business decisions, including marketing approaches, customer targeting, and overall business performance. Informal firms that perceive their prices as lower than those of formal businesses may view this as a competitive edge, prompting them to pursue aggressive market strategies, target cost-conscious customers, or operate on slimmer profit margins to increase sales volume. Conversely, firms that perceive their prices as higher might adopt differentiation strategies, focusing on quality or niche markets to justify their pricing. Additionally, firms that do not perceive a clear price position may either lack strategic direction or operate in volatile market conditions where pricing strategies are frequently adjusted.

The hypothesis underlying this study is that firms perceiving their prices as lower will exhibit different business behaviours and management practices, leading to varied performance outcomes compared to those perceiving their prices as the same, higher, or those that do not identify a specific price position. By exploring PPP, this study seeks to understand the role of pricing perceptions in shaping the operational and strategic decisions of informal businesses. The findings could provide valuable insights for policymakers and business advisors aiming to

enhance the competitiveness and sustainability of the informal sector, particularly in environments where formal business training and support are limited.

Gender

The gender of the business owner is represented as a binary variable, coded as 1 for female and 0 for male. Gender is a critical factor in understanding the dynamics of the informal sector, where women often face distinct challenges and opportunities. Research suggests that women, who are more likely to experience interruptions in their careers due to family responsibilities, may prefer the flexibility of the informal sector over the more rigid structures of formal employment.

This study hypothesizes that female business owners may have different business practices compared to their male counterparts, potentially affecting their profitability and resilience. For instance, women may be more inclined to adopt customer-centric strategies or flexible business practices that align with their dual roles in managing both household and business responsibilities. However, these practices might impact profitability and resilience differently, with female-led businesses potentially exhibiting greater resilience due to their adaptability, but possibly facing challenges in achieving high profitability due to limited access to resources and capital.

Owner's Age

Owner's Age is a continuous variable measured in years, representing the age of the business owner. The age of the business owner is an important determinant of business outcomes in the informal sector, influencing both profitability and resilience. Younger owners might bring

innovation and energy to their businesses, potentially adopting more dynamic and aggressive strategies to boost profitability. However, their lack of experience could result in lower resilience, especially in the face of economic shocks or market fluctuations.

Conversely, older business owners may prioritize stability and risk aversion, potentially leading to consistent, though perhaps moderate, profitability. Their experience and established networks could enhance the resilience of their businesses, helping them to withstand challenges and maintain operations over time. This study hypothesizes that age will have a differential impact on profitability and resilience, with younger owners potentially achieving higher short-term profits but facing lower resilience, while older owners may experience steadier profits and greater long-term resilience.

Education

Education is a categorical variable that captures the highest level of formal education attained by the business owner. Educational attainment is a key factor influencing business practices, profitability, and resilience. Higher education levels are generally associated with better management skills, strategic planning, and the ability to navigate complex business environments. These skills are crucial for achieving higher profitability and enhancing resilience in the face of market challenges.

This study hypothesizes that business owners with higher levels of education will adopt more sophisticated business practices, leading to higher profitability and greater resilience. In contrast, those with lower education levels may struggle with formal business management, potentially resulting in lower profitability and reduced resilience. Education is expected to play

a critical role in determining how effectively businesses can plan, manage risks, and capitalize on opportunities in the informal sector.

Industry

Industry is a categorical variable representing the specific sector in which the firm operates, coded as 1 for manufacturing, 2 for retail, and 3 for the provision of services. The industry in which a firm operates significantly influences its business practices, market conditions, and overall performance outcomes. Different industries face varying levels of competition, resource availability, and market stability, all of which can impact profitability and resilience.

This study hypothesizes that businesses operating in different industries will exhibit varying levels of profitability and resilience. For instance, manufacturing firms may benefit from economies of scale, leading to higher profitability but potentially facing challenges in resilience due to capital intensity and market fluctuations. Retail businesses might experience intense competition, impacting profitability but benefiting from greater market flexibility, enhancing resilience. Service providers, depending on the nature of their services, might balance profitability and resilience differently based on the demand for their services and their ability to adapt to market changes.

Location

Location is a categorical variable indicating the geographic region where the firm is situated, coded as 1 for Accra, 2 for Kumasi, and 3 for Tamale. The geographic location of a firm can have a profound impact on its business practices, access to resources, and market opportunities, all which influence profitability and resilience. Different regions offer varying levels of

infrastructure, customer bases, regulatory environments, and economic conditions, shaping the operational environment of businesses.

This study hypothesizes that firms located in different regions will experience different levels of profitability and resilience due to the unique challenges and opportunities presented by their locations. For example, businesses in Accra might benefit from a larger market and better infrastructure, leading to higher profitability, but they might also face stiffer competition, which could impact resilience. In contrast, firms in Tamale might face challenges related to infrastructure and market size, potentially resulting in lower profitability but possibly greater resilience due to lower competition and the ability to adapt to local conditions.

Firm Age

Firm Age is a continuous variable representing the number of years the firm has been in operation. The age of a firm is often a key determinant of its stability, growth prospects, and overall performance. Older firms are likely to have more established business practices, customer bases, and networks, which can enhance profitability and resilience. These firms may have developed effective strategies for managing resources, mitigating risks, and sustaining operations over time.

Conversely, younger firms might be more adaptable and innovative, quickly responding to market changes and opportunities. However, they may also face higher risks and uncertainties due to their limited experience and market presence, which could impact their profitability and resilience. This study hypothesizes that older firms will generally exhibit higher resilience due to their established operations and networks, while younger firms may demonstrate variability

in profitability and resilience as they navigate the challenges of establishing themselves in the market.

3.6 Source of Data

This study relies on observational data obtained from the World Bank's Informal Enterprise Surveys (IFS). IFS is a comprehensive data collection initiative aimed at understanding the dynamics and characteristics of informal businesses. These surveys employ a standardised methodology and questionnaire designed to address the challenges of measuring informal economic activities, which often go unaccounted for in official statistics and surveys. By focusing on the informal sector, the surveys aim to provide valuable insights into the operations, challenges, and opportunities faced by informal businesses across various economies.

The data used in this study was obtained from the second wave of the IFS which was conducted in 2022 across selected urban areas (Accra, Kumasi and Takoradi). It covers all unregistered businesses within the enumerated areas. Informal firms were defined as those not registered with the Registrar's General Department, as is the established convention for the Enterprise Survey in Ghana. The survey utilises an Adaptive Cluster Sampling methodology to ensure geographical representation and statistical robustness. Data collection efforts include visits to 3,999 enumeration blocks (out of 49,843 blocks), where information was gathered through interviews with 4,571 business owners or managers (out of 30,633 enumerated businesses). The survey covers a wide range of topics related to business operations, including owner demographics, business characteristics, infrastructure, workforce, operations, and business registration.

The data collected from the Informal Enterprise Surveys provide a rich source of information for studying informal businesses' characteristics, behaviours, and responses to external stimuli. With detailed insights into the informal sector's dynamics, researchers can gain a better understanding of its contribution to the economy and identify policy interventions to support its growth and development.

