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The Impact of Digital Leadership on Sustainable Supply Chain Performance in UK Manufacturing Firms: The Mediating Role of Supply Chain Digital Orientation

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ABSTRACT

Although digital transformation is critical to sustainability, manufacturing firms face significant challenges in converting digital leadership to sustainable supply chain performance, with the mediation of supply chain digital orientation still insufficiently studied, especially in the UK. A quantitative cross-sectional exploratory study involving 300 senior managers and supply chain professionals of the manufacturing companies in the United Kingdom was carried out through the use of structured questionnaire. With the four null hypotheses, structural equation modelling (SEM) using AMOS was used to test them. All the null hypotheses were rejected as digital leadership had a significant direct effect on sustainable supply chain performance ($\beta = 0.41$ and $P < 0.001$) and a strong influence on supply chain digital orientation ($\beta = 0.67$ and $P < 0.001$). Digital orientation of the supply chain was also a significant influence on the sustainable supply chain performance ($\beta = 0.53$, $P < 0.001$), and partially mediated the relationship between leadership and performance (indirect $\beta = 0.36$, $P < 0.001$). The model accounted for 56% of the variance in sustainable performance. The theoretical extension of the study is theoretical and it is based on dynamic capabilities theory. In practice, firms need to invest in developing their digital leadership. Policy implications include supporting leadership programmes and digital technology incentives. Recommendations include longitudinal designs and cross-national comparative studies. The study finds that digitally competent leaders create digital orientation throughout supply chains which directly contributes to better economic, environmental and social outcomes.

Keywords: Digital Leadership, Supply Chain Digital Orientation, Sustainable Supply Chain Performance, UK Manufacturing, Dynamic Capabilities Theory
JEL Classifications: C2, L6, L251

1. INTRODUCTION

As digital technology continues to surge in popularity, it's reshaped the competitive playing field of modern manufacturing, forcing organisations to reassess conventional leadership strategies and supply chain handling. In the United Kingdom (UK), manufacturers are increasingly facing the challenge of achieving sustainability goals while also boosting their operational efficiency, resilience and competitiveness. Digital leadership, defined as leaders' capacity to use digital technologies, promote innovation, and drive change in their organizations within dynamic business contexts, has thus become a crucial concept in the era of digital transformation and sustainability (Bresciani et al., 2021; El Sawy et al., 2022).

The last years' disruptions have made it evident that the need for sustainable supply chain performance has grown, due to global supply chain uncertainties, geopolitical tensions, and the rising number of environmental regulations. Sustainable supply chain performance includes the economic, environment, and society

outcomes resulting from the effectiveness of the supply chain practices (Khan et al., 2023). Therefore, manufacturing companies are increasingly applying digital technologies like artificial intelligence, cloud computing, big data analytics, internet of things (IoT), and digital twins to enhance visibility and responsiveness, as well as sustainability in supply chain networks (Oubrahim et al., 2023; Zaid et al., 2024). Digital transformation has been shown to play a crucial role in enhancing supply chain performance and sustainability by facilitating better information sharing, process integration, and decision-making (Jing and Fan, 2024; Wei et al., 2025).

Although digital transformation, supply chain integration, and sustainable performance have been shown to be correlated with one another (Oubrahim et al., 2023; Qureshi et al., 2023; Zaid et al., 2024), there has been relatively little research focused on aspects of leadership necessary to achieve these goals. Recent studies have shown how digital leadership contributes to the innovation of an organization, sustainability, and the implementation of digital transformation processes (Benitez et al., 2022; Solberg et al., 2023; Gan and Chu, 2026). In addition, recent studies indicate that digital leadership also enables the transformation of the supply chain through enhancing digital capabilities and technology-oriented cultures (Mihardjo et al., 2022; Li et al., 2026).

Despite the progress, there is still a significant research gap regarding the mechanism by which digital leadership can improve the performance of the sustainable supply chain. The mediating role of supply chain digital orientation - the strategic commitment towards digital technologies, data-driven decision making and digital integration in the supply chain activities - is not thoroughly examined, particularly in the UK manufacturing context. Filling this gap is significant as digital orientation could be the key pathway to sustainability outcomes from leadership-driven digital initiatives.

Thus, the purpose of this study is to explore the impact of digital leadership on performance of sustainable supply chains in manufacturing companies located in the UK whilst exploring the mediating effect of supply chain digital orientation in this relationship. This study adds to the ever-expanding body of literature concerning digital transformation, leadership and sustainable supply chain management through empirical evidence from the UK manufacturing industry.

Given the plethora of studies on the theme under consideration and while there is an understanding that digital transformation and supply chain sustainability are both significant for UK manufacturing organisations, there is a lack of understanding regarding the translation of digital leadership into sustainable supply chain performance (Esangbedo et al., 2024; Singh and Mathiyazhagan, 2024). While digital technologies are increasingly embraced by manufacturing leaders, many are not seeing the same boost in sustainability, indicating that technology alone is not enough without the proper leadership capabilities (Atieh and Abushaega, 2025; Usman and Alabdali, 2025). In particular, the digital leadership mechanism that is assumed to impact the sustainability outcomes, especially the digital orientation of the supply chain, has not been explored enough in both theoretical and empirical aspects (Çınar and Erkasap, 2025). The gap is particularly stark within the UK manufacturing landscape, which is unique in its regulatory pressures, net zero commitments and challenges of industrial digital maturity (The Manufacturer, 2025). This means that while manufacturing companies are increasingly adopting digital technologies, they are missing information and practices that can help them make informed decisions on digital leadership's impact on sustainable supply chain performance and allocate resources accordingly. As a result, manufacturing companies are not equipped with evidence-based guidance and practices to decide whether and how digital leadership contributes to sustainable supply chain performance, especially when it comes to making decisions and allocating resources. To this end, the current study seeks to address the following research question with its corresponding hypotheses namely (i) Assess the impact of digital leadership on the sustainable supply chain performance in UK manufacturing firms. (ii) Analyse how digital leadership affects digital orientation in the supply chain of manufacturing firms in the United Kingdom. (iii) Compare the impact of supply chain digital orientation on sustainable supply chain performance in manufacturing firms in the UK. (iv) Explore the mediating effect of digital orientation of supply chain on the linkage between digital leadership and sustainable performance of supply chain in UK manufacturing firms. With its corresponding

Hypotheses

H_{01}: Digital leadership has no significant positive effect on sustainable supply chain performance in UK manufacturing companies

H_{02}: Digital leadership has no significant positive effect on sustainable supply chain performance in UK manufacturing companies

H_{03}: Supply chain digital orientation has no significant positive effect on sustainable supply chain performance in UK manufacturing firms

H_{04}: Supply chain digital orientation does not significantly mediate the relationship between digital leadership and sustainable supply chain performance in UK manufacturing firms.

