

Enhancing Operational Performance through Organizational Culture: Exploring Social Sustainability Focus and Practices in Supply Chains

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Abstract

Sustainable supply chain practices involve a range of initiatives that are critical for global supply chains, including health and safety, child and slave labour, working conditions, human rights and community impact programs. However, while they may improve supplier sustainability behavior, they do not necessarily lead to better sustainability performance. There is a need to explore the relationship between sustainability orientation and basic and advanced socially sustainable supply chain practices. This study had objectives, to examine the effect of social sustainability orientation on social sustainability supply chain, to determine the effect of social sustainability supply chain on operational performance, to assess the mediating role of social sustainability supply chain between the relationship of social sustainability orientation and operational performance. To achieve these objectives, the study employed quantitative method, stratified sampling technique with a sample size of 150. The study has a response of 145 representing a response rate of 96.6%. The study's constructs have a KMO and Cronbach's Alpha results of 0.8 and 0.75 respectively. The regression analysis results of the study indicated that social sustainability orientation has a positive and significant effect on social sustainability supply chain, the findings of the study concluded that social sustainability supply chain has a positive and significant effect on operational performance. Again, the findings of the study concluded that social sustainability supply chain positively and significantly mediates the relationship social sustainability orientation and operational performance. Also, the findings of the study concluded that organizational culture positively and significantly moderates the relationship between social sustainability orientation and social sustainability supply chain. The study recommended that organizations should be able to provide information to all employees to understand the importance of social sustainability so that they can all joins hands to pursue social sustainability practices that will guide the organization to be social responsible to be in operations. Management in organizations should try to promote social sustainability as a major goal across all departments so all employees will understand the essence of pursuing such a goal in their organizations. Organizations should have a clear policy statement urging social sustainability in every area of operations so in carrying out their activities.

Keywords: Operational Performance, Organizational Culture, Competitive Advantage and Company Performance, Technological Innovation, Social Sustainability, Supply Chains

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1.0 INTRODUCTION

Socially-sustainable supply chain (SSSC) practices involve a range of initiatives that are critical for global supply chains, including health and safety, child and slave labour, working conditions, human rights and community impact programs (Walker et al., 2014). Tragedies such as the Dhaka fire in 2012 (Manik and Yardley, 2012) and the 2013 collapse of Rana Plaza (North, 2013), coupled with concerns for child and slave labor in the global fashion supply chain (ILO, 2017), many brands, such as Marks & Spencer (M&S) in the UK, expanded their SSSC practices to improve human rights across their supply base and supplier communities (Waldock, 2016). Besides being relatively unexplored when compared to environmental practices different SSSC practices can have different business outcomes (Klassen and Vereecke, 2012). For example, process oriented SSSC practices, such as codes of conduct and monitoring systems, serve as guides for suppliers on sustainability issues and help monitor supplier activities (Marshall et al., 2015). However, while they may improve supplier sustainability behavior, they do not necessarily lead to better sustainability performance (Jiang, 2009). Audits may in fact drive dishonest behavior and mock compliance. The need to provide the right 'face' to the customer and the subjective nature of auditing creates uncertain performance outcomes (Jiang, 2009; Huq et al., 2014). After all, the Rana Plaza building had passed compliance audit months before its collapse (Webb, 2017). Conversely, market-oriented practices, such as product redesign and Fairtrade initiatives, are much more strategic, longer-term commitments, which enhance reputation and potentially lead to improved operational performance across supply chains (Marshall et al., 2015).

The Ferrero Group, the world's third largest chocolate producer Journal of Operations and Production Management plan to eliminate slavery amongst all their cocoa suppliers by 2020, partnering with the cooperative movement ECOOKIM (Enterprise Cooperative Kimbre) in Côte D'Ivoire. This collaboration forms a major element of their sustainability effort, addresses their reputational challenges and drives operational improvements (Kittilaksanawong and Curcuraci, 2017). Some argue that firms should implement a broad range of SSSC practices (Winter and Knemeyer, 2013), though most tend to limit their practices, usually monitoring and certification practices, to key upstream partners (Quarshie et al., 2015; Thorlakson et al., 2018). Therefore, it is important to understand which practices can be most effective in improving sustainability, overall firm performance (Quarshie et al., 2015), and the mechanisms for such influence (Pagell and Wu, 2009; Closs et al., 2011).

Given the array of SSSC practices, Marshall et al. (2015) distinguish between 'basic' and 'advanced' practices. Basic practices focus on the health and safety of workers in the supply chain, such as health and safety monitoring or management systems, while advanced practices redefine the supply chain through new products or processes that benefit multiple stakeholder groups, promote transparency of social sustainability information and include NGOs and communities in supply chain decision making (Marshall et al., 2015). Due to a lack of research on SSSC practices, academics and managers find it difficult to delineate them, understand what drives them and have little knowledge of their impact. Furthermore, evidence suggests that the impact of SSSC on the operational performance of firms is ambiguous (Marshall et al., 2017). The few existing studies find performance benefits from SSSC practices difficult to realize (Hollos et al., 2012; Marshall et al., 2017).

However, other studies found general sustainability practices led to improved access to knowledge and information-sharing capabilities (Pedersen, 2009), better collaboration (Wu and Pagell, 2011) and resulted in 'cooperative advantages' from incorporating local community concerns (Strand, 2009). It is contended, though, that SSSC practices might indirectly lead to improvements in operational performance through the reduction of operational risk (Klassen and Vereecke, 2012) and enhance reputation through public recognition of SSSC adoption (Brammer and Pavelin, 2006). Therefore, this study seeks to examine the effect of social sustainability orientation and supply chain practices on operational performance.

1.1 Statement of the Problem

There is a clear gap in research relating to socially sustainable supply chain practices. The literature so far focuses primarily on environmental supply chain practices (Klassen and

Vereecke, 2012; Huq et al., 2014) leaving this gap of the form, drivers or impacts of socially sustainable supply chain practices initiatives (Zorzini et al., 2015). In the few supply chain-related studies that have touched on socially sustainable supply chain practices, labor-related issues are typically discussed in a peripheral manner. Their focus has instead been on a narrow range of concerns, particularly concentrating on health and safety at work; child, slave and forced labor; compliance with labor standards; equal rights; freedom of association; and human rights (Welford and Frost, 2006; Font et al., 2008). Methodologically, socially sustainable supply chain practices studies mainly use case studies to build theory and deconstruct SSSC practices (Ciliberti et al., 2009; Klassen and Vereecke, 2012; Huq et al., 2014).

Some studies have tested theory but conflate socially sustainable supply chain practices into one construct (Holloos et al., 2012). Klassen and Vereecke (2012) posit that managing social issues in supply chains requires the awareness of how such issues evolve in the supply chain, how practices can respond to stakeholder concerns, and their impact on performance. However, since research remains limited, the drivers of SSSC practice adoption remain unclear (Pagell and Wu, 2009; Closs et al., 2011). One notable exception is Marshall et al. (2015), who make a significant contribution to this domain by deconstructing basic and advanced practices and investigating how sustainability orientation affects such practices. However, particularly germane to this paper, they do not investigate the influence of temporal orientation or the impact on performance. This study is similar to work by Marshall et al. (2015) as it explores the relationship between sustainability orientation and basic and advanced socially sustainable supply chain practices. This study extends their research by examining not only the effect of sustainability orientation on the adoption of practices but also how these practices relate to operational performance in the Small and Medium Enterprises within Takoradi Metropolis.

1.2 Significance of the Study

This study is to assist researchers in the area of social sustainability supply chain, social sustainability orientation and operational performance as it will serve as a point of reference for the researchers as they conduct studies in this and other related topics. sustainability supply chain being an area that is attracting a lot of professional, academic and scholarly attention, this project can be used as a reference to promote the general academic and scholarly input to the understanding of this body of knowledge. The findings of the study will equally enable policy makers to devise sustainability supply chain policies that are based on empirical evidence and assumptions on the effect of on operational performance. Investors in the Small and Medium Enterprises may use the information from this study to make critical decisions regarding sustainability supply chain.

1.3 Scope of Study

Geographically, the study covers Small and Medium Enterprises within the Takoradi Metropolis the Western Region of Ghana. The study was conducted within the framework of social sustainability orientation, operational performance and social sustainability supply chain a Takoradi Metropolis the Western Region of Ghana. The respondents for this study therefore were the procurement and supply chain departments in the Small and Medium Enterprises within the Takoradi Metropolis the Western Region of Ghana. Hence the result of the study was generalized but its findings are placed in the relevant context of Small and Medium Enterprises within the Takoradi Metropolis the Western Region of Ghana.

1.4 Brief Methodology

Research methodology is considered as the general approach to the design process of a study from the theoretical foundation to the collection of data and its subsequent examination (Thurairajah et al., 2006). That is, it provides theoretical and philosophical assumptions of the study and its consequence on the method or methods adopted for the study (Saunders et al., 2009). There are two main types of research methods namely Qualitative and Quantitative research methods. The researcher adopted only quantitative method of research since it was found well-suited with the researcher's projections. The study relied solely on primary source of data due to the large scale nature of the study though there are two main sources of data. Quota

sampling technique was adopted by the researcher. According to Cohen et al. (2007), a quota sampling technique helps the researcher to obtain a “significant characteristics of the wider population. The study used a descriptive single cross-sectional survey approach in collecting data from the respondents.

1.5 Limitation of the Study

The limitations to this study were access to information, combining work with academics as well as financial constraints. More so, getting access to accurate information really posed a challenge however through negotiation the researcher was able to overcome. The issue of funds was managed through personal savings for the research.

2.0 LITERATURE REVIEW

The primary section in this chapter describes the review of literature; develop on the theory that used in the research to explain in the theoretical background. It likewise develops the ideas given in the conceptual background to build the conceptual model and finally explains views of different researchers, which are related to the study. Fundamentally this chapter is based on views of different researchers, which is conceptualized by the researcher to get a directed path for this research.

2.2 Sustainable supply chain management

Many articles refer to one general definition of sustainability and sustainable development given by the Brundtland Commission (World Commission of 1987) which states that: “Sustainable development meets the need of the present without compromising the ability of future generations to meet their own needs” (Pieters et al, 2009, p. 1; Kleindorfer et al., 2005). The principles of sustainable development include social equity, economic growth and environmental protection (Behrend et al., 2008). Although the number of definitions of sustainability varies, these differences are not so significant as most of them incorporate a consideration of at least environmental, economic and social issues while improving the long term economic performance of the supply chains (Carter and Rogers, 2008).

The framework for the sustainable supply chain management is presented by Carter and Rogers (2008) and covers the trade-offs between all three pillars of the sustainability: economic, social and environmental, as well as the domains influenced by the sustainability integration to the supply chain management: strategic planning, risk management, organizational culture and transparency. Sustainable supply chain management is defined as: ‘The strategic, transparent integration and achievement of an organization’s environmental, social and economic goals in the systematic co-ordination of key inter-organizational business processes for improving the long-term economic performance of the individual company and its chains’ (Carter and Rogers, 2008, p. 368).

Effectiveness and cost reduction have always formed the main focus within logistics, however awareness of demands on sustainability have emerged with an emphasis on transportation (Pieters et al., 2009). It is generally perceived that environmental supply chain management supports efficiency and synergy among actors in supply chain, as well as adds to enhancing environmental performance, minimization of waste and cost savings. The financial performance of the companies in the supply chain is affected by the environmental performance in number of ways: by minimizing hazardous and non-hazardous waste the utilization of natural resources improve, the operating costs are reduced and the productivity is improved. Marketing advantages follow, which leads to improved revenue, increased market share and new market opportunities (Rao and Holt, 2005).

Therefore, one of the logistics goals should be decreasing the environmental impact of transport (i.e. improved vehicle utilization). Increasing the efficiency in transport and logistics systems which would lead to both positive environmental effects and decreased costs for the industry should be in focus. The reduction of environmental impacts can be influenced by two general approaches: first, while relying on new, energy efficient technology; second, relying on companies to restructure their processes in a more sustainable way (Aronsson and Brodin,

2006). When incorporating social and environmental issues into a company's corporate behavior the organizational capabilities develop and present potential sources of competitive advantage due to their imperfect imitability by competitors (Gold et al., 2010). Hutchins and Sutherland (2008) mention safety and quality of life as endpoints for higher order needs for the companies wishing to be sustainable and keep focus on social part of the sustainability.