CHAPTER FOUR

ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter presents the empirical findings of the study, systematically analysing the relationships between perceived price position, business practices, profitability, and resilience among informal businesses in Ghana. The analysis begins with a descriptive overview of the sample characteristics and key variables, providing a contextual foundation for the subsequent regression analyses. The chapter then delves into the results of the Ordinary Least Squares (OLS) regression, offering initial insights into the direct effects of business practices on the outcomes of interest. Following this, the Two-Stage Least Squares (2SLS) regression analysis is introduced to address potential endogeneity issues, with a particular focus on how perceived price position (PPP) serves as an instrumental variable. The disaggregated analysis of business practices is also explored, identifying which specific aspects drive profitability and resilience. The chapter concludes with a discussion of the broader implications of the findings, setting the stage for the subsequent summary, conclusions, and policy recommendations.

4.1 Descriptive Statistics

This section provides a comprehensive overview of the sample characteristics and key variables used in the analysis. The descriptive statistics offer essential context for understanding the dynamics of informal businesses in Ghana, setting the stage for the subsequent regression analyses.

The study examines a sample of 4,571 informal businesses, focusing on various demographic and business-related attributes that are crucial for understanding the factors influencing profitability and resilience among informal businesses. These attributes include gender, age, education, industry, location, and firm age, all of which play significant roles in shaping business outcomes. Below is a summary of the descriptive statistics.

Table 4. 1 Descriptive Statistics of Informal Businesses

Variable	Obs	Mean	Std. Dev.	Min	Max
Profitability	3,864	1.3473	3.8278	-11.00	13.82
PPP	4,571	2.5275	1.1419	1.00	4.00
Marketing Practices	3,864	0.2366	0.3097	0.00	1.00
Stock Practices	3,864	0.6388	0.3372	0.00	1.00
Costing Practices	3,864	0.1276	0.2769	0.00	1.00
Financial Planning	3,864	0.0672	0.1922	0.00	1.00
Business Practices	3,864	0.2676	0.1881	0.00	1.00
Resilience	3,069	1.5259	0.8927	0.00	5.00
Gender	3,677	0.6562	0.4750	0.00	1.00
Owner's Age	3,565	40.0011	9.5609	17.00	86.00
Education	3,737	2.6253	0.8491	1.00	4.00
Location	4,571	1.7206	0.7414	1.00	3.00
Firm Age	3,999	7.6557	6.2003	1.00	63.00

Source: Author's Computation from World Bank Informal Survey Data

4.1.1 Owner Characteristics

The profile of business owners reveals significant insights into the demographic composition and its potential impact on business practices and performance. Within the sample, a notable majority of the business owners are female, comprising 65.01% of the total, with males representing 34.99%. This gender distribution underscores the prominence of women in the informal sector, which is often attributed to the sector's flexibility and the barriers women face in accessing formal employment. Women are more likely to engage in informal business activities due to the need for work-life balance and the prevalence of discriminatory practices in the formal sector (Stumbitz et al., 2018). These gender dynamics may influence business practices and outcomes, particularly in how risk is managed and how business strategies are formulated.

The average age of business owners is 40.17 years, with a broad range from 17 to 86 years, indicating the informal sector's appeal across different life stages. Younger entrepreneurs may be driven by the barriers to entering formal employment, such as the demand for experience or the scarcity of formal job opportunities, while older individuals, possibly retirees, may turn to informal businesses as a flexible source of income. Age is a crucial determinant of business performance, influencing not only the strategic decisions made by business owners but also their capacity to innovate and adapt to changing market conditions. The variation in age across the sample suggests that different age groups may exhibit distinct approaches to managing their businesses, with implications for both profitability and resilience.

Educational attainment among business owners varies significantly, with 15.25% having no formal education, 15.59% having completed primary education, 60.01% with secondary or

vocational education, and 9.14% holding tertiary qualifications. Education is a key factor in determining the success of a business, as it influences an owner's ability to navigate complex business environments, access financial resources, and adopt new technologies. The relatively low levels of education prevalent in the sample highlight the challenges that less-educated individuals face in the informal sector, potentially limiting their ability to maximize profitability and build resilience. However, it also underscores the informal sector's role as a critical avenue for income generation among those marginalized from formal employment due to educational barriers.

4.1.2 Firm Characteristics

The firm characteristics further contextualize the operational environment of these businesses. The majority of businesses operate within the retail sector, accounting for 64.30% of the sample, followed by 21.31% in the provision of services and 14.40% in manufacturing. This distribution reflects the diverse nature of the informal sector, where businesses range from small-scale manufacturing units to retail shops and service providers. The industry in which a business operates can significantly influence its profitability and resilience, as different sectors present unique challenges and opportunities. Retail businesses, for instance, may face intense competition but also benefit from higher customer turnover, while manufacturing firms might enjoy higher margins but require more significant capital investment and operational management.

Geographically, businesses are spread across three major cities in Ghana: 45.35% in Accra (Greater Accra Region), 37.23% in Kumasi (Ashanti Region), and 17.41% in Tamale (Northern Region). The location of a business is critical, as it affects access to markets, infrastructure,

and support services. Businesses in Accra, the capital city, may benefit from a larger market and better infrastructure, which can translate into higher profitability and resilience. In contrast, businesses in Kumasi and Tamale might face different challenges, such as smaller market sizes or less developed infrastructure, influencing their operational decisions and performance outcomes.

Firm age also plays a significant role in business success. The average age of firms in the sample is 7.66 years, with a range from 1 to 63 years. Older firms generally have more established operations, customer bases, and business networks, which can contribute to greater stability and resilience. However, younger firms, while potentially more adaptable and innovative, may face higher risks and uncertainties. The data suggests that firm age is likely to be a significant determinant of both profitability and resilience, with older firms possibly benefiting from their established presence in the market, while younger firms might leverage their flexibility to navigate the challenges of the informal sector.

4.1.3 Business Practices

The business practices index, which aggregates responses to 13 survey items across four key areas, marketing practices, buying and stock control, costing and record-keeping, and financial planning, has an average score of 0.26 with a standard deviation of 0.18. This index is a critical measure of the quality and effectiveness of management practices within informal businesses, influencing their ability to compete, manage resources, and respond to challenges. The data reveals variation in business practices across the sample, with some firms demonstrating strong adherence to effective management practices, while others may struggle in certain areas. This

variation is expected to have significant implications for profitability and resilience, with better-managed firms likely to perform better in both dimensions.

4.1.4 Perceived Price Position (PPP)

The PPP variable which tells us the how the informal businesses perceive their prices compare to their formal competitors who sell in the same industry, had an average of 2.53. Out of the total sample of 4571, 18.86% perceived their prices were lower, 43.40% perceived their prices were the same, 3.87% perceived their prices were higher, and 33.87% had no perceived position.