The remainder of the present study continues with section 2 that focuses on review of related literature and conceptualization of study. Section 3 subsequently outlined data and methodological sequences. Section 4 shows results interpretation and discussion and finally section 5 renders the concluding remarks and policy implications.

2. REVIEW OF RELATED LITERATURE

2.1. Conceptual Review

This section of this study focuses on the review of the related literature in a stylised manner alone side conceptual review.

2.2. Digital Leadership

Driven by the fast pace of technological progress, digital transformation and industry competitiveness, digital leadership has become a vital organisational competency. The idea is that leaders can imagine, initiate and implement organizational change

by utilizing digital technologies and innovation-based approaches effectively (Solberg et al., 2023; Bresciani et al., 2021). Digital leadership is different from traditional leadership because it prioritizes agility, technological consciousness, decision-making based on data, and the ability to create digital cultures that encourage ongoing innovations (Benitez et al., 2022; El Sawy et al., 2022). Digital leadership has been largely linked to the rise of industry 4.0, artificial intelligence, big data and analytics, cloud computing, and digital ecosystems – all of which have fundamentally transformed the way organisations deliver and create value (Zhang et al., 2024; Wu et al., 2024).

Solberg et al. (2023) and Xu et al. (2024) identified some common traits of digital leaders, such as possessing strategic thinking skills, being adaptable, thinking creatively, being interdependent, and having technology skills. Five dimensions of digital leadership have been identified recently in literature. Digital vision helps leaders to articulate and communicate a compelling technology-enabled future (Benitez et al., 2022). Digital competence is the awareness and use of digital technologies for supporting the goals of the organisation (Mihardjo et al., 2022). Towards innovation orientation, they encourage experimentation, creativity, and the use of emerging technologies (Xu et al., 2024; Cheng and Cui, 2024). In the context of implementing digital initiatives and organisational adaptation, change management capability eases the way for successful execution (Chen et al, 2024; Zhang et al, 2024). Strategic technology utilization is about making sure that the choices of technology investments are directed toward long term business objectives and operational performance (Wu et al., 2024; González-Varona et al., 2024).

In the manufacturing industry, digital leadership is gaining growing prominence as a vital factor in achieving operational excellence, supply chain resilience, and sustainable performance (Oubrahim et al., 2023). Digital leaders are essential for organizational change and competitiveness (Kraus et al., 2021; Ozturk, 2026; Li et al., 2026) through their role in developing digital skills, promoting innovation and supporting the adoption of technologies. Therefore, digital leadership has emerged as a crucial element within manufacturing organisations aiming to thrive in the digital world and realize sustainable growth.

2.2.1. Sustainable supply chain performance

Sustainable supply chain performance is defined as the economic success of the organisation and also the reduction of environmental effects and improvement of social well-being in the activities of supply chains (Khan et al., 2023; Yildiz Çankaya and Sezen, 2020). It originated as part of the sustainable development concept and has grown from a mainly cost efficient and operational effective perspective to include environmental and social responsibility (Kouhizadeh et al., 2021). With the global concern about sustainability growing, supply chain management has also embraced sustainability principles in sourcing, production, logistics and distribution processes (Tseng et al., 2022; Dubey et al., 2021).

Sustainable supply chain performance is often presented in the following three dimensions, which are interconnected in the literature. The economic performance encompasses profitability, cost reduction, productivity and competitive advantage gained by adopting sustainable practices in the whole supply chain (Qureshi et al., 2023; Khan et al., 2023). Environmental performance is defined as emission reductions, waste minimisation, energy saving and resource usage reduction throughout supply chain operations (Centobelli et al., 2022; Oubrahim et al., 2023). Social performance is defined as the welfare of the employees, the well-being of the employees, ethical behavior in the business, community involvement and welfare of the stakeholders (Tseng et al., 2022; Yildiz Çankaya and Sezen, 2020).

Sustainable supply chain performance is usually measured using the triple bottom line approach that draws on economic and environmental and social indicators to give a comprehensive picture of the organisations sustainable outcomes (Agyabeng-Mensah et al., 2021; Kouhizadeh et al., 2021). In recent years, more and more studies are using multidimensional scales to capture these dimensions of performance and assess the effectiveness of sustainability initiatives (Zaid et al., 2024; Qureshi et al., 2023).

The manufacturing industry in the UK has seen a rise in regulatory demands, stakeholder expectations, and commitment to achieving net zero carbon goals, leading to an increased focus on sustainable supply chain performance (Moktadir et al., 2023; Dubey et al., 2021). As a result, manufacturers are using sustainable supply chain management practices to enhance their resilience, competitiveness and long-term organisational sustainability, and to help achieve larger environmental and societal objectives.

2.2.2. Supply chain digital orientation

Supply chain digital orientation is a strategic intent to use, integrate and benefit digital technologies in the supply chain process, decision making and performance results (Nasiri et al., 2020; Queiroz et al., 2021). In essence, the concept embodies an attitude of organisations towards digital innovation and technological development as key factors in achieving supply chain effectiveness and competitiveness (Oubrahim et al., 2023; Wei et al., 2025). With ever-more complex and data-heavy supply chains, digital orientation now has become a strategic capability that helps businesses adjust to the uncertainties of the environment and market dynamics (Dolgui and Ivanov, 2023).

The concern of the strategic application of digital orientation of supply chains is to enable the exchange of information in real-time, operational agility, supply chain resilience, and creation of value in sustainable fashion in supply chain networks (Dubey et al., 2021). Modern literature lists several fundamental elements of digital orientation of supply chain. The adoption of digital technology includes the use of technologies like artificial intelligence, Internet of Things, blockchain, cloud and other technologies to increase the efficiency of operations (Kouhizadeh et al., 2021; Oubrahim et al., 2023). Data-driven decision making allows organisations to leverage data analytics and business intelligence tools to help streamline supply chain operations (Qureshi et al., 2023). Digital integration allows the supply chain partners to connect seamlessly, and supply chain visibility improves supply chain transparency and traceability (Queiroz et al., 2021; Dolgui and Ivanov, 2023).

This digital collaboration further enhances the coordination of stakeholders and information sharing within them (Zaid et al., 2024).

