

Pressured Chains: The role of Supply Chain Technology Utilisation

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doi: <https://doi.org/10.37745/bjmas.2022.0214>

Published May 29, 2023

Citation: Boahen S. and Kuffour R.K. (2023) Pressured Chains: The role of Supply Chain Technology Utilisation, *British Journal of Multidisciplinary and Advanced Studies: Engineering and Technology*, 4(3),47-75

ABSTRACT: *The institutional theory elucidates that businesses seek to provide a reasonable and relevant explanation for their behaviour because they are motivated by the need for social justification within institutional settings that shape their strategic directions and decisions. This study examined the supply chain performance implications of institutional pressures and supply chain technology among Ghanaian firms. The study employed the quantitative method and survey design. Data was sourced from 394 managers of small to large-scale firms operating in the Greater Accra Metropolis of Ghana. Data were analysed using Structural Equation Models (SEM). The study found that institutional pressures positively relate to supply chain performance. It was also discovered that supply chain technology utilisation (SCTU) mediates the relationship between Institutional pressures (INP) and supply chain performance (SCP). The finding shows the relative importance of INP and SCTU on the performance of supply chains of firms in Ghana. The study recommended that firms in Ghana and Africa must pay critical attention to supply chain technology to enhance their supply chain operations. The study provides practical implications for firms by highlighting the importance of institutional pressures and supply chain technology utilization in supply chain performance. This will provide firms with the insight to identify the most important institutional pressures that affect their supply chain technology utilization and performance. The study also encourages the use of technology in supply chain management. This can lead to more efficient and effective supply chains, which can help society by lowering prices and making more products available. The study is unique in its focus as it attempts to shift the discourse beyond how institutional pressures influence firms' environmental and sustainability performance to how they impact supply chain performance.*

KEYWORDS: Institutional Pressures; Supply Chain Performance; Supply Chain Technology Utilisation

INTRODUCTION

As globalization and industry competitiveness have increased over the past few decades, businesses around the world have expressed growing anxiety about the effects of regulatory, consumer, and rival pressures on their operations (Kalyar et al., 2019; Zhang et al., 2019). These pressures from regulatory agencies are called institutional pressures (Kalyar et al., 2019). Institutional theorists would have it that, institutions work as forces on organisations by exerting pressure and imposing limits, as well as by establishing parameters for what is considered acceptable and vice versa. Such an influence could be in the form of coercive, normative and mimetic pressures (Samad et al., 2021). The normative pressures are demonstrated through dyadic inter-organisational networks of firm-supplier and firm-customer relationships, allowing companies to learn about innovations in consort with their associated benefits and cost (Teo et al., 2003). Coercive pressures, on the other hand, are typically understood to be those that come from external institutions that explicitly set norms that the organization must follow.

According to institutional theory, businesses seek to provide a reasonable and relevant explanation for their behaviour because they are motivated by the need for social justification (Dubey et al., 2019). According to institutional theory, businesses must operate within specific institutional frameworks, which in turn affect the companies' long-term strategies and daily operations (Pfeffer and Salancik, 2003; Powell and Dimaggio, 1983). Institutional theorists have maintained that businesses must operate within specific institutional frameworks, which in turn affect the long-term strategies and daily operations of the organization (Pfeffer and Salancik, 2003; Powell and Dimaggio, 1983).

Businesses are motivated to adopt a practice either because of the positive results seen by other users in the same setting or because of the technique's widespread acceptance. Also, businesses often adopt the practices of like organizations. Therefore, mimetic isomorphism indicates that businesses will imitate successful pioneering organizations (Santos et al., 2020). To reduce the impact of the pressures on business operations while improving performance, firms are increasingly recognising Supply Chain Technology (SCT) as a feasible option to gain or maintain a competitive advantage (Chiu and Yang, 2019).

Supply chain technology (SCT) has become critical because, globally, the gap separating businesses from performing is becoming quite extensive in the face of the changing business landscape. Because of the rapid pace of change in today's business environment (Ashford et al., 2018; McGowan and Shipley, 2020), SCT is increasingly becoming vital. In addition, the novelty and innovations in technology and markets are driving these changes, and for most firms, keeping up with the rate of transformation in the supply chain is a persistent struggle (Francisco and Swanson, 2018; Verhoeven et al., 2018).

Accordingly, Supply Chain Technology as a concept (SCT) Utilization is defined as the degree to which a company uses, makes use of, or applies SCT in its internal and external business activities (Liu et al., 2010), permits firms to rationalise and improve the performance of the supply chain (Liu et al., 2016; Verhoeven et al., 2018). It is hypothesized in the literature that the

proliferation of these technologies will pave the way for supply chain integration to move from the realm of theory to the realm of practice (Rudyanto et al., 2021; Flynn et al., 2010). It is crucial to know that previous research has demonstrated that, although the emphasis of SCT has been reported to be high in the literature, (Queiroz et al., 2021), the Utilisation of SCT is highly limited in literature as well as SCT utilisation in relation to supply chain performance (Queiroz et al., 2021). Adopting SCT on its own will not result in improved organizational performance unless the technologies are legitimately integrated into the existing workflows of the business to produce capabilities and value (Liu et al., 2016).

Simplifying the boundary-spanning activities of businesses (Saldanha et al., 2015) and facilitating the sharing of information and communication across the boundaries of different organizations are two of the primary benefits that can be derived from the use of SCT, which is a subgroup of conventional information technology (Avittathur and Jayaram, 2016; Asamoah et al., 2021). As a result, there is a need for a greater understanding of how to achieve better utilization of SCT and how to link it to institutional pressures and the performance of the supply chain (Aslam et al., 2020). Such awareness can help firms facilitate SCT utilisation within supply chain networks and consequently intensify efficiency and better performance. Besides, given that firms characteristically devote large sums of money and effort to utilising SCT within their supply chains (Feng et al., 2021), the comprehension of efficiency and performance implications of SCT utilisation linked to institutional pressures can be beneficial for firms, particularly for supply chain managers (Mishra et al., 2013). Following accepted practices in the use of technology can boost a firm's credibility and ensure its continued existence. When one firm in a supply chain network successfully employs a certain SCT, others in the network often mimic the course of action, attributing their own success to the same SCT.

The study is carried out to fill the existing gaps in the literature concerning institutional pressure, SCT utilisation and supply chain performance. The study attempts to shift the discourse beyond how institutional pressures influence firms' environmental and sustainability performance to how they impact supply chain performance in other jurisdictions, especially in Africa, specifically Ghana. The adoption of Institutional Theory (INT), Resource-Based View Theory (RBV), and Practice-Based View Theory (PBV) shows a significant level of gaps existing in the literature and the need to contribute to theory by assessing how supply chain technology utilisation can influence the linkage between institutional pressures, supply chain performance of firms in the Ghanaian context. Following the aforementioned argument, the major objectives of this work are:

- Explore the relationship between institutional pressures and supply chain performance.
- Determine the role of SCT utilisation as a variable mediating the relationship between institutional pressures and supply chain performance.

