

SUPPLY CHAIN LEADERSHIP AND SUSTAINABILITY PERFORMANCE: EXPLANATORY MECHANISM AND BOUNDARY CONDITION

1.1 Motivation of the Study

Contemporary research emphasizes Supply Chain Leadership's (SCL's) role in supply chain sustainability performance (Mokhtar *et al.*, 2019). This is contributing to increasing research highlights the role of SCL in the implementation of sustainable supply chain practices (Vivaldini and Pires, 2016; Agi and Nishant, 2017; Blome *et al.*, 2017; Gabler *et al.*, 2017; Gosling *et al.*, 2017; Gunasekaran *et al.*, 2017). However, several issues exist concerning SCL and sustainability research that need addressing. First, SCL-sustainability performance literature remains fragmented. Some studies encapsulate leadership across the entire supply chain (Mokhtar *et al.*, 2019a; Fontoura and Coelho, 2020; Huo *et al.*, 2021; Burawat, 2019) whilst others encapsulate leadership of managers or leadership within a single firm (Teoman and Ulengin, 2017; Roman, 2017; Dubey *et al.*, 2015; Blome *et al.*, 2017; Ojha *et al.*, 2018). These affect the clarity of research on SCL and sustainability. Also, the extant review of the literature demonstrates that the effect of SCL on the traditional economic, social and environmental outcomes of sustainability remains underexplored, which necessitates future empirical research to clarify the relationship (Gosling *et al.*, 2014; Blome *et al.*, 2017; Chen *et al.*, 2021).

Further, empirical findings from SCL-sustainability performance studies have been mixed and inconsistent. Whilst some studies found SCL to be related positively to sustainability outcomes (see e.g. Blome *et al.*, 2017; Mokhtar *et al.*, 2019a; Roman, 2017), other studies revealed a negative and insignificant association between SCL and sustainability (see e.g. Blome *et al.*, 2017; Fontoura and Coelho, 2020). Coupled with that, considerable studies elaborating on the influence of SCL on sustainability are qualitative (Agi and Nishant, 2017; Gabler *et al.*, 2017; Vivaldini and Pires, 2016; Silvestre, 2015) or conceptual (Gosling *et al.*, 2017; Kurucz; 2017; Birasnav *et al.*, 2013, 2017). Thus, there is little clarity concerning which leadership style exerts the most significant benefits to specific performance improvements (Chen *et al.*, 2021), including sustainability performance. Further, there is minimal research focusing on the simultaneous application of transformational and transactional leadership in SCL research (Mokhtar *et al.*, 2019b).

Resilient response to some disruptions (e.g. Covid-19) may enhance sustainable development (Negri *et al.*, 2021). There is anecdotal evidence that buyers can undertake appropriate risk mitigation practices through successful engagement with suppliers by demonstrating leadership over them (Elliot *et al.*, 2019). However, literature has yet to investigate leadership's role in developing supply resilience (Vergheze *et al.*, 2022). There is an insufficient exploration of how supply-side capability to detect, respond and recover from disruptions affects buying firms (Durach *et al.*, 2020). Similarly, the literature overlooks the role of firms in successfully engaging and motivating their suppliers to invest in the development of resilience to supply chain disruptions in terms of their specific exchange relationship (Vergheze *et al.*, 2022). Thus, there are calls to explore the role of SCL in the development of resilience (Mishra *et al.*, 2021; Hoek, 2020) and the outcomes of resilience to incorporate sustainability outcomes in terms of financial, social and environmental in buyer-supplier exchange relationships (Baz and Ruel, 2020; Shashi *et al.*, 2020).