Supply chain digital orientation not only helps increase responsiveness, innovation, but also to better utilise resources, which are very beneficial to the competitiveness and long-term performance of the organisation (Nasiri et al., 2020; Wei et al., 2025). Digital orientation is gaining more significant importance within manufacturing firms, where it plays a key role in ensuring operational excellence, supply chain resilience, and sustainability goals in a digital business environment (Jing and Fan, 2024; Qureshi et al., 2023).

2.2.3. Digital leadership and sustainable supply chain performance

Digital leadership and sustainable supply chain performance have become an accepted link in the modern management and supply chain literature. Theoretically, the linkage is based on the resource based view and dynamic capabilities theory that argue that the leadership role is crucial for building organisational competences that bolster sustainability and competitive advantage (Dubey et al., 2021; Benitez et al., 2022). Digital leaders play a role in acquiring, integrating and deploying digital resources that enhance the responsiveness, resilience and sustainability of the supply chain (Solberg et al., 2023; El Sawy et al., 2022).

Leadership plays a vital role in driving changes in sustainability, impacting the organizational culture, priorities, and investment in sustainable initiatives (Khan et al., 2023). Good leaders champion environmentally responsible actions, foster innovation and lead decision making processes based on stakeholders' interests that improve economic, environmental and social outcomes (Mihardjo et al., 2022; Centobelli et al., 2022). By contrast, recent research has shown that companies with digitally competent leaders are more inclined to implement modern technologies that allow them to monitor, reduce, and use wisely the resources they have, in order to achieve energy efficiency and sustainability (Kraus et al., 2021; González-Varona et al., 2024).

In addition, digital leadership plays a crucial role in the sustainability of the supply chain by facilitating digital transformation and technology-driven collaboration in supply chain networks (Oubrahim et al., 2023; Zaid et al., 2024). Digital leaders are able to leverage technologies like AI, big data analytics, blockchain and IoT to achieve greater visibility, transparency, and operational efficiency in supply chains, thereby directly improving the performance of sustainable supply chains (Kouhizadeh et al., 2021; Qureshi et al., 2023). As a result, the notion of digital leadership has grown into a strategic tool to help manufacturing companies sustain their long-term goals while staying competitive in the ever-evolving business landscape (Li et al., 2026; Wei et al., 2025).

2.2.4. Digital leadership and supply chain digital orientation

Digital leadership is a key factor in driving digital transformation within the organisation and digital orientation in the supply chain. With the growing adoption of digital technologies by organisations, leadership has emerged as a key factor of successful digital transformation initiatives (Benitez et al., 2022; Solberg et al., 2023). Digital leaders play a crucial role in shaping the transformation processes by setting a clear digital vision, allocating technological resources, encouraging innovation and fostering a culture that promotes the adoption of technology and continuous learning (El Sawy et al., 2022; Kraus et al., 2021). Thus, leadership commitment plays a significant role in the implementation of digital technologies in organisations' activities and supply chains (Mihardjo et al., 2022; González-Varona et al., 2024).

Digital leadership is also a key enabler of the digital orientation of supply chains. Strategic guidance and technological awareness help leaders to promote the use of advanced technologies such as artificial intelligence, cloud computing, blockchain, big data analytics, and internet of things in supply chain functions (Kouhizadeh et al., 2021; Oubrahim et al., 2023). It has been found that digitally competent leaders promote collaborative working among different functions, digital integration, and data-driven decision making, which reinforces an organisation's digital orientation and adaptability (Wei et al., 2025; Nasiri et al., 2020).

Besides, digitalizing the supply chains needs leaders who can coordinate digital efforts with bigger organizational goals and supply chain strategies (Dubey et al., 2021; Queiroz et al., 2021). The role of digital leaders involves fostering supply chain transparency, communication, and cooperation, thereby increasing agility and responsiveness in a changing business landscape (Dolgui and Ivanov, 2023; Zaid et al., 2024). Within manufacturing companies, this digital orientation through leadership promotes operational efficiency, resilience, and innovation, enabling companies to excel in supply chain performance and long-term competitiveness (Jing and Fan, 2024; Li et al., 2026).

2.2.5. Supply chain digital orientation and sustainable supply chain performance

Digital orientation of the supply chain has become a key driver of sustainable performance of the supply chain in today's business environment. Digital technologies, such as artificial intelligence, blockchain, big data analytics, cloud computing, and IoT, can enhance operational efficiency, transparency, traceability and responsiveness in various activities of supply chains (Kouhizadeh et al., 2021; Dolgui and Ivanov, 2023; Nasiri et al., 2020). These technologies enable the exchange of information, and the data can be used for real-time decisions, leading to more sustainable and resilient supply chain operations (Oubrahim et al., 2023).

In terms of strategy, digital orientation of the supply chain is an organisational ability which helps companies use digital tools to improve their competitiveness and sustainability performance (Dubey et al., 2021; Queiroz et al., 2021). Companies that are more digitally oriented can better integrate and streamline their supply chain processes, gain supply chain visibility, collaboratively engage stakeholders, and adapt to environmental uncertainty (Jing and Fan, 2024; Wei et al., 2025). Digital orientation is therefore seen more and more as a dynamic capability that facilitates the adaptability and long-term value creation of an organisation (Kraus et al., 2021).

The triple bottom line concept is used to explain the relationship between digital orientation of the supply chain and sustainable supply chain performance. From an economic perspective, digital orientation improves productivity, efficiency, and profitability, optimising processes and reducing costs (Qureshi et al., 2023; Khan et al., 2023). From an ecological perspective, digital technologies can contribute to emissions reduction, resource efficiency, waste minimisation and sustainable production practices (Centobelli et al., 2022; Zaid et al., 2024). Socially, there is a link between this improvement in transparency, ethical sourcing, stakeholder engagement and employee well-being, and thus, enhanced social performance (Tseng et al., 2022; Yildiz Çankaya and Sezen, 2020). Thus, digital orientation in the supply chain is a strategic tool that could help manufacturing companies obtain better results in terms of sustainability and long-term competitiveness.

2.3. Theoretical Framework

2.3.1. Dynamic capabilities theory

In dynamic and changing environments, dynamic capabilities theory (DCT) offers a strong theoretical framework to explain how organisations adapt, innovate and maintain a competitive position. The theory was first developed by Teece, Pisano and Shuen and later by Teece, and it helps to explain how a firm's internal and external resources are integrated, developed and reconfigured as a response to the changing environment (Teece, 2023; Schilke et al., 2021). In recent studies, DCT has been increasingly extended to the contexts of digital transformation (Dubey et al., 2021), of sustainability (Warner and Wäger, 2021) and of supply chain management (Matarazzo et al., 2021), holding relevance in the new digital era.