LITERATURE REVIEW

Institutional Pressures

Institutional theorists such as (Powell and Dimaggio, 1983; Meyer and Rowan, 1977) have long considered institutional pressure to be a significant determinant of an organisation's activities.

Firms confronted with increased environmental pressures are susceptible to conform to these pressures. Nevertheless, the institutional environment, as indicated earlier, is very complex and different organisational filters influence how organisations perceive and respond to these pressures (Ramus et al., 2017; Greenwood et al., 2011), necessitating empirical evidence like the current study on the effect of institutional pressures and the role of legitimacy regarding the diffusion of organisational innovations.

Core to institutional theory is the question of how much external factors, such as regulatory requirements, can influence a firm's internal operations and decision-making (Santos et al., 2020; Dubey et al., 2019). According to this idea, an organization's actions are only considered legitimate if they are in line with generally accepted values and standards, which are determined by the institution's environment (Meyer and Höllerer, 2014; Scott, 2005; Powell and DiMaggio, 1983). The reason why firms strive for legitimacy is that it increases their chances of success, survival, and gaining access to scarce resources that boost their overall performance (Dez-Martn et al., 2021).

Accordingly, corporations are compelled to change in response to social forces stemming from their institutional setting in the quest for legitimacy. Nonetheless, institutional theorists agree that businesses respond in different ways to the pressures they face. Organizations, as described by Oliver (1991), function rationally because they anticipate future financial and non-financial rewards from their surroundings, and they are therefore motivated to comply with institutional demands. It has also been theorized in the literature that the level of conformity and the perceived benefit equation of an organization are influenced by its level of public attention (Aharonson and Bort, 2015).

As a result of the competition for the resources necessary for growth and survival, a firm's ability to survive and obtain resources is not always a function of outperforming rivals. According to Aharonson and Bort (2015), a firm's survival and performance are largely dependent on how well its strategy is matched with its external environment. The institutional theory's key tenet is that such alignment provides legitimacy, which favorably affects the drift of resources to legitimate organizations (Dowling and Pfeffer, 1975). Powell and DiMaggio (1991) assert that it is no longer possible to predict a priori the structure of an organization that was founded on the principles of market efficiency. According to DiMaggio and Powell, organizational changes are becoming less and less motivated by competitiveness or the need for efficiency while bureaucratization and rationalization continue to make organizations more similar. They referred to this as (institutional isomorphism).

DiMaggio and Powell and DiMaggio (1991) separated competitive and institutional isomorphism. Competitive isomorphism follows economic rationality: 'organisations compete not merely for resources and customers, but for political power and institutional legitimacy, for social and economic fitness' (p. 150). The second institutional isomorphism helps explain modern organizational politics and ritual (p. 150). To explain isomorphic institutional changes, DiMaggio and Powell suggested three mechanisms within organizational fields that provide uniformity among organizations. This study examines mimetic, normative, and coercive isomorphism. These three dimensions show how organizations view their surroundings. Politics

and legitimacy cause coercive pressures, according to DiMaggio and Powell and Dimaggio (1983). When organizations face equal political forces, legal settings, or resource deficiencies, empirical institutional theory outcomes often overlook coercive isomorphism. Institutional theory states that coercive pressure includes multifactor complications like internal behaviours since firms need accreditation to get crucial resources (Testa et al., 2018).

In developing countries, a dependency on commerce presents itself as coercive pressure, which may originate from international buyers, foreign investors, professional groups, and transnational institutions (Latif et al., 2020). As was mentioned, coercive forces have an effect on the environmental performance of businesses. The authorities of the government apply these obligatory and required protocols on businesses to force the businesses to comply with regulatory procedures. Every company is required to adhere to these protocols or risk suffering the severe sanctions and punishments that are enforced by these agencies (Orekhova, 2017).

Adopting new technologies enables firms to improve their performance, attract the backing of the government, and reap economic gains, even while they are subjected to coercive pressures. However, mimetic pressure causes standard uncertainty reactions (Powell and Dimaggio, 1983). This mechanism shows that emerging companies in uncertain contexts copy successful ones, such as adopting innovative technologies. Supply chain technology minimizes business unpredictability. For efficiency, mimetic structural change is not explicitly implemented. Leicht and Fennel (2008) hypothesized that mimetic pressures result from ingrained organizational practices. Borrowing organizational techniques that dominate an area is the greatest way to solve an issue (Meyer and Höllerer, 2014; Liu et al., 2010).

Competition creates mimetic pressure (Powell and Dimaggio, 1983). Supply chain technology adoption can be costly yet worthwhile. Companies must react to competitors. If competitors use supply chain technologies, others should too (Ni and Sun, 2019). Mimetic pressure improves management in international and multinational companies in emerging economies because technology allows them to meet global needs. Governments and stakeholders can enforce advanced environmental management and specific practices through strong mimetic pressures. Thus, significant supply chain technology usage allows enterprises to respond to mimetic demands for competitive advantage.

Suppliers, customers, groups like trade unions for businesses, the media, and other social groupings all exert normative pressure. The main organizations that generate normative pressures are often trade unions and other organisations (Schmitz et al., 2019; Powell and Dimaggio, 1983). Because normative pressures have an impact on socially acceptable behaviours and activities, it is believed that normative pressures operate as a catalyst for norms and responsibilities in emerging economies. The transmission of professional norms is thus shown by normative isomorphism in institutional forces. These forces ensure that customers and suppliers' function in the external environment and that businesses operate in a compliant social manner (Santos et al., 2020). In this study, the concept of Institutional Pressures is defined as the social, political, and economic systems under which organisations operate to attain legitimacy.

Supply Chain Performance

SCP is the measurement of the supply chain both subjectively and quantitatively, according to Hausman (2004), to ensure efficiency and effectiveness in an organization's supply chain. Nevertheless, Green, Inman, Brown, and Willis (2005) defined supply chain performance as the capacity of the supply chain to 1) deliver high-quality goods and services in precise amounts and at precise times; and 2) reduce the overall cost of the goods and services to the supply chain's final clients. Even though firm managers are held accountable for the performance of their organizations, such organizations' success depends on the effectiveness of the supply chains in which they participate as partners (Rosenzweig, Roth and Dean, 2003:437).

The performance of the supply chain depends on the partner's capacity to adjust to a changing environment (Cao and Zhang, 2011). The effectiveness of the supply chain has a direct impact on planning and control at the strategic, tactical, and operational levels. Since customers continue to be the ultimate arbiter of the amount of value being created at a logistical level and the expenses paid, supply chain success can be judged in terms of their degree of satisfaction. The supply chain may decrease setup time, change capacity, improve product quality, and react fast to the client by getting rid of surplus inventory and enhancing part quality. As a result, the performance of the supply chain is improved (Vonderembse, Uppal, Huang and Dismukes, 2006).

Management must be aware of the essential areas for improvement in the supply chain to ensure that organizations achieve their long-term goals. As a result, since 1990, SCP has been the subject of extensive inquiry and writing (Kurien and Qureshi, 2011). SCP metrics are subject to a variety of viewpoints, including cost and non-cost, strategic, tactical, and operational viewpoints, as well as business process and financial viewpoints. Measuring the SCP assists a company in achieving its short- and long-term goals in sales, finance, human resources, productivity, quality, and the complete product life cycle (Wamba et al., 2020; Hald and Kinra, 2019; Mani et al., 2018).