Purchasing and distribution have a vital role in improving sustainability of the firm, therefore there is a need for awareness of strategic and tactical decisions' influence on operational outcomes in order to make more sustainable decisions. Strategic decisions have a larger effect on i.e. emissions than operative decisions (Aronsson and Brodin, 2006). Both government and industry can support the development of sustainability standardization for transportation (Zhu et al., 2016). The government can create more possibilities for industry to reach the goals of de-coupling, modal shift, and improved fill rate by structural means. Another important issue is increasing knowledge about the connection between decision making in logistics and environmental impacts - this knowledge can be spread by education. In this case technology and government may generate possibilities but it is firms that have to realize them.

Linton et al. (2007) state that techniques such as life cycle assessment can be used for assisting in the determination of product design and minimization of its environmental impact over its useable life and after it. Resources reduction and environmental impacts are considered in the interface of engineering and product design through cleaner process technologies and quality production techniques. This approach increases the value produced by an individual product. The challenge for the provider of the product is to develop offerings that allow for them to capture more of the product value.

Supply chains should be clearly extended to take account of by-products of the supply chain, to assess the total lifecycle of the product, and to optimize the product not only from an existing cost standpoint but also a total cost standpoint. Total cost should include the influence of resource reduction and the generation of by-products that are neither captured nor used (waste and pollutants). The strategy for sustainable products as the definition of lifecycle based standards for the environmental and social performance of products implemented throughout the supply chain is discussed by number of authors.

Being a crucial source of competitive advantage, sustainability goals require closer interaction between all supply chain parts while ensuring economic, environmental and social performance on a product's total life-cycle basis with more performance criteria to be met (Seuring and Muller, 2018; Simpson et al., 2017, Tavasszy et al., 2003; Gold et al., 2010) Analysis of the operational implications of different policies and integration of sustainability in business is critical, since current legal tendencies will influence many of these changes 'whether or not academe and practice is prepared' (Linton et al., 2017).

2.3 Challenges and Conflicts in Sustainable Supply Chain Management

Challenges, triggers, pressures and difficulties are used as synonyms in this paper referring to a 'demanding or stimulating situation' (dictionary definition) in regards to sustainable supply chain management. The conflicts in the further discussion refer to 'tension between two or several social entities (individual, group or organizations) which arises from incompatibility of actual or desired responses' (Raven and Kruglanski, 1970) and allow the authors to discuss the diverse trade-offs between the three pillars of sustainability and the tension between various stakeholders. Abbasi and Nilsson (2012) divide the challenges for SSCM into five major areas: cost increase, operationalization of sustainable development, changing cultures and mind sets, strains in control and management of uncertainties and trade-offs, and the complexity of problems.

Xia and Tang (2011) discuss challenges that the automotive industry can face in the sustainable development of its supply chains and focus on social and ethical responsibility. While costs and revenues are still the main drivers in the development of supply chain, the majority of the research states that it must pay to be sustainable (Abbasi and Nilsson, 2012). The relationship in the supply chain through collaboration in regards to sustainable goals can actually result in a number of cost-effective activities: collaborative waste reduction, cost effective

and environmentally beneficial solutions to production and services problems, and environmentally sound innovation.

The relationship within the supply chain is also an important channel for communicating customer requirements (including the environmental demands) to suppliers (Simpson et al., 2007). Environmental regulation is one of the most effective tools to enable companies within a supply chain to internalize the effects of their activities (Carter and Jennings, 2002). Conversely, compliance with sustainable regulation obliges the supply chain members to implement possibly costly adaptation processes that can affect their competitiveness and profits as much as they transform production/service methods and systems.

Therefore, a company's response to fines and penalties for non-compliance can depend on whether the regulatory pressures are seen as opportunities or threats. If they are perceived as opportunities, it can help organizations to concentrate on long-term sustainability and relationship. The actors in a supply chain can manage and share the benefits through contracts, market mechanisms and partnership arrangements, which may result in the increasing efficiency of all partners. In a mature industry, the partners in the supply chain work together in a collaborative way with long-term objectives and are therefore engaged in a win-win strategy.

In this situation, sustainable goals have a positive and direct impact on supply chain actors' performance as well as an indirect effect on performance through improved trust and cooperation. The literature also discusses that command-and-control regulations can strangle innovation and that instead, voluntary norms may inspire proactive environmental strategies that lead to competitive advantages for companies (Carter and Jennings, 2002, Lopez-Gomero et al., 2010). Thus, the pressures for sustainability in the automotive industry may arise from regulation by government or through 'socio-technical experiments and normative visioning' (Orsato and Wells, 2007, p. 990). Operationalization of sustainable development is perceived as a challenge in terms of inertia and interpretation.

'A fear of change connected to difficulties of interpretation, the complexity involved, and the underlying business logic with its clear focus on financial aspects, all contribute to the inertia in reaching sustainable supply chains' (Abbasi and Nilsson, 2012, p. 526). Change of mind set and culture at the organizational (top management as well as other employees), national and international levels are other challenges for sustainable supply chain. The change needs to be critical, creative and incorporative of sustainability perspectives and assumptions. The uncertainties related to governmental decisions, consumer demands and competitive advantages and strategies formulated by organizations can be perceived as a challenge to change.

The complexity is inherited in the numerous ways in which supply chain processes and logistics influence society and the environment. There are several challenges involved in the choice of fuel, the routing of vehicles, the negotiation of environmental contracts etc. Tradeoffs between environmental effects and delivery times as well as service levels are other challenging issues (Abbasi and Nilsson, 2012). Multiple areas of conflicts can arise from the stakeholders of sustainable supply chain management. The customer as one of the major financial stakeholders has noteworthy potential to force developments of its suppliers' environmental management practices through the introduction of environmentally sound technologies or services, and collaboration with suppliers within the supply chain for common knowledge and joint development of more sustainable products and processes.

However, pressures can come from three sources: from customers while expecting that some suppliers will be more or less responsive than others; from suppliers it may include both benefits and difficulties in their attempts to face a new set of environmental performance requirements; from government this might require more collaboration in working with organizations (Simpson et al., 2007). Many possible conflicts from the external pressures on the supply chain approach towards sustainable responsibilities are considered from the regulatory, organizational, media and community stakeholders (Zhu and Sarskis, 2006). The possible conflicts for SSCM are also discussed by Walker et al. (2008).

The authors argue that cost and customer desire for lower price may inhibit environmental goals. The studies show that cost concerns might be the most serious obstacle for considering environmental factors in the purchasing process in this sense functioning as a barrier in the mind set of ecology versus economy trade-off. In terms of social versus economic

performance, the difficulties for the companies can lay in understanding the system and ways of incorporating social issues into economic ones due to the focus on efficiency and governance issues and little experience with broader social demands (Walker et al., 2008). Also, as discussed by Zhu and Sarskis (2006), the reaction of the companies to all these issues can depend on specificities of the industry. Analyzing these challenges and conflicts can add to logistics sustainability and allow companies to improve their approach to sustainable supply chain management (Abbasi and Nilsson, 2012).

2.4 Social sustainability supply chain practices

The majority of literature shows that basic social sustainability supply chain practices focus on the health and safety of workers in the supply chain (Ayuso et al., 2013; Huq et al., 2014), also include codes of conduct to ensure human rights and worker conditions (Awaysheh and Klassen, 2010) and social accountability systems such as SA8000 (Ciliberti et al., 2009). These practices involve monitoring the sustainability compliance of suppliers in the supply chain (Klassen and Vereecke, 2012; Marshall et al., 2014). Many authors have identified that focal firms monitor their supplier's compliance with regulatory social sustainability and corporate social sustainability directives (Huq et al., 2014). Social sustainability supply chain monitoring practices are arms-length practices that are used to control and evaluate suppliers (Klassen and Vereecke, 2012). Such practices might focus on minimising risk to the focal company through inspection and control as suppliers who are inspected and audited are less likely to be involved in unsustainable practices and ultimately risk the reputation of the focal firm (Foerstl et al., 2010; Reuter et al., 2010).

The focus and scope of monitoring activities can either be on the customer, supplier, or both. For example, suppliers can be tasked with reporting the safety of their products, materials, components or processes while customers assess the use and misuse of products. Monitoring can be identified as a number of activities including using public documentation in order to judge regulatory compliance, assessing suppliers' conformance to company-specific sustainability practices (MacCarthy and Jayarthne, 2012), and auditing suppliers' sustainability performance (Klassen and Vereecke, 2012; Min and Galle, 2001). One study also found monitoring to have a dark side with suppliers using mock compliance or shifting poor labour practices outside the organisation (Huq et al., 2014). Several studies have examined sustainability systems as a supply chain sustainability practice (Ciliberti et al., 2009; Marshall et al., 2014).

Sustainability management systems are complex systems of best practice that are implemented, often with certification, in order to give a comprehensive structure to sustainability practices in order to minimise impact and to prevent reputational damage (Lee and Kim, 2009; Wiengarten et al., 2013). Recent research has shown that health and safety management systems such as OHSAS 18001 are regarded as a way for companies to improve their performance (Tate et al., 2010). In sustainable supply chains, customers encourage or reward suppliers who gain certification, such as social accountability system SA8000 and OHSAS18001 certification, as part of evaluation and selection criteria (Ciliberti et al., 2009; Pagell and Wu, 2009). In summary, basic social sustainability supply chain practices involve both monitoring and management systems and are based on evaluating the sustainability processes of suppliers.

2.5 Advanced social sustainability supply chain practices

Advanced social sustainability supply chain practices focus on stakeholder and community benefits in the supply chain through the development of new products and processes (Klassen and Vereecke, 2012) or by redefining the supply chain (Pagell and Wu, 2009). Advanced practices include new products and processes focused on fair trade arrangements (Ashby et al., 2012; Amann et al., 2014; Hollos et al., 2012; Pullman et al., 2009) and engaging the supply chain with non-traditional partners to provide social programmes such as education or health-care to ensure community benefits (Carter and Rogers, 2008; Dai and Blackhurst, 2012; Huq et al., 2014; Keating et al., 2008; Lee and Kim, 2009; Lu et al., 2012; Klassen and Vereecke, 2012; Tate et al., 2010). These practices go beyond monitoring and compliance, to making fundamental changes in the supply chain (Klassen and Vereecke, 2012; Marshall et al., 2014; Perry and Towers, 2013). Researchers found that design changes to reduce impact that are demanded by

regulatory bodies are unlikely to have any economic benefit: only proactive companies will seek and implement fundamental changes to the design of their products and processes and will use this as a learning opportunity to improve performance over the long-term (Perry and Towers, 2013; Sharma and Henriques, 2005).

The literature shows that developing new products and processes with a focus on social sustainability or that benefit secondary stakeholders to the firm (including communities and society) can help develop new markets for existing products and services (Awaysheh and Klassen, 2010). Companies also state in their annual reports that working with suppliers to improve product and process designs to increase benefits for society enhances performance (Tate et al., 2010). Sustainable supply chain strategy redefinition is a fundamental redefinition in the business model of the supply chain towards social outcomes: this redefines and reconceptualises the supply chain not only in who the members of the supply chain are but also what it does from a social systems perspective (Bansal and McKnight, 2009; Pagell and Wu, 2009). Sharma and Henriques (2005) propose the redefinition of the business as the highest level of sustainability practice maturity, due the strategic nature of the practice and the impact the strategy makes on not just the focal firm but the entire supply chain. Furthermore, new business models based on social sustainability open access to new markets and lead to sustainable competitive advantage (Klassen and Vereecke, 2012; Spence and Bourlakis, 2009).

