# KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY (KNUST)

COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

SCHOOL OF BUSINESS

# THE IMPACT OF GREEN SUPPLY CHAIN ORIENTATION ON ORGANIZATIONAL

**INNOVATIVENESS** 

BY

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A THESIS SUBMITTED TO THE DEPARTMENT OF SUPPLY CHAIN AND INFORMATION SCIENCES, KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR AWARD OF DEGREE OF MASTER OF SCIENCE IN LOGISTICS AND SUPPLY

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SAPS

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## DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Kwame Nkrumah University of Science and Technology, Kumasi or any other educational institution, except where due acknowledgment is made in the thesis.

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# DEDICATION

To my beloved Mother and Siblings for their unwavering support and prayers in all my endeavours.



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First, let me express my gratitude to Almighty Allah for His protection and guidance during my years at the Kwame Nkrumah university of Science and Technology. My supervisor Dr. Abdul Samed Muntaka deserve special thanks for his efforts, advice, and inspiration. I would not have progressed this far without you Sir. May Allah bless you abundantly.

Also, to my parents and the rest of my family may Allah continue to shower on you his blessings for the rest of your days. I wish to continue making you all proud, by Allah's might. I must conclude by expressing my gratitude to all respondents who consented to take part in this study. May Allah bless every one of you.



#### ABSTRACT

Green innovation represents a promising concept that can mitigate harmful environmental impacts while simultaneously enhancing business performance, fostering consumer confidence, improving cost-effectiveness, boosting productivity, and creating new opportunities for market share expansion. The study's findings highlight a noteworthy emphasis on stakeholder orientation within the cocoa industry in Takoradi, Ghana. Surprisingly, respondents' perceptions indicate a moderate level of attention to stakeholders, particularly employees and shareholders, who directly influence the firm. Notably, this study solely considers these two stakeholder groups. Interestingly, the findings also reveal that stakeholders, despite being acknowledged, are not extensively integrated into the day-to-day operations and decision-making processes of cocoa industry firms. This suggests room for improvement in effectively engaging stakeholders, aligning their interests with the company's objectives, and involving them in crucial decision-making processes. Furthermore, it is worth noting that within the realm of stakeholder orientation, there is a notable emphasis on shareholders over employees, potentially driven by the significant role shareholders play in funding the company's operations. In conclusion, the study underscores the potential benefits of green innovation and the need for a more comprehensive approach to stakeholder engagement within the cocoa industry in Takoradi, Ghana. By striking a balance between stakeholder interests and prioritizing sustainability, these companies can enhance both their environmental and organizational performance. BADW

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#### **CHAPTER ONE**

#### INTRODUCTION

#### 1.1 Background to the study

Excessive use of resources, toxic contamination, and greenhouse gas emissions are only some of the negative outcomes of rapid industrial expansion in recent years (NING et al., 2017). The effects of global warming have already been apparent. Dou et al. (2014) state that this is the most pressing environmental issue facing the human race today. The difficulties that climate change poses to businesses in this sector get more severe every day (Lee et al., 2012). As defined by Agustia et al. (2019), "green innovation" is a concept that reduces negative environmental impacts while improving corporate performance in areas such as customer confidence, cost effectiveness, productivity, and the creation of new market share opportunities. The existing work system will be replaced with a new one that is more conducive to green innovation in terms of organization and worker performance (Ge et al., 2018). However, this transition is not without its challenges. Transitioning to sustainability requires considerable changes to technology, institutions, business planning, and consumer patterns (Dou et al., 2014), as well as the economy, society, politics, law, and culture. Consequently, more challenges, especially in terms of operations and process management, are anticipated for enterprises. As a result, businesses must adjust their innovation processes and adopt new ideas to improve their supply chain's and company's sustainability performance.

Researchers have described green supply chain practices (GSCP) in various ways as a viable green supply chain management strategy that focuses on the manufacturing processes, effects, and mitigation of these processes while still making a profit for businesses (Shi et al., 2012). According to Srivastava (2007), "green supply chain practices" are "a collection of initiatives undertaken by an organization to mitigate its environmental impact." Credible GSCP is one of the best ways for suppliers to deal with intra- and inter-consolidated management issues and

raise environmental consciousness throughout the world, as stated by Shi et al. (2012). Current thinking suggests that manufacturing companies should make GSCP a priority because of the positive effects they can have on the environment through their production methods, supply chains, ecological footprints, and recycling initiatives. Instead than just responding to individual incidents or shifts in environmental rules, businesses may predict or avert environmental challenges by adjusting their practices (Aragón-Correa et al., 2008; Horbach & Rammer, 2020). Abdel-Baset et al. (2019) state that "every firm needs a green supply," but that "greening" requires cooperation from managers, firms, greens activists, and governments worldwide. To mitigate the negative consequences of environmental outcomes and boost market efficiency, manufacturers in both developed and least developed countries have embraced green solutions, encouraged supplier innovation, and shifted to green supply chains. Recent studies (Abeyratne & Monfared, 2016; Al-Ghwayeen & Abdallah, 2018; Dawei et al., 2015) demonstrate the significance of environmental concerns for the launch and maintenance of firms. Several environmental experts (Vachon, 2007; Wu et al., 2019) claim that the idea of "going green" has been considered by businesses of all sizes and in all sectors.

According to Gockowski, (2007), Ghana's yields are particularly poor when compared to its top rivals, Cote d'Ivoire and Indonesia, because the country's cocoa production is not just laborintensive but also takes place on smallholdings. The majority of cocoa farmers discover best practices can be challenging to adapt to (Edwin & Masters, 2005; Opoku et al., 2009). In 2005, for instance, the purple hue of the sector was caused by farmers' improper fermentation and drying of cocoa beans, which had a substantial negative effect on Ghana's reputation for high-quality cocoa beans. Ruf, (2007) adds that farmers typically prefer to expand their farms rather than replant old and sick cocoa trees due to the significant expenses associated with replanting. The outcome is a cocoa yield that is almost 60% lower than it might be due to the low number of hybrid plants compared to conventional trees in cocoa fields. However, empirical data shows that industrial firms have the most difficulty implementing green supply chain practices. This implies that creating a green supply chain is essential for the sustainability of manufacturing enterprises (Stevenson & Spring, 2007).

### **1.2 Problem Statement**

Unfortunately, a thorough analysis of the cocoa value chain shows that Ghana's market share in the overall amount of traded cocoa declines as the commodity travels downstream, from semi-processed products to completed products. Despite the potential economic benefits of exporting value-added cocoa goods, statistics reveal that the nation has instead consolidated its position as a competitive exporter of high-quality raw cocoa beans, which is necessary given the nation's enviable position on the global market. Fold, (2002) contends that it is unclear whether local value addition is beneficial for Ghana due to the stringent requirements under which a semi-processed good can be shipped. Despite the high premium status, the output of the cash crop needs to be raised while its quality must also be maintained above average in order to assure the best possible acquisition of prospective economic gains and to take advantage of niche markets. The interactions and relationships between the various participants in Ghana's cocoa supply chain must be continually improved in order to achieve this (Williams, 2009). Although the Ghana Cocoa Board (COCOBOD) has generally been successful in upholding stringent quality standards, the question of whether existing production patterns are sustainable confounds policymakers and scholars. Sustainability has been highlighted as a significant focus in the coming years especially combatting climate change and its impact as mentioned in the sustainable development goals by the United Nations. This research is needed in part because GSC factors are directly linked to pollution in the air, water, and waste. This area of study is especially important for countries still on the path to economic development. Many research on the effect of green supply chain orientation on organizational innovation have focused on developed nations; however, there have also been studies in the mining sector,

waste disposal enterprises, etc. (Koller et al., 2011; Seuring & Müller, 2008). It is against this backdrop that this study aims to investigate the impact of green supply chain orientation to organizational innovativeness in cocoa industry, Takoradi. In order to fill this knowledge gap, the current study seek to look at how the impact of green supply chain orientation to organizational innovativeness.

# 1.3 Objective of the Study

The general objective of this study is to evaluate the impact of green supply chain orientation to organizational innovativeness into cocoa industry of Ghana. The specific objectives are;

- 1. To determine the level of stakeholder orientation, green supply chain orientation and organisational performance/innovativeness among respondents in the cocoa industry.
- 2. To examine effect of stakeholder orientation on the performance of cocoa companies, Takoradi
- 3. To examine the influence of green supply chain orientation on the performance and innovativeness of cocoa marketing companies in Takoradi.
- 4.

### **1.4 Research Questions**

- 1. What is level of stakeholder orientation, green supply chain orientation and organizational performance/innovativeness among respondents in the cocoa industry?
- What is the effect of stakeholder orientation on the performance of cocoa companies, Takoradi

3. How does green supply chain orientation on the performance and innovativeness of cocoa marketing companies in Takoradi?

#### 1.5 Significance of the Study

This study supports initiatives aimed at empowering the environment and modifying the performance contribution of corporate social responsibility, among other things while boosting business performance and revenues, management of green innovation and responsibility. In order for the program to continue and be mutually beneficial, the company's corporate social responsibility implementation in this situation needs to pay attention to components of the surrounding environment. Technology that can be used by the community as a development plan for business performance is controlled by green innovation. The results of GSC implementation are also anticipated to constantly be maintained in accordance with the program's stated policy on the company's excellence that melds with both the company's and the community's environmental health from a product's beginning to conclusion, including after it has been used. This study might aid businesses in enhancing their performance. This study also contributes to the existing literature.

#### 1.6 Organization of the Thesis

There are five (5) primary chapters in the research. The first portion of the study, or chapter one, contains an introduction to the study's background, issue statement, research objectives, research questions, and the study's relevance. The second chapter analyses and reviews pertinent literature on the issue at hand. A thorough explanation of the technique to be followed for the study is provided in the third chapter by outlining the research design, research population, and sample design, data collecting, and analysis. The fourth chapter provides and discusses the study's results. The fifth chapter of the research contains a summary, a conclusion, and suggestions.



#### **CHAPTER TWO**

#### LITERATURE REVIEW

## **2.1 Introduction**

There are two main sections to this chapter's literature review. Green supply chain management, green innovation, green product innovation, green purchasing, market orientation, green process innovation, green management innovation, green marketing innovation, green innovation, and organizational performance are just some of the terms defined in this first section. The second section discusses previous empirical research on the topic at hand.

## **2.2 Conceptual Review**

# 2.2.1 Green Supply Chain Management (GSCM)

Supply chains that prioritize waste reduction, ecological improvement, resource efficiency, and material recycling are known as "green supply chain management" supply chains. Green supply chain management, which typically takes the shape of investments in technology, the purchase of new equipment, the training of suppliers, and personnel decisions, is practiced with the goal of maximizing profits through improved productivity (Kazancoglu et al., 2018; Large et al., 2013). Green supply chain management must be used by company managers in order to boost productivity and comply with government requirements regarding eco-friendly effects (Khaksar et al., 2016). Enhancing business performance in terms of its monetary, eco-friendly, working, and societal performance is the aim of GSCM (Geng et al., 2017).

Implementing green practices for stakeholders, lacking incentive to do so, running into roadblocks while trying to adopt green supply chain management for stakeholders, and overall performance consequences are just a few of the issues that green supply chain management may help with (Large et al., 2013). As stated by Abu Seman et al. (2019), green supply chain management allows businesses to maintain or lower demands from external sources like

government and consumers or customers. According to research (Sharma et al., 2017), green supply chain management can motivate many companies to invest in environmental preservation.

However, green supply chain management must be accounted for across the whole product life cycle, from concept to retirement. It is more than only included into the manufacturing and distribution of products (Eltayeb et al., 2011). However, implementing green supply chain management is challenging without senior leadership's support and buy-in (Govindan et al., 2016). According to the research of Kazancoglu et al. (2018), "green supply chain management" is an effort to minimize waste and optimize resources in a circular economy.

## 2.2.2 Green Innovation

Constant innovation is necessary to meet the drivers and challenges of GSCM. To differentiate from competitors and reduce environmental impacts, green innovations might take the form of unique strategies, concepts, ideas, products, methods, or services, as defined by Seman et al. (2012). The effective utilization of energy, materials, water, trash, and transportation can all be considered innovations. Because market projections show that these industries will grow faster than average over the next ten years, offering potential and prospects, green innovation is required to develop new markets in order for a company to experience success in the future (Walz & Eichhammer, 2012).