According to Estampe et al. (2013) and Shepherd and Günter (2010), the term "SCP" refers to the extended supply chain's actions in meeting customer criteria, such as product availability, on-time delivery, and all required inventory and capacity. SCP transcends organizational borders since it consists of fundamental components, subassemblies, and finished goods that are distributed to the end user through a variety of channels. SCP cuts across typical company functional boundaries including purchasing, production, distribution, marketing and sales, and R&D.

Some criteria used to assess SCP include supply chain partner cooperation (Anbanandam et al., 2011) (Al-Doori, 2019). Although the supply chain is currently extremely competitive, cooperation can help to increase consumer trust, assure transparency, and preserve legal compliance (Shepherd and Günter, 2010). Effective key performance indicators (KPI) are another criterion considered while evaluating SCP (Moons et al., 2019; Maestrini et al., 2017). Vital areas that require agreement from both parties are the foundation of effective KPI management. For more specific and quantifiable KPIs that are part of the service level agreement, the key areas are the major ideologies that will serve as a general guide. When

calculating SCP, risk management techniques are also considered (Munir et al., 2020; Shahbaz et al., 2018; Ouabouch and Paché, 2014; Ritchie and Brindley, 2007).

It is crucial to evaluate the extent of the supply chain's resilience and how it relates to risk management to identify the kinds of changes that must be made to improve particular supply chain segments as a company's supply chain becomes more complex and subject to more regulations. As a result, numerous studies have proposed financial and non-financial measures to gauge the effectiveness of a company's supply chain. According to other studies, the most important metrics for assessing supply chain effectiveness are dependability, adaptability, quality, and efficiency (Angerhofer and Angelides, 2006).

Supply Chain Technology Utilization (SCTU)

Firms now face a very different landscape than they did even a decade ago, as was mentioned previously. Enterprise Resource Planning (ERP), Advanced Planning and Optimization (APO), and Warehouse Management Systems (WMS) are just a few examples of the various supply chain technologies used by businesses today to coordinate with their partners in the supply chain, respond to rising market competition, and generate returns for their investors (Mishra et al., 2013). Within or between organizations, supply chain technologies (SCT) refer to the instruments and methods used to implement SCM that is fully integrated throughout the entire supply chain (Queiroz and Wamba, 2019; Francisco and Swanson, 2018).

Technology affects supply chain speed, precision, and efficiency. Supply chain managers can use more data, automation, and other tools to make faster decisions, estimate demand more accurately, and prepare for unexpected events by using innovative technologies (Fernández-Rovira et al., 2021; Kumar et al., 2015). Manufacturers, suppliers, retailers, shippers, distributors, and others are major stakeholders in enterprises' supply chains, which finish with product delivery to consumers. Technology and customer expectations are driving the demand for integrated supply management.

Distributed ledger technologies like blockchain, which are used in cryptocurrencies, are also among the technologies most likely to increase supply chain transparency (Queiroz et al., 2021; Nandi et al., 2020; Queiroz and Wamba, 2019). Blockchain's immutable transaction records make it ideal for use in tracing product origins and establishing confidence in mutually disclosed supplier data—even when the involved parties have competing interests and aren't primarily motivated by trust (Aslam et al., 2021; Min, 2019; Francisco and Swanson, 2018).

Consequently, the primary potential of blockchain is to enable track-and-trace submissions, which help businesses document the chain of custody of products to prevent leakages, identify imitation products and fraud, pinpoint at-risk suppliers, prove compliance with regulatory requirements, and increase transparency in the sourcing process (Nandi et al., 2020; Queiroz and Wamba, 2019). To attract and retain a large consumer base, digitizing corporate processes is now seen as more of a need than a selling point by most companies (Fan and Ouppara, 2021). As a result, there is a greater need than ever to establish a digital setting that seamlessly incorporates the activities of numerous companies along the supply chain. As M Manavalan and Jayakrishna (2019) noted, modern technological advancements allow businesses to construct end-

to-end supply chain solutions that quicken operations and eliminate bottlenecks. Information in near real-time or actual time is essential for SCM. The goals of some SCTs include just-in-time procurement, reduced inventory, increased manufacturing efficiency, and timely fulfilment of customer requirements; these goals can be attained through the coordinated management and improvement of information flow across various key supply chain partners (Fernando et al., 2020). Companies can achieve on-demand or mass customization in the production cycle with the help of these technological solutions.

Theoretical background and hypothesis development

The current study draws on the Institutional theory, RBV and PBV to explore the relationships between institutional pressures on supply chain performance and how the utilisation of supply chain technologies can mediate the relationship.

Institutional Theory

Institutional theory relies heavily on the concept of institutions, which has been developed in economics, political science, and sociology. Specifically, economic historian Douglas North describes institutions as "the rules of the game" that govern social interactions inside a community (1990, p. 3). Taboos, conventions, and traditions are examples of informal regulations, as opposed to the more formal political, economic, and contractual rules (Fiori, 2002; Jepperson, 1991). Both official and informal institutions permit and restrict the actions of individuals and groups (Donges and Nitschke, 2015).

According to the institutional theory, the social, environmental, and economic performances of organizations are greatly impacted by the institutional environment in which they exist (Wijk et al., 2019; Scott, 2005; Powell and Dimaggio, 1983). About three decades ago is when contemporary institutional theorizing in the realm of organizations first began to emerge. The discovery made by Meyer and Rowan (1977) that organizations within a given institution utilize organizational forms that are like one another was the impetus for the development of the neo-institutional theory. Meyer and Rowan explain this concept by pointing to the influence of the social setting within which organizations are embedded as a defining characteristic of this perspective. This setting entails the existence of "strong institutional standards," which define proper and acceptable kinds of organizing. Therefore, organizations are encouraged to embrace the processes and procedures that have been established by the prevalent rationalized theories of organizational activity and that have been institutionalized in society.

Organizations, from an institutional point of view, function in a setting dominated by norms for what constitutes correct or appropriate organizational structures and practices (Dimaggio and Powell, 1991). Both Meyer and Rowan (1977) and Oliver (1997) use this term. Several research and fundamental theoretical contributions to institutional theory, as cited by Gornitzka (1999), stress the importance of an organization's conformity to the environment in which it operates. According to Gornitzka, organizations often create compliance symbols in response to environmental change as a ritual. Rules, laws, protocols, and processes that are important to the functioning of an institution serve as rationalized myths (Scott, 2005). An organization needs these rationalized myths to improve its legitimacy, knowledge, balance, and chances of survival. It is known as isomorphism that businesses follow these rationalized beliefs.