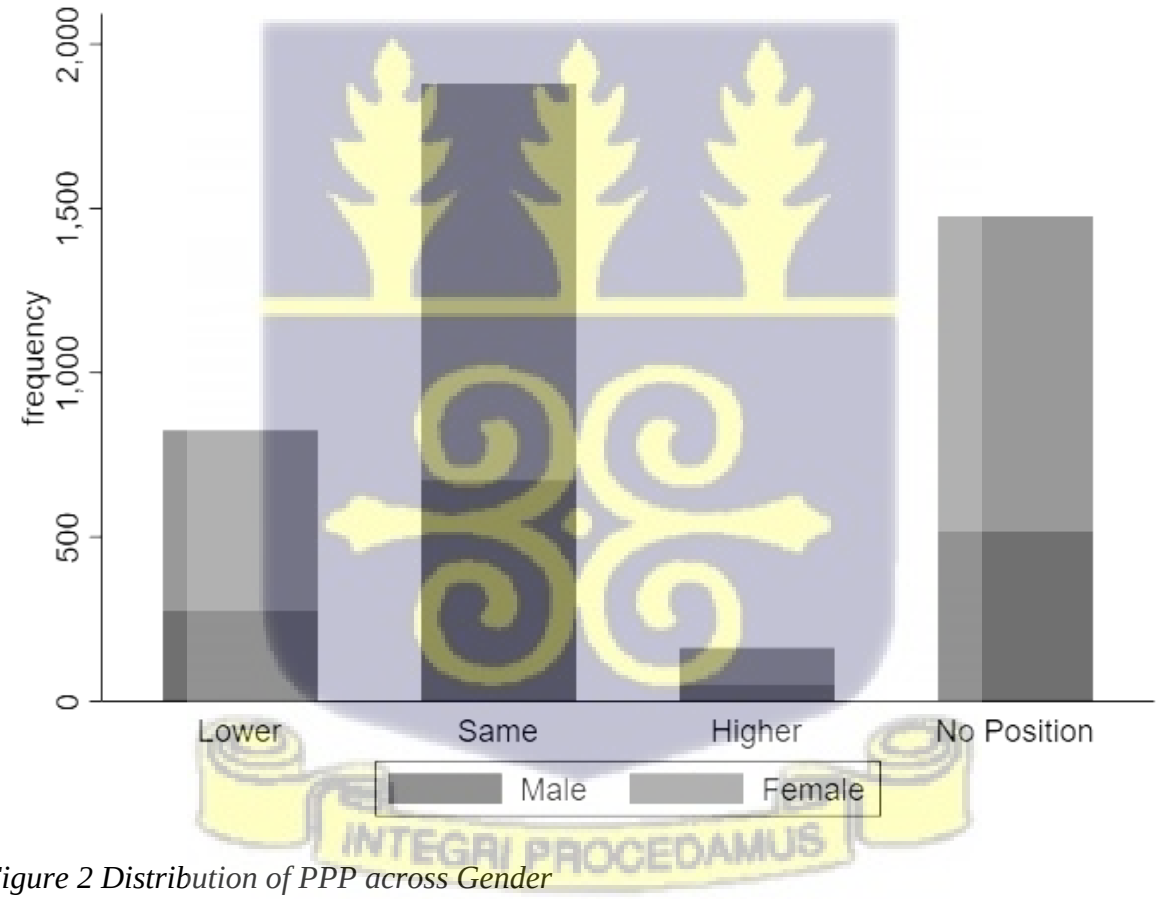

Figure 2 Distribution of PPP across Gender

Source: Author's Computation from World Bank Informal Survey Data

4.1.5 Profitability and Resilience

The average log of profit among the businesses is 1.35, with a standard deviation of 3.83. The minimum log of profit is -11, and the maximum is 13.82. Profitability is a key outcome variable in this study, reflecting the financial success of informal businesses. The resilience index, which measures the ability of businesses to withstand and recover from shocks, has an average score of 1.47, with a standard deviation of 0.92. The data indicates that there is substantial variability in both profitability and resilience across the sample, suggesting that some businesses are better positioned to thrive and endure challenges than others.

4.2 OLS Regression Analysis

This section delves into the results from the Ordinary Least Squares (OLS) regression analyses that explore the impact of business practices on both profitability and resilience among informal businesses in Ghana. The key objective is to understand how the business practices index, alongside other demographic and firm characteristics, influences these critical financial outcomes.

Table 4. 2 Table 4.2 OLS Regression results for business practices on Firm Profitability

Variable	Coefficient	Std. Err.	z-value	p-value
Business Practices Index	1.6232***	0.4924	3.3000	0.0010
Female	-0.1308	0.2006	-0.6500	0.5140
Owner Age	0.0071	0.0098	0.7200	0.4700
Education *(No Education)*				
Primary	0.3384	0.2902	1.1700	0.2440

Secondary/Vocational	0.0065	0.2706	0.0200	0.9810
Tertiary	-0.7489	0.4613	-1.6200	0.1050
Location *(Accra)*				
Kumasi	-0.5536***	0.1980	-2.8000	0.0050
Tamale	0.1895	0.2221	0.8500	0.3940
Industry *(Manufacturing)*				
Retail	-0.1142	0.2546	-0.4500	0.6540
Services	-0.6314**	0.3142	-2.0100	0.0450
Firm Age	0.0349**	0.0158	2.2100	0.0270
Observations	3,230			
F statistic	80.34			
R squared	0.4074			
Root MSE	2.9658			

*** p<0.01, ** p<0.05, * p<0.1

Source: Author's Computation from World Bank Informal Survey Data

Table 4. 3 OLS Regression results for business practices on Firm Resilience

Variable	Coefficient	Std. Err.	z-value	p-value
Business Practices Index	0.4374***	0.1594	2.7400	0.0060
Female	-0.0965	0.0643	-1.5000	0.1340
Owner Age	-0.0041	0.0032	-1.2900	0.1950
Education *(No Education)*				
Primary	0.0549	0.1186	0.4600	0.6430

Secondary/Vocational	-0.1716**	0.0845	-2.0300	0.0420
Tertiary	0.0350	0.1371	0.2600	0.7990
Location *(Accra)*				
Kumasi	-0.2381***	0.0609	-3.9100	0.0000
Tamale	-0.5100***	0.1080	-4.7200	0.0000
Industry *(Manufacturing)*				
Retail	-0.0061	0.0862	-0.0700	0.9430
Services	-0.0203	0.0934	-0.2200	0.8280
Firm Age	0.0006	0.0043	0.1300	0.8970
Observations	2,823			
F statistic	7.77			
R squared	0.0932			
Root MSE	0.8527			

*** p<0.01, ** p<0.05, * p<0.1

Source: Author's Computation from World Bank Informal Survey Data

4.2.1 Interpretation of OLS Results for Profitability

The OLS regression results for profitability highlight the significance of effective management practices in driving the financial success of informal businesses. The Business Practices Index, a composite measure reflecting the overall quality of management, shows a positive and statistically significant relationship with profitability, with a coefficient of 1.6232 ($p < 0.01$). This finding underscores the crucial role as suggested by Maes et al. (2004) and McKenzie & Woodruff (2017) that strong management practices play in enhancing the profitability of firms

operating within the informal sector, suggesting that better-managed firms are more likely to achieve higher profits.