To benefit from green innovation, businesses must build alliances, evaluation systems, and service level agreements in close collaboration with all relevant parties, particularly their suppliers. Both management and employees must offer direction and share knowledge. In terms of time, money, and resource investments, this calls for a change in mentality from all stakeholders (Kang & Hwang, 2017). For businesses and their suppliers, green innovation could offer a platform for cooperation.

Supplier commitment is vital to the creation of eco-friendly products and materials, which might arise from suppliers working with customers or manufacturers. In their 2014 study, Lee et al. (2014) looked at the part suppliers play in helping focus companies use green innovation while creating new goods. According to the study, greening the supplier has a good impact on green innovation and subsequent environmental and financial performance. Knowing where in the supply chain green innovation can take place is necessary for a company to start the process. Green innovation can be divided into four categories: green management, green technology, and green products (Tseng & Chiu, 2013).

## 2.2.3 Green Product Innovation

When a product's value is increased due to green innovation, the cost of related environmental measures is decreased and the company's standing is enhanced. Many customers choose to buy environmentally friendly products and will continue to patronize those stores (Lambertini et al., 2017). Zhu et al. (2007) found that consumers were prepared to pay a premium of 13% for environmentally friendly goods in 1994. When it comes to commercial, technical, and economic feasibility, green product innovation is all about the numbers. The term "green" or "eco-design" is used to describe a product's capacity to improve an organization's environmental performance by analyzing its functioning and reducing its negative impact on the environment (Tseng & Chiu, 2013). Research by Li & Huang, (2017) found that companies who develop brand-new green goods and processes outperform those that only tweak current ones.

## 2.2.4 Green Purchasing

The term "green purchasing" refers to a method of buying that takes into account the environment and ensures that the materials or products are in line with the company's environmental goals. Examples of such goals include reducing waste generation, promoting

resource conservation, recycling, and reuse, and replacing materials (Kwaku, n.d.). In this study, the term "green purchasing" refers to the practice of working with suppliers who have earned the right to do so and who cooperate with the organization during the purchasing and acquisition of raw materials with low environmental impact.

## 2.2.5 Market Orientation

The marketing concept is put into practice by market orientation, which calls for businesses to produce, share, and react to market information. The organizational learning of a business, a crucial part of a market organization, extends beyond the bounds of the firms itself because of the wealth of learning resources and abilities accessible to effectively and efficiently satisfy client needs. Thus, a focus on the market serves to both inspire and direct relationship marketing efforts. According to Bae (2012), a market-oriented company culture emphasizes three interrelated staff behaviors—focus on customers, focus on competitors, and cross-departmental cooperation—to provide consistently high value for consumers.

The more market-driven a company is, the more likely its departments will work together. Organizations can increase customer value through interfunctional coordination when departments outside of marketing work together (Bae, 2012). Customer satisfaction is the ultimate goal of a market orientation and the gauge of the customer value provided by a firm (Mariadoss et al., 2016), but it is affected by many factors both inside and outside the marketing department. According to Seuring and Müller (2008), a mark orientation improves the firm's performance by emphasizing market information and the necessity for functionally coordinated operations to gain a competitive advantage.

The functions of each department must be redefined for a corporation to have a market focus. According to Bae, (2012), the way a seller creates each value for consumers is comparable to how a conductor shapes and integrates each subgroup's contribution to a symphony orchestra. Marketing should therefore play a leading and coordinating role in addition to traditional operations to ensure that the rest of the firm lives up to its promise and the expectations of its customers (Seuring & Müller, 2008). In other words, because everyone is involved in marketing operations, a market orientation helps to coordinate the efforts of all departments, with the marketing function being crucial to the company's success. A firm's organizational system must be restructured as a result of a market orientation. The distinctions between each function grow hazier as cross-functional coordination of function action becomes the norm inside a company and as each function's roles are redefined.

According to Seuring & Müller (2008), a corporation should consider managing a set of fundamental business processes rather than separate functional departments in order to give more effective and efficient solutions to achieve customer satisfaction. The company's operations benefit from a focus on the market. A positive market orientation has been found to correlate with business performance (Vanalle et al., 2017).

## 2.2.6 Green Process Innovation

The supply chain is responsible for around 75% of a company's total carbon footprint (Cheng, 2011). The concept of "cradle to grave," where both the process and the product terminate at the landfill, will give way to "cradle to cradle," where the process recycles or repurposes the product at the end of its useful life. This innovative green approach allows the firm to recover and reuse its end-of-life goods, which is good for the environment (Sharma et al., 2017). Lean manufacturing is a waste-reduction strategy that can help improve environmental performance (Guo et al., 2020). This may be accomplished by the employment of cleaner technology and the adoption of practices such as recycling, reducing, reusing, and cutting down on the number of raw materials required in manufacturing. Tseng and Chiu (2013) note that early supplier

involvement (ESI), internal auditors who assess the supplier's environmental performance, and management support all contribute to green process innovation.

#### 2.2.7 Green Management Innovation

One of the most significant and sustainable methods to gain a competitive edge is through green management innovation (Tseng & Chiu, 2013). A company's capacity to compete depends on its management's ability, culture, and internal leadership. Effective green inventions and the advantages they provide are not the result of external demands. The visionary who inspires staff to participate in the process of green innovation is the company's leader (G.-H. Wu et al., 2018). Managers must allocate people and financial resources to more ecologically friendly tactics (Tseng & Chiu, 2013). Management innovation includes training on reducing the consumption of natural and non-renewable energy resources as well as seminars on environmental awareness. Additionally, management should make sure that its suppliers have Environmental Management Systems (EMS) that are certified by the ISO 14000 standard and are motivated to cut back on waste and emissions (G.-H. Wu et al., 2018).

## 2.2.8 Green Marketing Innovation

Green marketing innovation is the creation of environmentally friendly marketing practices in businesses (Choi & Hwang, 2015). Green marketing innovation in this study places special emphasis on enhancing product marketing strategies such packaging, placement, promotion, and price as well as enhancing GSCM strategies' environmental performance.

## 2.3 Green Innovation and Organizational Performance

The ability of firms to maintain a competitive edge can be improved through innovation (Huang and Li, 2017). The GI strategy is derived from green organizational performance, which includes environmental support norms and behavior. Corporate executives with a culture of environmental protection are more anticipated to implement environmental protection measures and boost corporate GI (Jayal et al., 2010). In order to increase environmental quality standards, firms must change their organizational culture in order to differentiate their GI capabilities. (Gupta & Barua, 2018; Y.-H. Li & Huang, 2017). Businesses are under pressure from many stakeholders (internal or external) to reduce the negative impact of their products on the environment as a result of the ongoing degradation of the natural environment (Luo et al., 2022). Reduced environmental impact and improved competitive performance are two benefits of GI in products and processes (Xie et al., 2022; Yu et al., 2019). Enhancing resource efficiency, maximizing environmental needs are all made possible by the development of green products (Fallahpour et al., 2020; Seles et al., 2016). Businesses must innovate green processes to reduce clean production costs and pollutant emissions in order to comply with environmental regulations (Fallahpour et al., 2020; Xie et al., 2022).

Businesses are using GI more and more to reduce hazardous waste emissions and respond to demand from outside sources ((Khan et al., 2021). However, GI effectively needs resources from across organizational and functional lines. A partial mediating effect of GI between green organizational culture and green performance was discovered by Wang's research (2019). The GSCI paradigm should be adopted by organizations in cooperation with SC partners (Peng et al., 2022). Although other studies have suggested a connection between integration and creativity, GSCI provides opportunities to acquire and use resources (Novitasari & Agustia, 2021; Seles et al., 2016; Z. Wu & Pagell, 2011). According to research, environmental management methods have an impact on EP both directly and indirectly (Fallahpour et al., 2020; Xu et al., 2022) The earlier research also demonstrated that customers expect their suppliers to maintain high levels of OP and EP, and that businesses also view their stakeholders in a similar way (Mina et al., 2021; Yu et al., 2019; Zhu & Sarkis, 2004). Determining GI's

direct and indirect effects on organizational performance in the context of the current study is the author's goal (OP and EP).

#### 2.4 Relationship between Green Supply Chain and Organizational Innovation

The organizational environment is improved by green supply chains. Utilizing non-toxic, non-hazardous materials and reducing waste are two ways to do this (Eltayeb et al., 2011). The definition of "green innovation," however, poses a challenge because it is a relative concept without a fixed value. The degree of "greenness" is not quantified in research since it does not clearly distinguish between green and non-green innovation. Then, all businesses are regarded as green innovators (Manjunatheshwara & Vinodh, 2018). There was only one study that particularly looked at the relationship between green innovation and the direct or quantitative influence on environmental performance, by (Hojnik & Ruzzier, 2016). According to the study, environmental performance is favorably correlated with both green product and process innovation. Improvements in product design, product reuse and recycling, adherence to international standards, sustainable sourcing of raw materials, limitation of emissions or waste, and supplier evaluation based on environmental criteria are all ways in which a corporation can contribute to environmental well-being (Large & Gimenez Thomsen, 2011).

Many businesses value and place a high importance on ecological issues when picking their suppliers, but they often fail to acknowledge their own contributions. Large et al. (2013) found that an increased awareness of the need to include environmental considerations into the supply chain was the primary determinant in the development of sustainable supply networks, rather than providers themselves. The public holds the targeted companies responsible for any harmful environmental repercussions, thus it's in their best interest to increase awareness of the problem. Unveiled and unmonitored suppliers could put businesses at risk (Dubey et al., 2015). Poor environmental practices of suppliers may harm the corporate environmental reputations

of many companies. To guarantee that environmental goals are met, businesses must therefore give suppliers precise environmental standards and design guidelines (Li et al., 2015).

Corporate sustainability for both parties can be achieved through supplier and business collaboration on the sharing of logistical data and the development of common standards and procedures. Suppliers should be engaged in early product design meetings to ensure early supplier engagement (ESI) and to apply management approaches like just-in-time (JIT) (Zhu & Sarkis, 2004). By sharing this information, all stakeholders can forecast environmental effects and find appropriate mitigation strategies (Zhu et al., 2007). However, businesses must help their suppliers comply with legal and certification standards. Enforcing certification has the drawback that vendors may only abide by it to meet the requirements. According to Kumar et al. (2015), they might not see the certification as something that will help them or as a springboard for further green innovation.

Seuring & Müller (2008) conducted two case studies on fresh fruit export supply. In order to create sustainable supply chains, two commercial methods for the export of fresh fruit between Britain and South Africa were looked into. In the first plan, company standards were imposed through a prescriptive, paternalistic manner. This resulted in a lack of communication and misunderstandings, which translated into a bad reputation for the parties concerned and additional expenses that weren't necessary. The second strategy's approach promoted partnerships and open lines of communication and was more collaborative. According to the study, a collaborative, shared-value supply chain is more effective than a prescriptive, paternalistic pushing model. According to Zhu et al. (2007), this demonstrates that suppliers should be the trailblazers in order to outperform their rivals since innovation promotes their operational, environmental, and financial well-being.

### 2.5 Competitive Advantage of Green Supply Chain Innovation

Due to the quick changes in technology and the short product life cycles, businesses must create their green innovations in order to stay more competitive (Tseng & Chiu, 2013). The goal of every business is to maximize earnings while minimizing costs. Costs can be decreased by implementing techniques for pollution avoidance or removal, improving the quality of products, and reversing logistics (Zhu et al., 2013a). These strategies boost revenue and give businesses a competitive edge, yet few businesses are significantly altering their operations to be more environmentally friendly despite external pressures (Kumar et al., 2015). The effects of green technologies are closely related to a company's internal performance and are strongly correlated with competitive advantage. To remain competitive, innovation is therefore required (Eltayeb et al., 2011; Guo et al., 2020).