When institutions are isomorphic, they prioritize legitimacy over efficiency when designing their internal structures (Fernando and Lawrence, 2014; Kondra and Hinings, 1998; Meyer and Rowan, 1977). Therefore, businesses try to maximize environmental advantages while maintaining internal consistency. Most significant changes in organizations result through slow, methodical actions that bring them closer to their surroundings. These shifts typically occur in long-standing institutions with well-established interests, attitudes, perceptions, and resources. When faced with reform measures brought from the outside, this institutional stability provides the foundation for institutional flexibility (Scott, 2005; Dart, 2004).

In accordance with Institutional Theory, we contend that the rules, requirements, assumptions, beliefs, and processes already in place in every given business's environment shape the latter's behaviour, both consciously and unconsciously. It shows that it follows norms and wins the approval of outside parties. Firms resort to expected practices to establish legitimacy in the business, which is why there is pressure or compulsion to conform to industry practices.

Resource-Based View (RBV)

The resource-based perspective is internally motivated and postulates that a company's success is due to its own unique set of assets and skills (Barney, 1991; Wernerfelt, 1984). According to the RBV, the growth of unique and exclusive resources which are often implicit or intangible in nature is where successful businesses will find their competitive edge. Therefore, the organization's distinctive assets and talents should serve as the centerpiece of its success narrative (Chen et al., 2021; Hinterhuber, 2013; Armstrong and Shimizu, 2007). The rent-producing potential of an organization's fundamental resources and competencies is also crucial to the policy's value-creating potential, or the business's ability to establish and maintain a successful market position (Nason and Wiklund, 2018).

According to the RBV, a firm's competitive edge and performance outcomes stem from inherently scarce and/or difficult to replicate internal resources and competencies (Barney, 1991; Wernerfelt, 1984). If they have certain distinctive qualities, such assets and competencies can be crucial components of long-term competitive advantage and top-tier organizational success. This means that, according to RBV, a company's resources are the primary factor in its ability to compete and succeed (Amit and Schoemaker, 1993; Wernerfelt, 1984). An organization's resources are everything in its possession that is its assets, competences, organizational processes, firm characteristics, information, knowledge, etc. that it may use to develop and implement strategies that improve its efficiency and effectiveness (Barney, 1991). Accordingly, RBV stresses the need of managers focusing on acquiring, developing, and deploying resources that provide them a competitive advantage (Madhani, 2010). The purpose of the Resource-Based View (RBV) is to understand how businesses achieve a competitive advantage using their resources over the long term (Miller, 2019; Wernerfelt, 1984).

The firm's RBV places premium on the idea that the organisation's unique selling points are the driving forces behind its better performance and competitive advantage (Barney et al., 2001). The firm's resources are more likely to be unique and difficult to copy by competitors if they are not easily transferred or procured, or if acquiring them requires a steep learning curve or a substantial change to the firm's environment and culture (Armstrong and Shimizu, 2007).

However, RBV experts (Simó and Sallán, 2021) have separated the company's assets into two categories: tangible and intangible.

Based on the RBV, the researcher indicate that the adoption and utilisation of supply chain technologies can, directly or indirectly, impact the supply chain performance of a firm by using the capability to create tangible and intangible unique value. This value generates a competitive advantage in the supply chain and leads to the further creation of capabilities through which firms can cope with institutional pressures or norms and practices in the industry. It is noted that by possessing technologies that competitors cannot easily imitate, firms are able to respond and effectively manage pressures more than firms without such technologies. The use of technologies such as Electronic Data Interchange (EDI), Enterprise Resource Planning (ERP), Advanced Planning and Optimization (APO), Data Capture Systems (DCS) and Warehouse Management System (WMS) enables the creation of inter-firm collaboration and integration of processes between and among supply chain partners (Zhang and Cao, 2018). By leveraging unique supply chain technologies, organisations can attain greater performance.

Practice-Based View Theory (PBV)

Researchers in the supply chain literature have applied the Resource-Based View of the firm (RBV) (Barney, 2012) to explore the efficiency of technology (Autry et al., 2010). The RBV holds that companies with precious, uncommon, inimitable, and non-substitutable resources can gain a competitive edge (Barney, 2012). The RBV now emphasises an organization's resource utilisation strategy (Priem and Swink, 2012). This extension is like Bromiley and Rau (2014) Practice-Based View (PBV), which indicates that organisations can use imitable activities or practises to improve operational skills and performance (Bromiley and Rau, 2014).

Strategic management studies have examined macro-level organisational behaviours and their effects on performance. Contrast this with operations research, which focuses on managerial techniques (Bromiley and Rau, 2014). Modern strategy study rarely discusses specific mechanisms managers might use to improve corporate processes. Organizations can establish a practise, according to Bromiley and Rau (2016). In contrast to the RBV, the PBV examines public-domain activities that can be replicated by other firms (Lockett et al., 2009; Newbert, 2007; Wernerfelt, 1995).

The PBV is interesting because literature shows that publicly acknowledged common practises affect organisational effectiveness. Some RBV claims assume that publicly acknowledged techniques cannot offer reliable performance advantages (Barney, 1991; Wernerfelt, 1984), but several empirical studies across fields find that organisations differ in their use of available management practises, and these differences partly explain performance (Collins, 2021; Combs et al., 2006). Bloom et al. (2013, 2012, 2007) evaluated performance and management techniques in large enterprises from many nations. They examined defining goals, having clear performance measurement criteria, attracting brilliant people, rewarding great performance, and dismissing low performers. These practises are not secret, scientifically complicated, or require hard-to-transfer resources or competencies.

Based on the PBV theory, we contend that an organisation's willingness to utilise supply chain

technologies reflects the compulsion to practice those technologies. Pressures from the environment compel organisations to adopt certain forms of technologies considered benign to be able to participate in a particular supply chain effectively; however, they must be willing to practice or implement the norms and beliefs surrounding its utilisation. The practices translate into the utilisation of available resources and those that are to be acquired.

Institutional Pressures and Supply Chain Performance

Institutional pressures have been shown to have a direct and considerable impact on environmental practises among firms and supply chain performance (Green et al., 1998; Handfield et al., 2002; Rao and Holt, 2005; Bowen et al., 2001). Improvements in supply chain efficiency are linked to institutional efforts to cut emissions and waste production and disposal (King and Lenox, 2002). The institutional theory's definition of a firm is an organisation that prioritises financial gain while also acknowledging the value of maintaining ethical standards among its employees (Suchman, 1995). According to the work of DiMaggio and Powell and Dimaggio (1983), who developed the theory of institutions, coercive pressures play a crucial role in institutional theory, encouraging acceptable industry behaviour by actors in the supply chain.

Additionally, institutional pressures guarantee that businesses adhere to social legality concerns. An external stakeholder who is either directly or indirectly involved in the affairs of the firm may apply this kind of pressure. Prescriptive pressure comes mostly from customers' and markets' needs (social standards) and their expectations for expansion. Therefore, clients and government agencies demand that companies implement operational plans, realign their priorities, and restructure their resources (Hanelt et al., 2021). In the context of institutional theory, as stated by Scott (2008), external pressure causes businesses to adopt and persist with comparable strategic activities. Numerous studies demonstrate how institutional norms influence corporate practises, namely the adoption of industry standards to boost supply chain performance (Sarkis et al., 2010). Institutional pressures were shown to have a favourable effect on supply chain performance in China, according to an analysis of the drivers and performance outcomes of green adoption conducted by Z Zhang et al. (2020).