Focusing the supply chain on social innovation involves embracing new members such as NGOs and community groups as part of the supply chain decision-making process (Hall et al., 2012; Pagell and Wu, 2009). For example, companies focus attention on communities as a means to improve performance and enhance the reputation of the supply chain (Tate et al., 2010). This focus was predicted by Godfrey et al., (2009), as a secondary stakeholder benefit. For example, community projects would give insurance-like benefits to the financial performance of organisations. These projects act as moral capital for the organisation. Companies engage in socially responsible practices to protect both their reputation and the image of their brands (Awaysheh and Klassen, 2010; Lemke and Pederson, 2013). Additionally, redefining the supply chain through higher levels of transparency, where social sustainability information is made available to the public, leads to an increase in responsible practices (Awaysheh and Klassen, 2010) and ultimately market advantage.

2.6 Sustainability culture and social sustainability supply chain practices

Sustainability culture is defined as a company's recognition of the impact of the company's activities on society and communities and the need to minimise it, which translates into a philosophy and values that drive the decision-making process of the firm (Fraj-Andrés et al., 2009; Pagell and Wu, 2009). Values that embed sustainability issues are key to developing sustainable cultures and sustainable cultures are reflected in the practices adopted (Pagell and Wu, 2009). Cultures that are sustainability-oriented provide an atmosphere where everyday conversations have a sustainability angle and decisions made in the organisation take a triple bottom line rather than just an economic view. They also have a guiding vision that encompasses sustainable benefits, which are not found in traditional supply chains (Pagell and Wu, 2009). However, most previous empirical studies focus on sustainability as a holistic concept or on environmental sustainability, finding that organisations with sustainability cultures are more likely to adopt sustainability practices above and beyond regulation (Fraj-Andrés et al., 2009; Pagell and Wu, 2009; Banerjee, 2002).

For example, sustainability culture was shown to have a direct positive relationship on the adoption of green supply chain practices including green purchasing and eco-design (Wu et al., 2012). Additionally, conceptual development of sustainability culture predicted that sustainability culture would lead to the adoption of sustainability practices (Linnenluecke and Griffiths, 2009). While Pagell and Wu, 2009, in their study of ten supply chain sustainability exemplars, found sustainability culture to be an important driver of sustainability practice adoption. Research on social supply chain sustainability is generally lacking but in one study (Weaver et al., 1999) a social sustainability culture led to an embedded ethics programme, while pressure from outside the firm to adopt an ethics programme, led to resistance and showboating. This means that institutional pressures may not be enough to explain the adoption of social

sustainability supply chain practices as firms make a choice about decoupling their espoused and enacted sustainable supply chain activities (Grosvold et al., 2014).

Hollos et al. (2012) examined the drivers and outcomes of social sustainability practices with firm performance. They found that a strategic purchasing and supply management orientation drives supplier sustainability cooperation, which in turn drives the adoption of social practices. Furthermore, Reuter et al. (2012) ask how managers' reactions to different stakeholders influences supplier selection decisions. They find that where managers focus on shareholders they favour cost over sustainability criteria, while a focus on the public favours sustainability and an ethical culture. Finally, a focus on the customer has a negative impact on sustainability prevalence. This means that stakeholder and cultural orientation is an important driver of the adoption of sustainability practices.

2.7 Sustainability culture and basic practices

Once a firm has developed a sustainability culture, it is likely to first engage in implementing sustainability practices within its own organisation (Linnenluecke and Griffiths, 2009). These practices, however, are not only embedded internally but also across the supply chain (Klassen and Vereecke, 2012). Although there are few studies of specific practices directly influenced by sustainability culture, one study found that a focal firm's interest in key suppliers' basic compliance with sustainability practices was directly influenced by the sustainability culture of the focal firm (Fraj-Andrés et al., 2009). Therefore, we suggest that a high sustainability culture is likely to be associated with a high level of activity related to the control and evaluation of suppliers' social sustainability supply chain practices, while a low sustainability culture will result in no monitoring practices as the focal firm is less concerned with the risks associated with supplier's social sustainability supply chain activities.

In the environmental sustainability literature, companies with a strong sustainability culture focus organisational members on specific sustainability issues (Bansal, 2003). One of the most common sustainability practices adopted by firms is implementing an environmental management system such as ISO 14001 (Wiengarten et al., 2012) and once established, buyers pressure their suppliers to adopt their own sustainability management systems (Baden et al., 2009). Using both internal and external environmental management systems organisations benefit from both credibility and environmental outcomes (Darnall et al., 2008). Although research is lacking in the social sustainability area we hypothesise a similar relationship to environmental management systems.

Although there are no studies, to our knowledge, exploring the antecedents of social sustainability management systems, studies show the adoption of social sustainability practices follow from similar antecedents to environmental practices (Pagell and Wu, 2009). The only study of social sustainability certification is by Ciliberti et al. (2009). These researchers investigated the implementation of SA8000 and the outcomes of implementation rather than the antecedents. They found that implementation leads to trust and a reduction of information asymmetry. They also stated that one of the reasons for getting the certification was to show their commitment to sustainability issues. Additionally, Darnall et al. (2008) found that companies adopted sustainable management systems due to specific cultural orientation and commitment.

2.8 Social sustainability orientation

The extent a firm embraces social sustainability determines their social sustainability orientation. The term orientation loosely refers to a broad focus or positioning of an organization's activities and policies, and the concept of firm orientation has been applied to many areas of research, such as marketing (Siguaw et al., 1994), entrepreneurship (Lumpkin and Dess, 2001), stakeholder theory (Berman et al., 1999), and corporate environmentalism (Banerjee, 2002). Banerjee's (2002) definition of environmental orientation and Berman et al.'s (1999) definition of stakeholder orientation are both applications of this concept to the broader study of sustainability. Similarly, Marshall et al. (2015, 438) used the term "sustainability culture" as a firm's recognition of the impact of its activities "on society and communities and the need to

minimize it, which translates into a philosophy and values that drive the decision-making process of the firm” applying the concept of orientation to both entrepreneurial and socially-sustainable positioning.

Extending these definitions, we define the construct of social sustainability orientation as the overall firm commitment to SSSC practices. Firms that are social sustainability-oriented have ingrained social sustainability in their values and recognize the need to minimize their impact on society (Banerjee, 2002; Marshall et al., 2015). Furthermore, social sustainability-oriented cultures promote decision making and practices that operationalize these values (Marshall et al., 2015). Our examination of social sustainability orientation emphasizes the systems in place, innovations introduced, and the strategies adopted to drive SSSC practices (Gimenez et al., 2012).

The operational practices that can drive social sustainability across supply chains are categorized into basic and advanced practices by Marshall et al. (2015). Basic SSSC practices focus on the health and safety of workers in the supply chain and usually include monitoring of suppliers and/or the implementation of sustainability management systems (Marshall et al., 2015). Monitoring of suppliers can be accomplished through verification of suppliers’ compliance with codes of conduct, compliance with government regulation and audits of suppliers’ facilities and operations (McCarthy and Jayarathne, 2012; Klassen and Vereecke, 2012; Marshall et al., 2015). Sustainability management systems are developed by firms following guidelines from certification bodies to provide structure to their practices (Marshall et al., 2015).

Examples include codes of conduct to ensure ethical behavior, human rights, and acceptable working conditions, and social monitoring and management systems, e.g., SA 8000, OHSAS 18001 certification (Marshall et al., 2015). Advanced SSSC practices are significant because they redefine the supply chain and focus on the development of new products or processes that benefit different stakeholder groups (Marshall et al., 2015). These practices require proactive behavior from firms to implement major changes that go beyond monitoring and compliance of suppliers (Klassen and Vereecke, 2012; Marshall et al., 2014, 2015).

Advanced practices usually include the redesign of products or processes or supply chain strategy redefinition (Pagell and Wu, 2009; Klassen and Vereecke, 2012; Marshall et al., 2015). Products and processes may be redesigned to benefit workers, reduce health risks for consumers, and include fair-trade arrangements with suppliers (Marshall et al., 2015). For example, in fair trade arrangements, which focus on long-term relationships between farmers and importers, commodities are purchased directly from producers, guaranteeing a fairer price for their products even when market prices are low (Levi and Linton, 2003). These practices encourage collaboration with non-traditional partners and open up the supply chain to scrutiny by disclosing data on workers’ rights, human rights and well-being for workers being in the supply chain (Marshall et al., 2015), they are thus likely to influence operational performance through product-development efficiency, process improvements and lead time reductions.

2.9 Long-term orientation (LTO)

LTO is particularly important in exploring SSSC practices as there are different arguments for the impact of STO or LTO on practice adoption and performance. In studies confined to environmentally-sustainable supply chain practices, researchers disagree if these practices lead to short-term costs or benefits, or if there are long-term costs or benefits (Colby et al., 1995; Carter and Rogers, 2008; Wu and Pagell, 2011). Additionally, Wu and Pagell (2011) found that short term concessions to business imperatives were often made at the expense of sustainability practices. Therefore, understanding the impact of LTO on the relationship between social sustainability orientation and SSSC practice adoption should provide important insights.

The temporal orientation of firms is a subjective measure of time that reflects the depth of strategic decision making (Lee and Liebenau, 1999) and may range from short-term to long-term focus of strategic decisions on outcomes (Wang and Bansal, 2012). The important distinction between an STO and LTO is that while STO tends to emphasize efficiency and productivity, LTO generally focuses on effectiveness and competitiveness, requiring vision and careful coordination of relationships and processes (Wang and Bansal, 2012). Consequently, we adopt Lumpkin et al.’s (2010, 241) definition of LTO as firms’ “tendency to prioritize the long-

range implications and impact of decisions and actions that come to fruition after an extended time period.

2.10 Long Term Orientation, social sustainability orientation, SSSC practices and operational performance

Researchers state LTO is critical to reaping the benefits of sustainable operations and supply chain practices (Rouse and Daellenbach, 1999). Given corporate sustainability is widely viewed as a long-term construct (Klassen and Hajmohammad, 2017), Wang and Bansal (2012) argued. LTO may help firms recognize the value of investing in sustainability activities, even if investments cannot be recouped in the short-term (Wu and Pagell, 2011) and therefore have to be traded off against other benefits such as increased value from stakeholder relationships, decreased risks and compliance costs and reduced managerial distractions by improving alignment among stakeholder demands. Wu and Pagell (2011) reinforce the connection between sustainability, LTO, and firm performance by affirming social and environmental sustainability are essential to creating longterm competitiveness and, therefore, an LTO should ultimately positively impact a firm's operational performance (Lumpkin et al., 2010; Flammer and Bansal, 2016). Jiang (2009) and Roehrich et al. (2014) pointed out that many firms realize the successful implementation of SSCM practices requires LTO. Firms with LTO, for example, are more capable of developing successful suppliers partnerships, which can positively affect operational performance by ensuring quality, improving processes, and reducing lead times (Kotabe et al., 2003; Roehrich et al., 2014).

However, Aguinis and Glavas (2012) and Klassen and Hajmohammad (2017) note that temporal issues related to sustainability practices and performance have received scant attention and there is, they argue for the incorporation of time-based factors in any research investigating the impact of sustainability practices on performance. Adoption of different types of sustainability practices is also related to firms' temporal orientation. Although the literature indicates temporal orientation plays a role in the adoption of basic SSSC practices, few studies have looked at the impact of firms' temporal orientation on the adoption of basic SSSC practices. Some supplier certification programs, such as FLO-CERT from Fairtrade, emphasize short-term results to reassure consumers that suppliers are adhering to sustainable practices (Klassen and Hajmohammad, 2017).

However, Huq et al. (2014) found that suppliers who appropriately comply with basic practices, such as labor standards, were able to secure longer-term orders from buyers and retain skilled workers for longer periods of time, which suggests that LTO plays a role in firms' decision to adopt basic practices. Additionally, the literature indicates toward a connection between LTO and advanced practices. Eccles et al. (2014) found a positive relationship between LTO and highly sustainability-oriented firms, i.e., those adopting a wide array of sustainability practices. They posit LTO is necessary when adopting sustainability practices that can meet the needs of different stakeholder groups.