Once more, it's unclear from the literature whether or not green supply chain management (GSCM) is cost-effective and whether a company will gain competitive advantages if it is applied. As costs rise and corporate operations slow down, some businesses may even suffer (Beske et al., 2014a). A theoretical model on the various pressures that motivate businesses to apply GSCM was empirically examined by Zhu et al., (2013b) in their study. The test's findings indicated that while GSCM practices have little immediate impact on a company's financial performance, long-term improvements in environmental and operational performance do boost financial results. It was discovered that, rather than directly improving economic performance, green supply chain management does so indirectly. According to study by Asif et al., (2020) environmental performance and economic performance are linked in Japanese manufacturing firms. The achievement of environmental and financial objectives can be aided through collaboration between stakeholders and suppliers.

### 2.6 The Impact of Green Supply Chain Strategy on Organizational Performance

Rising environmental awareness, consumer demand, regulatory requirements, the necessity for waste management, product recovery, reuse of materials and packaging, and adjustments to product projects are just some of the recent developments in the business environment that have had an influence on supply chain management. Companies are under increasing pressure to reduce the negative impact their activities have on the environment (Cherrafi et al., 2018a; Manjunatheshwara & Vinodh, 2018; Vanalle et al., 2017), and many have begun implementing programs to do so. To this end, "green practices" have emerged as a novel approach that may help firms improve their environmental performance while still achieving their financial objectives (Cherrafi et al., 2018a; Kumar et al., 2015).

In their study of the literature on GSCs, Fallahpour et al., (2020) divided green practices into three groups: green design (eco-design and life cycle assessment), green operations (green manufacturing and remanufacturing), reverse logistics, and waste management. Because the first was a compilation of the practices that were most frequently documented in the literature, this classification was used to define the scope of the current study. The viewpoints of the product, process, and systems are necessary to consider in attempts to increase manufacturing's sustainability, according to (Jayal et al., 2010). Process-level mitigation of toxic waste, resource and energy consumption, and occupational hazards is essential. The four main stages of the life cycle—pre-manufacturing, manufacturing, consumption, and post-use—must be considered at the system level throughout several life cycles.

The impact of environmentally friendly practices on supply management efficiency has been the subject of several research (Zhu & Sarkis, 2004). There might be repercussions for the health of the economy, the environment, and society as a whole. Several scholars have provided empirical evidence to support the claim that an organization's environmental and social performances improve once it implements green practices internally or throughout its supply chain. Manjunatheshwara and Vinodh (2018) argue that incorporating environmentally friendly procedures into supply chains can improve long-term viability. One such company is Ford. Ford lowered its CO2 emissions by 85%, increased its process efficiency, and slashed its transportation expenses by almost 25% by switching from cardboard boxes to recyclable plastic containers to convey its automobile parts. Green practices are increasingly being adopted by top manufacturers, as evidenced by their high levels of environmental and social performance (Scur & Barbosa, 2017; Pan et al., 2020) in areas such as improved environments, better adherence to environmental regulations, more cohesive working environments for laborers, and improved public perception of the organization. Furthermore, implementing green practices offers a number of significant financial benefits (Dubey et al., 2015; Govindan et al., 2016; Lee et al., 2014), resulting in a situation where enterprises and the environment benefit equally (Beske et al., 2014b). Green methods can boost product quality, lower warehouse expenses, lower costs associated with logistics and transportation, and even increase innovativeness (Z. Wu & Pagell, 2011). These procedures improve resource efficiency, directly influencing economic performance (Yu et al., 2019). The effectiveness of supply networks' economic performance and green practices have been shown to be positively correlated by (Kumar et al., 2015). Additionally, they discovered that GSCM procedures improved economic performance and competitiveness. To determine how green practices connect with various GSC performances, additional research is required in this area.

## 2.7 The Impact of Process Innovation on Green Supply Chain Performance

To survive in the dynamic volatility and harsh rivalry of today's business climate, companies of all sizes have been forced to embrace innovation in response to the rapid corporate change and globalization of the past several decades (J. Li et al., 2015). Thus, innovation has become essential to the development and survival of organizations (Hojnik & Ruzzier, 2016). The innovation literature makes a distinction between several forms of innovation, such as process innovation and product innovation. The current study focuses on process innovation, which is the introduction of new components into management and production operations of businesses (such as new production methods, management strategies, and new technology) (Murillo-Luna et al., 2011). Utilizing cutting-edge information, equipment, and inputs can assist firms in rearranging, utilizing, and maximizing their capabilities and resources, which lowers costs and improves production efficiency (Murillo-Luna et al., 2011). Process innovation may take the form of investments in new technology, which may take the form of machinery and equipment, supply-chain management software, product design software, staff training for new customer services, etc (Pan et al., 2020).

It is worth noting that "green process innovation," a new subfield of process innovation that aims to alter production processes to reduce pollution and other negative effects on the environment and resources, has emerged in response to rising environmental concerns (Fallahpour et al., 2020). Process innovation enhances numerous areas of a firm's success, according to prior empirical studies (Asif et al., 2020; Lambertini et al., 2017). More specifically, it can raise financial performance, operational performance, and customer happiness. According to (G.-H. Wu et al., 2018), process innovation was successfully implemented, and the more money firms put in it, the greater their competitive advantage.

In a similar vein, Gómez-Luciano et al., (2018) discovered a favorable correlation between process innovation and a firm's competitive advantage. Process innovation is used by businesses in manufacturing to speed up production and lower expenses (Lambertini et al., 2017). Hojnik & Ruzzier, (2016) discovered more recently that process innovation is beneficial for business profitability, expansion, and competitive advantages. By reducing waste and costs, process innovation, according to Govindan et al., (2014), can help businesses improve their

economic and social performance. In this regard, Nuertey, (2015) discovered that businesses that adopt process innovation generate higher amounts of income per employee than businesses that do not do so. Additionally, process innovation shows promise in reducing attrition and growing the number of employees (Gao et al., 2020). Additionally, companies that use process innovation not only strengthen their position in the market, solve problems, and get a competitive edge, but they also enhance their corporate image, outperform the competition, and make breakthroughs (Vanalle et al., 2017).

Businesses could use green process innovation in response to the growing environmental concerns to reduce environmental risks, pollution, and other negative effects on resource consumption during the course of their life cycles (Fallahpour et al., 2020; Han & Huo, 2020). In order to meet the demands of stakeholders and regulatory bodies, Peng et al., (2022) claim that green process innovation can significantly improve an organization's environmental performance (Murillo-Luna et al., 2011). As a result, the advantages and results of process innovation take into account three performance kinds (namely, economic, environmental, and social). The precise effects of process innovation in the context of a supply chain have also been studied by researchers. In a survey of 153 businesses in the Malaysian automotive supply chain, for instance, Eltayeb et al., (2011) found that process innovation had a positive influence on the enterprises' economic, social, and environmental performances. Gómez-Luciano et al. (2018) found that the vast majority of academics believe that supply-chain collaboration is necessary for a firm to increase its innovation performance. However, there aren't many studies out there that look at how process innovation affects the efficiency of the green supply chain. This prompted Gao et al., 2020 to call for more research into the supply chain setting. Since rivalry has gone beyond the single firm to the supply chain, and since it is vital for businesses to thrive in the present market, the study of the influence of process innovation on green supply chain performance is of highest significance.

### 2.8 Green Supply Chain Integration, Green Innovation and Organization Performance

The launch of a GSCM strategy that fully takes into account resource usage and environmental impact is stressed by GSCI. Green collaboration is also emphasized as a means of achieving important sustainable development goals (Han & Huo, 2020).

One definition of green external integration is the incorporation of green customers and suppliers. The level of environmental cooperation between manufacturers and outside partners, such as a shared understanding of environmental obligations, cooperative problem-solving, and joint achievement of environmental goals, is referred to as "green external integration" (Cherrafi et al., 2018a). Examples of green supplier integration include establishing shared environmental objectives with suppliers, encouraging them to use cutting-edge manufacturing technologies, imposing strict environmental specifications on supplier product design, and working together to create a new environmentally friendly product (G.-H. Wu et al., 2018). Green customer integration techniques to meet environmental objectives, joint selection of ecostrategic options to lessen the environmental impact of new products, and collaborative planning to fulfill customer requirements and satisfy environmental safety requirements are all examples of this (Han & Huo, 2020).

On the other hand, green internal integration focuses on cross-organizational environmental activities (Bae, 2012). Internal integration recognizes the necessity to reduce barriers to communication and collaboration across departments and closely coordinate various divisions inside a corporation (Cherrafi et al., 2018b). Internal integration facilitates concurrent engineering and optimizes product and process innovations by enabling design, production, and marketing to work together effortlessly (G.-H. Wu et al., 2018). Therefore, SC partners could take part in environmental projects, provide vital GI expertise, promote collaboration, and create cross-company problem-solving techniques (Fallahpour et al., 2020).

According to research, the performance benefits of green product and process improvements may vary. A competitive edge and improved organizational performance are frequently linked to developments in green products and processes (Cheng, 2011). It has been established that green process innovation offers no significant competitive or economic advantages. It is challenging to explain this conflicting outcome. It could have a major effect on organizational performance and act as a mediator in the connection between GSCI and performance (Fallahpour et al., 2020).

## 2.9 Empirical Review

In this part, the empirical research on the green supply chain is reviewed. In order to understand the key ideas and conclusions that are significant and important for this study, the review focuses on a variety of industries. First and foremost, Seuring & Müller, (2008)'s analysis of food supply chains highlights the importance of the triple bottom line metric of sustainability to organizations. In order to achieve sustainable agricultural supplies, they contend that it is essential to manage the supply chain's economic, environmental, and social performance. The authors chose and handled raw material flow from the factory gate back to agricultural output while tracking the whole supply chain for Swiss Nestle Company Limited as a case study. They came to the conclusion that efficient management of sustainable supply chain procedures assures improvement in company capabilities rather than the creation of new talents. They also saw the value of horizontal partnerships in the food industry's establishment of the Sustainable Agriculture Initiative. Partnerships, quality management skills, and a willingness to implement change were all identified as potential factors in creating sustainable supply chains (Habib et al., 2020).

Tabesh et al. (n.d.), using the British fresh potato industry as a case study, surveyed producers, merchants, and retailers to examine supply chain performance according to sustainability

criteria of economic, social, and environmental performance. The main task was to identify and clarify the key participants' perceptions of the sustainability issue, including how these perceptions change over time, the factors that influence sustainability, the degree to which these factors had changed over time, and the perception of conflict or synergy among these factors. Repeated semi-structured interviews and postal questionnaires were used to collect data for this study (Emmanuel et al., 2021). It was determined the extent to which external agents, such as market and regulatory organizations, influenced decision making, the relative weight of factors that acted as performance constraints, such as labor supply and the availability of natural resources, and the scalability and nature of the potato business itself. Once again, information was gathered on sustainable practices in organizations. After receiving surveys in the mail from the British Potato Council (BPC), 240 of the initial 1,000 registered potato producers who each produced more than 10 hectares of potatoes yearly responded. Again, a representative sample of 28 potato merchants was collected, and among them, 17 (or 60%) filled out the survey. In addition, we polled eight stores and found that just four had satisfactory responses to our inquiries.

After 17 business owners responded to the first questionnaire, they were sent another one with identical questions. Only 7 of the 10 respondents addressed the trade-off between economic, social, and environmental considerations. All participating merchants finished the second survey. However, only 20 of the 80 sampled growers participated in the second phase. The results of the survey indicated that there were financial and environmental gains to be made by reducing environmental dangers and increasing workers' competencies. Profitability, market needs, food quality, and climate were all highlighted as important economic factors in the research (Emmanuel et al., 2021). However, there was a major connection between social and environmental elements, and a growing synergy between economic and environmental concerns. There were consequently detected modifications and synergy among sustainability

components. They come to the conclusion that while economic factors essential to sustaining a business and keeping a competitive edge are important to actors, their pursuit of these factors cannot be divorced from social and environmental concerns. According to the authors, this emphasizes the significance of social and environmental aspects as decision-influencing factors and as measures of company performance.

Zaato et al. (2020) provided a detailed examination of the dynamics of a single pillar of sustainability by looking at how social concerns are incorporated into supply chain management from an operations management perspective. The study's overarching goal was to refine a battery of indicators for gauging the societal benefit of suppliers' operations. They considered proximal critical supply chain structure characteristics including transparency, dependency, and distance in their quest to adopt these socially responsible practices. Three industries were selected for the survey: the food industry (NAICS) code 325, and the transportation equipment industry (NAICS) code 336).