Similarly, Carter and Ellram (1998), in a study on environmental purchasing and firm performance, found that a combination of institutional pressures on firms to adopt green practices directly influences the efficiency of the supply chain. Droge et al. (2004) similarly found the relationship between institutional pressure and supply chain performance to be positive. Against this, the relationship between institutional theory and supply chain performance is theorised as follows:

H1. Institutional pressures positively relate supply chain performance.

Institutional Pressures and Supply Chain Technology Utilisation

The institutional theory indicates that a set of rules-like societal expectations and norms for proper organisational structures, operations, behaviours, and practises emerges in a highly competitive economic environment (Powell and Dimaggio, 1983; Meyer and Rowan, 1977). Organizational legitimacy, and hence the organization's ability to get valuable and limited resources, hinges on its ability to conform to these expectations and norms (Powell and

Dimaggio, 1983; Heugens and Lander, 2009). When a business decides to implement new technology, it will first learn about the standards and customs of relevant institutions, then use that knowledge to weigh the pros and cons of adopting the technology in question, and finally set itself up so that it can best weather any potential storms that may arise (Powell and Dimaggio, 1983; Zsidisin et al., 2005).

According to DiMaggio and Powell and Dimaggio (1983), institutional pressures are exerted on businesses because of the institutional environment, and these forces encourage businesses to adhere to commonly held beliefs and practises. DiMaggio and Powell and Dimaggio (1983) further categorised institutional forces into normative, mimetic, and coercive pressures in order to analyse why companies adopt similar practises. This process is termed "isomorphism," and it is used to analyse why companies adopt similar practises. These pressures are brought on by various participants in the sector, such as consumers, vendors, and other businesses (Oliver, 1997). The way in which the company understands these forces has an impact on both its interpretation of the environment in general and its utilisation of technology (Zsidisin et al., 2005). In general, the ubiquity of a practise in an industry result in the formation and strengthening of related norms, which, in turn, put pressures on the business and push them to make use of the prevalent practise of systems use (Grossi et al., 2020).

In the current research context, the prevalence and utilisation of the various supply chain technologies across industries will promote information sharing within the supply chains and thus accelerate the establishment and transfer of supply chain technology application norms among trading partners (Walker et al., 1997). Additionally, businesses learning of the benefits their competitors derive from the utilisation of supply chain technologies will, in turn, pressure them to imitate their successful counterparts (Mitra and Singhal, 2008). That notwithstanding, when a major channel member equally prefers to use a particular technology in its supply chain operations, such a member is likely to push its partner to utilise that technology coercively. This implies that a deviant channel member risks its survival in the network.

Therefore, to avoid being locked out of competitive corporate relationships and to ensure continued access to resources, businesses will choose to conform to such pressures and be inclined to adopt and utilise supply chain technologies in their supply chain operations. This relationship is hypothesised as given below.

H2. Institutional pressures positively relate to supply chain technology utilisation.

Supply Chain Technology Utilisation and Supply Chain Performance

As indicated, the importance of SCT utilisation has increased over the past few decades (Agrawal and Narain, 2018). Today, technology has paved the way for organisations to increase output and advance interaction with stakeholders, which has transformed the way firms operate, bringing innovation to the production process (Almulhim, 2021). Also, SCT Utilization has converted organisations' supply chains to digital SCM to afford their customers the best service possible (Fernández-Rovira et al., 2021). Technological utilisation increases performance suggestively by affording innovative techniques in the supply chain operation (Chege et al., 2020). The findings of Bag et al. (2022) are suggestive that technology that can support SC

operations leads to gains in productivity, regular operations, and logistical activities in the SC network. This is true even at its most basic level.

According to Martn-Pea et al. (2020) and Windahl (2015), the technical modernisation of a company increases its supply chain performance and provides greater profits. Therefore, organisations must incorporate innovation and technology into their manufacturing processes. Utilization of SCT has advanced rapidly. Advanced artificial intelligence structures and smart technologies are associated by businesses as a digital procedure that improves consumer happiness (Fan and Ouppara, 2021; Kumar et al., 2015). Business success or failure depends on its performance.

Even though SCT usage is not uncommon, it enables organisations to develop skills that improve supply chain operational performance (Nez-Merino et al., 2020; Autry et al., 2010). Creating an effective, dependable, and efficient system of information and product flows within and between organisations is a basic reason for organisations to utilise SCT. Consequently, the degree to which an organisation will fulfil this target will likely be reflected in how its SCT utilisation impacts its supply chain performance, which is the degree to which products and services are delivered on time, accurately, and quickly (Vanpoucke et al., 2017).

As previously mentioned, SCT utilisation primarily increases the visibility and openness of information across supply chains, which can be advantageous for firms seeking to improve their supply chain performance (Windahl, 2015). The increased availability of information among supply chain partners enables businesses to improve their supply chain's efficiency, reliability and flexibility (Attaran, 2020; Asamoah et al., 2019). In addition, the improved data accuracy made possible by SCT utilisation enables a reduction in supply chain waste caused by inaccurate inventory records (Hofer et al., 2021; Mishra et al., 2013), hence enhancing the supply chain performance of organisations.

Literature demonstrates that unprecedented levels of SCT utilisation further streamline order and product flow, allowing decision-makers to respond rapidly and efficiently and providing synchronised and consistent answers (Autry et al., 2010). Again, SCT utilisation increases organisations' knowledge management capability throughout the supply chain, which can be advantageous for businesses seeking to enhance their delivery performance (Schniederjans et al., 2020). For instance, increased SCT utilisation can enable decision-makers to swiftly detect demand shifts and monitor real-time customer behaviour (Yu et al., 2021), enabling organisations to better serve their customers by delivering their products on time. Like Hassan, Haussain, and Rahman (2013) and Lu and Ramamurthy (2011), IT adoption was found to be the most influential element in minimising costs and boosting operational agility.

In addition, SCT adoption improves a firm's supply chain connection in their supply chain networks, promoting information sharing and collaboration throughout supply chains (Fernando et al., 2020). Sharing pertinent information expedites decision-making and frequently results in reduced lead times and improved delivery performance. Moreover, Asamoah et al. (2019), in their study on the influence of inter-organisational systems use on supply chain capabilities and performance, concluded that the use of IOS facilitates the growth of businesses' supply chain

capabilities and enhances the supply chain's performance. The relationship between SCT utilisation and supply chain performance is hypothesised as follows.

H3. Supply Chain Technology Utilization positively relate supply chain performance.

INP, SCTU and SCP

In this study, we examined the idea that the utilization of supply chain technology could act as a mediator between the relationship between institutional pressures and supply chain performance. Utilizing technology in business has come to be seen as a crucially important strategic instrument that companies may use to improve both their performance and their level of competitiveness (Khin and Ho, 2020). It is clear from previous research that technological advancement influences performance (Choi et al., 2013; Valmohammadi, 2017). On the other hand, there have been some studies that have shown that there are adverse consequences on performance (Laforet, 2011). In addition to this, there have also been other discoveries that are contradictory (Westerman et al., 2011; Weill and Woerner, 2015).