Flammer and Bansal (2016) proposed that firms with LTO are more likely to increase investments in long-term strategies, such as innovation and developing lasting relationships with stakeholder groups. In addition, they observed improved operational performance in the long-term due to firms' investment in long-term strategies and practices, while these might be costly in the short term they have higher long-term returns. For example, McDonald's supplier, Cargill, through an alliance with the non-governmental organization CARE, have worked to enhance the livelihoods of workers and farmers in supply chains, have improved crop yields, given farmers access to new markets and thus increased incomes, improved educational opportunities and access, nutritious food and child care. Further, Cargill has reaped benefits not only of the reputational advantage but also, operational benefits of higher quality, better product and process design and a more stable supply chain (McDonald's, 2014).

2.11 The Concept of Operational Performance

Organizational performance is widely recognized as an important construct in the research strategy (Combs et al., 2005). Indeed, the emphasis on business performance is presented as one of the elements that distinguishes this field from other areas of organizational

studies (Glick et al., 2005). From the perspective of Venkatraman and Ramanujam (1986), financial performance and operational performance are the main determinants of the effectiveness of a company. While the financial sector involves indicators such as sales growth, profitability and earnings per share, among others, the operational area is related to measures such as market share, the introduction of new products, product quality and value added in manufacturing, among others.

However, the way in which performance is measured varies widely. A study by Combs et al. (2005), involving the analysis of 374 articles published in the Strategic Management Journal (SMJ) in the period 1980–2004, revealed 56 different performance indicators, 33 of which were related to financial performance and the rest to operational performance. In the opinion of the authors, this plurality of indicators suggests the multidimensionality of this construct, a fact that does not prevent researchers from representing it with a single indicator (Glick et al., 2005; Murphy, Traylor, & Hill, 1996). The historical predominance of the use of financial measures to measure companies' performance can be explained by the fact that outside groups exert great influence on such measures as well, and the measurement systems of the internal performance of a company have also tended to be financial and usually to have a focus on costs. However, the use of cost accounting systems that include measures of efficiency and variance to guide a company towards the correct strategic decisions has been questioned. According to Skinner (1974): Operational performance (OP) is a key enabler to the overall supply chain performance, which usually is the amalgamated outcome from multiple factors and enablers in the system.

Van Hoek (1998) and Beamon (1999) suggested that performance measures for a supply chain should include indicators in the operational dimension, such as customer satisfaction and the operational responsiveness to the changing market demand. Similarly, Neely et al. (1995) enlisted cost, time, quality, delivery and flexibility as the basic measures of operational performance. While addressing the needs for supply chains to balance their attention to the environmental concerns, Jakhar (2015) developed a green supply chain operational performance framework. Operational performance (OP) is a key enabler to the overall supply chain performance, which usually is the amalgamated outcome from multiple factors and enablers in the system. Van Hoek (1998) and Beamon (1999) suggested that performance measures for a supply chain should include indicators in the operational dimension, such as customer satisfaction and the operational responsiveness to the changing market demand. Similarly, Neely et al. (1995) enlisted cost, time, quality, delivery and flexibility as the basic measures of operational performance. While addressing the needs for supply chains to balance their attention to the environmental concerns, Jakhar (2015) developed a green supply chain operational performance framework.

The selection of Operational Performance as one of the constructs for this study is for two reasons. One is because we see strong evidence that OP is a major enabler of supply chain performance, which draws great deal of attentions from the research community (Wong et al., 2011); the other is because OP is a measurable construct, which could be influenced by the level of SCI. Furthermore, there is little doubt, OP is a critical and indispensable part of many performance measurement frameworks witnessed in today's literature (Yu et al., 2014; Ebrahimi, 2015), albeit their findings are not always consistent with each other. One may question why not use 'business performance' or 'supply chain performance' instead? Well, 'business performance' involves more environmental influences, including competitors, and infrastructure (Goldman, 1995).

2.11.1 Operational Performance

Operational performance can be defined as the extent to which a focal firm is actually in tangible outcomes in terms of quality, flexibility, and productivity (Arshinder et al., 2008). Supply chain complexity will affect the cost, time, quality and flexibility negatively. Quality, time, cost, and flexibility are operational performance's dimensions that were developed by many scholars (Narasimhan and Das, 1999). For this study time and cost were combined in one dimension, which is labeled productivity. Our proposed operational and strategic complexity practices should enhance the operational performance. These practices involve coordination between supply partners (Arshinder et al., 2008) as well as the integration of internal functions with

strategy in order to enhance performance, focus on customer demand, and customer service and relationship management (Lambert, 2004). As a result Operational Performance is correlated with Financial Performance.

2.11.2 Definition and Operations Performance Objectives

Operational performance has been defined in previous work as unit manufacturing cost, quality, speed of new product introduction, flexibility, and delivery dependability (Ferdows & De Meyer 1990). the performance of manufacturing processes is assessed and termed manufacturing operational performance (MOP) will be defined as measures of cost, time, quality, flexibility (or responsiveness) within the production environment at manufacturing companies, including productivity, which relates to time (Lee et al.,2017). Performing well is a business imperative. Successful organisations maintain their reputation largely because of the performance of their operations. In general, every organisation wants to be efficient and effective. The main objective of operations function in organisations is therefore to arrange resources and activities in an as most effective and efficient way as possible. Being effective means producing the goods and services that customers really want and being efficient means producing the required goods and services at as lowest cost and effort as possible. Critical operations performance objectives are crucial factors that are strategically important to organisations. Being strategically important means that the performance objectives have to be considered as strategic goals to be achieved and the primary aim of the operations function is to deploy the appropriate resources to support the achievement of those goals. Typically, the operations performance objectives are specifically related to satisfying customers' requirements.

In general, the fundamental performance objectives that apply to all types of organisation and are closely related to customer satisfaction requirements are speed, dependability, flexibility, quality, and cost (Slack et al., 2007). Speed: Speed means doing things quickly. It is about delivering goods and services to customers as fast as possible. This involves making quick decisions and rapidly moving materials and information inside the operations. For example, in the context of trade and transport facilitation, 'automated processes' can be a speed performance factor. Dependability: Dependability means doing things on time and as promised. It is about developing trustworthiness.

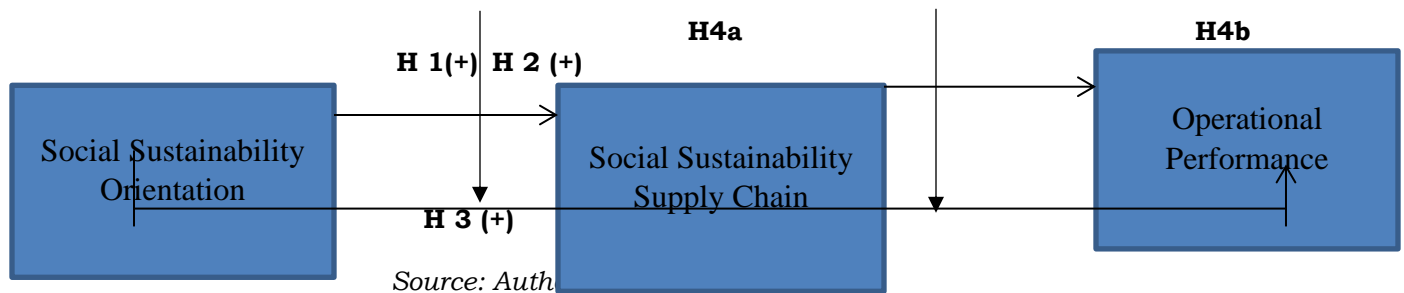
Dependability can be achieved through the use of reliable equipments, effective communication, efficient scheduling systems, motivated workforce, transparency of processes, etc. In the context of trade and transport facilitation, 'transparency of border processes' can be an example of dependability performance factor. Flexibility: Flexibility is about being able to change the operations to fulfil new requirements. As requirements can change over time, organisations need to develop operations ability to introduce new or modified products and services, as well as to produce a wide range or mix of products and services. Flexibility also involves volume flexibility (the ability to change volume of output over time) and delivery flexibility (the ability to change delivery time).

Flexibility can be achieved to the use of more versatile equipments, suppliers with good flexibility performance, multi-skilled workforce, etc. In the context of trade and transport facilitation, 'different entrance times' can be an example of flexibility performance factor. Quality: Quality is about doing things right. It means consistently producing goods and services that meet expectations. The quality objective can be achieved by the provision of error-free products or services that fulfil customer requirements. This requires skilled workforce, adequate job specifications, proper technologies, and effective communication. For example, in the context of trade and transport facilitation, 'adequate transport infra-structure' can be a quality performance factor. 5. Cost: Cost performance is about doing things economically. Low cost is a universally attractive aspect. Lower cost of production or service delivery reflects to the customer in form of lower price. Cost reduction can be achieved by developing good relationships with suppliers, good negotiation of supplying contracts, getting the right mix of resources and facilities as inputs, etc. In the context of trade and transport facilitation, 'no hidden costs' can be an example of cost performance factor.

2.12 Conceptual Framework



Organizational Culture



2.13 Social sustainability orientation, Social Sustainability Supply Chain practices and operational performance.

As Marshall et al. (2015) found, adoption of Social Sustainability Supply Chain practices is dependent on the internal decision-making context and orientation of the sourcing firm. However, their study did not address the potential relation between firms' sustainability orientation and operational performance. While other studies explore social sustainability practices and/or financial performance (Pullman and Dillard, 2010; Klassen and Vereecke, 2012; Shafiq et al., 2017) rather than on operational performance. Marshall et al.'s (2015) framework identifies two main categories of basic practices: monitoring activities and management systems that improve the health and safety of workers in the supply chain. While few studies looked at the connection between basic practices and operational performance, some studies looked into the impact of basic practices such as suppliers' behaviors and capabilities, quality, and productivity on operational performance. Jiang (2009) found that basic practices, such as codes of conduct and company policies, can help guide the improvement of supplier sustainable behavior, however, they do not always lead to sustainability outcomes. Klassen and Vereecke (2012) found that firms with basic practices, such as supplier monitoring, are better able to shape their suppliers' social capabilities. Similarly, Tencati et al. (2008) found that basic practices improve productivity, quality, competitiveness, and retention of skilled workers. According to them, basic practices (e.g., monitoring and management systems) organize and standardize business systems across the supply chain leading to fewer mistakes, fewer accidents, decreased employee turnover and higher productivity.

Verecke (2012) suggest that basic practices can influence operational performance by improving quality, reducing lead times and improving processes. More advanced practices identified in Marshall et al.'s (2015) classification involve substantial changes in product and process designs along with the redefinition of SSSC strategies. These practices have been shown to help focal firms improve operational processes, identify new product opportunities, develop new markets for existing products and services, increase transparency in the supply chain, improve competitive advantage, improve reputation of the entire supply chain, and increase organizational learning (Awaysheh and Klassen, 2010; Tate et al., 2010; Marshall et al., 2015).

For example, Puma, the international sportswear company, has engaged in multi-stakeholder dialogue for over a decade, bringing them into their strategy and decision-making processes. They have motivated suppliers to provide information for their social key performance indicators. According to the company, this has increased supply chain visibility allowing Puma to mitigate risks and identify opportunities for product and process development (Puma, 2016). Advanced practices make social issues central to the organization and its supply chain and arguably should improve firm performance in the long-term (Sharma and Henriques, 2005). Further, the significance of advanced practices for operational performance is primarily through the identification of process and product inefficiencies in an analytical manner, based on the incorporation of operational data in decision analysis (Klassen and Vachon, 2003; Hervani et al., 2005).

Such a 'forensic' approach increases the engagement of personnel in collaborative knowledge sharing related to the organization's internal operations, again driving progress in sustainability goals (Hervani et al., 2005). Thus, in examining the relationship between social sustainability orientation and operational performance, it is posit that the impact of basic and advanced practices may differ, and the relationship will be impacted by the type of practice adopted. It is therefore hypothesized that:

H1: Social Sustainability Orientation has a positive relationship with operational performance.

H2: Social Sustainability Supply Chain has a positive relationship with operational performance.

H3: Social Sustainability Supply Chain is positively mediating between Social Sustainability Orientation and Operational Performance.