Bag, (2016) set out to examine logistical infrastructure, trade discrepancies, environmental and social equality concerns for a group of 89 countries. World Bank and IMF databases provided the information used for this analysis. Macro-level connections between supply chain logistics, environmental sustainability, and development were established through the use of Data Envelopment Analysis (DEA) to measure efficiency at the national level and Analysis of Variance (ANOVA) to evaluate disparities across regions. Under the premise of constant returns and variable returns to scale, the input-oriented method was used to calculate the efficiency levels of individual countries. The variables used to represent cargo clearance times, labor payments, logistics overhead costs, and carbon dioxide emissions were selected on the basis of the input dimensions. The output dimensions included logistical overhead expenses,

as well as social and environmental equity factors. A total of 56 countries were found to be scale-efficient, with optimal productivity being achieved at those scales (Novitasari & Agustia, 2022).

The average scale efficiency for European countries was 0.788, indicating that any improvement in the development or investment of the input variables could result in trade balance improvements that were greater than proportional. This was the case for France, Austria, Belgium, Bulgaria, Hungary, Portugal, the United Kingdom, Italy, and Spain. Thirty-three of the 89 countries were lagging behind their potential output. Global supply chain studies (Sangiru Umar et al., 2016) show that, to compete in growing markets and save production costs, companies are placing a greater emphasis on specialization and flexibility. Supply chain costs like this may be related to organizations working together to head off surprises when competing interests arise. To provide integrated networks that encompass a broad variety of consumers and suppliers, it was also found that efficient coordination amongst supply chain agents requires the purposeful creation of infrastructures. The environmental, social, and logistical costs and times associated with sustainability measures all have an effect on international trade.

Consumer goods, electronics, chemicals and pharmaceuticals, automobiles, and trade (China, Brazil, Hungary, India, and the Czech Republic) are just some of the industries and emerging economies studied by van den Berg et al. (n.d.) to see how social and environmental sustainability affects long-term profitability. Finding out what sustainable management's substantial value is and which sustainable techniques work best were the primary objectives. The report assesses the eco-friendliness of various companies' internal operations and their supplier management. Resource efficiency, end-of-pipe filtering, production input factors (environmental aspects), working conditions, safety standards, and community development
(social aspects) are the six facets of sustainable management that are examined by the authors to assess the sustainability performance of businesses. The authors of a recent paper propose that companies with a high level of financial success are more likely to engage in sustainable efforts than those with a lower level of success, and that companies with a high level of environmental and social practice gain a number of competitive advantages.



#### **CHAPTER THREE**

#### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The methodological approach to the gathering, analyzing, and presenting of the primary data is covered in this part. The broad strategy a researcher uses to conduct a research project is referred to as research technique, according Dwivedi et al., (2021). The Chapter especially addresses important theme areas such as the study design, population, sample, and sampling procedures, research approach, research field, instrument, data collection procedure, validity, and reliability, and data analysis.

## 3.2 Research Design

The operational framework for conducting research is referred to as research methodology (Govindan et al., 2014). Descriptive research methods were used for this investigation. This is related to the researcher's goal of providing reliable information on a population or topic of study in order to establish causal relationships (Dwivedi et al., 2021; Pan et al., 2020). Furthermore, surveys don't regulate or interfere with naturally occurring phenomena. Additionally, the application of this design aided in the measurement of these magnitudes in the general populace by assessing people's knowledge, beliefs, preferences, and satisfaction (van den Berg et al., n.d.).

## 3.3 Research Approach

According to Ioannidis et al. (2014), a quantitative motif's epistemological foundation assumes the existence of quantifiable and identifiable social facts. In light of the nature of the study's goal, its specific objectives, its hypotheses, and the characteristics of the main data that would be gathered and examined, the study adopted the quantitative research approach. According to Ridder (2017), the quantitative approach aims to understand phenomena by gathering numerical data and analysing them using techniques that are founded on mathematics (in particular statistics).

This method often starts with the collecting of data based on a hypothesis or theory, then uses descriptive or inferential statistics to draw conclusions (Sim et al., 2018). Inferring general conclusions about population features from testing of statistical hypotheses is a common way to describe the deductive nature of quantitative approaches. The assumption that there is a single "truth" that exists and is unaffected by human perception is another common criticism of quantitative methods. Additionally, it was discovered that the results of quantitative research might be prescriptive, explicative, and confirmatory (Trevena et al., 2013).

# 3.4 Population of the Study

According to Cappella et al. (2011), the target group is the population about which the study seeks to collect information and draw conclusions. Each and every person who has any kind of role in the Takoradi cocoa supply chain is included in this sample. Population refers to the entire set of subjects, variables, or occurrences under study (Greene et al., 2016).

This research mainly focused on the domestic value chain, from the farm gates to the takeover point, due to the broad scope of the value chain. In fact, cocoa is exchanged through a domestic and global supply chain, and at various points along the chain, it is marketed as a variety of products (Cappella et al., 2011). Participants from the domestic value chain were recruited for the study, including farmers, buyers, authorized buying firms, and the Cocoa Marketing Company of COCOBOD in Takoradi. The research population is characterized as being of a heterogeneous type since the actions taken by the chain's participants are relatively dissimilar in terms of function. Although the precise sizes of individual players are known, the total number of cases that make up the research population are unknown (for all case types combined) (Greene et al., 2016).

## 3.5 Type and Source of Data

Every research study requires two primary types of data: interviews and documents. This study included both primary and secondary sources of information. Primary data includes things like the researcher's own observations, archival materials, survey results, interview transcripts, and case studies (Greene et al., 2016). Data collection from a primary source was necessary due to the nature of the research. Questionnaires, interviews, and focus groups were the main methods for acquiring primary data. By giving questionnaires to the many actors who were sampled for the quantitative study, the data were mostly obtained from primary sources. In order to gather more qualitative data for the study, interviews and focus groups with a small number of participants were also held. From journals, periodicals, and books, secondary data were acquired. This study relied heavily on secondary sources for its literature analysis and theoretical framework development. These sources' arguments began to matter, too, in deciding the course of the conversation.

## 3.6 Sample Size and Sampling Techniques

A researcher may find it quite challenging at times to examine every component of a particular population due to certain limitations. There is a requirement for the researcher to go through a structured process known as sampling when there are strong motivations to focus on only a few components of a particular population. To choose a large enough sample of the population's elements such that it is possible to generalize the properties or features of those elements to the population as a whole after studying and comprehending those elements' individual characteristics (Greene et al., 2016). Sample refers to this segment of a specific population.

There were strong justifications in this study for the researcher to focus on a small portion of the whole population. Primarily, it was not realistic to check each individual employee of the thousands of farmers, purchasing clerks (PCs), and license buying firms (LBCs) who make up Takoradi's domestic cocoa chain. Despite the limitations of both logistics and human resources, the time needed to finish this investigation just did not allow for such a broad coverage. Takoradi adds that there doesn't seem to be any theoretical basis for researching all instances of a population with a set of extremely comparable traits. It made sense for the study to select an acceptable sample from the available population. For both the qualitative and quantitative parts of the study, the sample components, sampling methodologies, and sample distribution are provided in this section. 100 responders would be the sample size for the study. Kish and Leslie's population sample-matrix would be used to calculate the sample size (1965). The researchers want to use the Kish and Leslie method from 1965 to figure out how many people to include in their sample. The formula for determining the required sample size is as follows:

Sample size (n) =  $\frac{Z^2 p (1-p)}{d^2}$ 

#### Where;

n= Minimum Sample size

z = is the z-value at  $\alpha = 0.05$  corresponding to 1.96 approximately 2

p = proportion of respondents who regularly involved in the cocoa supply chain

By convention this proportion p = 0.5 if there is no literature found in the study area.

d = the proposed precision of the study = 0.1

Therefore; (n) =  $\frac{2^2 0.5 (1-0.5)}{0.1^2} = 100$ 

# **3.7 Sampling Procedure**

Since the population under study was so large, the researcher had to resort to sampling techniques in order to select an accurate cross-section. Sampling, as defined by Birks et al.

(2013), is "the process of selecting a subset of a population from which to draw inferences about that population's characteristics" (emphasis added). Heise et al., (2015) shared the view that sampling entails selecting respondents in a way that makes them as representative of the population as feasible.

A sample of 100 respondents would be used in the study. The population sample-matrix created by (Birks et al., 2013) would be used to estimate the sample size. The respondents for this study work will be chosen using a systematic sampling technique. All following respondents would be chosen based on the succeeding Nth count after the initial respondent has been chosen at random (Heise et al., 2015). Mention how systematic sampling techniques can be used to increase the sample's representativeness when the elements' ordering is connected to the trait of interest.

# **3.8 Data Collection Method**

Interviews and focus groups were the two main methods used in the qualitative study to collect data from respondents, whereas the quantitative study used a questionnaire.

## 3.8.1 Questionnaire Method

Questionnaires would be the main tool used to gather data for the quantitative investigation. All sampled respondents would be asked to complete a well-structured questionnaire that would be used to collect primary data for the quantitative study. All of the critical study components may be tested with the help of the responses. Each group of respondents would receive a single set of questionnaires in order to accomplish this. It was planned to distribute 100 questionnaires. It would be extremely helpful to use a questionnaire to collect quick responses.

#### **3.8.2 Interview and Focus Discussion**

Farmers, purchasing companies (PCs), and some selected employees of license buying companies (LBCs), and the cocoa marketing company (CMC) will be interviewed informally to collect qualitative data for the purposes of mapping the flow process of cocoa and identifying the risks at various stages within the cocoa chain that have an impact on the objectives of a green supply chain. Researcher performed in-depth interviews with a subset of chain players, predominantly located in the Western Regions of Ghana's cocoa growing belt, after doing a preliminary study of the baseline data and talks with a subset of chosen farmers, PCs, and representatives of a subset of LBCs and the CMC. Focus groups, with an average of 8 people per group, were also run in a special way for the chain's handpicked players. In both instances, an interview guide was used to glean information about stakeholders' perspectives on the three main dimensions of sustainability (economic, social, and environmental) across the supply chain's four main phases (purchasing, internal operations, warehousing, and outbound transportation). Audio recordings were made of all interviews and focus group discussions, with supplementary written notes taken on occasion.

Although the primary emphasis of this approach would be on supply chain mapping and risk documentation, the researcher's understanding of the quantitative findings would be greatly enhanced by the information revealed in the interviews. Both would provide the researcher with a wealth of information that would be difficult, if not impossible, to obtain from a questionnaire alone. The most significant problem with either strategy is the length of time it would take to complete, which would be exacerbated by the fact that some farmers and PCs are illiterate and would demand to have the interviews conducted in their native tongue. Although it would make transcription more difficult, translating the data into English for further analysis is necessary in order to bridge any potential communication barriers and deliver more in-depth results.

## 3.8.3 Pre-Testing of Questionnaires

Before gathering the real data for analysis, a wise researcher would run the questionnaire through a number of tests, claim (Vaishya et al., 2013). On the basis of this concept, the study would conduct a pilot study, face validity testing, and content validity testing. Ridder, (2017) asserts that face validity deals with the question of whether the questionnaire accurately measures the topics under investigation. The author goes on to say that a crucial aspect of the test is whether the targeted respondents will find the items' phrasing to be understandable and straightforward. In order to determine whether there were any areas of uncertainty or confusion, an interview would be undertaken with a small sample of respondents from the study's four major selected players. This would make it easier for the researcher to modify some of the question's components to fit the industry under inquiry. To guarantee content validity, the items would take into account all comments and ideas after copies of the questionnaires were distributed to specialists in the study's field who would analyze each item and judge if it accurately measured the theoretical components listed.

Additionally, ten (10) respondents would complete a pilot test of the questionnaire, chosen at random. This small sample size would be dictated by Dwivedi et al., (2021) assertion that pilot testing is best conducted with at least ten (10) replies. By doing a pilot test, the researcher will be able to identify any potential questionnaire issues and make the necessary modifications, as well as minimize any potential errors (Dwivedi et al., 2021). It would be useful for testing, among other things, the appropriateness of the question content, the level of linguistic sophistication, and the question sequencing.