Furthermore, to date there is little theoretical explanation of the mechanisms (Mokhtar *et al.*, 2019) through which SCL influences sustainability performance. Similarly, though the relationship between SCL and performance is highlighted, there is little clarity on whether the relationship is

direct or indirect and what variables might intervene in these relationships (Sundram *et al.*, 2016). Thus, there is a need to explore other variables that can comprehensively elaborate the intervening mechanisms that turn SCL into performance (Fontoura and Coelho, 2020; Burawat, 2019). The study proposes supply resilience as a mechanism through which SCL enhances sustainability performance, considering the prevalence of upstream disruptions in recent times. Mokhtar *et al.* (2019) assert that an in-depth appreciation of SCL mechanisms is vital because SCL-related concepts can potentially contribute to developing new theories that may enhance supply chain practices. Also, the empirical literature review demonstrates a minimal exploration of moderators that help explain the role of SCL on sustainability performance, given the mixed and inconsistent findings between SCL and sustainability performance Foo *et al.*, 2021; Huo *et al.*, 2021; Blome *et al.*, 2017; Fontoura and Coelho, 2020). Thus, the study proffers supplier dependency as having contingency effect in the link between SCL and sustainability performance.

The contingency role of supplier dependence in driving SCL effort at achieving resilience and sustainability outcomes respectively remains ignored. Dependence dictates the conditions of power to influence partners (or not) which is critical in controlling relational balance (Wang *et al.*, 2016). Thus, the extent of dependency from the theoretical perspective of the social exchange theory can crucially provide the basis for leading firms to promulgate and propagate goals aimed at ensuring supply resilience whilst ultimately achieving sustainable performance. Under situations of dependence, whether it is a power imbalance or joint dependence, firms gain the ability to convince other partners to align with their positions (Fernandez, 2022). Thus, the provision of leadership in driving resilience and sustainability effort in the presence of asymmetry/supplier dependence can elicit higher compliance with standards from upstream firms and consequently contribute to the accomplishment of resilience and sustainability goals.

Contextually, supply chains operating in emerging and developing countries compared to developed countries are bedeviled with more barriers to sustainability which stem from the highly turbulent business environments and institutional voids (Silvestre, 2015b). This requires that focal firms in emerging and developing economies play more significant roles in driving supply chains towards more sustainable business practices than developed economies (Silvestre, 2015b). The characteristics of business environments in developing countries may profoundly require SCL towards driving and accomplishing sustainability goals. In that regard, Chen *et al.* (2021) systematic review indicates that the impact of SCL is more substantial in developing economies compared to developed economies. Also, there is little research on how SCL drives sustainability in developing economies particularly in Sub-Saharan. Mokhtar *et al.* (2019) systematic literature review of SCL reveals that the concept of SCL is researched extensively in developed rather than developing economies; specifically, the concept is USA-centric. Similarly, Chen *et al.* (2021) meta-analysis revealed only one research from developing regions (South Africa) is outside of Asia. Thus, the study from the theoretical perspectives of social exchange and dynamic capabilities theories investigates the mechanism and boundary condition influencing the relationship between SCL and sustainability performance in Ghana, a developing region in Sub-Saharan Africa.

2.2 Literature Area

This section provides a brief review of literature on the constructs used in the study comprising of supply chain leadership, sustainability performance, supply resilience and supplier dependence.

2.2.1 Supply Chain Leadership

Defee *et al.* (2010) defined supply chain leadership as a relational concept that involves the supply chain leader and one or more supply chain follower firm in a dynamic and co-influencing process. Also, Lockstrom *et al.* (2010, pp. 251) defined SCL as a buying firm's ability "to influence a supplier to achieve a common goal within the supplier's organisation". Mokhtar *et al.* (2019a, pp. 4) defined SCL as "the behaviours of the buying firm in influencing the actions of their upstream suppliers". In line with the diversity of leadership styles of classical leadership theory, considerable leadership styles have been emphasized in supply chain research. The varied definitions of SCL highlight that SCL is relational in nature and encapsulate the ability of an actor (leader) to influence other actor(s) (followers) just as the generic leadership concept embodies. In addition, the provision of leadership based on the definitions is skewed towards the buying firm as the one demonstrating the leadership with suppliers dominantly acting as followers. Mokhtar *et al.* (2019a) revealed the most utilized leadership theory in relation to SCL is based on transformational and transactional leadership theory which are focused on in this study.