The theory is based on three interrelated skills: Sensing, seizing and transforming. Sensing involves an organization's capacity to detect opportunities, technology advancements and changes in the environment (Teece, 2023; Fainshmidt et al., 2023). Seizing is the action of mobilizing resources and making strategic decisions in order to successfully exploit opportunities identified. (Warner and Wäger, 2021; Matarazzo et al., 2021). Transforming refers to the ability to constantly change organizational structures, processes and competencies to enhance long-term competitiveness (Schilke et al., 2021; Ferreira et al., 2022).

Digital leadership is considered as a capability that allows organisations to sense the opportunities in the digital environment, identify digital innovations, and transform business processes by engaging in strategic leadership and technological vision (Benitez et al., 2022; Solberg et al., 2023; El Sawy et al., 2022). Likewise, the digital orientation of the supply chain is an organizational capability that helps in the deployment and integration of digital technologies in the supply chain processes (Nasiri et al., 2020; Oubrahim et al., 2023). Digitally oriented supply chains are more adaptive and resilient through increased visibility, digital integration, and data-driven decision making (Dolgui and Ivanov, 2023; Wei et al., 2025).

Dynamic capabilities are also associated with sustainable supply chain performance, allowing companies to craft innovative solutions, optimize resource use, and address sustainability issues (Khan et al., 2023; Zaid et al., 2024). The theory, however, has been questioned because of its conceptual ambiguity (Fainshmidt et al., 2023; Schilke et al., 2021), measurement challenges, and the absence of agreement on the exact mechanisms by which dynamic capabilities result in a competitive advantage. However, the above-mentioned restrictions have not reduced the relevance of the study of DCT to the understanding of how digital leadership and digital orientation of the supply chain are related to sustainable supply chain performance in manufacturing companies.

2.3.2. Upper echelons theory

One of the most significant theories of leadership for organizational outcomes is known as upper echelons theory (UET). The theory, created by Donald C. Hambrick and Phyllis A. Mason, states that the experiences, values, cognitive bases, and personal characteristics of the top executives partially predict organisational outcomes (Hambrick, 2021). The main premises of UET are that the backgrounds and interpretations of senior leaders influence strategic choices and organisational performance, since executives as key decisionmakers shape the direction of the organisation (Neely et al., 2020; Carpenter et al., 2023). The theory has been expanded to digital transformation, sustainability, and innovation contexts in recent studies, which have shown that the same characteristics of leadership are also key factors in achieving organizational adaptation in turbulent environments (Li et al., 2024; Solberg et al., 2023).

According to the theory, characteristics of leadership like education, technology skills, managerial experience, risk-taking tendency and strategic thinking are important factors that affect the organisational's decision-making and performance (Bromiley and Rau, 2021; Benitez et al., 2022). Leaders with high innovation orientation and digital knowledge are more inclined to invest in advanced technologies, in organisational learning, and in transformative projects to increase the performance of the firm (Mihardjo et al., 2022; Kraus et al., 2021). Therefore, executive characteristics can shape the manner in which an organisation deals with environmental challenges and takes advantage of new opportunities (Wang et al., 2024; Ferreira et al., 2022).

The digital leadership is a reflection of executives' technology consciousness, strategic vision, and dedication to technological innovation (El Sawy et al., 2022; Benitez et al., 2022). Digital leaders contribute to the orientation of organizations to the digital, through the promotion of the adoption of technology, the creation of cultures of innovation and the allocation of resources to digital transformation projects (Solberg et al., 2023; González-Varona et al., 2024). These leadership behaviors are particularly significant in relation to supply chain sustainability, as they influence the adoption of sustainable technologies, digitalization, and environmentally responsible practices (Dubey et al., 2021; Khan et al., 2023; Oubrahim et al., 2023).

Although UET is a strong explanatory framework, it has been questioned for its overemphasis on managerial attributes and lack of attention to external environmental factors, organizational routines, and institutional constraints (Carpenter et al., 2023; Hambrick, 2021). Additionally, scholars report problems with

assessing psychological attributes using observable proxies such as demographics (Neely et al., 2020; Wang et al., 2024). However, the theory will still be very much applicable in understanding the effect of digital leadership on digital orientation of supply chains and sustainable performance of supply chains in manufacturing companies.

2.3.3. Theoretical synthesis and justification

The theory used in this study is a theory of dynamic capabilities theory (DCT) and complemented by the theory of upper echelons theory (UET). UET helps identify the effects of the characteristics, values, and decision making of senior leaders on the outcomes of organisations, whereas DCT helps to identify how organisations develop, integrate, and reconfigure resources and capabilities to effectively respond to changes in their environment (Hambrick, 2021; Neely et al., 2020; Teece, 2023). UET thus offers insights into the role of digital leadership, while DCT offers an explanation of how the digital capabilities of leaders lead to performance outcomes (Solberg et al., 2023; Benitez et al., 2022).

Of the theories discussed, the selected theory that provides a comprehensive explanation of how the firms develop adaptive capabilities which are helpful for digital transformation and sustainable performance is dynamic capabilities theory (Dubey et al., 2021; Warner and Wäger, 2021). The theory is very relevant because supply chain digital orientation is a dynamic capability of the organisations through which companies can sense the opportunities, capture the technological innovations and modify the process of the operations that they are engaged in to reach the sustainability goals (Wei et al., 2025; Oubrahim et al., 2023; Nasiri et al., 2020).

2.3.4. Empirical review

In recent years, international research has increasingly explored the link between digital leadership and sustainable organizational performance. Using survey data from Spanish companies and partial least squares structural equation modelling (PLS-SEM), Benitez et al. (2022) examined the relationship between digital leadership capability and innovation and organisational performance. The study revealed that digital leadership had a significant impact on the ability to deliver innovation and organisational performance, where technology is used for decision making. Likewise, through a systematic review of digital leadership literature in various countries, Solberg et al. (2023) found that digital leadership contributes to organizational agility, innovation and sustainable value creation of digitally transforming organizations.

In the manufacturing industry, Oubrahim et al. (2023) applied a quantitative survey design and PLS-SEM analysis to study manufacturing companies in Morocco. They found that digital transformation has a significant impact on sustainable supply chain performance in terms of better integration into and information sharing between the chain. Similarly, Qureshi et al. (2023) researched sustainable manufacturing supply chain (MSC) performance and Industry 4.0 (Industry 4.0) technologies based on manufacturing organisations data. The study found that the use of technology and process innovation had a positive impact on both the economic, environmental and social performance outcomes. This was reinforced by Zaid et al. (2024), which used structural equation analysis to explore the impact of digital transformation on achieving sustainable supply chain performance. The outcomes showed that the digital technologies had a positive impact on sustainability with regards to information sharing and organisational responsiveness. In a more recent study by Li et al. (2026), they examined how digital leadership affects the integration of green supply chains (GSCs) based on survey responses from manufacturing companies. The study revealed that digital leadership did significantly contribute to sustainable supply chain practices by facilitating digital transformation and organising through data.