Among the control variables, gender, owner's age, and educational attainment do not show significant effects on profitability. This suggests that factors such as the gender of the business owner and their age are not major determinants of profitability in the informal sector when management practices and other variables are accounted for. Interestingly, while tertiary education is associated with a negative impact on profitability (though not statistically significant), primary and secondary education levels also do not significantly influence profitability. These findings might suggest that while education is generally beneficial, its direct impact on profitability in the informal sector may be complex and context-dependent, possibly due to the practical, hands-on nature of running an informal business that might not always align with formal education.

Geographic location emerges as a significant factor, with businesses in Kumasi reporting significantly lower profitability compared to those in Accra ($p < 0.01$). This may reflect regional differences in market dynamics, access to resources, and economic opportunities that impact the financial performance of businesses. On the other hand, businesses in Tamale do not exhibit a significant difference in profitability, suggesting that the challenges and opportunities in this region might not be as starkly different from those in Accra.

Industry classification reveals that businesses in the service sector face greater challenges in achieving profitability, with a significant negative coefficient for the service industry ($p < 0.05$). This finding suggests that service-oriented businesses might struggle with factors such as higher competition or lower profit margins compared to manufacturing or retail businesses.

Firm age also shows a positive and significant effect on profitability ($p < 0.05$), reinforcing the idea that older, more established firms tend to be more profitable due to their accumulated experience, established customer base, and possibly more stable operations. This is consistent with the findings of Chiliya & Roberts-Lombard (2012).

4.2.2 Interpretation of OLS Results for Resilience

The OLS regression analysis for resilience presents a somewhat different picture compared to profitability. The **Business Practices Index** remains a significant predictor of resilience, with a coefficient of 0.4374 ($p < 0.01$), indicating that effective management practices do contribute to a firm's ability to withstand and recover from shocks. This is consistent with studies from McKenzie & Woodruff (2017). However, the magnitude of the impact is less pronounced than in the case of profitability, suggesting that while good management is important, resilience may also depend on other factors not captured by the business practices index alone as mentioned by DiBella et al. (2023).

The control variables present interesting contrasts. Gender shows a marginally negative, but not statistically significant, effect on resilience, indicating that female-owned businesses might face slightly more challenges in building resilience, though this finding is not conclusive. The age of the business owner also does not show a significant impact, suggesting that, similar to profitability, resilience is not strongly linked to the owner's age in this context.

Educational attainment presents mixed results. While secondary/vocational education is negatively associated with resilience ($p < 0.05$), indicating that business owners with this level of education might struggle more with resilience, tertiary education shows no significant effect.

This might imply that while formal education provides certain advantages, it does not necessarily translate into better resilience in the informal sector.

Geographic location is a significant factor in determining resilience. Businesses in Kumasi and Tamale show significantly lower resilience compared to those in Accra (both $p < 0.01$), reflecting regional disparities in economic conditions, infrastructure, and access to support systems that are critical for business survival and recovery.

Industry classification does not significantly influence resilience, suggesting that the type of industry may not be as crucial in determining a firm's ability to withstand and recover from economic shocks. This could indicate that resilience is more broadly influenced by management practices and external factors rather than the specific sector in which a business operates.

4.3 2SLS Regression Analysis

The Two-Stage Least Squares (2SLS) regression results offer crucial insights into the relationship between business practices, as captured by the Business Practices Index, and profitability among informal businesses. This section discusses the findings from the 2SLS regression, with a focus on the impact of business practices on profitability and resilience after addressing potential endogeneity concerns.

4.3.1 First-Stage Regression

In this section, the first stage of the Two-Stage Least Squares (2SLS) regression is examined to understand how the Perceived Price Position (PPP) influences the Business Practices Index among informal firms. This stage is crucial as it lays the groundwork for understanding the

endogenous relationship between business practices and profitability and resilience. The PPP serves as the instrumental variable in this analysis, hypothesised to impact business practices by shaping firms' perceptions of their competitive positioning in the market. The table below summarises the first stage regression results showing the impact of PPP on Business Practices.

Table 4. 4 First Stage Regression results for the business practices on Firm Profitability

Variable	**Coefficient**	**Std. Err.**	**t-value**	**p-value**
Female	-0.0316***	0.0123	-2.5700	0.0100
Owner's Age	-0.0005	0.0006	-0.7900	0.4280
Education *(No Education)*				
Primary	-0.0140	0.0171	-0.8200	0.4120
Secondary/Vocational	0.0473***	0.0141	3.3500	0.0010
Tertiary	0.1724***	0.0295	5.8500	0.0000
Location *(Accra)*				
Kumasi	0.0394***	0.0118	3.3500	0.0010
Tamale	0.0181	0.0173	1.0500	0.2940
Industry *(Manufacturing)*				
Retail	0.0004	0.0159	0.0300	0.9790
Services	-0.0002	0.0180	-0.0100	0.9910
Firm Age	0.0033***	0.0010	3.4100	0.0010
PPP *(lower PPP)*				
Same	-0.0581***	0.0154	-3.7600	0.0000

Higher	0.0714*	0.0418	1.7100	0.0880
No Position	-0.1123***	0.0146	-7.7100	0.0000
Constant	0.3127***	0.0387	8.0800	0.0000
Observations	3,230			
F statistic	11.76			
R squared	0.1315			
Root MSE	0.1814			
Durbin (score) chi² (1)	29.0177 ***			
Wu-Hausman F(1, 3215)	29.1448 ***			

Source: Author's Computation from World Bank Informal Survey Data

The first-stage regression results demonstrate that PPP is a relevant instrument given the R-squared is greater than 0.1 and F statistic is greater than 10 as suggested by Stock & Yogo (2005). This shows that PPP significantly influences the Business Practices Index. Specifically, firms that perceive their prices as being "same" and firms that have no perceived price position relative to formal competitors exhibit significantly different management practices compared to those with other price perceptions. The negative and substantial coefficients of -0.0581 ($p < 0.000$) and -0.1123 ($p < 0.000$) for "No Position" and "Same" respectively suggests that firms that perceive the same price position or have no price position at all tend to have worser business practices relative to those with a lower price position. This uncertainty or lack of differentiation in price position might lead to less investment in robust management practices, as these firms may struggle to clearly define their market strategy.

Conversely, firms that perceive they have a higher price position compared to formal competitors tend to have better business practices with a coefficient of 0.0714 ($p < 0.088$) being marginal significant, reflecting their confidence in their pricing strategies and competitive position. These findings highlight the critical role of perceived pricing in influencing how informal businesses manage their operations, particularly in environments where formal business support is limited.