The justification for the choice of transformational and transactional leadership among the varied forms of leadership explored in the domain of supply chain management are elaborated as follows. First, business literature emphasizes two primary relationship dichotomies between buyers and suppliers, that is, arm's length relationship versus partnership, cooperative versus competitive, discrete versus relational, distributive versus integrative bargaining depending on the business domain (Terpend and Krause, 2015). Transformational and transactional leadership styles can be considered as competing leadership approaches and aligns with the two primary dichotomies of buyer-supplier relationship. Transformational leadership can be considered as cooperative/relational whereas transactional leadership can be viewed as competitive/arm's length approach to leadership in buyer-supplier relationship (Terpend and Krause, 2015). Also, buyer-supplier engagement likely transitions from transactional ties to commitment-based ties (Carmeli *et al.*, 2016). It therefore suffices to indicate that transactional leadership is likely to be adopted in early buyer-supplier exchanges whereas the evolution of such exchanges may involve the usage of transformational approaches.

Transformational leadership refers to in supply chain management as a buying firm's ability to motivate and stimulate the action and behaviours of supply chain members (Mokhtar *et al.*, 2019a). Transformational leadership literature emphasizes four dimensions of transformational leadership to comprise of idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. According to Mokhtar *et al.* (2019a), the primary idea of transformational leadership is buying firm ability to inspire suppliers in order to exceed their normal performance and simultaneously develop the self-interest of suppliers to perform and to commit to the plan of the buying firm (Mokhtar *et al.*, 2019a).

Transactional leadership in the context of supply chain management encapsulate the behaviour of buying firms in clarifying the expectation and roles of suppliers, rewarding in addition to monitoring and auditing of suppliers (Mokhtar *et al.*, 2019a). Transactional leadership manifests when supply chain members actions, behaviours or performance are assessed and subsequently rewarded or punished by the leading firm to enhance adherence and compliance (Mokhtar *et al.*, 2019b). Transactional leadership in supply chain is highlighted to consist of two dimensions: contingent reward and management-by-exception (Defee, 2009a; Mokhtar *et al.*, 2019a).

2.2.2 Sustainability Performance

Because of the increasing attention given to environmental protection and resource savings, firms are influenced to include sustainability in their strategy formulation (Cui *et al.*, 2022). The performance of firms was primarily evaluated using economic performance relating to firm assets, liabilities as well as market position (Iqbal *et al.*, 2020), however, a more positive outlook is prioritized wherein firm efforts aim at balancing high economic profitability with environmental and social performance (Chin *et al.*, 2015). Supply chain sustainability therefore incorporate environmental and social goals into the conventional cost-oriented supply chain management practices (Jabbarzadeh *et al.*, 2018).

Broadly, supply chain sustainability is defined as the interaction between organizations in a supply chain that holistically delivers environmental and social benefits to the entire supply chain or to one or more firms within the supply chain (Taylor and Vachon, 2017). Sustainability performance embodies performance related to: the level of emission and natural resource saving; other environmental activities and initiatives; employment features; occupational health and safety; relationships with society and community; involvement of stakeholders; and economic impacts of the organization other than those financial assesses applied in the financial accounts (Burawat, 2019). Sustainability performance refers to firm performance about society, economy and environment in an era of sustainable development (Argandona and von Weltzien Hoivik, 2009). The sustainability dimensions focused in this study are social and economic sustainable performance.

Economic sustainable performance according to Abdul-Rashid *et al.* (2017) involves the evaluation of operational and economic output and signifies the measurement of economic growth in addition to preserving the ecology and improving the quality of life concurrently. Sustainable economic performance in this study embodies the extent to which firms can enhance their profitability, sales growth, market share in addition to return on investment and assets in comparison to competitors (Akhtar *et al.*, 2016; Prasad *et al.*, 2018). The varied definitions of sustainable economic performance are targeted at improving a firms' bottom-line.

Social sustainable performance according to Rashid *et al.* (2017) refers to the measurement of an organization's performance in maintaining and improving the quality of life of the surrounding community in addition to the varied internal and external stakeholders without abandoning the relevant environmental concerns whilst ensuring work-place safety. The social performance dimension focuses and benefits customers, employees, and communities and can be considered a people-centered dimension of sustainability.