With the rising significance of digital transformation in organisations' competitiveness, the linkage between digital leadership and digital orientation has been gaining focus in the research community. Benitez et al. (2022) explored the influence of digital leadership capability on innovation and organisational performance based on survey responses from Spanish organisations and the PLS-SEM analysis. The results showed that the digital leadership had a significant impact on fostering digital innovation and organizational capabilities, in terms of technology-enabled decision-making and strategic change. The study has proved that for the creation of digitally oriented organisational cultures, leadership commitment is a key factor.

Similarly, Mihardjo et al. (2022) investigated the role of digital leadership in fostering business model innovation and organisational performance. The study involved quantitative data obtained from Indonesian companies and structural equation modeling to produce results. The results of the study showed that digital leadership can positively influence the development of digital capability through the innovation promotion, knowledge sharing, and technological adaptation processes. As the authors found, digital leaders play a key role in the readiness of the organisation for digital change.

González-Varona et al. (2024) conducted a study of SMEs that used a mixed methods research design to investigate the acquisition of digital transformation skills. The results showed that leadership support, strategic vision and technological commitment were key aspects affecting the development of digital skills and digital orientation in organisations. Similarly, Li et al. (2026) examined the link between digital leadership and green supply chain integration based on the survey information of manufacturing companies. The study used structural equation modelling to illustrate that digital leadership significantly had a positive effect on digital transformation and data-driven organisational culture, which in turn had a positive effect on the digital capabilities of the supply chain.

The technological orientation of the supply chain towards digital systems has been subject to a growing number of empirical studies in recent years for its ability to boost the performance and sustainability of supply chains. Oubrahim et al. (2023) examined the manufacturing companies in Morocco through a quantitative survey and partial least squares structural equation modeling (PLS-SEM). The study revealed that Digital transformation has

contributed significantly to the performance of the sustainable supply chain, by improving the integration of the supply chain and the sharing of information. The results underscored the need for digital orientation to promote operational efficiency and sustainability.

Likewise, Jing and Fan (2024) investigated the relationship between digital transformation, supply chain integration and supply chain performance among manufacturing companies. The quantitative research design and structural equation modelling uncovered that digital transformation had a positive effect on supply chain performance through digital integration, information visibility, and collaboration. The authors have come to the conclusion that digitally based supply chains are more responsive to the dynamic market conditions.

This study employed a survey and PLS-SEM methodology to examine the impact of Industry 4.0 technologies on the performance of sustainable manufacturing supply chain (SMSC), as investigated by Qureshi et al. (2023). Their results showed that the use of technology and the innovation of process had a significant impact on the economic, environmental and social aspects of performance. The research highlighted the importance of digital technologies for sustainable supply chain goals.

In addition, Zaid et al. (2024) studied the role of digital transformation in the sustainable performance of supply chains. The study demonstrated through structural equation modelling that digitalisation positively contributes to sustainability outcomes by promoting better information sharing and responsiveness of organizations. Similarly, Wei et al. (2025) studied how digitalization of the supply chain affects supply chain performance by applying a moderated mediation model. The findings highlighted that the digitalisation of the supply chain had a significant effect on improving digital competences, supply chain efficiency and agility and organizational performance.

The findings of these studies together are strong evidence in support of the positive relationship between SC digital orientation and SC performance. The majority of study techniques used were quantitative and analytical using the SEM technique. Yet, literature on the topic of supply chain digital orientation has been limited and mostly has examined digital transformation and digitalisation. Furthermore, the empirical evidence available from UK manufacturing companies is still limited and therefore there is a context gap that needs to be explored. Therefore, this study aims to fill these gaps by exploring how the digital orientation of the supply chain can have a positive impact on sustainable supply chain performance in the UK manufacturing industry.

Research on digital orientation as a mediator indicates that it serves as a pathway between strategic leadership and technological investment and their associated positive impacts on supply chain effectiveness. Zaid et al. (2024), for example, showed using structural equation modelling that Digital transformation indirectly improves Sustainable Supply Chain performance via digital orientation-related capabilities, such as information exchange and organizational responsiveness.

In a similar way, Oubrahim et al. (2023) conducted a quantitative study, conducting a survey and PLS-SEM approach to identify manufacturing companies. They found that there was a mediating effect of integration in the supply chain on the relationship between digital transformation and sustainable supply chain performance, meaning that a digital orientation mechanism like integration and coordination are key factors in moving digital investments to sustainable supply chain outcomes. The study highlighted the importance of digital skills being complemented by an organisational culture of digitalisation.

Wei et al. (2025), further, analyzed the impact of supply chain digitalisation and performance based on a moderated mediation model. Results showed that digital capabilities act as an intervening variable between digitalisation initiatives and supply chain performance, and that digital orientation increases agility, responsiveness and operational efficiency. The findings of the study highlight the need to consider capability development as an intermediate step to realise performance improvements through digital strategies.

Moreover, the findings by Jing and Fan (2024) showed that the relationship between digital transformation and supply chain performance partially is mediated by supply chain integration for manufacturing firms. Their quantitative analysis showed that digitalisation has a positive impact on performance mainly in terms of better coordination, visibility and decision making processes based on data. Overall, the studies employ a mainly quantitative approach, focusing primarily on PLS-SEM and regression-based mediation analysis.

Empirical research on the UK manufacturing industry has predominantly shifted its attention towards digital transformation, sustainable supply chain management and innovation through leadership. To examine the impact of digital transformation (DT) on operational efficiency and supply chain integration, this research by Kohtamäki et al. (2021) analysed the digital transformation of manufacturing companies in the UK and Europe through survey-based analysis. The research identified a growing trend within UK manufacturers as they seek to be competitive in global markets, increasing their use of advanced digital technologies.

Walker and Cooper (2022) adopted a mixed method approach to studying UK manufacturing organisations and determined that sustainable supply chain practices are motivated by compliance with environmental regulations, stakeholder pressure and technological adoption. Their results indicated that using sustainable principles in the supply chain operations has an impact on improving environmental and economic performance outcomes.