2.14 The role of Organizational Culture

According to Deshpande and Webster (2004), the organizational culture is "the shared patterns of values and beliefs" that help individuals to understand the operation of the organization. Organizational culture consists of basic assumptions that given group has invented, discovered or developed in learning to cope with its problems of external adaptation and internal integration and that have worked well enough to be considered valid and therefore to be taught to new problems (Schein, 1984). The organizational culture was studied on the basis of "employee orientation", "customer orientation", "innovativeness", "social responsibility", and "systematic management and control" dimensions.

When faced with opportunities and threats, organizational culture affects decisions, feelings and behaviors of individuals (Ozigbo, 2012). According to Tsui et al. (2006), firms with a strong culture share general characteristics shaped and strengthened through a set of rules, systems and norms created by cultural examples. The capabilities, knowledge and skills of employees are developed through employee orientation. Employees play a significant role for achieving competitive advantage in logistics firms in the service industry, and, the issues on creating programs for recruiting, training and orienting time-based employees in a challenging area is one of the most important issues of the decade we are in perhaps (Bowersox, 1998). By means of various management systems implemented in firms, a good fellowship and team spirit have been established in firms by encouraging teamwork. Although firms investigate the expectations of their customers at their core, they do generally not want to ignore expectations and demands of their employees as well.

Considering the characteristics of their customers and employees, firms, which focus on their customers, should create an innovative organizational culture in which employees can effectively adopt the system they are a part of; have responsibility for the customers and their environment; and meet the demands of customers; in addition, firms should also adopt this created culture in their all activities and functions. Concordance of the cultural substructure of the logistics system of firms and existing or created cultural substructure of firms enables them to step forward in the competitive market. Abilities of firms to understand customer demands and needs, to acquire and assimilate external knowledge, and to transform it into new or more improved products are organizational capabilities required for successful product innovation. Customer orientation highlights the significance of understanding the customer and customer needs and the importance of improving services for customer loyalty (Kantsperger and Kunz, 2005).

Socially responsible firms accomplish the moral, economic, legal, ethical and discretionary expectations of a society; and, social responsibility actions of a firm hold the potential for promoting positive acceptance of the organization, thus increasing its competitive position in relationship to its industry rivals (Murray and Montanari, 1986). In recent years, researchers have suggested that the role of logistics must expand to encompass social

responsibility (Bowersox 1998, Poist 1989, Stock 1990), as well as the environmental, safety and human rights issues brought forward, in additions to various general issues of logistics (Carter and Jennings, 2002). The study findings of Carter and Jennings (2002) show that logistics managers can influence the Logistics Social Responsibility (LSR) positively by creating a corporate culture which facilitates and encourages to have features such as willingness to be a good corporate citizen. Systematic management and control promotes an active and open dialog between the team members as well as motivating them to better understand the market, follow the proper procedures for acquiring technical knowledge and spread the correct response model (Akgün et al., 2010).

Studies indicate that innovation increases firm performance by encouraging the members of organization to produce new products and services in order to cope with technology and market changes (Matsuo, 2006). Innovative firms develop particular types of capabilities and knowledge that become embedded in their organizational culture (Knight and Cavusgil, 2004). Logistics innovation is necessary precisely because of this constant change (Flint et al., 2005). According to a study by Daugherty et al. (2011) on the logistics service capability, developing a logistics service innovation capability can differentiate a firm and improve its performance, and a proper structure may enhance its innovation capability. Innovative firms develop particular types of capabilities and knowledge that become embedded in their organizational culture (Knight and Cavusgil, 2004). All these factors draw attention to the relationship between organizational culture, Social Sustainability Orientation, Social Sustainability Supply Chain. and Operational Performance.

H4a: There is a positive moderating effect of organizational culture in the relationship between Social Sustainability Orientation and Social Sustainability Supply Chain

H4b: There is a positive moderating effect of organizational culture in the relationship between Social Sustainability Supply Chain and Operational Performance

3.0 METHODOLOGY

This chapter focuses on research design, population of the study, collection of data methodology, sources of data and sample size and sampling methods, data collection methods and data analysis.

3.2 Research Design

Research design is defined as a blue print of those procedures, which are adopted by a researcher for testing the relationship between dependent variables and independent variables (Khan, 2018). This study employed inferential statistics and it used the survey approach: through the use of single cross-sectional data questionnaires were self-administered to the respondents and later returned for them. The bottom of any research is to gather and analyze data for preferred result. The technique used should be selected according to the problem and purposes of the research (Nyberg, 1999). There are two main types of research methods namely Qualitative and Quantitative research methods. The researcher adopted only quantitative method.

3.3 Population of the Study

Population refers to all observations of interest in an entire collection like people or events as defined by a researcher (Burns & Burns, 2008). In general, the study focuses on Chief Executive Officers and Managers of the Small and Medium Enterprise in the Takoradi Metropolis within the Western Region of Ghana. The total population of the Small and Medium Enterprise in the Takoradi Metropolis is about 2,516. To add to this, the nature of concepts being investigated into required narrowing down to a group that could provide all relevant data needed to address the objectives of the study. For instance, the staff of the Small and Medium Enterprise taken into consideration should at least have fair knowledge in Social Sustainability Orientation and operational performance.

3.4 Sampling Technique and Sample Size

The researcher used stratified and quota sampling technique. According to Cohen et al. (2007), a quota sampling technique helps the researcher to obtain a “significant characteristic of the wider population”. Stratified sampling technique on the other hand is used for dividing the “population into homogenous groups, with each containing subjects with similar characteristics”. Therefore, the staff of procurement and supply departments, mine maintenance, plant maintenance as well as accounting and finance departments constitutes the respondents of the study. In finding an appropriate sample size for a study, Singh (2016), says there is no one given rule in arriving at an appropriate sample size for any study. In all one hundred and twenty (120) Managers and the Chief Executive Officers was drawn from 2,516 populations of the Small and Medium Enterprises within Takoradi Metropolis that are with fair knowledge were contacted. Therefore, the total sample size drawn for the study is one hundred and forty-five (145).

3.5 Data Collection Method

The study relied solely on primary source of data due to the large scale nature of the study though there are two main sources of data (i.e. primary and secondary data sources). This study makes use of only primary data source. The primary data were gathered through a self-administered questionnaire. This instrument was designed with reference to measures adopted by some authors in measuring similar constructs in their studies. The questionnaire mostly constituted closed ended questions. In order to ensure that respondent clearly provide answers and enable researcher code responses with ease, items on the questionnaire were grouped under procurement strategies and operational performance.

The study adopted only one approach in collecting responses in the actual field study. Questionnaires were self-administered at Goldfields Ghana Limited and those that fall within the study population that hold the required positions were contacted and given questionnaires to be answered. In all one hundred and ninety-five (195) questionnaires were administered to one hundred and ninety – five (195) Managers and Chief Executive Officer in which 120 responses were made within the stipulated time frame for the study.

3.6 Data Collection Instruments

Construct	Number of items	Source
Social Sustainability Orientation Practices	7	(Marshall et al., 2015)
Operational Performance	14	(Kotabe et al., 2003)
Social Sustainability Supply Chain Practices	16	(Marshall et al., 2015)
Organizational culture	23	(Slaughter, 2015)

3.7 Data Analysis

The study relied on quantitative data analysis techniques even though there are two main analyses, namely quantitative and qualitative the researcher employed only quantitative since it was found more reliable for the researcher’s projections. The data obtained from the questionnaires administered were coded into SPSS which generated results for the analysis. Data analysis is the ability to break down data and to clarify the nature of the component parts and the relationship between them (Saunders et al., 2007). The data obtained was edited, coded and analyzed using SPSS version 20. An entirely quantitative approach was adopted in the data analysis. Both descriptive and inferential statistics were employed. Descriptive statistics was used to present the characteristics of the data. Regression techniques were used to test for the effects of the variables.

3.8 Profile of the Study Area

The Western Region of Ghana covers an area of approximately 2,391 square kilometres, which is about 10 per cent of Ghana’s total land area. The region has about 75 per cent of its vegetation within the high forest zone of Ghana, and lies in the equatorial climatic zone that is

characterized by moderate temperatures. It is also the wettest part of Ghana with an average rainfall of 1,600mm per annum. It is bordered on the east by the Central Region, to the west by the Ivory Coast (Côte d'Ivoire), to the north by Ashanti and Brong-Ahafo Regions, and to the south by the Gulf of Guinea. The southernmost part of Ghana lies in the region, at Cape Three Points near Busua, in the Ahanta West District. The region is endowed with considerable natural resources, which give it a significant economic importance within the context of national development. It is the largest producer of cocoa, rubber and coconut, and one of the major producers of oil palm. The rich tropical forest makes it one of the largest producers of raw and sawn timber as well as processed wood products. A wide variety of minerals, including gold, bauxite, iron, diamonds and manganese are either being exploited or are potentially exploitable. The region's total geological profile and mineral potential are yet to be fully determined. The four major occupations in the region are agriculture including fishing, animal husbandry and hunting (58.1%), production and transport work (14.5%), sales work (10.2%) and professional and technical work (5.4%). The major industrial activities in the region are agriculture, excluding fishing but including forestry and hunting (58.1%), mining and quarrying (2.4%), manufacturing (10.2%) and wholesale and retail trade (10.3%). The working population in the private formal (13.5%) and the public (6.0%) sectors are mainly employees of private and public sector employers.

DATA ANALYSIS

This presents the data analysis and discussion of the results. The chapter first considered the background of respondents followed by descriptive statistics, inferential analysis, hypothesis testing, and findings, and finally discussed the results. In all, 150 questionnaires were administered to the respondents but 145 were received within the time frame representing 96.6%.

Table 4.1 Respondents' Background

Profile	Categories	Frequency	Percentage
Gender	Male	88	60.7
	Female	57	39.3
	Total	145	100
Age	20 – 25 years	37	25.5
	26 – 35 years	67	46.2
	36 – 45 years	33	22.8
	46 years and above	8	5.5
	Total	145	100
Level of Education	Postgraduate	16	11.0
	Graduate	95	65.5
	HND/Diploma	32	22.1
	Secondary/ A level	2	1.4
	Total	145	100
Working experience	2-5 years	38	26.2
	6-10 years	25	17.2
	11-15 years	36	24.8
	16-20 years	24	16.6
	21 years and above	22	15.2
	Total	145	100
Size of the organization	Less than 50	46	31.7
	Between 50 and 100	35	24.1
	Between 100 and 200	32	22.1
	Over 200	32	22.1
	Total	145	100
Years of the organizations	Less than 5 years	25	17.2
	Between 5-10 years	40	27.6

	Between 10-15 years	30	20.7
	Between 15-20 years	30	20.7
	More than 20 years	20	13.8
	Total	145	100

Regarding the gender of the respondents, 88 representing 60.7% were male whereas 57 representing 39.3% were female. The age of the respondents, 37 representing 25.5% were between the ages of 20 – 25 years, 67 representing 46.2% were between the ages of 26 – 35 years, 33 representing 22.8% were between the ages of 36 – 45 years and 8 representing 5.5% were 46 years and above. Concerning the respondent’s level of education, 16 representing 11.0% were second degree graduates, 95 representing 65.5% were degree graduates, 32 representing 22.1% were Higher National Diploma and its equivalent graduates whilst 2 representing 1.4% were secondary or Advance level graduates. The working experience of the respondents, 38 representing 26.2% have worked for about 2-5 years, 25 representing 17.2% have worked for about 6-10 years, 36 representing 24.8% have worked for about 11-15 years, 24 representing 16.6% have worked for about 16-20 years and 22 representing 15.2% have worked for about 21 years and above. Concerning the size of the organization, 46 representing 31.7% have a workforce of less than 50, 35 representing 24.1% have a workforce of between 50 and 100, 32 representing 22.1% have a workforce of Between 100 and 200 and 32 representing 22.1% have a workforce of over 200.

The years that their organizations have been in operation, 25 representing 17.2% indicate that their organizations have been in operation for less than 5 years, 40 representing 27.6% indicate that their organizations have been in operation for about 5-10 years, 30 representing 20.7% indicate that their organizations have been in operation for between 10-15 years, 30 representing 20.7% indicate that their organizations have been in operation for between 15-20 years and 20 representing 13.8% indicate that their organizations have been in operation for more than 20 years.