2.2.3 Supply Resilience

Resilience is commonly understood as a system's ability to bounce back to its original state or even an improved desirable state after being disrupted (Shekarian and Parast, 2020). According to Gu *et al.* (2020) supply chain resilience can be categorized into internal, supplier and customer resilience based on nodes that disruptions may emanate and the continuity of operations which requires guaranteeing. Upstream disruptions have detrimental implications and constitute significant managerial challenge for operations professionals (Autry *et al.*, 2013) which is contributing to the increasing focus of firms on supply resilience to ensure alertness to, adaptation to, maintenance and rapid response to changes stemming from upstream disruptions (Dabhilkar *et al.*, 2016).

According to Gu *et al.* (2020) supply resilience refers to the capability that is embedded between focal firm and its suppliers to sustain the continuity of supply and ensure that upstream structures and functions are guaranteed. Dabhilkar *et al.* (2016) define supply resilience as the capability of a buying firm to be alert to, adapt to, swiftly respond to and recover from changes stemming from an upstream disruption, thus, returning to, or maintaining operational continuity at the desired level of connectedness and control over structure and function. Supply resilience centers on the buying firm developing effective capabilities for the anticipation, adaptation, responding, recovering and learning from disruptive event through resource management (Kamalahmadi and Parast, 2016).

2.2.4 Supplier Dependence

Buyer and supplier dependence influence the exchange of resources, information, products and services in a supply chain, thereby impacting financial outcomes (Liu and Park, 2020). The extent of dependency can influence the ability of leading firms to propagate goals aimed at ensuring various outcomes such as supply resilience and sustainability outcomes in supply chains. Dependence in supply chain management refers to the need of a firm to maintain its business relationships with supply chain partners to accomplish its goals (Frazier, 1983; Narasimhan et al., 2009).

Supplier dependence refers to the extent to which a focal firm acquires materials or services from leading suppliers (Liu and Park, 2020). Dependence manifest when a supplier depends on its customer's scarce resources and cannot control all the conditions required for accomplishing desirable outcomes (Brito and Miguel, 2017). On one hand, in situations where buyer dependency is high and supplier dependency is low, there is the existence of supplier power which can result in opportunistic behaviour. On the other hand, in situations when the supplier dependency is high and the dependency on the buyer is low, there is the existence of buyer power which can be used by the buyer to impact the behaviour of the supplier (Cadden et al., 2015).

Table 1: Operational Definition of Constructs

Construct	Operational Definition	Source
Transformational leadership	The extent to which leading buying firms stimulate their subordinates to think innovatively, challenging old methods and proposing new solutions.	(Goffnett and Goswami, 2016)
Transactional leadership	The extent to which leading buying firms clarifies and defines supply chain members' role and requirements to be implemented throughout the supply chain's activities.	(Mokthar et al., 2019)
Supply resilience	The capability of a buying firm to be alert to, adapt to, swiftly respond to and recover from changes stemming from an upstream disruption, thus, returning to, or maintaining operational continuity at the desired level of connectedness and control over structure and function	(Dabhilkar et al., 2016).
Supplier dependence	The degree of a supplier's need to maintain its business relationships with supply chain leading buying firms to achieve its goals	(Narasimhan et al., 2009)

Economic performance	The ability of a firm to improve its profitability, market share, sales volume and organizational health	(Akhtar et al., 2016; Prasad et al., 2018)
Social performance	The ability of a firm to provide safe product to customers, ensuring the health, safety and satisfaction of employees and customers	(Yee et al., 2013; Bag, 2018).

2.3 Research Model and Hypotheses

This section provides the study’s research model which highlights how the variables in the study are related in addition to the study’s hypotheses.