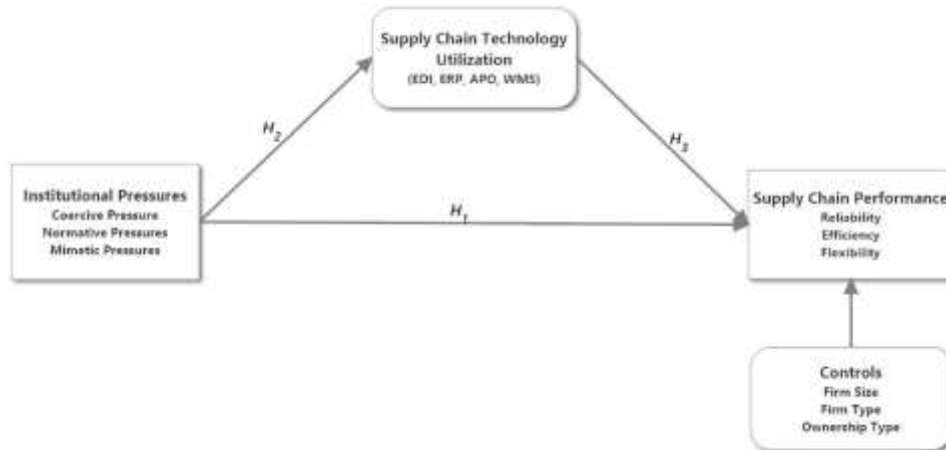
In a similar vein, Chae et al. (2014) discovered no connection between institutional pressures and organizational performance. However, they concluded that more research was needed to discover and include other variables that might affect the relationship between institutional constraints and organisational performance. Since the connection between institutional pressure and organisational performance has yet to be established, especially in the context of firms in Ghana, we respond to this call by arguing that technology may be a factor that may influence the relationship between institutional pressures on the firms and their performance.

Furthermore, there is a lack of research that specifically addresses the mediation effect of technology utilisation on the link between performance and the organisation (Lestari et al., 2013) or technological capability (Al-Ansari et al., 2013). Specifically, Al-Ansari et al. (2013) suggest that to improve organisational performance, managers should take innovation into account technology orientation as mediating factor. Technological orientation has a direct impact on innovation (Yang et al., 2012; Sainio et al., 2012; Hortinha et al., 2011). However, no research has examined the potential moderating role of supply chain technology usage in the connection between institutional pressures and the supply chain performance of enterprises in the Ghanaian setting. So, there is little proof of a rippling impact of technology use in the supply chain on either institutional pressure and supply chain performance.

Firms with high levels of technology adoption and utilisation have a greater capacity to positively respond to institutional demands and to control the impact of these forces on the supply chain, which is why SCTU is thought to play a mediating role in this relationship. Based on this rationale, we argue that SCTU plays a mediating role by translating the effects of institutional pressures into better performance. Hence, we hypothesize as follows:

H4. Supply Chain Technology Utilization mediates the effect of Institutional pressures and supply chain performance.

Figure 1. Research Model



METHODOLOGY

The study used a survey research design to examine the relationships between institutional pressures, supply chain technology utilization, supply chain performance, and business performance in firms operating in the Accra metropolis. A sample of 394 managers was selected for the study and data was collected using questionnaires as the primary source of data collection. The questionnaires included a combination of multiple choice, Likert scale, and open-ended questions and were administered to the participants electronically. Thus, the unit of analysis for this study was the managers whose operations directly relate to their organisations' supply chain activities.

Data were collected through a survey that was administered through questionnaires. The survey included measures of Institutional Pressures, Supply Chain Technology Utilisation and Supply Chain Performance. Institutional pressures consisted of a modified version of twelve questions adopted from (Teo et al., 2003; Khalifa and Davison, 2006). Supply chain performance was measured using 14 items adopted from (Asamoah et al., 2019) which assesses the performance of the supply chain using three main performance metrics including Efficiency, Reliability and Flexibility.

FINDINGS

Demographic Profile of the firms surveyed.

The analysis of the demographic characteristics of the companies that were surveyed revealed that most of the companies have between 100 and 500 employees, representing 103 (26.1%), followed by businesses with 60 to 99 employees representing 78 (19.8%), and the firms with less than 2000 employees representing 23 (5.8%). In addition, most of the companies have an approximate annual income of between 200,000 and 999,000, which accounts for 96 (24.4%), while the lowest is less than 40 dollars, which accounts for 21 (5.3%). The respondents who were sampled from limited liability corporations made up the majority, with 295 (74.9%), followed by those whose businesses were in the service industry with 176 (44.7%), and the

respondents whose businesses were partnerships with 41 (10.4%) (See Table 1).

Table 1 Firm Level Profile

Variable	Category	Frequency	Percentage
Number of employees	< 6	30	7.6
	6 – 29	50	12.7
	30 – 59	53	13.5
	60 – 99	78	19.8
	100 – 500	103	26.1
	501 – 2000	57	14.5
	> 2000	23	5.8
Approximate Ann. Income (.000.00)	< 40	21	5.3
	40 – 79	31	7.9
	80 - 199	83	21.1
	200 - 999	96	24.4
	1000 - 4999	58	14.7
	5000 – 20,000	31	7.9
	Above 20,000	74	18.8
Industry	Service Based	176	44.7
	Manufacturing	125	31.7
	Both	93	23.6
Ownership status	Sole Proprietorship	58	14.7
	Limited Liability	295	74.9
	Partnership	41	10.4
Total		394	100.0

Measurement model assessment

Test of Validity and Reliability of Instruments

Confirmatory Factor Analysis (CFA)

The study performed reliability and validity test coupled with CFA to establish model fit for the study variables. The CFA was undertaken to test the measurement fit models of all the study variables such as INP, SCTU, and SCP. As a general agreed rule, the model Fit indices was used by the researcher to effectively assess the goodness of fit of the model. Considering this, the ratio of χ^2 to the degrees-of-freedom (*df*) was also evaluated coupled with, root mean square error of approximation (RMSEA), normed fit index (NFI), comparative fit index (CFI), goodness-of-fit index (GFI), etc. This is presented in Table 2. The results from the CFA with regards to fit indices for the model. The principal study indicators include institutional pressures (INP), supply chain technology utilisation (SCTU), supply chain performance (SCP) and business performance (BP). The result from the table shows [$\alpha = 0.937$; $\chi^2 = 1710.05$; $df = 299$; $\chi^2/df = 2.799$; RMSEA = .057; GFI = .961; CFI = .998, NFI = .973 and IFI = .992]. The result shows

that the model adopted for the study fit the data. The loadings result from each of the major constructs as well as the items for assessing each of the indicated constructs were all significant at ($p < .001$; $p < .005$, $p < .010$), which supports the dimensionality of the constructs as indicated by Creswell (2015).