Empirical evidence of leadership in the UK manufacturing sector has been provided by Jones et al. (2023) who investigated the effect of transformational leadership on innovation and operational performance. The study identified leadership style as a significant factor in determining the adaptability of an organisation and the success of digital and sustainability projects in manufacturing companies through quantitative surveys and regression analysis.

Likewise, Hughes and Davies (2024) examined the importance of digital leadership in the UK industrial sector and found that digitally competent leaders are more likely to foster change within the organisation, promote innovation and facilitate the adoption of digital technologies in the supply chain. In their research, they highlighted leadership as a critical factor in the context of successful digital transformation in manufacturing.

Recently, Smith and Brown (2025) explored the dimensions of SC resilience and digitalisation in manufacturing in the UK context through structural equation modelling. They found that digital technologies and integrated supply chain systems have a great positive impact on the resilience and sustainability performance, especially in times of disruption.

Overall, these empirical studies suggest that the UK manufacturing sector is getting more digitally transformed, adopting sustainable practices and innovation driven by leadership. Nevertheless, a critical gap in the context remains unexplored, as few studies have explicitly studied digital leadership in terms of digital orientation of the supply chain and performance of sustainable supply chain in an integrated way. Furthermore, there is a lack of empirical evidence on the mediation of supply chain digital orientation in the UK manufacturing context, therefore, the need for the current study.

2.3.5. Summary of literature and identified research gap

The literature review shows these three subjects (digital leadership, digital transformation and supply chain sustainability) have been generally studied, but there are some gaps. Digital orientation is often confused with digital transformation or supply chain integration in prior research, which does not provide sufficient clarity as to supply chain digital orientation as a concept (Zaid et al., 2024; Jing and Fan, 2024). Most of the studies are based on general capability or leadership views, and the emphasis on the role of the dynamic capabilities theory does not take into account the mediating role of supply chain (Teece, 2023; Dubey et al., 2021). Methodologically, the majority of the literature reviews are of a cross sectional survey design, and PLS-SEM, which restricts causal inference (Wei et al., 2025). In strategic context, in relation to digital and sustainable transitions, it is notable that there is little research which is specific to UK manufacturing firms (Smith and Brown, 2025). Hence, the need for the study.

3. METHODOLOGICAL SEQUENCES

3.1. Research Design

The cross-sectional survey research design is used in this research as an approach to examine the relationship between digital leadership, supply chain digital orientation, and sustainable supply chain performance of UK manufacturing companies. A cross-sectional design would be suitable because they allow for data to be collected at one time to examine the relationships between variables (Saunders et al., 2020). Statistical methods like structural equation modelling (SEM) are recommended as tools to test the hypothesised relationships (Hair et al., 2021) with quantitative approaches. It is appropriate for research settings such as organisational research that study the causal associations or mediating effects (Creswell and Creswell, 2022).

3.2. Population of the Study

This study's population consists of senior and supply chain managers, operations managers and digital transformation officers from registered manufacturing companies in the United Kingdom. The choice of UK manufacturing companies is based on their growing uptake of digital technologies and introducing supply chain measures with sustainability at their core (Make UK, 2023). The sample is limited to managerial level respondents as they are knowledgeable about the strategic aspects of digital leadership practices and supply chain operations (Kumar et al., 2021). The study population is thus representative of understanding the digital leadership's impact on digital orientation of supply chain and sustainable performance outcomes in manufacturing environments.

3.3. Sample and Sampling Technique

The sample size selected was 300 respondents out of the population. The sample size is sufficient to support structural equation modelling (SEM) that typically requires 200-300 observations to get stable estimates (Hair et al., 2021). It is a purposive and stratified random sampling. To ensure that only respondents with experience in managing and connecting digital supply chains are included in the sample, a purposive sampling strategy was used, and stratification was used to ensure representation across the various subsectors of manufacturing industries including automotive, food processing and electronics (Etikan et al., 2021). Stratified sampling helps to reduce sampling bias and increase representativeness (Taherdoost, 2022). These methods help increase the validity of the results, as they improve the data quality and ensure that respondents have the appropriate knowledge of practices related to digital leadership and the supply chain.

3.4. Research Instrument

Data was obtained by a structured questionnaire which was formulated according to the validated scales of previous studies. The instrument consists of four sections: Demographic information, digital leadership, supply chain digital orientation and sustainable supply chain performance. Responses were measured with a 5-point Likert scale of "strongly disagree" to "strongly agree". Structured questionnaires are extensively made use of in quantitative study as a result of their capability to be standardised, analyzed statistically and to be compared (Sekaran and Bougie, 2020). The measurement items were modified from previously published research to maintain construct relevance and clarity (Benitez et al., 2022; Zaid et al., 2024). The questionnaire was distributed electronically and self-completed, to ensure the accessibility and efficiency of the responses from the UK manufacturing professionals.

3.5. Validity of Instrument

Content validity was achieved by expert review and adaptation of items based on literature. The questionnaire was reviewed by three academic experts in supply chain management and digital transformation to ensure clarity, relevance and alignment of the questionnaire to the research objectives. The responses were used to revise ambiguous questions and enhance the construct coverage (Taherdoost, 2022). The construct validity was additionally

evaluated with confirmatory factor analysis (CFA) in AMOS, to assess the factor loading, convergent validity and discriminant validity (Hair et al., 2021). Factors having a factor loading <0.50 were discussed for deletion. Average variance extracted (AVE) was used to test the convergent validity and the Fornell-Larcker criterion was employed to test the discriminant validity. This process is very intense and ensures that the instrument measures digital leadership, supply chain digital orientation and sustainable supply chain performance well.

3.6. Reliability of Instrument

Cronbach's alpha coefficient was used to check the reliability of the instrument. The internal consistency for the reliability of the instrument was determined by Cronbach alpha, which is generally considered acceptable at 0.70 or higher (Taber, 2021). To ensure reliability of the study, the study questionnaire was pre-tested with a pilot sample of 30 respondents from manufacturing companies in the UK. Data was analysed through reliability test on SPSS. The buildings with alpha values of >0.70 were selected for further analysis. The high reliability refers to the consistency of the items that measure the concepts of digital leadership, digital orientation of the supply chain, and sustainable performance of the supply chain (Hair et al., 2021).

3.7. Data Analysis

Data analysis was done using SPSS and AMOS software. SPSS software was utilized for preliminary data analysis, which encompassed descriptive data analysis, normal distribution tests and reliability measurements. AMOS was used for structural equation modelling (SEM) to test the hypothesised relationships and mediating effects. SEM can be used to investigate the relationship between latent variables in complex situations (Hair et al., 2021). The goodness of fit model was assessed by the indices of CFI, TLI, RMSEA and Chi-square statistics. This is a combined analytical approach which will enable to test both direct and indirect relationships between variables (Byrne 2020).