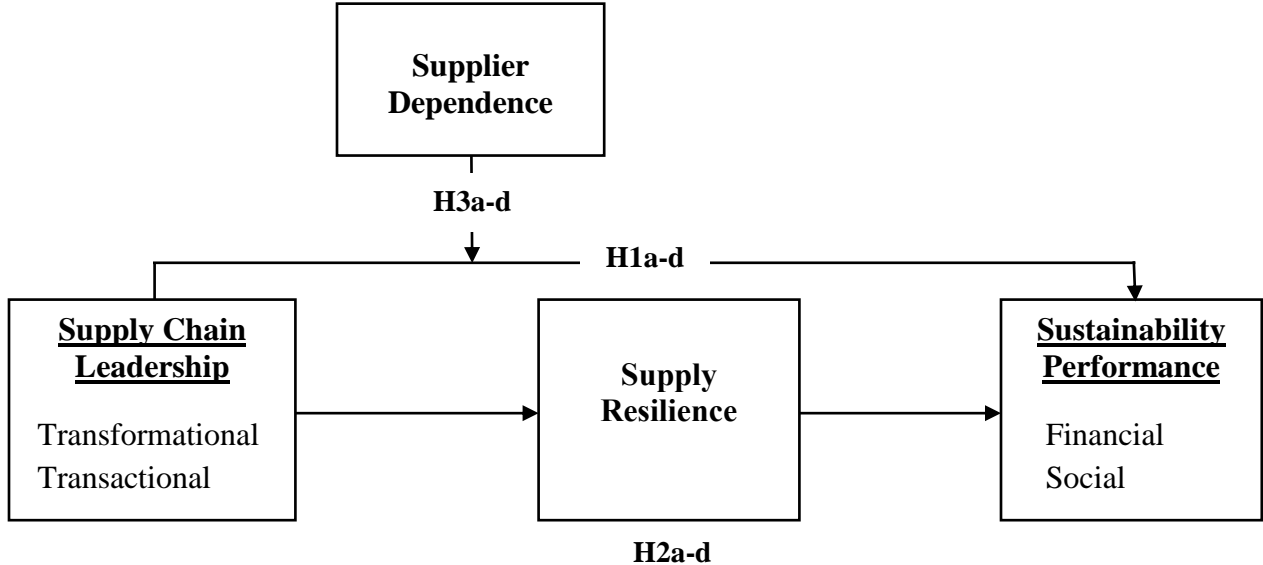


Figure 1: Research Model

2.3.1 Proposed Hypotheses

- H1a-d: Supply chain leadership has a positive relationship with sustainability performance
- H2a-d: Supply resilience positively mediates the relationship between supply chain leadership and sustainability performance
- H3a-d: Supplier dependence moderates the effects of supply chain leadership on sustainability performance through supply resilience

2.4 Research Questions

The primary research question is how and under what conditions does SCL relates to sustainability performance. The specific research questions below have been derived from the overarching research question.

- i. What is the relationship between SCL and sustainability performance?
- ii. What is the mediating role of supply resilience in the link between SCL and sustainable performance
- iii. How does supplier dependence moderates the indirect link between SCL and sustainability performance through supply resilience?

2.5 Methodology

The study develops a research model aimed at elucidating the mechanism and boundary conditions through which SCL relates to sustainability performance from the theoretical perspective of the social exchange theory and dynamic capabilities theory. The study from a positivist philosophical standpoint adopts a quantitative approach. A survey of pharmaceutical companies is conducted to gather primary data from managerial and senior level respondents using structured questionnaire. The study focused on the pharmaceutical industry because pharmaceutical supply chains are critical in ensuring public health (Shokouhyar *et al.*, 2020). Additionally, the study focused on pharmaceutical supply chains on the backdrop of the recent global supply chain shocks and climate crises, revealing the strategic importance of resilient and sustainable pharmaceutical supply chains to societies. Measurement items that have passed the required reliability and validity tests are adopted and modified from prior studies to measure the study's construct. Pilot testing will be undertaken prior to the field study to identify any inherent issues in the measurement items and to refine the items to suit the context. The sampling frame is obtained from multiple databases specifically Ghana Business Directory at www.ghanayello.com, Pharmaceutical Council and Food and Drugs Authority. A total of 300 firms will be sampled for the study. The unit of analysis of the study is the firm level and single respondent will be selected from each participating firm. IBM SPSS, Hayes PROCESS Macro, Mplus will be utilized in undertaking varied aspects of the data analysis. Specifically, the analysis to be undertaken comprises of Descriptive statistics, Exploratory Factor Analysis, Confirmatory Factor analysis in addition to measurement and structural model analysis.