Table 2 Confirmatory Factor Analysis and Fit Indices

Fit indices: [$\omega = 0.937$; $\chi^2 = 1710.05$; d.f. = 299; $\chi^2/d.f. = 2.799$; RMSEA = .057; GFI = .961; CFI = .998, NFI = .973 and IFI = .992]								
Constructs	Constructs Categories	No of items	Item Code	Loading	Cronbach's Alpha	Composite Reliability	AVE	\sqrt{AVE}
Institutional Pressures		12	INP		.937	.845	.772	.861
	<i>Coercive Pressures (CP)</i>		CP1	.84	.939			
			CP2	.84	.939			
			CP3	.92	.936			
			CP4	.89	.936			
			CP5	.81	.936			
	<i>Normative Pressures (NP)</i>		NP1	.81	.937			
			NP2	.86	.936			
			NP3	.91	.936			
	<i>Mimetic Pressures (MP)</i>		MP1	.89	.936			
			MP2	.89	.936			
			MP3	.89	.936			
			MP4	.88	.936			
Supply Chain Technology Utilization		5	SCTU		.935	.836	.765	.853
	<i>Electronic Data Interchange</i>		EDI	.89	.935			
	<i>Enterprise Resource Planning</i>		ERP	.90	.935			
	<i>Advanced Planning & Optimization</i>		APO	.91	.935			
	<i>Data Capture Systems</i>		DCS	.88	.935			
	<i>Warehouse Management System</i>		WMS	.84	.935			

Supply Performance	Chain	14	SCP		.934	.810	.743	.821
	<i>Reliability</i>		SPREL1	.71	.935			
			SPREL2	.77	.935			
			SPREL3	.73	.934			
			SPREL4	.86	.935			
			SPREL5	.83	.934			
	<i>Efficiency</i>		SPEFF1	.85	.934			
			SPEFF2	.79	.933			
			SPEFF3	.78	.935			
			SPEFF4	.76	.935			
	<i>Flexibility</i>		SPFLX1	.75	.934			
			SPFLX2	.78	.934			
			SPFLX3	.90	.935			
			SPFLX4	.89	.934			
			SPFLX5	.90	.934			

Additionally, the Cronbach's alpha was used to assess the reliability of the data (Table 2). The composite reliability of the constructs was ascertained by using the square of the summation of the factor loadings and dividing it's by square of the summation of the factor loadings and summation of error variables. This was utilized to adhere to the indication by Creswell (2015) in relation to Cronbach alpha procedure, however, considering the factor loadings of the items. In relation to the CFA results, the all the factor loadings for all items and constructs were greater than 0.6. Additionally, the result shows that the Cronbach's alpha score are higher than 0.7, which is an acceptable for exploratory research according to Creswell (2015) and Goran (2013).

Further, Anderson et al. (2016), posited that convergent validity deals with how closely the new scale is related to other variables and other measures of the same construct. Therefore, considering the result from Table 2 all composite reliabilities for the major indicators or constructs of the study are above 0.7. It is also clear that all the average variance extracted estimates are above 50%.

In relation to convergent validity, Anderson (2015) indicated that how closely a scale relate to other indicators and other measures of the same construct shows greater level of convergent validity. The result in Table 3 shows that all composite reliabilities for major constructs or indicators are all above 0.7. It is also clear that all the average variance extracted estimates are above 50%.

Hair et al (2016) intimated that all these results provide clear evidence of adequate convergent validity and reliability of all constructs. Moreover, in relation to the discriminant validity results, the researcher employed the Fornell and Larcker Criterion and HTMT. The constructs presented moderated correlations between each other. From the result, the square root of the minimum average of variance extracted is greater than the largest inter-construct correlation, therefore resulting in the

establishment of discriminant validity (Fornell and Larcker, 1981).

Table 3 Discriminant Validity: Fornell and Larcker Criterion

Constructs	1	2	3
SCP	0.903		
SCTU	0.173	0.897	
INP	0.526	0.398	0.925
<u>Heterotrait-Monotrait Ratio (HTMT) criteria</u>			
SCP	0.310		
SCTU	0.321	0.120	
INP	0.211	0.066	0.512

Relative to the variance-based SEM, Henseler et al. (2015), claimed that the Fornell and Larcker Criterion alone is not conclusive with regards to providing vivid evidence for discriminant validity (Table 3). Therefore, considering this, the authors provided the three Heterotrait-Monotrait Ratio (HTMT) criteria for determining discriminant validity. The HTMT specificity ratio of 0.09, HTMT specificity ratio 0.85 and HTMT inference score ranging between -1 to 1 ($-1 < \text{HTMT} < 1$) as indication of distinctiveness. Therefore, the result from the table 3.13 shows that all the HTMT correlations for all constructs fall within the established range of ($-1 < \text{HTMT} < 1$). This therefore shows the establishment of discriminant validity for the four major or key constructs of the study or model.

Structural model analysis

To ascertain whether the direct hypothesised paths were supported, the path coefficients and t-values for each hypothesised direct path were examined as shown in Table 4. provides the summary of result from the regression analysis of the effect of institutional pressure on supply chain performance through supply chain technology utilisation. The result shows that all the demographic variables such as firm size, firm type and ownership type failed to significantly impact on SCP. The result showed that the effect of institutional pressure on supply chain performance was found to be positive and statistically significant, indicated as [$\beta = .281, t = 4.908, < 0.01; 0.05; 0.10$]. This is suggestive that hypothesis 1 was supported by the results.

From the table it could be observed that INP showed negative effect on the SCTU. However, the strength of the relationship was not statistically significant, indicated as [$\beta = -.006, t = -.902, > 0.01; 0.05; 0.10$]. The results suggests that institutional pressures have negative effect on the extent of supply chain technology utilisation among firms. This may not necessarily give an impression of causality but rather more of an observed pattern.

In addition, the result also shows SCTU exerted significant effect on SCP indicated as [$\beta = .550, t = 9.488, < 0.01; 0.05; 0.10$]. Despite this, the result shows that supply chain technology utilisation (SCTU) mediates the relationship between institutional pressures (INP) and supply chain performance (SCP) indicated as ($\beta = .507, t = 8.342, < 0.01; 0.05; 0.10$). This shows that 50.7% of variables explain such mediation effect of supply chain technology utilisation on the relationship between institutional pressures (INP) and supply chain performance (SCP). This therefore supports

the third study hypothesis that; H4: Supply Chain Technology Utilization mediates the relationship between Institutional pressures and supply chain performance.

Figure 2. Path analysis of model



DISCUSSIONS

The study objective of the study is to determine the relationship between institutional pressures and supply chain performance and supply chain technology utilisation. The findings of the study relative to the objective supports the first study objective that H1: Institutional pressures positively relate supply chain performance. This by implication shows that institutional pressures are very critical in enhancing supply chain performance of firms. This is corroborated by the works of Bowen et al. (2001) and reiterated by Rao and Holt (2005) who discovered in their works significant and direct effects of institutional pressures on supply chain performance.