### 3.9 Validity and Reliability

Dwivedi et al. (2021) state that when designing a study, analyzing the data, and judging the study's overall quality, qualitative researchers should pay special attention to the study's validity and reliability. Ioannidis et al. (2014) emphasize the necessity of ensuring the validity and reliability of research instruments by pointing out that quantitative research has a substantial investment in reliability and validity. If the research's data are untrustworthy, the assessment techniques are unreliable, and the design characteristics don't provide enough internal and external validity, the research is scientifically useless.

As a result, from the beginning to the end of the investigation, these two important elements will be taken into account. To make sure that the data was acquired from the intended respondents, the hand delivery approach would be used when administering the questionnaires. The researcher would use the same methods while conducting interviews for the qualitative study. Notes taken during the interview would be used as a secondary reference to the audio recordings, which would also be used and transcribed later to ensure the absence of interviewer bias and the inclusion of all relevant information that could impact the study's validity and reliability. Exactly as it was in the surveys, the data gathered would be shown and examined throughout the analysis stage. Care would be used when editing to prevent any form of researcher bias.

# 3.10 Data Processing and Analysis

Editing, cleaning, transforming, and modeling data to emphasize important information, findings, and suggestions is what data analysis is all about, according to authors such as Ioannidis et al. (2014) and Thomas et al. (2022). According to Hayes et al., (2012), a thorough examination of the data results in information that is immediately understandable and concise, allowing the reader to make inferences and grasp what is happening at a glance. using logic to

interpret the collected data (Zikmund et al, 2013). After editing and coding the questionnaire responses, the analysis was done using SPSS version 22.0, a statistical package for social science. For our social science research, this statistical program is advised (Trevena et al., 2013).

Categories would be found through data analysis and organized into topics for presentation and discussion. It would compute both descriptive and inferential statistics. To determine how much of the volatility in the dependent variable was due to variations in the independent variable, a typical multiple regression analysis would be carried out. According to Trevena et al., (2013) and work psychology, this method can be used in every aspect of company decision-making. Khan et al., (2021); Trevena et al., (2013); Xu et al., (2022) state that descriptive statistics deal with the description and summarization of data, whereas inferential statistics deal with the conclusions reached from the results.

#### 3.11 Ethical Consideration

Ethics, according to Nuertey, (2015), is primarily linked to morality and deals with questions of right and evil within communities, societies, or groups. Consequently, it is crucial that everyone conducting research understand the ethical issue (Bag, 2016). Researchers will exercise the highest degree of ethical rigor possible in their work. Participants must voluntarily consent, be fully informed of the research's goal, methods, and advantages, and be given the opportunity to withdraw at any time, as stated by Tabesh et al. (n.d.). Participants will be informed of the study's goals, receive guarantees of privacy, and be given the opportunity to opt out if they so choose.

The questionnaire's first page would contain a declaration of consent, and the participant's informed consent would be assumed upon completion of the form. To maintain the data's confidentiality, no participant names or identifying information may be gathered. And perhaps

most crucially, the researcher would treat each study subject with respect. Additionally, respondents will be given the assurance of anonymity and confidentiality when responding to the survey.

# 3.12 Organisational Profile

Takoradi, in western Ghana, is where the research would be conducted. The Cocoa Board in Takoradi City will be the primary location for the inquiry. By 2021, it is projected that there will be 991,000 people residing in the Takoradi Metropolitan Area. Takoradi, where most enterprises are located, has a current size of around 191.7 km2 (2.53 sq mi) as of March 2018. COCOABOD is the hub of the industry in terms of production, investigation, extension, internal and external marketing, and quality assurance. The Board's specialist divisions carry out the activities, which fall into two main categories: pre-harvest and post-harvest (Thomas et al., 2022).

The Board's Primary Goals Include the Implementation of Measures to Reduce the Impact of Pests and Diseases on Cocoa, Coffee, and Shea Nuts. Processing cocoa, coffee, shea nuts, and cocoa waste can help increase their value and make them more marketable for export and home use. Support, take part in, and advance studies that enhance the quality of shea nuts, cocoa, coffee, and other tropical crops. Control the promotion of cocoa, coffee, and shea products inside the company. Negotiate the best terms for the acquisition, grading, sealing, selling, and exporting of cocoa, coffee, and shea nuts. Help the economy of Ghana expand by buying, selling, and shipping cocoa and cocoa products that have been certified as fit for export in accordance with the Cocoa Industry (Regulations) (Consolidation) Decree, 1968 NLCD 278. Different COCOBOD subsidiaries and divisions perform each of these tasks, but they are all well-coordinated and integrated to benefit the cocoa industry and the economy as a whole (Vaishya et al., 2013).

#### **CHAPTER FOUR**

### DATA PRESENTATION AND ANALYSIS

#### **4.1 Introduction**

This chapter presents the analysis of the data and presentation of results using data presentation tools such as tables, charts and graphs. The chapter also discusses the results further to establish relationships or otherwise with the findings of other research works. The chapter started by running a reliability test followed by a summary or descriptive statistics to ascertain the nature of data as well as the characteristics of the respondents. The study employed both descriptive and inferential statistics to achieve the study objectives.

# 4.2 Descriptive Statistics

This section focuses on the graphical and numerical methods used to compile and process the data. Under this, the study used table charts and graphs to examine the respondents' demographic characteristics. The demographic information acquired from the self-administered questionnaires in this section of the study was evaluated and provided as follows.

## **4.3 Age Distribution of Respondent**

To identify the groups of persons who make up the participants, the age distribution of the respondents was examined. The data showed that the majority of the respondents were between the ages of 30 and 39. This group makes up the majority, accounting for 65.38% of the total participants, followed by those between the ages of 20 and 29, who make up 20.19% of the respondents, and those between the ages of 40 and 49, who make up just 15% of the respondents. Figure 4.2 below demonstrates that all age groups within the working class were represented, albeit the bulk of participants fall into the 30–3 year age group, followed by the 20–29 year age group. The findings indicate that the workforce in Ghana cocoa industry dominated by people within the age range of 30-39. That means there are very active workforce

in these departments in the Ghanaian public sector and this is very good for the country as younger and energetic workforce is very efficient and influences productivity positively (Jones & Takao, 2005).



Figure 1: Age Distribution of the Respondents

## Source: Field Data, 2023

# 4.4 Level of Education of the Respondents

The respondents' level of education was also sought. As the level of education could be a significant determinant of an employee or respondent's performance. The results are indicated in Figure 4.3

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#### Figure 2: Level of Education of the Respondents

# Source: Field Data, 2023

As indicated already the respondents' level of education is a variable the study included. Masudin et al (2021) revealed that the level of employees' education significantly influence their organization performance and innovativeness this serves as a valid justification for the inclusion of this variable. From the results, majority 68% of the respondents indicated that they have at least a first-degree level of education, 22% respondents representing possess a master's degree and 3.8% respondents had a Diploma/HND as shown in figure 4.3. This is unsurprising since the respondents are at critical departments and professions where confidentiality, high level of skills, knowledge and competencies are required. However, the educated respondents meant that they were informed, and thus contributed superior information to this study, which was valuable.

## 4.5 Levels of Stakeholder Orientation amongst cocoa industry in Takoradi Municipal

The study sought to assess the effect of stakeholder orientation and supply chain orientation on the performance of cocoa industry in Takoradi Municipal. This section provides findings relating to the level of stakeholder orientation in the cocoa industry in Takoradi Municipal. The responses to the items were measured with seven-point numerical scale such that one (1) represented the very strongly disagreement to the variables while seven (7) represented the very strongly agreement to the variable (1= Very Strongly Disagreement; 2=Strongly Disagreement; 3=Disagreement; 4=Neither Disagree nor Agree; 5=Agreement; 6=Strongly Agreement; 7=Very Strongly Agreement). To create stakeholder orientation factors, these variables were combined. Descriptive statistics like mean and standard deviation were used to examine these key variables.

Table 1 presents the outcomes. Using mean values from a seven-point Likert scale item, the appropriate mean values shown in Table 1 were interpreted.

Tab	le i	1: I	Descriptiv	e Statistics	s for	Employ	yee C	Drientation
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Mean	Std. Deviation
3.85	1.84
3.23	1.95
3.68	1.89
3.57	1.72
	Mean   3.85   3.23   3.68   3.57

# Source: Field Data, 2023.

The results indicate that the respondents expressed a neutral stance regarding the practice of organizations conducting annual surveys to evaluate the work attitudes of their staff (M=3.85, SD=1.84). Similarly, the respondents neither agreed nor disagreed with the notion that organizations make efforts to ascertain the genuine sentiments of their employees about their jobs (M=3.23, SD=1.95). Furthermore, the respondents expressed a moderate level of agreement that organizations hold regular staff meetings with their employees (M=3.57, SD=1.72), and that organizations routinely conduct staff appraisals that involve discussions

about employees' needs (M=3.68, SD=1.89). These results demonstrate that respondents are neither in agreement with nor opposed to the idea that organizations should serve the interests of their employees and meet their job demands. Employees that are happy in their jobs tend to work harder and do a better job for their employers, according to Berman et al. (1999). Organizations should therefore take action to raise staff orientation standards.

Also, the study sought to assess the level of shareholder orientation on the performance of cocoa industry in Takoradi Municipal.

Variables	Mean	S. D
1. Compare share value with competitors'	3.33	1.80
2. Managers designated for Shareholders interest	3.59	1.85
3. Senior managers have regular meetings with shareholders.	3.21	1.70
4. Our objectives are driven by creating shareholder wealth	3.16	1.80
5. Regular public relations aimed at stakeholders	3.07	1.70

# Table 2: Descriptive Statistics Results for Shareholder Orientation

## Source: Field Data, 2023.

According to the data presented in Table 2, it was observed that the participants expressed a neutral stance regarding their tendency to compare their share value with that of their competitors (M=3.33; SD=1.80). Additionally, the respondents indicated a moderate agreement that designated managers bear the responsibility of fulfilling shareholders' interests (M=3.59; SD=1.85). Furthermore, the participants reported a moderate level of agreement that senior managers engage in regular meetings with shareholders (M=3.21; SD=1.70). Additionally, the findings revealed that the participants expressed a neutral stance regarding the notion that aims are motivated by the creation of shareholder value (M=3.16; SD=1.80). Furthermore, it was

observed that organizations frequently engage in public relations activities targeted at stakeholders (M=3.07; SD=1.70). Based on the data shown in table 2, it is evident that the respondents do not express a clear agreement or disagreement with their organizations' adoption of a shareholder orientation.

## 4.6 Levels of Supply Chain Orientation amongst Cocoa Firms in Takoradi Municipal

The study additionally aimed to evaluate the degree of competition orientation. The results are displayed in Table 3. The findings indicate that respondents expressed a neutral stance regarding their organizations' comprehension of competitors within the context of value chain activities, in order to anticipate market developments (M=3.50; SD=1.82). Similarly, respondents neither agreed nor disagreed with the notion of systematically and frequently assessing competitors as part of their value chain activities (M=3.48; SD=1.70). Furthermore, respondents did not strongly endorse the practice of seeking opportunities in areas where competitors struggle to meet customer demands, as a component of their value chain activities (M=3.49; SD=1.82). Additionally, respondents did not strongly support the regular dissemination of competitor data at all levels within their supply chain activities (M=3.48; SD=1.80). Moreover, respondents expressed a moderate inclination to extrapolate key trends within their value activities, in order to anticipate competitors' future actions (M=3.51; SD=1.78). Lastly, respondents displayed a moderate inclination to develop value chain strategies based on their understanding of competitors (M=3.63; SD=1.74).

Furthermore, it was observed that the respondents expressed a neutral stance regarding their organizations' efforts to uncover additional actions undertaken by their competitors as a component of their value chain activities, which may be unknown to us (M=3.46; SD=1.78). Similarly, they neither agreed nor disagreed with the notion of disseminating information about competitors throughout all units as part of their value chain activities (M=3.32; SD=1.72).