3.8. Ethical Considerations

Ethical approval was done before data collection was made. The respondents were informed about the purpose of the study and they were made voluntary participants in the study. All participants gave informed consent. All the information was kept confidential and anonymised and limited to academic research. Personal data were not gathered. The study complied with standard research ethics guidelines for social science research (British Educational Research Association, 2021).

4. EMPIRICAL FINDINGS AND DISCUSSION

According to the results of Table 1, the measurement items for digital leadership (DL), supply chain digital orientation (SCDO), and sustainable supply chain performance (SSCP) loaded well on their respective constructs and the values ranged from 0.78 to 0.87. This means that all indicators are good representatives for the set of latent variables. The VIF values ranged between 1.8 and 2.3 which is below the value of 3.0, indicating that there is no multicollinearity concerns. AVE values (0.66-0.69) are higher than the recommended value of 0.50, which reflects good convergent validity. The internal consistency and reliability of the measurement model are good as indicated by the composite reliability values ranged from 0.90 to 0.92 and Cronbach's Alpha values ranged from 0.87 to 0.89 (Hair et al., 2021).

All the HTMT scores in Table 2 are below the proposed limit of 0.85, indicating good discriminant validity. The Digital leadership construct and sustainable supply chain performance construct, for instance, have an HTMT of 0.71, which suggests that the constructs are related but conceptually distinct. Likewise, the value of the digital leadership and supply chain digital orientation construct (0.62) also demonstrates that the constructs measure different theoretical dimensions. This ensures the measurement model is without any construct overlap problems (Henseler et al., 2015; Hair et al., 2021).

The results of the structural equation model are shown in the Table 3, which indicates that the model is adequate to the data. The Chi-square/df value of 2.18 indicates a good model fit. The CFI (0.95) and TLI (0.94) values are higher than the recommended level of 0.90, indicating good comparative fit. The RMSEA value of 0.058, and the SRMR value of 0.047, also suggest a good fit between the model and the data. In general, these findings validate the model that was hypothesized for testing structural relations (Byrne, 2020).

4.1. Hypotheses Interpretation

4.1.1. H_{01}: DL→SSCP

The hypothesis testing analysis are presented in table 4. The path coefficient ($\beta = 0.41$, $t = 8.20$, $P < 0.001$) indicates that digital leadership has a significant positive effect on sustainable supply chain performance. The R^2 value is 0.56 indicating that 56% of the variance in SSCP is accounted for by the model.

4.1.2. H_{02}: DL→SCDO

Digital leadership significantly influences digital supply chain ($\beta = 0.67$, $t = 11.50$, $P < 0.001$), therefore, the companies that have a high digital leadership are more digitally oriented.

4.1.3. H_{03}: SCDO→SSCP

The result shows that supply chain digital orientation has a significant positive effect on sustainable supply chain performance ($\beta = 0.53$, $t = 9.10$, $P < 0.001$), which means that it plays an important role in sustainable supply chain performance.

4.1.4. H_{04}: Mediation effect

The indirect effect of digital leadership on SSCP via SCDO is significant ($\beta = 0.36$, $t = 7.85$, $P < 0.001$), which supports the partial mediation. This means, digital leadership has a direct and indirect contribution to sustainability via the digital orientation.

Figure 1 shows the relationships between digital leadership (DL), supply chain digital orientation (SCDO), and sustainable supply chain performance (SSCP) in manufacturing companies in the UK. As indicated in the model, the effect of DL on SCDO and SSCP are significant and positive, and the effect of SCDO on SSCP is

Table 1: Construct validity and reliability

Construct	Item loading range	VIF range	P-value	AVE	Composite reliability	Cronbach's alpha
DL	0.78-0.86	1.9-2.2	<0.001	0.67	0.91	0.88
SCDO	0.79-0.85	1.8-2.1	<0.001	0.66	0.90	0.87
SSCP	0.80-0.87	1.9-2.3	<0.001	0.69	0.92	0.89

Sources: Authors compilation

Table 2: HTMT discriminant validity

Variables	DL	SCDO	SSCP
DL			
SCDO	0.62		
SSCP	0.71	0.66	

Sources: Authors compilation

Table 3: Model fit indices

Index	Value	Threshold	Decision
χ^2/df	2.18	<3.00	Good fit
CFI	0.95	>0.90	Good fit
TLI	0.94	>0.90	Good fit
RMSEA	0.058	<0.08	Good fit
SRMR	0.047	<0.08	Good fit

Sources: Authors compilation

also positive. The findings showed that the effects were direct and indirect, and mediated by the activity of SCDO. The model fits well (good fit indices were obtained) and accounts for significant variance of the endogenous variables (R^2 = 0.45 for SCDO and R^2 = 0.56 for SSCP). In general, the diagram substantiates the hypothesized relationships, and backs the proposed conceptual framework.

4.2. Discussion

The results of digital leadership positively influencing sustainable supply chain performance are in line with those of the theory of Dynamic Capabilities (Teece, 2023) and the Upper Echelons Theory (Hambrick, 2021), which suggest that leader's capabilities influence the performance of the organisation. Empirically, this finding is ratified by Benitez et al. (2022), who established that digital leadership capability has a significant positive effect on innovation and performance of Spanish companies. Likewise, Li et al. (2026) found that digital leadership creates sustainable supply chain practices by digital transformation. Oubrahim et al. (2023) and Zaid et al. (2024) have shown that digital transformation has positive impacts on sustainability but the attention was less on the explicit leadership aspect. The current discovery builds on these studies by identifying digital leadership as a unique antecedent. This study goes beyond the work of Solberg et al. (2023) which proposed a need for further empirical research with respect to how leadership is enacted, in this case with direct quantitative confirmation from the UK manufacturing context, complementing a contextual gap addressed by Smith and Brown (2025).

The finding that digital leadership has a strong positive influence on supply chain digital orientation is consistent with the Upper Echelons Theory (Hambrick, 2021) which holds that executive attributes are associated with organisational strategic decisions. This finding is consistent with that of Benitez et al. (2022) who reported that digital leadership capability seriously improves digital innovation and technology based decision making in an empirical study. Likewise, digital leadership has a positive impact on the development of digital capability, as described by Mihardjo et al. (2022), who believe that digital leadership in the form of innovativeness and technological adaptation has a positive effect on the process of developing digital capability. This discovery is an extension of González-Varona et al. (2024) who showed that leadership support and strategic vision are essential for building digital transformation skills. While Li et al. (2026) concentrated on the integration of a green supply chain, the current study treats supply chain digital orientation as an independent mediator. Additionally, although Solberg et al. (2023) advocated testing the role of leadership in developing digital capabilities, this study offers empirical quantitative evidence from UK manufacturing organisations to address a previously under-researched gap in context.