4.3.2 Profitability Analysis

In the second stage of the regression, the predicted values of the Business Practices Index from the first stage were used to estimate their impact on profitability. The results indicate that business practices have a strong and significant positive effect on profitability. Specifically, the coefficient for the instrumented Business Practices Index is 7.835, which is statistically significant at the 1% level. This implies that firms with better business practices, as influenced by their perceived price positioning, tend to experience significantly higher profitability. This is consistent with some prior studies (See Maes et al., 2004; McKenzie & Woodruff, 2017)

The robustness of this finding is reinforced by the large z-value (3.91), suggesting a substantial and reliable effect of business practices on profitability. The results highlight the critical role that effective management practices play in enhancing the financial performance of informal firms. This relationship underscores the importance of improving business practices, particularly in environments where formal training and business development support may be lacking.

The control variables included in the model provide additional context to the analysis. For instance, the gender of the business owner (GEN) does not have a statistically significant

impact on profitability in this context, as indicated by the p-value of 0.911. This suggests that, after controlling for business practices, gender does not play a decisive role in determining profitability among these informal businesses. Similarly, the age of the business owner (OWN_AGE) and most education categories (EDUC) are not significantly associated with profitability, except for tertiary education, which shows a negative and significant effect on profitability. This unexpected finding could be due to various factors, including the possibility that highly educated individuals may engage in informal businesses as a secondary or less prioritized activity.

Location (LOC) and industry (IND) also play important roles. Businesses located in Kumasi show a negative and significant effect on profitability compared to those in Accra, suggesting regional differences in business environments. On the other hand, businesses in Tamale do not show a significant difference in profitability compared to Accra. Industry-wise, neither of the sectors (coded as 2 and 3) shows a significant impact on profitability, indicating that the type of industry may not be a strong determinant of profitability once business practices are accounted for.

Table 4. 5 Second Stage Regression results for the business practices on Firm Profitability

Variable	**Coefficient**	**Std. Err.**	**z-value**	**p-value**
Business Practices Index	7.8352***	2.0036	3.9100	0.0000
Female	0.0247	0.2213	0.1100	0.9110
Owner's Age	0.0108	0.0104	1.0400	0.2990
Education *(No Education)*				
Primary	0.4087	0.3314	1.2300	0.2170

Secondary/Vocational	-0.3462	0.3070	-1.1300	0.2590
Tertiary	-1.8805***	0.5930	-3.1700	0.0020
Location *(Accra)*				
Kumasi	-0.6473***	0.2136	-3.0300	0.0020
Tamale	0.0718	0.2855	0.2500	0.8010
Industry *(Manufacturing)*				
Retail	-0.0542	0.2762	-0.2000	0.8440
Services	-0.5463	0.3485	-1.5700	0.1170
Firm Age	0.0112	0.0190	0.5900	0.5540
Constant	-4.7493***	0.8697	-5.4600	0.0000
Observations	3,230			
Wald Chi2	886.4100			
R squared	0.1365			
Root MSE	3,1784			

***** p<0.01, ** p<0.05, * p<0.1**
Source: Author's Computation from World Bank Informal Survey Data

4.3.2 Resilience Analysis

The second stage of the 2SLS regression highlights a significant and positive relationship between the Business Practices Index and resilience. The coefficient for the Business Practices Index is 1.566, and it is statistically significant at the 5% level. This finding indicates that firms with better business practices are more resilient, able to better withstand and recover from shocks. The large z-value (2.33) further supports the robustness of this relationship, suggesting

that effective management practices play a crucial role in enhancing the resilience of informal firms.

In contrast to the profitability analysis, the control variables in the resilience model provide additional insights. Gender (GEN) does not significantly influence resilience, with a p-value of 0.209, implying that, like profitability, gender does not play a decisive role in determining resilience when business practices are accounted for. The age of the business owner (OWN_AGE) is also not significantly associated with resilience, indicating that resilience may be more dependent on how businesses are managed rather than the owner's age.

Educational attainment presents a mixed picture, with secondary education showing a negative and significant impact on resilience, while other levels of education do not have a significant effect. This could suggest that secondary education, which may not provide specialized business skills, does not equip business owners as effectively as higher levels of education in building resilience.

Location variables reveal significant regional differences, with businesses in Kumasi and Tamale showing a negative impact on resilience compared to those in Accra. This suggests that regional disparities in infrastructure, market conditions, and access to resources might influence a firm's ability to remain resilient in the face of challenges.

Industry variables in the resilience model do not show significant effects, which indicates that the type of industry (manufacturing, retail, or services) does not have a strong direct impact on resilience once business practices are accounted for. This result suggests that across different industries, it is the quality of management practices rather than the specific sector that plays a more crucial role in determining a firm's resilience.

Table 4. 6 Second Stage Regression results for the business practices on Firm Resilience

Variable	Coefficient	Std. Err.	z-value	p-value
Business Practices Index	1.5659**	0.6714	2.3300	0.0200
Female	-0.0839	0.0669	-1.2600	0.2090
Owner's Age	-0.0026	0.0035	-0.7300	0.4640
Education *(No Education)*				
Primary	0.0714	0.1152	0.6200	0.5350
Secondary/Vocational	-0.2228**	0.0923	-2.4100	0.0160
Tertiary	-0.1723	0.1947	-0.8900	0.3760
Location *(Accra)*				
Kumasi	-0.2608***	0.0608	-4.2900	0.0000
Tamale	-0.5288***	0.1059	-5.0000	0.0000
Industry *(Manufacturing)*				
Retail	0.0223	0.0850	0.2600	0.7930
Services	0.0253	0.0947	0.2700	0.7890
Firm Age	-0.0041	0.0053	-0.7600	0.4460
Constant	1.6757***	0.2782	6.0200	0.0000
Observations	2,823			
F statistic	98.87			
R squared	0.0384			
Root MSE	0.8757			

***** p<0.01, ** p<0.05, * p<0.1**
Source: Author's Computation from World Bank Informal Survey Data

4.4 Impact of Disaggregated Business Practices on Profitability and Resilience

In this section, the focus shifts to examining the individual components of the Business Practices Index, namely, Marketing Practices, Stock Control, Costing Practices, and Financial Planning, to understand their distinct effects on profitability and resilience among informal firms. While the aggregate Business Practices Index has provided overarching insights, this disaggregated analysis aims to identify which specific management practices are most critical for driving business success.

4.4.1 First-Stage Regression Analysis

The first-stage regression results are pivotal in understanding the relationship between Perceived Price Position (PPP) and the individual components of business practices. By using PPP as an instrument, we can isolate the exogenous variation in each practice that stems from how businesses perceive their pricing relative to competitors.

The results of the first-stage regressions reveal significant insights into how PPP influences different aspects of business management. Businesses that perceive their prices as having "No Position" relative to formal competitors show a consistently strong negative association with all four business practice indices. This suggests that uncertainty or a lack of clarity in price position can lead to weaker overall management practices, possibly due to the lack of a focused strategy or confidence in market positioning.