2.6 Potential Contributions

First, the study will contribute to the literature by advancing the interrelationship between SCL, supply resilience and sustainability performance. Whilst the interrelationship between these variables are considerably highlighted in the literature, there is little empirical research about how they influence each other. For example, resilience is emphasized to contribute to sustainability whilst sustainability is also emphasized to be fundamental in achieving sustainability. Similarly, given the inconclusive findings on the relationship between SCL and sustainability outcomes, the study will contribute to knowledge by providing a detailed introspection of the relationship between SCL and sustainability performance. Exploring such interrelationships will empirically clarify how these variables are related and contribute to validating the conceptual insights and the minimal empirical research exploring how these variables are related.

Further, the study will contribute to SCL and sustainability performance literature by theorizing supply resilience as a mechanism through which SCL contribute to sustainability performance. This is in response to the little research demonstrating the mechanisms through which SCL contribute to sustainability performance. The theorizing and investigation of supply resilience respond to the call for research to address the minimal theoretical explanation of the mechanisms through which SCL contributes to sustainability performance (Mokhtar *et al.*, 2019b). Thus, the contribution of supply resilience as a potentially intervening mechanism in the SCL-sustainability performance relationship will augment the understanding of the mechanisms through which SCL amidst a rapidly changing business environment can be leveraged to achieve sustainability performance.

Additionally, investigating the boundary condition under which SCL influences sustainability performance provides an additional theoretical appreciation of SCL – sustainability performance

relationship and provides valuable insight for enhanced managerial decision making. Given the inconsistent findings on the relationship between SCL and sustainability performance, exploring potential contingency factors in enhancing the effect of SCL on sustainability is crucial. Therefore, this study will demonstrate how supplier dependence can influence the effort of leading buying firms to develop supply resilience to ensure regular and uninterrupted supply, coping and adaptation to changes brought about by supply disruption.

Lastly, the study uses data from a unique empirical setting specifically, Sub-Saharan Africa to broaden the contextual domain of SCL and sustainability research.

2.7 Potential Managerial and Policy Implications for Africa

The study provides valuable contributions to enhance supply chain leadership, supply resilience and sustainability of pharmaceutical supply chains amidst prevalent upstream disruptions due to recent global supply chain shocks and climate crises. The study findings are expected to help managers and business executives in Ghana and Sub-Saharan Africa in understanding the interventions needed to ensure that pharmaceutical supply chains pursue and derive superior economic benefits from resilience sustainability initiatives.

First, the study provides insights in guiding managers and firms in Sub-Saharan in their quest to ensure supply resilience and to achieve sustainability outcomes particularly in the pharmaceutical industry. The findings will demonstrate to managers and firms the contribution of SCL in pursuing and accomplishing sustainability goals. This will guide managers of pharmaceutical firms in understanding, choosing and prioritizing appropriate leadership styles that are best suited to the Sub-Saharan context in relation to their buyer-supplier exchanges to ensure optimal support and compliance from upstream actors in the pursuit of their sustainability goals.

Further, empirical validation of the means through which SCL contribute to sustainability outcomes is imperative and will inform firms and managers on which capabilities to develop and prioritize. Specifically, the study provides guidance to managers within the pharmaceutical industry in Sub-Saharan Africa to develop upstream resilience capabilities. The development of supply resilience will enhance the ability of pharmaceutical firms to cope and adapt to supply disruptions and provide the basis for accomplishing sustainability outcomes. Therefore, top managers should provide resources and the needed support for the development of resilience. The continuity of pharmaceutical supplies due to supply resilience can contribute immensely in ensuring public health.