4.2 Reliability and Validity tests

Reliability is the extent to which data collection techniques or analysis procedures yields consistent findings (Mugenda & Mugenda, 2003). This means that if people answered the same question the same way on repeated occasions, then the instrument can be said to be reliable. Reliability analysis was used to test the internal consistency of the research instruments for the purposes of identifying those items in the questionnaire with low correlations in order to exclude them from further analysis. Cronbach's alpha a coefficient of reliability that gives unbiased estimate of data generalizability was used to test reliability of the answered questionnaires. According to Zinbarg (2005), Cronbach's alpha is a coefficient of reliability that gives an unbiased estimate of data generalizability.

Validity refers to the extent to which an instrument measures what it is supposed to measure (Cooper & Schindler, 2006). Validity estimates how accurately the data obtained in the study represents a given variable or construct (Doodley, 2003). This research tested the validity using the Cronbach's alpha. Alpha values range from zero - no internal consistency to one - complete internal consistency. Validity of the instrument was tested by administering questionnaires to randomly selected respondents of different division in the strata, to identify any ambiguous and unclear questions. Feedback received was used to fine-tune the questionnaire before embarking on the actual data collection.

Table 4.2 Reliability Results

Constructs	Cronbach’s Alpha	Number of items
Operational performance	.892	14
Social Sustainability Orientation Practices	.924	7
Sustainability Supply Chain Practices.	.731	16

Organizational Culture	.921	23
Constructs	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Approx. Chi-Square
Operational performance	.529	90.898
Social Sustainability Orientation Practices	.544	96.085
Sustainability Supply Chain Practices	.595	334.365
Organizational Culture	.507	237.894

Source: Field Data, 2022

The construct operational performance (Cronbach's Alpha = .892; items = 14; Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .529; Bartlett's Test of Sphericity Approx. Chi-Square = 90.898); Social Sustainability Orientation Practices (Cronbach's Alpha = .924; items = 7; Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .544; Bartlett's Test of Sphericity Approx. Chi-Square = 96.085); Sustainability Supply Chain Practices (Cronbach's Alpha = .731; items = 16; Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .595; Bartlett's Test of Sphericity Approx. Chi-Square = 334.365); Organizational Culture (Cronbach's Alpha = .921; items = 23; Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .507; Bartlett's Test of Sphericity Approx. Chi-Square = 237.894).

The recordings of all the constructs Alpha Cronbach's were even within the recommended threshold of 0.7, Kaiser-Meyer-Olkin Measure of Sampling Adequacy was also within the threshold of 0.5 a, and their Bartlett's Test of Sphericity Approx. Chi-Square were all within the acceptable threshold therefore the constructs for the study are highly reliable. After the data collection, we assessed the reliability and validity of the scales by employing a data purification (Anderson and Gerbing, 1988; Fornell and Larcker, 1981). Factor analysis was applied to the questions of all variables in order to test their factor loadings. In the analysis, Varimax Rotation was used to achieve a more meaningful factor structure. Table 2 shows the results of the explanatory factor analysis of the study. When performing factor analysis, certain questions, explained by more than one factor, were excluded from the scales.

Table 4.2.1 Factor loadings

Items	Loadings	Items	Loadings	Items	Loadings	Items	Loadings
OC1	.841	SSCP1	.751	OP1	.639	SSOP1	.801
OC2	.801	SSCP2	.661	OP2	.599	SSOP2	.675
OC3	.773	SSCP 3	.749	OP3	.872	SSOP3	.813
OC4	.724	SSCP4	.773	OP4	.711	SSOP4	.834
OC5	.685	SSCP5	.557	OP5	.546	SSOP5	.394
OC6	.652	SSCP6	.609	OP6	.671	SSOP6	.722
OC7	.758	SSCP7	.703	OP7	.671	SSOP7	.511
OC8	.734	SSCP8	.757	OP8	.807		
OC9	.835	SSCP9	.501	OP9	.811		
OC10	.607	SSCP10	.509	OP10	.723		
OC11	.604	SSCP11	.731	OP11	.788		
OC12	.786	SSCP12	.781	OP12	.624		
OC13	.819	SSCP13	.665	OP13	.703		
OC14	.724	SSCP14	.653	OP14	.665		
OC15	.645	SSCP15	.827				
OC16	.791	SSCP 16	.714				
OC17	.766						
OC18	.811						
OC19	.680						
OC20	.643						
OC21	.757						

OC22	.694						
OC23	.702						

Source: Field Data, 2022

All factor loadings were within the acceptable threshold of 0.5 and above hence the item were deemed good for further analysis to be carried.

Table 4.3 Correlations among the variables

		OC01	SSCP02	OP03	SSOP04
OC	Pearson Correlation	1	.677**	.097	.094
	Sig. (2-tailed)		.000	.337	.353
	Sum of Squares and Cross-products	98.110	50.240	8.600	8.150
	Covariance	.991	.507	.087	.082
	N	145	145	145	145
SSCP	Pearson Correlation	.677**	1	.215*	.055
	Sig. (2-tailed)	.000		.032	.588
	Sum of Squares and Cross-products	50.240	56.160	14.400	3.600
	Covariance	.507	.567	.145	.036
	N	145	145	145	145
OP	Pearson Correlation	.097	.215*	1	.268**
	Sig. (2-tailed)	.337	.032		.007
	Sum of Squares and Cross-products	8.600	14.400	80.000	21.000
	Covariance	.087	.145	.808	.212
	N	145	145	145	145
SSOP	Pearson Correlation	.094	.055	.268**	1
	Sig. (2-tailed)	.353	.588	.007	
	Sum of Squares and Cross-products	8.150	3.600	21.000	76.750
	Covariance	.082	.036	.212	.775
	N	145	145	145	145

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

* **Correlation is significant at the 0.05 level (2-tailed).**

Note: OP= Operational performance; SSOP= Social Sustainability Orientation Practices; SSCP= Sustainability Supply Chain Practices; OC= Organizational Culture

The relationship between Organizational Culture and Sustainability Supply Chain Practices, the Pearson Correlation coefficient of (.677**); Sum of Squares and Cross-products of (50.240) and Covariance (0.507) $p <$ value of (0.000) indicate that there is a positive and

significant relationship between Organizational Culture and Sustainability Supply Chain Practices. The relationship between Organizational Culture and Operational performance, the Pearson Correlation coefficient of (.097); Sum of Squares and Cross-products of (8.600) and Covariance (0.087) $p <$ value of (0.337) indicate that there is a positive but not a significant relationship between Organizational Culture and Operational performance.

The relationship between Organizational Culture and Social Sustainability Orientation Practices, the Pearson Correlation coefficient of (.094**); Sum of Squares and Cross-products of (8.150) and Covariance (0.082) $p <$ value of (0.000) indicate that there is a positive and significant relationship between Organizational Culture and Social Sustainability Orientation Practices. The relationship between Sustainability Supply Chain Practices and Operational performance, the Pearson Correlation coefficient of (.215**); Sum of Squares and Cross-products of (14.400) and Covariance (0.145) $p <$ value of (0.032) indicate that there is a positive and significant relationship between Sustainability Supply Chain Practices and Operational performance. The relationship between Sustainability Supply Chain Practices and Social Sustainability Orientation Practices, the Pearson Correlation coefficient of (.055**); Sum of Squares and Cross-products of (3.600) and Covariance (0.588) $p <$ value of (0.036) indicate that there is a positive and significant relationship between Sustainability Supply Chain Practices and Social Sustainability Orientation Practices. The relationship between Operational performance and Social Sustainability Orientation Practices, the Pearson Correlation coefficient of (.268**); Sum of Squares and Cross-products of (21.000) and Covariance (0.212) $p <$ value of (0.000) indicate that there is a positive and significant relationship between Operational performance and Social Sustainability Orientation Practices.

4.3 Operational performance

In determining the Operational performance of the organizations for the study, literature was consulted and 14 items were adopted. The table 4.4 presents the results.

Table 4.4 Descriptive Statistics for Operational performance

Items	Min	Max	Mean	S.D
We experience low product failure rates service in our operations.	1	5	4.17	.995
We experience Low warranty claims costs in our operations.	2	5	4.28	.753
We experience Low defect rates in our operations.	2	5	3.80	.899
We experience Low scrap in our operations.	1	5	4.05	.880
We experience Low rework in our operations.	1	5	4.78	.905
We experience Low recycling costs in our operations.	1	5	4.97	.948
We ensure 25-50 per cent of production cycle time devoted to performing value added work on materials in our operations.	1	5	4.78	.711
We achieve Processing orders in hours, rather than days in our operations.	1	5	4.90	.727
The ability to perform equipment changeovers in minutes, rather than days in our operations is achieved.	1	5	4.92	.725
Consistently meeting 95 per cent or better customer delivery commitments in our operations.	2	5	4.31	.706
Your company has implemented social sustainability practices with your key supplier that has resulted in improved product design.	2	5	4.12	.742
Your company has implemented social sustainability practices with your key supplier that has resulted in improved process design.	1	5	4.82	.770
Your company has implemented social sustainability practices with your key supplier that has resulted in a reduction in lead times.	1	5	4.05	.880

Your company has implemented social sustainability practices with your key supplier that has resulted in improved product quality.	2	5	4.31	.647
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The (Mean = 4.17; SD=.995) is affirming that the organizations for the study are experiencing low product failure rates service in their operations. The (Mean = 4.28; SD= .753) is affirming that the organizations for the study are experiencing low warranty claims costs in their operations. The (mean = 3.80; SD= .899) is affirming that the organizations for the study are not sure as to whether they are experiencing low defect rates in their operations or not. The (mean = 4.05; SD= .880) is affirming that the organizations for the study are experiencing experience low scrap in their operations. The (mean = 4.78; SD= .905) is affirming that the organizations for the study are experiencing low rework in their operations.

The (mean = 4.97; SD=.948) is affirming that the organizations for the study are experiencing low recycling costs in their operations. The (mean = 4.78; SD= .711) is affirming that the organizations for the study are ensuring that 25-50 per cent of production cycle time is devoted to performing value added work on materials in their operations. The (mean = 4.90; SD=.727) is affirming that the organizations for the study are achieving processing orders in hours, rather than days in their operations. The (mean = 4.92; SD= .725) is affirming that the organizations for the study are having the ability to perform equipment changeovers in minutes, rather than days in their operations is achieved. The (mean = 4.31; SD= .706) is affirming that the organizations for the study are ensuring consistent meeting 95 per cent or better customer delivery commitments in their operations.

The (mean = 4.12; SD= .742) is affirming that the organizations for the study are implementing social sustainability practices with their key supplier that has resulted in improved product design. The (mean = 4.82; SD= .770) is affirming that the organizations for the study are implementing social sustainability practices with their key supplier that has resulted in improved process design. The (mean = 4.05; SD= .880) is affirming the that organizations for the study are implementing social sustainability practices with your key supplier that has resulted in a reduction in lead times. The (mean = 4.31; SD= .647) is affirming the that organizations for the study are implementing social sustainability practices with your key supplier that has resulted in improved product quality.

4.4 Social Sustainability Orientation Practices

In determining the Operational performance of the organizations for the study, literature was consulted and 7 items were adopted. The table 4.5 presents the results.