On the other hand, firms that perceive their prices as "Same" or "Higher" exhibit varying effects across the different business practices. For example, a "Higher" perceived price is positively associated with Costing and Financial Planning practices, indicating that firms perceiving they

have higher prices may be more meticulous in managing costs and finances to maintain their premium price position. The firms that have a more neutral price position ("Same") also show a negative association with marketing, stock control and costing index, indicating that they also invest less in better management practices. The following table summarizes the coefficients of PPP on each of the disaggregated business practice indices.

Table 4. 7 Summary of the coefficients of PPP on each of the disaggregated business practice indices

PPP	Marketing Practices	Stock Control	Costing Practices	Financial Planning
(Lower)				
Same	-0.1154*** (0.0237)	-0.0759*** (0.0262)	-0.0484* (0.0257)	0.0073 (0.0182)
Higher	0.0069 (0.0600)	-0.0698 (0.0475)	0.1367** (0.0564)	0.2119*** (0.0528)
No Position	-0.2208*** (0.0226)	-0.0776*** (0.0262)	-0.1087*** (0.0237)	-0.0423*** (0.0147)

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
Source: Author's Computation from World Bank Informal Survey Data

4.4.2 Second-Stage Regression Analysis:

4.4.2.1 Profitability Analysis

In the second stage of the 2SLS regression analysis, the predicted values of the disaggregated business practices indices from the first stage were used as instruments to estimate their impact on profitability. This approach allowed us to isolate the effects of each aspect of business practices on the profitability of informal firms. The table below summarises the impact of each business practice on the profitability of the firm.

Table 4. 8 Second Stage Regression results for the disaggregated business practices on Firm Profitability

Variable	**Profit**	**Profit**	**Profit**	**Profit**
Marketing Practice	4.7407***			
	(1.1346)			
Stock Practices		14.0924***		
		(4.9777)		
Costing Practices			6.1478***	
			(1.7951)	
Financial Planning				2.4877
				(1.8277)
Female	-0.3492	-0.0572	0.3882	-0.0757
	(0.2263)	(0.3512)	(0.2711)	(0.2124)
Age	0.0107	0.0242	0.0008	0.0086
	(0.0105)	(0.0185)	(0.0107)	(0.0103)
Education *(No Education)*				
Primary	0.3209	2.2482**	-0.0183	0.2288
	(0.3241)	(0.9058)	(0.3506)	(0.3093)
Secondary/Vocational	-0.3324	0.2780	-0.6015*	0.0115
	(0.3174)	(0.4845)	(0.3525)	(0.2778)
Tertiary	-1.2358**	-1.0363	-2.5612***	-0.8993
	(0.5128)	(0.6508)	(0.7911)	(0.5696)
Location *(Accra)*				
Kumasi	-0.7883***	-0.3063	-0.3215	-0.6666***
	(0.2245)	(0.3414)	(0.2208)	(0.2323)
Tamale	-0.4494	-0.1576	0.6737**	0.2664
	(0.3144)	(0.5687)	(0.2931)	(0.2246)
Industry *(Manufacturing)*				
Retail	-0.0557	-0.9739*	0.1335	-0.0303
	(0.2859)	(0.5488)	(0.2824)	(0.2688)
Services	-0.5447	-1.0435*	-0.4732	-0.5787*
	(0.3535)	(0.5840)	(0.3546)	(0.3210)
Firm Age	0.0141	-0.0432	0.0355**	0.0345**
	(0.0185)	(0.0417)	(0.0168)	(0.0167)

Constant	-3.5821***	-12.5326***	-3.1610***	-2.8955***
	(0.7277)	(3.7355)	(0.6813)	(0.6645)

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
Source: Author's Computation from World Bank Informal Survey Data

The results indicate that marketing practices have a substantial and statistically significant positive effect on profitability. The coefficient of 4.74 ($p < 0.001$) suggests that firms with better marketing practices tend to achieve significantly higher profits. This finding underscores the importance of effective marketing strategies in driving business success, especially in informal settings where competition can be intense, and brand recognition may be limited. Firms that invest in robust marketing efforts, including customer engagement, promotional activities, and market research, are better positioned to attract and retain customers, thereby enhancing their profitability.

Stock control practices also demonstrate a strong and significant influence on profitability, with a coefficient of 14.09 ($p < 0.01$). Effective stock management is crucial for maintaining the balance between supply and demand, minimizing waste, and reducing costs associated with overstocking or stockouts. The significant impact of stock control on profitability highlights the critical role of inventory management in the operational efficiency and financial performance of informal firms. Businesses that can accurately forecast demand and optimize their inventory levels are likely to experience fewer disruptions and better cash flow, contributing to higher profits. This is confirmed by the findings of NdiranguKung'u (2016).

Costing practices show a significant positive effect on profitability, with a coefficient of 6.15 ($p < 0.001$). This suggests that firms with better costing practices, including accurate cost estimation and effective cost control, are more likely to be profitable. This is consistent with the findings of (Sooriyakumaran et al., 2020). Proper costing is essential for pricing strategies,

budget management, and financial planning. In the informal sector, where financial resources and accounting skills may be limited, the ability to manage costs effectively can be a decisive factor in a firm's financial success. Firms that can accurately track and manage their expenses are better equipped to price their products or services competitively while maintaining profitability.

Although the coefficient for financial planning practices is positive (2.49), it is not statistically significant ($p = 0.173$). This suggests that, while financial planning may contribute to profitability, its impact is not as pronounced as that of other business practices within the informal sector. Financial planning encompasses activities such as budgeting, financial forecasting, and investment planning. The lack of significance may reflect challenges that informal businesses face in implementing formal financial planning processes, or it may indicate that other factors, such as market conditions or access to credit, play a more critical role in determining profitability. This is also consistent with findings from (Sooriyakumaran et al., 2020)

4.4.2.2 Resilience Analysis

The second-stage results of the 2SLS regression for resilience provide further insight into how disaggregated business practices influence the resilience of informal firms. The analysis highlights the varying effects of different aspects of business practices—marketing, stock control, costing, and financial planning—on the resilience of these businesses. This section discusses the findings, emphasizing the role of each practice in enhancing the ability of firms to withstand and recover from economic shocks and challenges. The table below shows the second stage regression results for the disaggregated business practices on resilience of firms

Table 4. 9 Second Stage Regression results for the disaggregated business practices on Firm Resilience