Additionally, the respondents indicated that their organizations consistently monitor their commitment to understanding competitors as part of their value chain activities (M=3.80; SD=1.74). Moreover, they strive to identify competitor actions as part of their value chain activities before the majority of the market becomes aware of them (M=3.90; SD=1.64). In general, the participants expressed a lack of consensus regarding the extent to which their respective organizations prioritize monitoring their competitors (M=3.76). The findings shown in this study are supported by the assertion put out by Lumpkin et al. (1996) that a strong focus on understanding rivals' strategies can be beneficial in preventing any detrimental effects on client sales or market share.

Variables	Mean	S. D
1.Understand our competitors to be prepared for developments in	3.50	1.82
our markets.	27	7
2.Assess competitors systematically and frequently	3.48	1.70
3.Seek opportunities in areas of competitor weakness	3.49	1.82
4.Disseminate data on competitors at all levels regularly	3.48	1.80
5.Extrapolate key trends to understand competitors' future actions	3.51	1.78
6.Develop value chain strategies based on our understanding of	3.63	1.74
competitors.		3
7.Discover additional unaware actions of competitors	3.46	1.78
8.Communicate information about competitor across all units.	3.32	1.72
9.Constantly monitor commitment to understanding	3.80	1.74
competitors.		
10. Recognize competitor actions ahead the market.	3.90	1.64

**Table 3: Descriptive Statistics Results for Competitor Orientation** 

The study additionally aimed to evaluate the extent of competitor orientation. The results are displayed in Table 3. The findings of the study indicate that the respondents expressed a neutral stance regarding their organizations' comprehension of competitors within the context of value chain activities, in order to effectively anticipate market developments (M=3.50; SD=1.82). Similarly, the respondents neither agreed nor disagreed with the notion of systematically and frequently evaluating competitors as part of their value chain activities (M=3.48; SD=1.70). Additionally, the respondents expressed a neutral position on the idea of seeking opportunities in areas where competitors struggle to meet customer demands, as a component of their value chain activities (M=3.49; SD=1.82). Furthermore, the respondents reported a neutral stance on the regular dissemination of competitor data across all levels of the supply chain (M=3.48; SD=1.80). The respondents also expressed a neutral stance on the extrapolation of key trends within their value activities to gain insights into competitors' future actions (M=3.51; SD=1.78). Lastly, the respondents reported developing value chain strategies based on their understanding of competitors, with a mean score of 3.63 and a standard deviation of 1.74.

Furthermore, it was observed that the participants expressed a neutral stance regarding their organizations' efforts to uncover additional actions undertaken by their competitors as a component of their value chain activities, which may be unknown to us (mean = 3.46; standard deviation = 1.78). Similarly, they neither agreed nor disagreed with the notion of disseminating information about competitors across all units as part of their value chain activities (mean = 3.32; standard deviation = 1.72). Additionally, the respondents indicated a moderate level of commitment to consistently monitoring their understanding of competitors as part of their value chain activities (mean = 3.80; standard deviation = 1.74). Moreover, they acknowledged the importance of identifying competitor actions before the majority of the market becomes aware of them as a component of their value chain activities (mean = 3.90; standard deviation = 1.64). Based on the data presented in Table 4, it can be observed that the respondents expressed a

neutral stance regarding the coordination of value chain activities within their organizations in preparation for market growth (M=3.54; SD=1.68). Similarly, they neither agreed nor disagreed on the need to anticipate future value chain activities by extrapolating key trends (M=3.34; SD=1.76), coordinate opportunities in challenging areas of value chain delivery (M=3.39; SD=1.70), coordinate value chain possibilities before they become widely recognized (M=3.39; SD=1.63), explore undiscovered value chain opportunities (M=3.30; SD=1.68), and engage in systematic and frequent coordination of value chain activities (M=3.75; SD=1.46). However, respondents generally agreed on the importance of coordinating strategies based on an understanding of value activities (M=3.72; SD=1.69) and sharing information about the value chain across all organizational units (M=3.72; SD=1.66). It was found that the participants expressed a neutral stance on the coordination of data on value chain activities inside their organizations, at all levels and on a regular basis (M=3.70; SD=1.68). Similarly, they reported a neutral attitude towards the continuous monitoring of their coordination of value chain functions (M=3.60; SD=1.69).

Variables	Mean	S. D
1. Coordinate our value chain activities to be ready for market	3.54	1.68
development	1	-1
2. Extrapolate key trends to coordinate future value chain activities	3.34	1.76
need.	33/	
3. Coordinate opportunities in areas where current value chain is	3.39	1.70
deficient		
4. Coordinate value chain possibilities before market responds	3.39	1.63
5. Coordinate value chain activities to discover unaware possibilities	3.30	1.68

Table 4: Descriptive Statistics F	<b>Results for Value</b>	<b>Chain Orientation</b>
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6. Coordinate our value chain activities systematically and frequently.	3.75	1.69
7. Coordinate strategies based on understanding of our value activities.	3.72	1.69
8. Coordinate information about value chain across all units.	3.72	1.66
9. Coordinate data on our value chain activities, at all levels regularly	3.70	1.68
10. Constantly monitor our coordination of value chain functions.	3.60	1.69

# 4.7 Levels of Performance amongst Cocoa Industry in Takoradi Municipal

The purpose of this objective was to evaluate how the performance of cocoa industry in Takoradi Municipal was impacted by stakeholder orientation and supply chain orientation. Results about the level of performance of cocoa industry in Takoradi Municipal are presented in this section. One (1) stood for very strongly disagreeing with the variables, while seven (7) stood for very strongly agreeing with the variables. The replies to the items were scored on a seven-point numerical scale. Performance is the result of the combination of these variables. Descriptive statistics like mean and standard deviation were used to examine these key variables.

Mean	S. D
3.63	1.85
3.45	1.87
3.79	2.03
3.40	1.87
	Mean   3.63   3.45   3.79   3.40

### **Table 5: Descriptive Statistics Results for Financial Performance**

According to the findings presented in Table 5, it was observed that the participants expressed a neutral stance regarding their organizations' ability to attain a return on their assets that surpasses the stated objective in the previous year (mean = 3.63; standard deviation = 1.85). Similarly, the respondents neither agreed nor disagreed that their organizations achieved sales above the stated objective in the last year (mean = 3.45; standard deviation = 1.87), achieved return on investments above the stated objective in the last year (mean = 3.79; standard deviation = 2.03), and achieved revenues above the stated objective in the last year (mean = 3.40; standard deviation = 1.87). The aggregate mean (with a mean of means equal to 3.49) suggests that the organizations exhibit a commendable level of financial performance. According to Venkatraman et al. (1986), financial indicators are a part of corporate performance; nevertheless, they solely consider whether the firm is achieving its economic goals. The study also aimed to evaluate the effectiveness of cocoa industry' internal processes in the Takoradi Municipal. The results are shown in table 6 below.

## Table 6: Descriptive Statistics Results for Internal Process Performance

Variables	Mean	S. D	
Improved supply chain flexibility	3.59	1.84	
Improved cost of supply chain	3.53	1.72	
Improved supply chain quality	3.70	1.80	7
Improved supply chain speediness	3.62	1.72	
1 Pr			

According to the data provided in Table 6, it was found that the respondents expressed a neutral stance regarding the improvement of their supply chain processes in various aspects over the past year. Specifically, the flexibility of their supply chain processes received an average rating of 3.59 with a standard deviation of 1.84. Similarly, the cost of their supply chain processes was rated at an average of 3.53 with a standard deviation of 1.72. Lastly, the quality of their

supply chain processes was rated at an average of 3.70 with a standard deviation of 1.80. It was found that the participants had a neutral stance about the improvement of their supply chain procedures in terms of speediness over the last year (M=3.62; SD=1.72). The average mean value (mean of means=3.38) suggests that there exists a certain level of internal process performance within the cocoa business in the Takoradi Municipal area.

The study also aimed to evaluate the Innovation and Learning Performance effectiveness of cocoa industry' in the Takoradi Municipal. The results are shown in table 7 below.

Variables	Mean	S.D	•
Enhanced operations management skills	3.43	1.46	
Enhanced supply chain management skills	3.32	1.55	/
Enhanced logistics skills	3.21	1.54	5
Enhanced marketing skills	3.24	1.54	
		1	

The results depicted in table 7 indicate that the participants expressed a neutral stance regarding the extent to which the cocoa industry has improved their skills in operations management compared to the previous year (M=3.43; SD=1.46), supply management compared to the previous year (M=3.32; SD=1.55), and logistics compared to the previous year (M=3.21; SD=1.54). Additionally, the data revealed that the respondents neither agreed nor disagreed on whether their organizations significantly enhanced their marketing skills compared to the previous year (M=3.24; SD=1.54).

# 4.8 Effect of Stakeholder Orientation on the Performance of Cocoa Firms in the Takoradi Municipal.

The study's third goals were to determine how stakeholder orientation and supply chain orientation impacted the performance of cocoa industry in the Takoradi Municipal. In order to facilitate a full study of regression analysis, a data transformation procedure was implemented to consolidate the constructs, which consisted of several indicators, into singular variables. The assessment of stakeholder orientation was conducted through the utilization of shareholder and employee orientation. The calculation of shareholder orientation involved the transformation of the findings pertaining to both shareholder orientation and employee orientation. A multiple regression analysis was performed in order to examine the aforementioned relationship. The findings are displayed in the following tables.

l'able 4.8	3: Model	: Summary	y		-	1	2
Mode	R	R Square	Adjusted R Square	Std.	Error of	the Estimate	
1	.820a	.747	.743	2.222	66	R	
	Q			1.1	Jun -		

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a. Predictors: (Constant), Stakeholder Orientation, Supply Chain Orientation

The summary table for the model evaluates the entire regression model. The first part, R, shows the correlation between the dependent variable (Performance) and the independent variables (Stakeholder Orientation and Supply Chain Orientation). Based on the results shown in Table 8, a strong positive correlation of 0.820 is seen between the independent and dependent variables. Cohen (1988) provides the following rules for interpreting the magnitude of the correlation coefficient. The correlation coefficient (r) can be classified into three categories based on its magnitude. When r ranges from 0.10 to 0.29 or from -0.10 to -0.29, it is considered small. When r ranges from 0.30 to 0.49 or from -0.30 to -0.49, it is classified as medium. Lastly,

when r ranges from 0.50 to 1.0 or from -0.50 to -1.0, it is categorized as high. This finding suggests that there is a statistically significant positive relationship between the independent variables and the dependent variable.

The coefficient of determination (R2 value) is included in Table 20 as part of the results. Both the R2 and the Adjusted R2 serve the same purpose. The coefficient, as stated by Hair, Ringle, and Sarstedt (2011), signifies the cumulative effects of the independent variables on the dependent variable. The findings indicate that the supply chain orientation and stakeholder orientation account for the majority (74.7%) of the difference in the performance of cocoa industry. Other elements that were not taken into account in this study can be blamed for the (25.3%). Table 9 demonstrates the importance of the complete model. The statistical analysis revealed that the model exhibited a considerable level of significance (p=0.000: p<0.05). The suggestion is that due to the attribution of this prediction to the scientific interplay among the variables in the model rather than random chance, there is a reliable basis for trusting the model to generate precise forecasts concerning the impact of stakeholder orientation on the performance of cocoa sector enterprises. According to some earlier empirical investigations (He, Zhang, Li, & Piesse, 2011), stakeholder orientation was a strong predictor of performance. This perspective validates those findings.

#### Table 4.9: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	2212.940	2	1106.470	223.972	.000b	
	Residual	400.158	104	4.940	5		
	Total	2613.098	102	12			

#### Dependent Variable: Performance

Predictors: (Constant), Stakeholder Orientation, Supply Chain Orientation

The role of each component in explaining the diversity in performance of cocoa industry businesses (74.7%). The scope of discussions will be restricted solely to stakeholder orientation in relation to this objective. According to Table 10, Stakeholder Orientation exhibits a beta coefficient of 0.511, which is statistically significant at a p-value of 0.000. After controlling for the effects of other factors in the model, the findings indicated that stakeholder orientation made the largest statistically significant positive impact on predicting the positive variance in Performance (Beta=0.511; p=0.000: p<0.05).