Lastly, the contingency role of supplier dependence in the link between SCL and sustainability performance can demonstrate the role of relational imbalance in supply chain relationships. This will particularly demonstrate how leading buying firms in situations where they have low dependency on their suppliers can leverage on the imbalance in their favour to provide leadership and promulgate sustainability and resilience goals and to achieve commitment and compliance of suppliers. Such commitment and compliance can contribute in ensuring that sustainability and resilience objectives are accomplished.

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EDUCATIONAL BACKGROUND

<i>Date</i>	<i>Qualification / Name of Institution Attended</i>
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2017 - 2019	Master of Philosophy in Logistics and Supply Chain Management, Kwame Nkrumah University of Science and Technology
2012 – 2016	Bachelor of Art in Industrial Art (Ceramics, First Class Honours), Kwame Nkrumah University of Science and Technology

CAREER HISTORY

Sep. 2018 – May 2019:	Graduate Research Assistant, Department of Supply Chain & Information Systems, School of Business, KNUST
Sep. 2016 – Aug. 2017:	Traffic Warden, Suntreso District Headquarters, Kumasi (National Service)

TRAINING AND PROFESSIONAL DEVELOPMENT

- ✚ March – September, 2022: Paper Development Workshop for Young African Scholars, organized by Academy of International Business (AIB) – Africa
- ✚ June 27th 2022: Paper Development Workshop organized by CARISCA – KNUST and Arizona State University.
- ✚ 28 – 30th September 2021: Managing Supply Chain Risk and Resilience in a Developing Economy organized by CARISCA – KNUST, Arizona State University and USAID.
- ✚ November 30th 2021: Managing Global Supply Chain Disruptions: An African Perspective organized by CARISCA – KNUST, Arizona State University and USAID.

ACADEMIC PUBLICATIONS

- ✚ Asamoah, D., Nuertey, D. Agyei-Owusu, B., & **Acquah, I. N.** (2022). Examining the relationship between the dimensions of supply chain integration, operational performance and financial performance, evidence from an emerging country, *Management Research Review*, Vol. 45 No. 12, pp. 1644-1669.

- ✚ Asamoah, D., Nuerthey, D. and Agyei-Owusu, B. **Acquah, I. N.**, (2021). Antecedents and outcomes of supply chain security practices: the role of organizational security culture and supply chain disruption occurrence, *International Journal of Quality and Reliability Management*, Vol. 39 No. 4, pp. 1059-1082.
- ✚ **Acquah, I. N.**, Kumi, C. A., Asamoah, D., Agyei-Owusu, B., & Agbodza M. (Under Review). Unearthing the relationship between supply chain social capital and firm performance: the roles of supplier network and operations systems responsiveness. *Benchmarking: an International Journal*.
- ✚ **Acquah, I. N.**, Kyeremeh, E., Asamoah, D., & Agyei-Owusu, B. (Under Review). Unearthing the relationship between firm innovativeness and operational performance: the roles of absorptive capacity and supply chain agility. *International Journal of Productivity and Performance Management*.
- ✚ Essuman, D., Enin, E. K., Awuni, F., Ataburo, H. & **Acquah, I. N.** (Under Review). Performance implication and boundary condition of motor tricycle deployment in micro and small businesses in a developing country. *Journal of Small Business and Enterprise Development*.

CONFERENCES AND SEMINARS ATTENDED

- ✚ **Presenter:** Unpacking the role of green absorptive capacity in the relationship between green supply chain management practices and firm performance. How Africa Matters to the Global Supply Chain – Supply Chain Research Summit. June 28 – 30th 2022.
- ✚ **Presenter:** Minimizing post-harvest losses through ICT enabled supply chain visibility: a design science approach. Production and Operations Management Society (POMS) 31st Annual Conference. April 30th to 5th May, 2021.
- ✚ **Paper Presented:** Minimizing post-harvest losses through digitally enabled supply chain visibility: a design science approach, American Conference on Information Systems (AMCIS). August 9 – 13, 2021.
- ✚ **Paper Presented:** Examining the drivers of Supply Chain Integration: a test of Competing Theories and Model. Decision Sciences Institute (DSI) 52nd Annual Conference. November 20 – 22, 2021.

REFEREES

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