Variable	Resilience	Resilience	Resilience	Resilience
Marketing Practice	0.8082**			
	(0.3793)			
Stock Practices		1.9527		
		(1.2880)		
Costing Practices			1.4561**	
			(0.6147)	
Financial Planning				1.5781**
				(0.7432)
Female	-0.1352**	-0.1307	0.0089	-0.0610
	(0.0651)	(0.0804)	(0.0866)	(0.0673)
Age	-0.0033	0.0011	-0.0053	-0.0028
	(0.0034)	(0.0058)	(0.0034)	(0.0034)
Education *(No Education)*				
Primary	0.0559	0.3245	-0.0305	-0.0111
	(0.1216)	(0.2170)	(0.1200)	(0.1194)
Secondary/Vocational	-0.2053**	-0.1234	-0.3060***	-0.1893**
	(0.0919)	(0.1029)	(0.1041)	(0.0878)
Tertiary	-0.0149	0.0210	-0.3924	-0.1634
	(0.1537)	(0.1891)	(0.2664)	(0.1934)
Location *(Accra)*				
Kumasi	-0.2818***	-0.1895**	-0.1903***	-0.3282***
	(0.0606)	(0.0819)	(0.0692)	(0.0706)
Tamale	-0.6258***	-0.5874***	-0.3604***	-0.4534***
	(0.1282)	(0.1399)	(0.1137)	(0.1028)
Industry *(Manufacturing)*				
Retail	-0.0013	-0.0565	0.0797	0.0378
	(0.0883)	(0.1074)	(0.0926)	(0.0851)
Services	-0.0038	0.0560	0.0310	-0.0003
	(0.0948)	(0.1266)	(0.0981)	(0.0939)
Firm Age	-0.0025	-0.0116	0.0018	-0.0022
	(0.0049)	(0.0113)	(0.0043)	(0.0049)

Constant	1.9398***	0.7722	1.9347***	1.8782***
	(0.2244)	(0.8582)	(0.2378)	(0.2342)

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
Source: Author's Computation from World Bank Informal Survey Data

The coefficient for marketing practices is positive and statistically significant at the 5% level, with a value of 0.8082. This result suggests that firms with stronger marketing practices tend to be more resilient. Effective marketing may help businesses maintain a stable customer base and revenue stream, even in the face of adverse conditions. By ensuring consistent demand for their products or services, these firms can better weather economic downturns and other disruptions. The significance of this finding underlines the importance of strategic marketing in building resilience, particularly in a competitive and often unpredictable informal sector.

The coefficient for stock control practices is positive but not statistically significant at conventional levels. With a coefficient of 1.9527 and a standard error of 1.2880, the wide confidence interval suggests variability in the impact of stock control on resilience across firms. While strong stock control practices theoretically contribute to resilience by preventing overstocking or stockouts, which can strain financial resources or lead to lost sales, the lack of statistical significance indicates that this effect may not be consistent across all firms. Further investigation might be necessary to understand the conditions under which stock control practices most effectively contribute to resilience.

Costing practices show a significant positive relationship with resilience, with a coefficient of 1.4561, significant at the 5% level. This finding suggests that firms that carefully manage their costing practices—by accurately tracking costs and ensuring that prices cover these costs—are better positioned to withstand financial pressures. Proper costing practices likely provide firms with the financial stability needed to navigate difficult periods without compromising their

long-term viability. The significance of this result highlights the critical role of financial prudence and accurate cost management in building a resilient business.

The coefficient for financial planning practices is also positive and significant, with a value of 1.5781 at the 5% significance level. This result indicates that firms engaging in sound financial planning, such as budgeting, forecasting, and managing cash flow, are more resilient. Effective financial planning enables businesses to anticipate potential challenges and allocate resources accordingly, reducing the likelihood of financial distress during tough times. This finding underscores the importance of forward-looking financial management in ensuring that businesses can continue operating smoothly even when faced with economic shocks.

4.4.3 Comparative Analysis

The comparative analysis of the disaggregated business practices highlights that while each practice contributes positively to both profitability and resilience, their relative importance and impact differ. Among these practices, stock control emerges as the most critical factor driving profitability. This suggests that businesses that effectively manage their inventory are better positioned to maximize revenue and minimize costs. Efficient stock control ensures that products are available to meet customer demand while reducing the risks associated with overstocking or stockouts. However, its impact on resilience, though positive, is less pronounced. This difference implies that while profitability and resilience are related, they are shaped by different facets of business management. Profitability is more immediately influenced by operational efficiencies, such as inventory management, whereas resilience is likely influenced by longer-term strategies and adaptability.

Marketing practices are crucial for both profitability and resilience. The strong impact of marketing on profitability underscores the importance of visibility and customer engagement in competitive markets. Businesses that invest in effective marketing strategies are more likely to attract and retain customers, which directly translates into higher profits. Furthermore, marketing also plays a vital role in resilience by helping businesses maintain their market presence and customer loyalty during challenging times. This dual role of marketing underscores the need for informal businesses to prioritize their marketing efforts, as it not only drives immediate financial success but also contributes to the business's ability to withstand and recover from economic shocks.

Costing and financial planning practices also play significant roles in both profitability and resilience, though their impact varies. Accurate costing is essential for setting prices that cover all expenses and ensure a profit margin. This practice is particularly important in the informal sector, where cost structures can be complex and variable. Effective financial planning, on the other hand, is crucial for long-term stability and growth. It involves forecasting future financial needs, managing resources, and preparing for potential challenges. While its impact on profitability may not be as immediate as stock control or marketing, financial planning is vital for building resilience, as it allows businesses to navigate financial difficulties and sustain operations over time.

These findings suggest that interventions aimed at improving the performance of informal businesses should be tailored to address the specific needs associated with each business practice. For instance, training programs could focus on enhancing stock control and marketing strategies to boost profitability. These programs could teach best practices in inventory management and customer engagement, helping businesses optimize their operations and

increase their market share. Additionally, the importance of financial planning for resilience should not be overlooked. Training and support should emphasize the development of financial planning skills, enabling businesses to manage their resources more effectively and build the financial stability needed to weather economic downturns.

By recognizing the distinct roles that different business practices play in driving profitability and resilience, policymakers and business support organizations can develop more targeted and effective interventions. Such tailored approaches will help informal businesses not only improve their immediate financial performance but also build the long-term resilience necessary for sustained success in a competitive and often uncertain economic environment.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This final chapter integrates the key findings from the study, presenting a comprehensive synthesis of the research outcomes. It concludes the discussion by highlighting the implications of the findings for understanding the dynamics of the informal sector in Ghana and offers targeted policy recommendations. These recommendations are informed by the empirical evidence gathered throughout the study and are aimed at enhancing the performance and sustainability of informal businesses, thereby contributing to broader economic development initiatives.

5.1 Summary of Key Findings

The study aimed to explore the determinants of profitability and resilience among informal businesses in Ghana, with a particular emphasis on the role of business practices and perceived price position (PPP). By employing both Ordinary Least Squares (OLS) and Two-Stage Least Squares (2SLS) regression models, the analysis addressed potential endogeneity issues, ensuring that the relationships identified were robust and reliable.

One of the most significant findings of the study is the strong positive impact of business practices on profitability. The Business Practices Index, which encapsulates various management practices such as stock control, marketing, and costing practices, was found to be a critical determinant of profitability. Firms that implemented more effective management

practices consistently achieved higher profit margins, demonstrating that the quality of management within informal businesses is a key driver of financial success. This finding is particularly noteworthy in the context of the informal sector, where businesses often operate with limited resources and under challenging conditions. The study provides empirical evidence that even in such environments, better management can lead to substantial financial gains.