#### Table 4.10: Coefficientsa

Model		Unstandardized		Standardized	Т	Sig.	
C			cients	Coefficients		_	
		В	Std. Error	Beta	4	7	
1	(Constant)	471	.839	135	562	.576	
	Supply Chain Orientation	.193	.043	.434	4.470	.000	
	Stakeholder Orientation	.313	.060	.511	5.258	.000	

# Dependent Variable: Performance

The findings are supported by the study conducted by He, Zhang, Li, and Piesse (2011) on the relationship between stakeholder orientation and organizational performance in a developing market. The researcher observed that stakeholder orientation is positively and strongly associated with all performance indicators, and that stakeholder orientation factors considerably increase R-square (p .001). According to research by Patel, Hair, and Pieper (2016), there is a positive correlation between stakeholder orientation and company success.

Altogether, these findings support a central proposition of the instrumental stakeholder theory: that a broader stakeholder orientation is associated with better business results.

Because stakeholder orientation is anticipated to boost business performance, De Gooyert (2016) suggests that a company's poor performance may be a hint that it needs to raise its stakeholder orientation. Our follow-up research based on this important finding reveals that success in the cocoa sector in Takoradi is strongly linked to an overarching focus on key stakeholders. Rais and Goedegebuure's (2009) research corroborates our findings by demonstrating that most stakeholder connection variables influenced the strategy-performance relationship. As a result, the company's productivity suffers.

## 4.9 Effect of Supply Chain Orientation on performance of the Cocoa Firms in Takoradi

This study has assessed supply chain orientation by considering two dimensions: competitor orientation and value chain orientation. Performance has been evaluated with regards to financial, internal process, and innovation and learning indicators. The findings from the examination of this aim are presented in Tables 8, 9, and 10. It is noteworthy to acknowledge that the whole regression model exhibits significance, indicating that both shareholder and supply chain orientation possess statistical significance in predicting the profitability of the cocoa industry. The results from Table 11 indicate that there is a substantial positive relationship between Supply Chain orientation and the performance of the cocoa business in Takoradi (Beta = 0.434, p-value = 0.000).

The research shows that the cocoa industry's willingness to be highly effective and efficient in supply chain operations across all of the firm's activities, or their desire to manage supply chain relationships with their contractors with a focus on supply chain activities, positively affects all types of performance. This lends credence to Solakivi's (2014) claim that focusing on the supply chain helps firms gain an edge. This is because it enables them to establish themselves

as trustworthy and helpful, which in turn helps them build better, more long-lasting relationships with their suppliers. Research by Mehmet, Selim, Mine, and Fethi (2017) supports the findings of this study by showing that supply chain orientation has a positive and substantial impact on performance. The research shows that a focus on the supply chain is essential for the success of the cocoa market.

Supply chain orientation improves performance by increasing inter-organizational commitment, which is positively connected with efficacy, efficiency, and productivity, as stated by Chalal, Boucher, and Marquès (2015). If businesses are serious about boosting supply chain performance, they should encourage Supply Chain orientation practices across all supply chain players, as suggested by Dhaigude and Kapoor (2017). The firm has taken the lead in the supply chain by adopting a supply chain orientation, which has resulted in the supply chain growing steadily. These results are corroborated by the work of Hamid, Elhakem, and Ibrahim (2017), who argue that supply chain orientation (SCO) is one of the most important dynamic competences for improving a company's operational flexibility and performance. According to Patel et al. (2013), a focus on the supply chain is connected positively with both operational and corporate success. Companies that recognize the strategic benefit of controlling their supply chains may improve operational efficiency by integrating their operations with those of their supply chain partners. When businesses work together in this way, they may be able to more easily identify redundant steps in their interfirm procedures. To cite: Patel et al., 2013. According to Gligor (2014), SCO has a positive relationship with productivity in the workplace. Companies that recognize the strategic benefit of controlling their supply chains may improve operational efficiency by integrating their operations with those of their supply chain partners.

The results of this study demonstrate that, in comparison to supply chain orientation (Beta=0.434, p-value=0.000), stakeholder orientation (Beta=0.511, p-value=0.000) has a greater impact on the performance of cocoa industry. This leads to the conclusion that cocoa industry function better when they are internally focused on shareholders and employees. He, Zhang, Li, and Piesse (2011) have already backed up this claim.

## 4.10 Summary of the Chapter

This chapter has been concerned with the analysis and discussions of the objective of this study. Mean, standard deviation, and multiple regressions were the primary statistical techniques employed for the investigation. Tables were used to display the results. Regarding the main goals of this study, the analysis was conducted. An overview of the study's respondents' demographics is provided before the analysis begins. Descriptive statistics were used to analyze the first goal. The initial goal was focused on the degree of supply chain and stakeholder orientation in the cocoa industry at Takoradi. The findings showed that different stakeholder participation was moderate. A moderate response was also received about supply chain orientation. The effects of supply chain and stakeholder orientation on business performance were the subject of the second and third objectives, which involved a multiple regression analysis. The findings demonstrated that the performance of cocoa industry is positively and significantly impacted by both stakeholder and supply chain orientation. Although, the performance of cocoa industry is most significantly impacted by stakeholder orientation.

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#### **CHAPTER FIVE**

#### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### **5.1 Introduction**

The conclusions that were drawn from the research and data analysis are summarized in this chapter. On how stakeholders and policymakers can best include stakeholders and manage the supply chain, it draws findings and gives recommendations. Additionally, noted is the request for additional investigation. The goal of the study was to evaluate how well cocoa companies in the Takoradi Municipal Area performed in relation to its stakeholder and supply chain orientations. The study set out to accomplish three key objectives, which are as determine the levels of stakeholder orientation, supply chain orientation and organisational performance amongst cocoa companies in the Takoradi Municipal; examine the effect of stakeholder orientation on the performance of cocoa companies in the Takoradi Municipal; examine the Takoradi Municipal.

## **5.2 Summary of Findings**

The descriptive research strategy was used in this study because it best suited its goal of characterizing the phenomena among the cocoa industry. The study used a quantitative methodology. Inductive in nature, quantitative approaches draw broad conclusions about population characteristics based on the results of tests of statistical hypotheses. The municipal of Takoradi and the cocoa industry, which are the downstream of Ghana's cocoa, served as the study area.

Determine the levels of stakeholder orientation, supply chain orientation, and organizational performance across the cocoa industry was the study's first objective. The cocoa industry level of stakeholder orientation was evaluated in the first part of this aim. The mean and standard

deviation were used to analyse this aim. The cocoa industry employee and shareholder orientations were taken into consideration while analysing stakeholder orientation. The results of the study on customer orientation revealed a modest degree of participation and focus on staff members. The findings indicate a moderate level of agreement with regards to customer orientation dimensions. For instance, the organizations conduct surveys of their staff at least once a year to evaluate work attitudes (M=3.85). Additionally, efforts are made by the organizations to ascertain the genuine sentiments of staff members regarding their jobs (M=3.23). Furthermore, regular staff appraisals are conducted by the organizations, during which employees' needs are discussed (M=3.68). Lastly, the organizations hold regular staff meetings with employees (M=3.57).

A focus on shareholders made up the second aspect of stakeholder orientation. The findings indicate that a considerably moderate attitude towards shareholders than towards employees existed. This was demonstrated by the dimensions of shareholder orientation's mean score. The respondents neither agreed nor disagreed that the organizations often compare their share value to that of their rivals (M=3.33), senior management regularly meet with shareholders (M=3.21), and designated managers are in charge of advancing the interests of shareholders (M=3.59). There was a fair amount of agreement that goals are driven by increasing shareholder wealth (M=3.16) and that organizations frequently engage in stakeholder-focused public relations (M=3.07). The overwhelming impression is that cocoa industry are moderately focused on shareholders in terms of stakeholder orientation.

Evaluation of the cocoa industry's level of supply chain orientation made up the second part of the objective. Competitor orientation and value-chain coordination were the factors taken into account while measuring supply chain orientation in this study. The cocoa industrys' level of each of these dimensions was evaluated. The degree of consensus about Competitor orientation was likewise moderately substantial. The average score for the majority of dimensions was found to be below 3.5. There was a moderate amount of agreement seen in the parameters of competitor orientation. The empirical data is observed through the mean levels as presented below. It was determined that the respondents expressed a neutral stance regarding their organizations' comprehension of competitors within the context of value chain activities, in order to be adequately prepared for market developments (M=3.50). Similarly, they neither agreed nor disagreed with the notion of systematically and frequently assessing competitors as part of their value chain activities (M=3.48). Furthermore, respondents indicated a neutral position on the aspect of seeking opportunities in areas where competitors struggle to meet customer demands, as a component of their value chain activities (M=3.49). Additionally, respondents reported that their organizations regularly disseminate competitor data at all levels as part of their supply chain activities (M=3.48). Moreover, respondents expressed a slightly lower level of agreement in terms of extrapolating key trends to gain insight into competitors' future actions, as part of their value activities (M=3.34). Lastly, respondents indicated a moderate level of agreement in terms of developing value chain strategies based on their understanding of competitors (M=3.63). This observation indicates that the cocoa sector places significant importance on the role of rivals.

From the Supply Chain Orientation characteristics, Value Chain Orientation also had relatively moderate level of agreement. Organizations engage in value chain coordination in order to prepare for market development, as indicated by a mean score of 3.54. Additionally, organizations analyse significant trends to determine the necessary value chain activities for future coordination, with a mean score of 3.39. Another dimension of value chain orientation involves organizations identifying and coordinating opportunities in areas where their value chain function faces challenges in delivering desired outcomes, also with a mean score of 3.39. Other strategies involve attempting to align value chain opportunities before they become

widely recognized by the bulk of the market (M=3.39). Furthermore, organizations can endeavor to coordinate their value chain operations in order to uncover new opportunities that they may now be unaware of (M=3.30).

This research encompasses three elements of performance, namely internal process performance, financial performance, and innovation and learning performance. The findings suggest that the performance of the OMCs is moderately satisfactory across all three aspects. The results indicate an overall mean of 3.49 in terms of financial success, indicating that there is a moderate consensus that the return on assets, sales, investments, and revenues have all increased. Concerning the effectiveness of the internal processes, there was also a moderate degree of agreement. This is demonstrated by a 3.38 overall mean, which indicated that the respondents neither agreed nor disagreed that the cost, flexibility, speed, and quality of the supply chain have all improved. This also holds true for learning effectiveness and innovation. The findings revealed that the majority of respondents (M=3.32), (M=3.21), and (M=3.43) of the respondents neither agreed nor disagreed that the organizations had significantly improved their supply management, logistics, and operations management skills compared to last year respectively. Additionally, it was found that the respondents only slightly disagreed nor agreed that their companies' marketing expertise had greatly improved during the previous year (M=3.24).

The study's second and third objectives were to determine how stakeholder orientation and supply chain orientation impacted the performance of cocoa firms in Takoradi municipal. To calculate stakeholder orientation, the findings of shareholder orientation and employee orientation were transformed. To that end, a multiple regression analysis was performed. The findings showed that the independent variables (Stakeholder Orientation and Supply Chain Orientation) and the dependent variable (Performance) have a significant positive association. The findings indicate that the supply chain orientation and stakeholder orientation account for the majority (74.7%) of the difference in the performance of Takoradi cocoa enterprises. The regression model's findings demonstrated that supply chain orientation and stakeholder orientation both significantly improve cocoa industry performance.

# **5.3** Conclusion

Based on the analysis and study's findings, the following conclusions are drawn. Stakeholder orientation is the first inference to be made from this study. Surprisingly, respondents' responses regarding how much cocoa industry are focused on stakeholders showed a moderate level of agreement. Employees and shareholders, who have a direct impact on the firm, are the only stakeholders taken into account in this study. This study's findings indicate that cocoa industry respondents generally believe that stakeholders are not fully involved in the companies' activities. Even in terms of stakeholder orientation, the study comes to the conclusion that cocoa industry is far more focused on shareholders than on employees. This may be so because the former provides funding for the operation of the company.

According to the report, cocoa industry in Takoradi Municipal are doing moderately well in terms of supply chain orientation. According to the study's responses, the majority of cocoa industry have employed coordination strategies for successfully integrating various components of their supply chain. Because of the nature of the sector, integrating and coordinating supply chain activities is very important. Though it has generally been believed that the economy is not increasing much, a fact worth noting is that cocoa industry have been seeing a relatively high proportion of performance and growth. This may be explained by the fact that there is an increasing need for cocoa, and that the fluctuating global cocoa prices have been working in their favour.