Table 4.4 Descriptive Statistics for Supply Chain Coordination

Items	Min	Max	Mean	S.D
At your firm, you provided information to all employees to understand the importance of social sustainability.	3	5	4.13	.661
You tried to promote social sustainability as a major goal across all departments.	2	5	4.11	.790
Your firm had a clear policy statement urging social sustainability in every area of operations.	2	5	4.92	.862
Social sustainability was a high-priority activity in your firm.	2	5	4.10	.835
Social sustainability was a central corporate value in your firm.	2	5	4.96	.831
Your firm had a responsibility to be socially sustainable.	1	5	4.54	.815
Your firm worked hard for an image of social sustainability.	2	5	4.31	.706

The (mean = 4.13; SD= .661) is affirming the that organizations for the study are providing information to all employees to understand the importance of social sustainability. The (mean = 4.11; SD= .790) is affirming the that organizations for the study are trying to promote social

sustainability as a major goal across all departments. The (mean =4.92; SD=.862) is affirming the that organizations for the study are have a clear policy statement urging social sustainability in every area of operations. The (mean = 4.10; SD= .835) is affirming the that organizations for the study treat social sustainability a high-priority activity in their firm. The (mean = 4.96; SD= .831) is affirming the that organizations for the study are ensuring that social sustainability is a central corporate value in their firm. The (mean = 4.54; SD=.815) is affirming the that organizations for the study are have a responsibility to be socially sustainable. The (mean = 4.31; SD= .706) is affirming the that organizations for the study are working hard for an image of social sustainability.

4.5 Sustainability Supply Chain Practices

In determining the Sustainability Supply Chain Practices for the study, literature was consulted and 16 items were adopted. The table 4.6 presents the results.

Table 4.6 Descriptive Statistics for Sustainability Supply Chain Practices

Items	Min	Max	Mean	S.D
You monitored your key supplier's compliance with your health and safety requirements.	1	5	4.17	.995
You sent health and safety questionnaires to your key supplier to monitor their compliance.	2	5	4.28	.753
You monitored your key supplier's commitment to health and safety improvement goals.	2	5	3.80	.899
You conducted audits of the health and safety of their employees.	1	5	4.05	.880
You designed systems for work/family balance across the supply chain with your key supplier (dropped item).	1	5	3.78	.905
You introduced employee health and safety compliance and auditing systems with your key supplier.	1	5	3.97	.948
You helped your key supplier obtain OHSAS 18001 certification, SA8000 or other management system certification (dropped item).	1	5	3.78	1.011
You developed an ethical code of conduct system with your key supplier.	1	5	3.90	.927
Your company developed new product/processes with your key supplier that reduced health risks for consumers.	1	5	3.92	.825
Your company developed new product/processes with your key supplier that benefited workers throughout the supply chain.	2	5	4.31	.706
Your company developed new product/processes with your key supplier that reduced health and safety hazards for employees.	2	5	4.12	.742
Your company developed new product/processes with your key supplier that provided fair margins to all of your suppliers.	1	5	3.82	.770
Your company has changed its supply chain strategy to bring nongovernmental organizations and community groups into the supply chain.	1	5	4.05	.880
Your company has changed its supply chain strategy to minimize negative impacts on communities around your supply chain operations.	2	5	4.31	.647
Your company has changed its supply chain strategy to make social sustainability data (ethical code of conduct/ impact on communities) throughout your supply chain available to the public (dropped item).	1	5	4.05	.880

Your company has changed its supply chain strategy to focus on fair trade throughout the supply chain.	2	5	4.31	.647
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The (mean = 4.17; SD= .995) is affirming the that organizations for the study are monitoring their key supplier’s compliance with your health and safety requirements. The (mean = 4.28; SD=.753) is affirming the that organizations for the study do send health and safety questionnaires to their key suppliers to monitor their compliance. The (mean = 3.80; SD= .899) is affirming the that organizations for the study are monitoring their key supplier’s commitment to health and safety improvement goals. The (mean = 4.05; SD= .880) is affirming the that organizations for the study are conducting audits of the health and safety of their employees. The (mean =3.78; SD= .905) is affirming the that organizations for the study have designed systems for work/family balance across the supply chain with your key supplier (dropped item). The (mean =3.97; SD= .948) is affirming the that organizations for the study have introduced employee health and safety compliance and auditing systems with your key supplier. The (mean = 3.78; SD=1.011) is affirming the that organizations for the study are helping their key supplier obtain OHSAS 18001 certification, SA8000 or other management system certification (dropped item).

The (mean = 3.90; SD= .927) is affirming the that organizations for the study are developing an ethical code of conduct system with your key suppliers. The (mean = 3.92; SD= .825) is affirming that the organizations for the study are not sure as to whether they are developing new product/processes with your key supplier that reduced health risks for consumers. The (mean = 4.31; SD= .706) is affirming that the organizations for the study are developing new product/processes with their key supplier that benefited workers throughout the supply chain. The (mean = 4.12; SD=.742) is affirming that the organizations for the study are developing new product/processes with your key supplier that reduced health and safety hazards for employee. The (mean = 3.82; SD= .770) is affirming that the organizations for the study are developing new product/processes with your key supplier that provided fair margins to all of your suppliers.

The (mean = 4.05; SD= .880) is affirming the that organizations for the study are changing their supply chain strategy to bring nongovernmental organizations and community groups into the supply chain. The (mean =4.31; SD= .647) is affirming that the organizations for the study are changing their supply chain strategy to minimize negative impacts on communities around your supply chain operations. The (mean = 4.05; SD= .880) is affirming that the organizations for the study are changing their supply chain strategy to make social sustainability data (ethical code of conduct/ impact on communities) throughout your supply chain available to the public (dropped item). The (mean = 4.31; SD= .647) is affirming that the organizations for the study are changing their supply chain strategy to focus on fair trade throughout the supply chain.

4.6 Organizational Culture

In determining the Organizational Culture for the study, literature was consulted and 23 items were adopted. The table 4.7 presents the results.

Table 4.7 Descriptive Statistics for Organizational Culture

Items	Min	Max	Mean	S.D
Everyone believes that he or she can have a positive impact	1	5	4.17	.995
Decisions are usually made at the level where the best information is available	2	5	4.28	.753
Cooperation across different parts of the organization is actively encouraged.	2	5	3.80	.899
Teamwork is used to get work done, rather than hierarchy	1	5	4.05	.880
Authority is delegated so that people can act on their own	1	5	4.78	.705
The leaders and managers “practice what they preach”	1	5	4.97	.748
There is a clear and consistent set of values that governs the way	1	5	4.78	.711

we do business.				
When disagreements occur, we work hard to achieve “win-win “solutions.	1	5	3.90	.927
There is a clear agreement about the right way and the wrong way to do things	1	5	3.92	.825
It is easy to coordinate projects across different parts of the organization.	2	5	4.31	.706
There is good alignment of goals across levels	2	5	4.12	.742
The way things are done is very flexible and easy to change	1	5	3.82	.770
We respond well to competitors and other changes in the business environment.	1	5	4.05	.880
Customer comments and recommendations often lead to changes	2	5	4.31	.647
Customer input directly influences our decisions	3	5	4.13	.661
We view failure as an opportunity for learning and improvement	2	5	4.11	.790
Innovation and risk taking are encouraged and rewarded	2	5	3.92	.662
There is a long-term purpose and direction	2	5	4.10	.835
Our strategy leads other organizations to change the way they compete in the industry	2	5	4.96	.831
There is widespread agreement about goals	1	5	4.54	.815
Leaders set goals that are ambitious, but realistic	1	5	4.94	.886
We have a shared vision of what the organization will be like in the future.	2	5	4.90	.832
Leaders have a long-term viewpoint	1	5	4.21	.813

The (mean = 4.17; SD= .995) is affirming that the organizations for the study they can have a positive impact. The (mean = 4.28; SD= .753) is affirming that the organizations for the study decisions are usually made at the level where the best information is available. The (mean = 3.80; SD= .899) is declaring an uncertainty that the organizations for the study are either cooperating across different parts of the organization is actively encouraged or not encouraged. The (mean = 4.05; SD= .880) is affirming that the organizations for the study are using teamwork to get work done, rather than hierarchy. The (mean = 4.78; SD= .705) is affirming that the organizations for the study are using authority to delegated so that people can act on their own. The (mean = 4.97; SD= .748) is affirming that the organizations for the study leaders and managers “practice what they preach”.

The (mean = 4.78; SD= .711) is affirming that the organizations for the study are clear and consistent set of values that governs the way they do business. The (mean = 3.90; SD= .927) is affirming that the organizations for the study are able to handle when disagreements occur, they work hard to achieve “win-win “solutions. The (mean = 3.92; SD= .825) is affirming that the organizations for the study have a clear agreement about the right way and the wrong way to do things. The (mean = 4.31; SD= .706) is affirming that the organizations for the study believe that it is easy to coordinate projects across different parts of the organization. The (mean = 4.12; SD= .742) is affirming that the organizations for the study have a good alignment of goals across levels. The (mean = 3.82; SD= .770) is affirming that the organizations for the study believe that the way things are done is very flexible and easy to change.

The (mean = 4.05; SD=.880) is affirming that the organizations for the study do respond well to competitors and other changes in the business environment. The (mean = 4.31; SD= .647) is affirming that the organizations for the study customer comments and recommendations often lead to changes. The (mean = 4.13; SD=.661) is affirming that the organizations for the study customer input directly influences their decisions. The (mean = 4.11; SD= .790) is affirming that the organizations for the study they view failure as an opportunity for learning and improvement. The (mean = 3.92; SD=.662) is affirming that the organizations for the study believe that innovation and risk taking are encouraged and rewarded.

The (mean = 4.10; SD= .835) is affirming that the organizations for the study they have a long-term purpose and direction. The (mean = 4.96; SD= .831) is affirming that the organizations for the study strategy leads other organizations to change the way they compete in the industry. The (mean = 4.54; SD= .815) is affirming that the organizations for the study have a widespread agreement about goals . The (mean = 4.94; SD= .886) is affirming that the organizations for the study leaders set goals that are ambitious, but realistic. The (mean =4.90; SD= .832) is affirming that the organizations for the study have a shared vision of what the organization will be like in the future. The (mean = 4.21; SD= .813) is affirming that the organizations for the study leaders have a long-term viewpoint.

4.7 Social sustainability orientation and social sustainability supply chain

The study examined the effect of Social sustainability orientation on social sustainability supply chain and the table 4.8 presents the results.

Table 4.8 Social sustainability orientation and social sustainability supply chain

Model Summary				
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.677 ^a	.458	.453	.737
ANOVA^a				
Sum of Squares	df	Mean Square	F	Sig.
44.944	1	44.944	82.845	.000 ^b
Coefficients^a				
Unstandardized Coefficients		Standardized Coefficients		
B	Std. Error	Beta	t	Sig.
.895	.098	.677	9.102	.000

The R Square establishes the total effect that the independent variable has on the dependent variable. The R Square of 458 is establishing a variation of 46%. This explains that the independent variable social sustainability orientation can overall influence the dependent variable social sustainability supply chain of about 46%. The R Square clearly establishes social sustainability orientation is a good predictor of achieving social sustainability supply chain. The Unstandardized Coefficients and Standardized Coefficients (B= .895; Std. Error =.098; Beta=.677; t=9.102; p<0.000) statistically establish that social sustainability orientation has a positive and significant effect on social sustainability supply chain.

4.8 Social Sustainability Supply Chain and Operational Performance

The study examined the effect of social sustainability supply chain and operational performance and the table 4.9 presents the results.

Table 4.9 Social Sustainability Supply Chain and Operational Performance

Model Summary				
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
2	.381 ^a	.145	.136	.818
ANOVA^a				
Sum of Squares	df	Mean Square	F	Sig.
11.116	1	11.116	16.598	.000 ^b
Coefficients^a				
Unstandardized Coefficients		Standardized Coefficients		
B	Std. Error	Beta	t	Sig.
.518	.127	.381	4.074	.000

The R Square establishes the total effect that the independent variable has on the dependent variable. The R Square of 145 is establishing a variation of 15%. This explains that the independent variable social sustainability supply chain can overall influence the dependent variable operational performance of about 15%. The R Square clearly establishes social sustainability supply chain is a good predictor of achieving operational performance. The Unstandardized Coefficients and Standardized Coefficients (B= .518; Std. Error = .098; Beta=.127; t=4.074; p<0.000) statistically establish that social sustainability supply chain has a positive and significant effect on operational performance.

4.9 The mediating role of social sustainability supply chain

The study further examined the mediating role of social sustainability supply chain in the relationship between social sustainability orientation and operational performance and the table 4.10 presents the results.