Another crucial aspect of the study was the examination of perceived price position (PPP) and its role in influencing business practices. The results revealed that businesses' perceptions of their competitive pricing compared to their formal sector counterparts significantly shaped their management strategies. Specifically, businesses that perceived their prices as either the same as their formal competitors were more likely to exhibit weaker management practices relative to those who perceived their prices were lower. This was the same with business that had no clear price position. This suggests that the way informal firms view their market positioning can have a profound impact on how they manage their operations. Firms that do not perceive a clear pricing advantage may lack the incentive to invest in robust management practices, which in turn negatively affects their profitability and resilience.

The study also conducted a disaggregated analysis of business practices, breaking down the Business Practices Index into its component parts. This analysis provided deeper insights into which specific practices were most critical for profitability and resilience. Stock control emerged as the most important practice for profitability, highlighting the centrality of efficient inventory management in maximizing revenue and minimizing costs. However, the impact of stock control on resilience was less pronounced, suggesting that while profitability and resilience are related, they are influenced by different aspects of business management.

Marketing practices were found to be crucial for both profitability and resilience, emphasizing the need for informal businesses to invest in strategies that enhance their market presence and customer engagement. Costing and financial planning also played significant roles, particularly in maintaining stability and ensuring long-term success.

The use of PPP as an instrument in the 2SLS regression models was instrumental in addressing endogeneity concerns, providing more accurate estimates of the causal relationships between business practices and business outcomes. The findings confirmed that business practices indeed have a direct and substantial impact on both profitability and resilience, independent of other confounding factors. This methodological approach strengthened the reliability of the study's conclusions, ensuring that the observed relationships were not merely correlational but indicative of causal effects.

5.2 Conclusion

The study concludes that effective business practices are essential drivers of profitability and resilience among informal businesses in Ghana. The findings demonstrate that firms engaging in better management practices, particularly in areas such as stock control, marketing, and financial planning, are more likely to experience higher profitability and greater resilience in the face of challenges. This conclusion underscores the importance of management quality even in the informal sector, where businesses typically operate under resource constraints and less formalized structures.

Moreover, the study highlights the significant role of perceived price position (PPP) in shaping business practices. Firms' perceptions of their pricing relative to formal competitors are crucial in determining how much they invest in management practices, which in turn affects their

financial performance. This finding suggests that interventions aimed at improving informal business performance should consider not only the direct enhancement of business practices but also strategies to help businesses better understand and optimize their market positioning.

The disaggregated analysis of business practices further emphasizes that different aspects of management contribute to business success in distinct ways. While stock control is critical for profitability, financial planning is more closely associated with resilience. This differentiation indicates that profitability and resilience, while interconnected, require distinct management strategies. Thus, policymakers and support programs should tailor their approaches to address the specific needs of each business practice.

These conclusions contribute to a broader understanding of the informal sector in developing economies. They highlight that, despite the challenges associated with informality, management quality remains a decisive factor in business performance. The study also provides evidence that targeted interventions to improve business practices can have significant positive effects on the profitability and resilience of informal firms, thereby supporting economic growth and poverty reduction.

5.3 Policy Recommendations

One of the key recommendations is the need for targeted training and capacity-building programs. Government agencies such as the Ghana Enterprises Agency (GEA), in collaboration with NGOs and private sector partners, should design and implement structured training initiatives aimed at enhancing critical business practices, specifically in stock control, marketing, and financial planning. These programs should be tailored to the realities of informal businesses, incorporating modular, practical, and on-site training formats. Priority

should be given to community-level delivery to increase accessibility. By equipping informal entrepreneurs with relevant skills and business acumen, such programs can directly improve their operational efficiency, profitability, and resilience to shocks.

Secondly, in recognition of the strong link between stock control and profitability, policies should focus on promoting affordable inventory management tools. This could include subsidized access to simple inventory-tracking mobile apps or low-cost software for small business owners. Additionally, targeted micro-grants or tax incentives (where applicable) can be introduced to encourage informal businesses to invest in basic inventory systems. Training programs should also integrate inventory management modules to ensure that technology adoption is accompanied by capacity enhancement.

Thirdly, marketing emerged from the study as a critical determinant of both profitability and resilience, underscoring the need for policies that expand market opportunities and strengthen visibility for informal businesses. Policymakers should therefore prioritize initiatives that improve access to both local and digital markets. This can be achieved by organizing trade fairs and regional expos that bring small businesses into direct contact with potential customers and partners, as well as by creating digital business directories and online platforms where informal businesses can showcase their products and services. In addition, the establishment of community-based digital marketing training hubs would provide entrepreneurs with practical knowledge on customer engagement, branding, and online advertising. By enhancing visibility and access to broader markets, such interventions will help informal firms expand their customer base, diversify revenue streams, and improve their long-term viability.

Fourthly, given the importance of financial planning to business resilience, comprehensive financial literacy programs should be rolled out in partnership with financial institutions and fintech platforms. These programs should focus on budgeting, saving, cash flow management, debt handling, and preparing for economic shocks. Additionally, tailored microfinance services such as flexible savings accounts and emergency loans should be promoted to meet the specific financial needs of informal businesses. Such support would not only improve financial decision-making but also enhance long-term sustainability and shock preparedness.

Despite the potential impact of these interventions, policymakers must also anticipate and address practical barriers that could hinder effective implementation. Low literacy levels among many informal business owners may limit their ability to fully engage with training materials or adopt written record-keeping and digital tools. Similarly, language diversity across regions can constrain participation and comprehension if programs are not delivered in local dialects. In addition, the persistent technology gap including limited smartphone ownership, unreliable internet connectivity, and low digital confidence, may impede the uptake of inventory-tracking applications and online marketing initiatives. Addressing these challenges requires deliberate adaptation of policy design through multilingual delivery, simplified training content, and the integration of low-tech or offline alternatives to ensure inclusivity and maximise reach across the informal sector.

Lastly, the study also reveals that informal businesses are far from homogeneous, with sectorial, regional, and size-based differences shaping how business practices influence profitability and resilience. Recognizing this diversity, policymakers should avoid a one-size-fits-all approach and instead implement interventions that are responsive to the unique contexts in which these firms operate. Support programs should be segmented according to industry,

business size, growth stage, and geographic location, ensuring that assistance is closely aligned with the realities of each group. For instance, interventions designed for food vendors in urban markets may differ significantly from those suitable for small-scale artisans in rural areas. Establishing regional-level business support centres that can provide context-specific training, advisory services, and resources would ensure that policies are not only inclusive but also effective. By tailoring support in this way, policymakers can maximize the impact of interventions and foster a more sustainable and resilient informal sector.

In conclusion, this study provides a comprehensive analysis of the factors driving profitability and resilience in the informal sector, offering actionable recommendations to support the growth and sustainability of informal businesses in Ghana. By implementing these recommendations, policymakers can help create a more vibrant and resilient informal sector, contributing to broader economic development and poverty reduction goals.

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