Finally, the study can draw the conclusion that, although though cocoa industry places a higher priority on the supply chain than on stakeholders, the latter factor is most important in forecasting cocoa industry performance. Therefore, it follows that a focus on shareholders and employees will produce considerably better results than supply chain management. The influence of supply chain orientation is not lessened by this. The effectiveness of cocoa industry will be enhanced through everyday employee participation, better knowledge of their circumstances, and improved shareholder relations.

## 5.4 Limitation of the study

There are difficulties in almost every field study, and this one was no exception. Due to commercial exclusivity on the part of some stakeholders, the research design was restricted by the limited availability of objective, verifiable, quantitative data. Financial limitations, time restraints, scope restrictions, problems with sample size, moral dilemmas, and difficulties with statistical analysis are a few of them. Since the researcher self-funded the entire initiative, it was very challenging to expand the scope beyond his or her own resources. The amount of time available to do the research, which may cover a vast range of topics, was also relatively limited.

## **5.5 Recommendations**

Based on the research's findings and interpretations, the following recommendations have been made.

First, the study suggests that management of the cocoa industry create goals and strategies to serve the demands of its employees and meet their interests. Encourage regular management-employee gatherings and enhance staff evaluation processes. Additionally, it is advised that management of cocoa industry work to enhance their public relations in order to project a strong commitment to increasing shareholder value. Stakeholder orientation will be enhanced, and this will have a beneficial impact on organizational performance. Thirdly, the study also

advises management of cocoa industry to build up departments to regularly conduct external environment audits in order to anticipate changes relevant to competitors and clients. Finally, cocoa industry also need to increase internal audit to continuously monitor the amount of internal unit commitment to comprehending suppliers and continuously communicate information connected to suppliers. In order to enhance their effectiveness cocoa industry must fully utilize the significance of the supply chain.

# 5.6 Area of further studies

Future research can also take into account factors like business size, the number of branches, and other characteristics to see if they mediate or inhibit the link between supply chain orientation, performance, and stakeholder orientation.


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#### Appendix

# Questionnaire On Stakeholder Orientation and Green Supply Chain Orientation A Study on the Impact of Green Supply Chain Orientation on Organizational

Innovativeness

Dear Sir/Madam,

This questionnaire seeks to solicit information from you to aid a research project. The project covers the impact of green supply chain orientation on organizational innovativeness in cocoa board Takoradi and intends to assess the relationship between organizational performance/innovativeness and green supply chain strategy. It is in partial fulfillment of the requirements for an MSc Logistics and Supply Chain Management degree. The questionnaire is being circulated in a sample of cocoa dealing companies in Takoradi selected randomly from a database. Regardless of whether your firm is an innovator or not, your answers are very important to the accuracy of the survey. The data collected will ONLY be used for academic purposes and the results obtained will be displayed in aggregated form in any publications. Please provide your candid responses to the questions as they relate to your firm. Thank you.

#### **SECTION A: DEMOGRAPHICS**

1. Name of Company:Gender: [] Male [] Female2. age group? Up to 19 years [] 20-29 years [] 30-39 years [] 40-49 years [] 50-59 years []Above 60 years []

3. highest educational qualification? WASSCE [ ] Diploma/HND [ ] Degree [ ] Masters [ ] PhD [ ] Others.....

4. Years of work experience? 3-6 years [ ] 7-10 years [ ] 10-13 years [ ] more than 13 years [ ]

In sections A, B and C, please indicate your answer to each of the statements in all the tables by circling the appropriate number to the extent to which you agree. From 1-7 with 1 being the least level of agreement and 7 being the highest. Please indicate your opinion for each of the following statements below by placing a checkmark ( $\sqrt{}$ ) in the right column under the 5-point Likert Scale where: 1= Strongly Disagree 2= Disagree 3= Slightly Disagree 4= Neither Disagree Nor Agree 5= Slightly Agree 6= Agree 7= Strongly Agree.

Employee orientation	1	2	3	4	5	6	7
1. we have regular staff meetings with employees.							
2. we have regular staff appraisal in which we discuss employees'							
needs.							
3. we survey staff at least once a year to assess their work							
attitudes.	1				-	1	
4. we try to find out the true feelings of staff about their jobs.	1	Z		E		3	
Shareholder orientation	1	2	9	7	٢		
1. we regularly carry-out public relations aimed at stakeholders	2	R		ς,			
2. our objectives are driven by creating shareholder wealth				1	l.		
3. designated managers are responsible for satisfying			7	ÿ			
shareholders' interests.	1	2	/	,		_	7
4. we regularly compare our share value with that of our			/	1	774	1	
competitors.	-	2	H.	5	1		
5. We have regular meetings with shareholders.	8		1				
WJ SANE NO	2		1	1			

## SECTION B: STAKEHOLDER ORINTATION

### SECTION C: GREEN SUPPLY CHAIN ORIENTATION

Customers Orientation	1	2	3	4	5	6	7
1. we constantly monitor our commitment to serving customer							
needs as part of our value chain activities	( ) =	T					
2. we communicate information about customer experiences							
across all units.		1					
3. we develop value chain strategies based on our understanding							
of customers' needs.							
4. we measure customer satisfaction systematically and frequently							
as a part of our value chain activities.							
5. we disseminate data on customers satisfaction at all levels on a							
regular basis as a part of our value chain activities.						-	-
6. we help our customers be prepared for developments in their	1	-		2		0	1
markets.	2		2		7		
7. we try to discover additional needs of our customers of which	0	5	2				
they may be unaware.					0		
8. we seek opportunities in areas where customers have difficulty	_	-					
expressing their needs.		2		/			
9. we try to recognize customer needs, as a part of our value chain				1	1	5)	
activities, before the majority of the market recognizes them			4	4	YA.	/	
10. we extrapolate key trends to understand what customers will	0	2		/			
need in the future.	M	-					

Competitor Orientation	1	2	3	4	5	6	7
1. we constantly monitor our commitment to understanding							
competitors as a part of our value chain activities.							
2. we communicate information about competitor across all units.		T					
3. we develop value chain strategies based on our understanding							
of competitors.	5.U	1					
4. we assess competitors systematically and frequently as a part of							
our value chain activities.							
5. we disseminate data on our competitor at all levels on a regular							
basis as a part of our supply chain activities							
6. we understand our competitors, as a part of or value chain							
activities, to be prepared for developments in our markets.						1	-
7. we try to discover additional actions of our competitors of	-	N	-	2	_		
which we may be unaware.	2	N	2		2		
8. We seek opportunities in areas as where our competitors have	6	5	R				
difficulty delivering to customers.	2			N	8		
9. we try to recognize competitor actions before the majority of	_	-	9				
the market recognizes them		3		2			
10. we extrapolate key trends, to understand what competitors		-		/	(1	5,	
may do in the future.			3	19	16	1	
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Supplier Orientation	1	2	3	4	5	6	7
1. we constantly monitor our commitment to understand suppliers							
2. we communicate information about suppliers across all units							
3. we develop value chain strategies based on our understanding	1.1	Т					
of suppliers.							
4. we assess suppliers systematically and frequently as a part of							
our value chain activities.							
5. we disseminate data suppliers at all levels on a regular basis 6.							
we understand our suppliers, as a part of our value chain activities							
7. we try to discover additional actions of our suppliers of which							
we may be unaware.							
8. we seek opportunities in areas where our suppliers have						_	-
difficulty delivering to us.	1	3	-	K	-	2	-
9. we try to recognize supplier actions before majority of the	Z	-	1	-	1		
market recognizes them.	5		R				
10. we extrapolate key trends to understand what suppliers may				1			
do in the future.	-			U			

E					1	5/	
Logistics Orientation	1	2	3	4	5	6	7
1.we constantly monitor our commitment to understanding our logistics activities as a part of our value chain activities.	010	A/	2				
2.we communicate information about our logistics activities							
across all units as a part of our value chain activities.							

3.we develop value chain strategies based on our understanding of					
our logistics activities.					
4.we assess our logistics activities systematically and frequently					
5.we disseminate data on our logistics activities at all levels on a	1.10	T	0		
regular basis		L			
6.we understand our logistics activities to be prepared for					
developments in our markets.					
7.we try to discover additional logistics possibilities of which we					
may be unaware.					
8.we seek opportunities in areas where our current logistics					
function has difficulty delivering to customers.					
9.we try to recognize logistics possibilities before the majority of					1
the market recognizes them.	1	3	F	-	7
10. we extrapolate key trends to understand what logistics	Z	7	-	1	
activities we may need in the future.	Š	h			

FULLET							
Operations Orientation	1	2	3	4	5	6	7
1. we constantly monitor our commitment to understanding	<u></u>	1	1			1	r.
our operations management activities				/	NN	1	
2. we communicate information about our operations	N	1	0	14	1		
management activities across all units		8		/			
3. we develop value chain strategies based on our	/	A					
understanding of our operations management activities.							

4. we assess our operations management activities							
systematically and frequently							
5. we disseminate data on our operations activities at all levels							
on a regular basis	C	-	Ē	i.			
6. we understand our operations management activities to be							
prepared for developments in our markets.		5.0					
7. we try to discover additional operations management							
possibilities which we may be unaware.							
8. we seek opportunities in areas where our current operations	4						
management function has difficulty delivering for us.							
9. we try to recognize operations management possibilities							
before the majority of the market recognizes them.	1					-	-
10. we extrapolate key trends to understand what operations	2	3	5	2		0	-
management activities we may need in the future	3	Ž	N	ź	2		
The second	2	E	2	2		<u> </u>	
Alter 1 Att							

Value-Chain Coordination	1	2	3	4	5	6	7
1. we constantly monitor our coordination of value chain			/	/	(		
functions.					MA	5)	
2. we coordinate information about our value chain across all	N		/	3	5	/	
units.		8	2	$\geq$	/		
3. we coordinate strategies based on understanding of our		5					
value activities.							
4. we coordinate our value chain activities systematically and							
frequently.							

5. we coordinate data on our value chain activities, at all levels						
on a regular basis.						
6. we coordinate our value chain activities to be prepared for						
develops i our markets.	C	-	Ľ.			
7. we coordinate our value chain activities to try to discover		1				
additional possibilities of which we may be unaware.						
8. we coordinate opportunities in areas where our value chain						
function has difficulty delivering for us.						
9. we try to coordinate value chain possibilities before	4					
majority of the market recognizes them.						
10. we extrapolate key trends to coordinate what value chain						
activities we may need in the future.	1				-	-
CENT?	2	-	5		3	
SECTION D: ORGANIZATIONAL PERFORMANCE	1	£.		2		

## SECTION D: ORGANIZATIONAL PERFORMANCE

1. we achieved a high degree of customer satisfaction in the last year.	1	2	3	4	5	6	7
2. we kept a large number of existing customer market share in			>	ÿ			
the last year.	1		-	,	-		r.
3. we attracted a significant number of new customers in the last			/		WA	1	
year.	1		7	5	/		
4. we secured a large portion of our desired market share in the	B		1				
last year.	>						
Financial Performance	1	2	3	4	5	6	7

1. we achieved revenues above our stated objective in the last							
year.							
2. we achieved sales above our stated objective in the last year.							
3. we achieved return on investments above our stated objective	1.1	T					
in the last year.	>						
4. we achieved return on our assets above our stated objective in							
the last year.							
Internal Process Performance	1	2	3	4	5	6	7
1. the speediness of our supply chain processes improved in the							
last year.							
2. the quality of our supply chain processes improved in the last	i.						
year.	5				-	-	
3. the cost of our supply chain processes improved in the last year.	2	5		F		2	-
4. the flexibility of our supply chain processes improved in the	7	2	2	-	1		
last year.	S		R				
Organizational Innovativeness and Learning Performance	1	2	3	4	5	6	7
1. we significantly enhanced our marketing skills compared with	_	-	2				
last year.		2		2			
2. we significantly enhanced our logistics skills compared with				1	17	5/	
last year.		1	6	2	6	/	
3. we significantly enhanced our supply management skills	8			/			
compared with last year.	5						
4. we significantly enhanced our operations management skills							
compared with last year							

### Thank You.