Table 4.10 mediating role of social sustainability supply chain

Model Summary						
R	R-sq	MSE	F	df1	df2	p
.2609	.0681	21.5747	7.1581	1.0000	98.0000	.0087
			Mode3			
OP	coeff	se	t	p	LLCI	ULCI
	1.9316	.7220	2.6755	.0087	.4989	3.3644
Direct effect of X on Y						
	Effect	se	t	p	LLCI	ULCI
	.3074	.1040	2.9567	.0039	.1010	.5137
Indirect effect(s) of X on Y						
		Effect	BootSE	BootLLCI	BootULCI	
		.2109	.1081	.0393	.4634	

The study examined the mediating role of social sustainability supply chain in the relationship between social sustainability orientation and operational performance and the R-Square clearly establishes that social sustainability supply chain mediates the relationship between social sustainability orientation and operational performance of about 7%. The direct effect statistical values (effect = .3074; se = .1040; t =2.9567; p <0.0039) clearly indicate that social sustainability supply chain positively and significantly mediates the relationship social sustainability orientation and operational performance.

4.10 Moderating role of organizational culture

The study also examined the moderating role of organizational culture in the relationship between social sustainability orientation and social sustainability supply chain and the table 4.11 presents the results.

Table 4.11 Moderating role of organizational culture

Model Summary						
R	R-sq	MSE	F	df1	df2	p
.7018	.4926	.2076	10.0313	3.0000	31.0000	.0001
Int_1	coeff	se	t	p	LLCI	ULCI
	.7546	.2482	3.0401	.0048	.2483	1.2608
Test(s) of highest order unconditional interaction(s):						
		R2-chng	F	df1	df2	p
		.1513	9.2421	1.0000	31.0000	.0048
Conditional effects of the focal predictor at values of the moderator(s):						

	Effect	se	t	p	LLCI	ULCI
	.8120	.1632	4.9765	.0000	.4792	1.1447

The moderating role of organizational culture in the relationship between social sustainability orientation and social sustainability supply chain, the R Square establishes that organizational culture can moderates the relationship between social sustainability orientation and social sustainability supply chain of about 49%. The Test(s) of highest order unconditional interaction(s): and Conditional effects of the focal predictor at values of the moderator(s): (se = .1632; t= 4.9765; p <0.0000) establish that organizational culture positively and significantly moderates the relationship between social sustainability orientation and social sustainability supply chain.

4.11 Moderating role of organizational culture

The study also examined the moderating role of organizational culture in the relationship between social sustainability supply chain and operational performance and the table 4.12 presents the results.

Table 4.12 Moderating role of organizational culture

Model Summary						
R	R-sq	MSE	F	df1	df2	p
.6910	.4775	.2138	9.4451	3.0000	31.0000	.0001
Int_1	coeff	se	t	p	LLCI	ULCI
	.5599	.1845	3.0340	.0049	.1835	.9362
Test(s) of highest order unconditional interaction(s):						
		R2-chng	F	df1	df2	p
		.1551	9.2051	1.0000	31.0000	.0049
Conditional effects of the focal predictor at values of the moderator(s):						
	Effect	se	t	p	LLCI	ULCI
	.8080	.1594	5.0685	.0000	.482	1.1331

The moderating role of organizational culture in the relationship between social sustainability supply chain and operational performance, the R Square establishes that organizational culture can moderates the relationship between social sustainability orientation and social sustainability supply chain of about 48%. The Test(s) of highest order unconditional interaction(s): and Conditional effects of the focal predictor at values of the moderator(s): (se = .1594; t= 5.0685; p <0.0000) establish that organizational culture positively and significantly moderates the relationship between social sustainability supply chain and operational performance.

4.13 Hypothesis testing and findings

Hypothesis	Relationship	Beta	t	p	Remarks
H1	SSO -->SSSC	.677	9.102	.000	Supported
H2	SSSC -->OP	.381	4.074	.000	Supported
H3	SSSC -- > SSO -- > OP	.1040	2.9567	.0039	Supported
H4a	OC --> SSO *SSSC	.1632	4.9765	.0000	Supported
H4b	OC --> SSSC *OP	.1594	5.0685	.0000	Supported

4.14 Discussion of results

Social sustainability orientation and social sustainability supply chain

The study examined the effect of Social sustainability orientation on social sustainability supply chain and the findings of the study establish that social sustainability orientation has a positive and significant effect on social sustainability supply chain. As Marshall et al. (2015) found, adoption of Social Sustainability Supply Chain practices is dependent on the internal

decision-making context and orientation of the sourcing firm. However, their study did not address the potential relation between firms' sustainability orientation and operational performance. While other studies explore social sustainability practices and/or financial performance (Pullman and Dillard, 2010; Klassen and Vereecke, 2012; Shafiq et al., 2017) rather than on operational performance. Marshall et al.'s (2015) framework identifies two main categories of basic practices: monitoring activities and management systems that improve the health and safety of workers in the supply chain.

Social Sustainability Supply Chain and Operational Performance

The study examined the effect of social sustainability supply chain on operational performance and the findings of the study statistically establish that social sustainability supply chain has a positive and significant effect on operational performance. Vereecke (2012) suggest that basic practices can influence operational performance by improving quality, reducing lead times and improving processes. More advanced practices identified in Marshall et al.'s (2015) classification involve substantial changes in product and process designs along with the redefinition of SSSC strategies. These practices have been shown to help focal firms improve operational processes, identify new product opportunities, develop new markets for existing products and services, increase transparency in the supply chain, improve competitive advantage, improve reputation of the entire supply chain, and increase organizational learning (Awaysheh and Klassen, 2010; Tate et al., 2010; Marshall et al., 2015).

The mediating role of social sustainability supply chain

The study further examined the mediating role of social sustainability supply chain in the relationship between social sustainability orientation and operational performance and the findings of the study clearly indicate that social sustainability supply chain positively and significantly mediates the relationship social sustainability orientation and operational performance. Advanced practices make social issues central to the organization and its supply chain and arguably should improve firm performance in the long-term (Sharma and Henriques, 2005). Further, the significance of advanced practices for operational performance is primarily through the identification of process and product inefficiencies in an analytical manner, based on the incorporation of operational data in decision analysis (Klassen and Vachon, 2003; Hervani et al., 2005). Such a 'forensic' approach increases the engagement of personnel in collaborative knowledge sharing related to the organization's internal operations, again driving progress in sustainability goals (Hervani et al., 2005).

Moderating role of organizational culture

The study also examined the moderating role of organizational culture in the relationship between social sustainability orientation and social sustainability supply chain and the findings of the study establish that organizational culture positively and significantly moderates the relationship between social sustainability orientation and social sustainability supply chain. According to Deshpande and Webster (2004), the organizational culture is "the shared patterns of values and beliefs" that help individuals to understand the operation of the organization. Organizational culture consists of basic assumptions that given group has invented, discovered or developed in learning to cope with its problems of external adaptation and internal integration and that have worked well enough to be considered valid and therefore to be taught to new problems (Schein, 1984). The organizational culture was studied on the basis of "employee orientation", "customer orientation", "innovativeness", "social responsibility", and "systematic management and control" dimensions.

Moderating role of organizational culture

The study finally examined the moderating role of organizational culture in the relationship between social sustainability supply chain and operational performance and the findings of the study establish that organizational culture positively and significantly moderates the relationship between social sustainability supply chain and operational performance. Considering the characteristics of their customers and employees, firms, which focus on their

customers, should create an innovative organizational culture in which employees can effectively adopt the system they are a part of; have responsibility for the customers and their environment; and meet the demands of customers; in addition, firms should also adopt this created culture in their all activities and functions. Concordance of the cultural substructure of the logistics system of firms and existing or created cultural substructure of firms enables them to step forward in the competitive market.

5.0 CONCLUSIONS

This presents the summary of findings, conclusion, recommendations and suggestions for future studies.

5.2 Summary of findings

- **Social sustainability orientation and social sustainability supply chain:** The study examined the effect of Social sustainability orientation on social sustainability supply chain and the findings of the study statistically establish that social sustainability orientation has a positive and significant effect on social sustainability supply chain.
- **Social Sustainability Supply Chain and Operational Performance:** The study examined the effect of social sustainability supply chain and operational performance and the findings of the study statistically establish that social sustainability supply chain has a positive and significant effect on operational performance.
- **The mediating role of social sustainability supply chain:** The study further examined the mediating role of social sustainability supply chain in the relationship between social sustainability orientation and operational performance and the findings of the study clearly indicate that social sustainability supply chain positively and significantly mediates the relationship social sustainability orientation and operational performance.
- **Moderating role of organizational culture:** The study also examined the moderating role of organizational culture in the relationship between social sustainability orientation and social sustainability supply chain and the findings of the study establish that organizational culture positively and significantly moderates the relationship between social sustainability orientation and social sustainability supply chain.
- **Moderating role of organizational culture:** The study finally examined the moderating role of organizational culture in the relationship between social sustainability supply chain and operational performance and the findings of the study establish that organizational culture positively and significantly moderates the relationship between social sustainability supply chain and operational performance.

5.3 Conclusions

- **Social sustainability orientation and social sustainability supply chain:** The study examined the effect of Social sustainability orientation on social sustainability supply chain and the findings of the study concluded that that social sustainability orientation has a positive and significant effect on social sustainability supply chain.
- **Social Sustainability Supply Chain and Operational Performance:** The study examined the effect of social sustainability supply chain and operational performance and the findings of the study concluded that social sustainability supply chain has a positive and significant effect on operational performance.
- **The mediating role of social sustainability supply chain:** The study further examined the mediating role of social sustainability supply chain in the relationship between social sustainability orientation and operational performance and the findings of the study

concluded that social sustainability supply chain positively and significantly mediates the relationship social sustainability orientation and operational performance.

- **Moderating role of organizational culture:** The study also examined the moderating role of organizational culture in the relationship between social sustainability orientation and social sustainability supply chain and the findings of the study concluded that organizational culture positively and significantly moderates the relationship between social sustainability orientation and social sustainability supply chain.
- **Moderating role of organizational culture:** The study finally examined the moderating role of organizational culture in the relationship between social sustainability supply chain and operational performance and the findings of the study concluded that organizational culture positively and significantly moderates the relationship between social sustainability supply chain and operational performance.

5.4 Managerial implications

Management in organizations should note that they can highly achieve good sustainability supply chain practices if they are able to monitored their key supplier's compliance with your health and safety requirements, send health and safety questionnaires to your key supplier to monitor their compliance, monitored their key supplier's commitment to health and safety improvement goals, conduct an audits of the health and safety of their employees, designed systems for work/family balance across the supply chain with your key supplier (dropped item), introduce employee health and safety compliance and auditing systems with your key supplier, help their key suppliers to obtain OHSAS 18001 certification, SA8000 or other management system certification, develop an ethical code of conduct system with their key suppliers, develop new product/processes with their key suppliers that can reduce health risks for consumers and develop new product/processes with their key suppliers that benefit workers throughout the supply chain.

5.5 Recommendations

Organizations should be able to provide information to all employees to understand the importance of social sustainability so that they can all joins hands to pursue social sustainability practices that will guide the organization to be social responsible to be in operations. Where an organization may not provide the social sustainability information to all employees, it will be very difficult for such organization to achieve social sustainability goals set because some employees may end up deviating from the common set by the organization. It is therefore very important for the organizations to ensure that necessary information is provided to all employees to understand the importance of social sustainability so that its achievement will not be difficult.

Management in organizations should try to promote social sustainability as a major goal across all departments so all employees will understand the essence of pursuing such a goal in their organizations. The organizations effort of promoting social sustainability will help the employees to gain more insight and contribute for their organizations to achieve social sustainability.

Organizations should have a clear policy statement urging social sustainability in every area of operations so in carrying out their activities, they will exercise the necessary precautions to avoid any activity that cause an environmental havoc. This will help the organizations to carry out their activities in way that it will not have any negative impact within the environment that they are operating to help the achieve social sustainability.

5.6 Suggestion for future study

A future study can consider the top management commitment in the relationship between organizational culture and sustainable supply chain practices in the mining industry.

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