Additionally, the finding is found to be consistent with the study by Droge et al. (2004) who found the relationship between institutional pressure and supply chain performance to be positive. Zhang et al. (2020) reached similar outcome when they found a positive influence of institutional pressures on supply chain performance. Institutional theory by DiMaggio and Powell and Dimaggio (1983) theorised that institutional pressures stimulate a certain kind of business practices where coercive pressures usually play a vital role in forcefully promoting acceptable industry behaviour by actors in the supply chain. Many studies show how businesses abide by institutional norms for an improvement in supply chain performance through the adoption of industry standards (Sarkis et al., 2010).

The result shows that institutional pressure failed to exert significant effect on supply chain technology utilisation. Despite the results showing a negative relationship between the IP and SCTU. This means the second study hypothesis that H2: Institutional pressures positively relate to supply chain technology utilisation was not supported by the data. This clearly shows the weak level of utilisation of supply chain technology amongst the firms in the Ghana. This finding failed to corroborate those reached by DiMaggio and Powell and Dimaggio (1983) when they reached that institutional pressures emanate from the institutional environment and push firms to adopt shared notions and routines. This study has shown that the pressure from the institutional environment is not sufficient to compel firms to adopt or utilise technologies in their respective supply chains. This position was reiterated by Walker et al. (1997) who asserted that the prevalence and utilisation of

the various SCTU across industries will promote information sharing within the supply chains and this accelerate the establishment and transfer of supply chain technology application norms among trading partners. More so, this finding failed to affirm the findings of John et al. (2000) who was of the view that generally, the prevalence of the practice in an industry creates and strengthens the related norms which in turn generate pressures on the business and compels them to utilise prevailing practices of system utilisation.

In the candid opinion of the researcher, it is essential to point out that there is less effective information sharing and collaboration among firms in the metropolis. This is because SCT afford firms the platform to improve communication, synchronisation, and collaboration across organisational boundaries at all levels. This position is well supported by the literature as it was inferred that the diffusion of technologies in business operations facilitates the possible arc of supply chain integration which can transform an ideal practice into an operational reality (Rudyanto et al., 2021; Frohlich and Westbrook, 2001; Flynn et al., 2010; Liu et al., 2010).

The third study objective was to examine the mediating role of SCTU on the relationship between institutional pressure and supply chain performance. The study found that institutional pressure exerts significant effect on supply chain performance. In addition, the result also shows SCTU exerted significant effect on supply chain performance. Despite this, the result shows that SCTU mediates the relationship between INP and SCP. This therefore supports the third study hypothesis that; H3: Supply Chain Technology Utilization mediates the relationship between Institutional pressures and supply chain performance. By implication the finding suggests that supply chain technology utilisation is very critical when it comes to the linkage between institutional pressures and supply chain performance.

This shows that supply chain technology utilisation pave way for organisations to increase their output and advance with stakeholders, which have transformed the way firms operate, bringing innovation to the production process (Almulhim, 2021). The finding supports the study that technological utilisation increases performance suggestively by affording innovative techniques in the supply chain operation (Chege et al., 2020). Furthermore, the result is corroborated by the works of Tan et al. (2008) who asserted that the utilisation of supply chain technology narrows the focus of managers and slowly eliminates the adverse relationship between logistics providers, suppliers, and customers while strategic alliances and long-term cooperative relationships are established. Fink and Neumann (2007) reached similar results when they observed that the utilisation of technology has shown direct and positive effects on the organisation's agility performance. That is to postulate that increasing he role of supply chain technology contributes significantly to supply chain performance.

Theoretical Contributions

The research makes several theoretical contributions. First, the study uses the Institutional Theory, Resource Based View Theory to theorise and elucidate the complex interaction between INP, SCTU and SCP. The study findings highlight that institutional theory has positive and statistically significant influence on the supply chain performance. It was established that isomorphic variables in the organizational environment are impacting positively on the performance of the supply chain of firms in the metropolis. This shows that firms in the metropolis are coping or responding well to

the pressures from the corporate environment. Though previous had already established that institutional pressures have direct positive influence on supply chain performance, the current study highlights the contextual underpinning of this findings confirming that the pressures emanating from institutions in the Ghana is stimulating a certain kind of practices forcefully promoting acceptable behavioural practices among the actors in the supply chains. Further, the study has reiterated the position of many Institutional Theorists who propounded that as institutions put pressure on firms to adhere to certain protocols, there is the propensity to compel the adoption of certain practices which ultimately enhances the efficiency of the supply chain.

Secondly, the study empirically presents new insights on the outcomes of the influence of supply chain technology utilisation as a resource on the relationship between institutional pressures and supply chain performance. This finding fills a rare empirical gap as many researchers have called for the introduction of new dimensions or variables into the study of how institutional pressures influence supply chain performance. This outcome of this study has deepened insights into how the relationship between institutional pressures and supply chain performance can be mediated by technology utilisation. In the absence of supply chain technology utilisation, the influence of institutional pressures on supply chain performance disappears. It is apparent that to better leverage on the positive impact of institutional pressures on supply chain performance, managers of firms should continue to leverage their information exchange, collaboration, coordination, and responsiveness obtained from the use of technology in their supply chains. Firms who may not be able to leverage on these advantages may only experience marginal improvements in the performance of their supply chains.

Thirdly, this study has extended the debate surrounding institutional pressures beyond just environmental protection advocacy to the arena of supply chain management practices. The study has shown that not only does institutional pressure compels firms to adopt environmental practices but also compels them to focus on other variables in the industry that has implications on their performance. This dimension of institutional pressure backed by the institutional theory is rare in extant literature and this current study has open the space for further studies to deepen knowledge in the area.

Conclusion and Limitations

Generally, the study makes attempts to shift the discourse beyond how institutional pressures influence firms' environmental and sustainability performance to how they impact supply chain performance and how this relationship is mediated by the utilisation of supply chain technology in other jurisdictions most especially Africa specifically Ghana. Findings from this research points to the direction that institutional pressure has positive and statistically significant effect on supply chain performance. However, supply chain technology utilisation showed a weak effect on supply chain performance of firms surveyed.

More so, the study discovered that supply chain technology utilisation mediates the relationship between Institutional Pressures and Supply Chain Performance. The findings of the current study contribute to a better theoretical understanding of the factors that influence the performance of a firm's supply chain. It should be noted, however, this shows that 50.7% of variables explain such

mediation effect of supply chain technology utilisation on the relationship between INP and SCP. This is suggestive that a large portion of the mediation effect on the relationship between INP and SCP remains unexplained requiring additional research incorporating potential unmeasured variables in future studies.

Despite the contributions of this study to literature, it is however, not exonerated from limitations. First, some general inferences were made based on the firms sampled. However, it will be better to create a cross-country study regarding institutional pressures and its impact on supply chain performance and supply chain technology utilization. Second, the study was conducted in Ghana, specifically in the Greater Accra metropolis; thus, the findings are based on the selected manager's responses to the issues under study. The results may differ in other jurisdictions depending on the level of technology available, the regulatory environment, or where participants have different understandings regarding the concepts under study. Third, because of the cross-sectional nature of the primary data collected, the interpretation of results may be limited to the firms assessed at the time of this study.

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