It is found that the level of digital orientation in the supply chain has a significant impact on the performance of the supply chain in terms of sustainable supply chains, which can be explained based on dynamic capabilities theory, which means that companies can use digital resources to perceive opportunities, seize innovations, and sustainably transform their operations (Teece, 2023). In practice, this finding aligns with Oubrahim et al. (2023) whose study revealed that digital transformation positively impacts sustainable supply chain performance, particularly in terms of integration and information sharing. Likewise, Jing and Fan (2024) found that digital transformation has positive effects on the performance of the supply chain, such as digital integration and supply chain visibility. This is an extension of the work conducted by Qureshi et al. (2023) which proved that the use of technology improves the economic, environmental, and social aspects of performance dimensions. The present study takes a different approach to isolating the strategic commitment construct of supply chain digital orientation, which differs from Zaid et al. (2024) who studied information exchange and responsiveness. Moreover, although digitalisation has been found to enhance supply chain efficiency by Wei et al. (2025), this study offers specific evidence for UK manufacturing companies, filling a gap in the literature identified by Smith and Brown (2025).

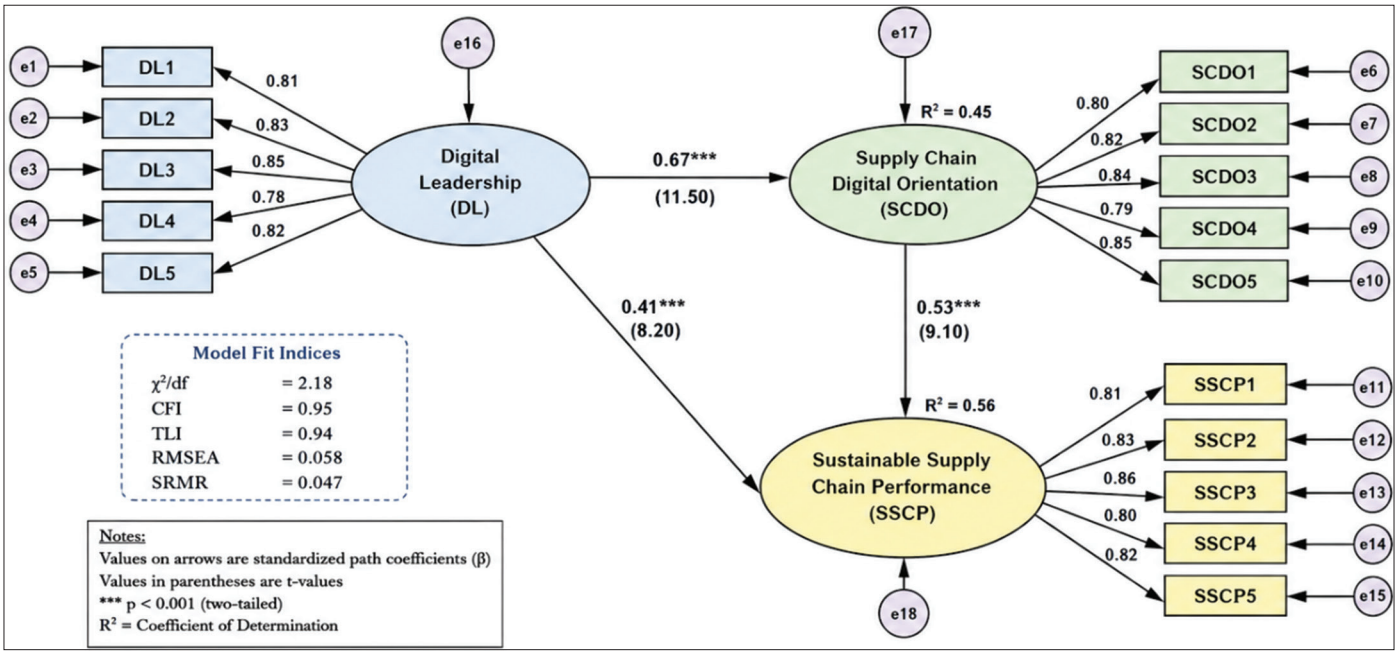
The results of this study offer robust support for dynamic capabilities theory, which suggests that digital leadership—shaped by digital orientation capabilities—contributes to sustainable supply chain performance via an intermediate process (digital orientation) within the supply chain (Teece, 2023; Dubey et al., 2021). The finding is in line with the empirical result by Zaid et al. (2024) who showed that digital transformation has indirect positive impacts on sustainability by increasing information sharing and responsiveness. Likewise, Oubrahim et al. (2023) identified supply

Table 4: Hypotheses testing

Path	β	SE	t-value	P-value	R^2	F	Q^2	Decision
DL→SSCP	0.41	0.05	8.20	<0.001	0.56	132.4	0.38	Reject H_{01}
DL→SCDO	0.67	0.04	11.50	<0.001	0.45	118.6	0.33	Reject H_{02}
SCDO→SSCP	0.53	0.06	9.10	<0.001	0.56	132.4	0.38	Reject H_{03}
DL→SCDO→SSCP	0.36	0.05	7.85	<0.001	—	—	—	Reject H_{04}

Sources: Authors compilation

Figure 1: SEM path diagram showing direct and indirect relationships



chain integration as a mediator between the relationship between digital transformation and performance. This result corroborates the findings of Wei et al. (2025), who concluded that "Digital capabilities are an intermediary link between digitalisation initiatives and the performance of the supply chain". While supply chain integration is included as a mediator in the supply chain integration effect on innovation, it is separated as an independent construct in the present study, similar to many other studies on the topic, such as those conducted by Jing and Fan (2024). Moreover, although Li et al. (2026) considered digital transformation as a mediator, this study offers fresh empirical evidence from UK manufacturing companies, establishing the link between digital leadership, digital orientation, and sustainability outcomes.

5. CONCLUSION AND POLICY IMPLICATIONS

This study investigated how digital leadership affects sustainable supply chain performance in manufacturing companies in the UK, while controlling for supply chain digital orientation as a mediator. The results show that the four tested null hypotheses are all rejected, meaning that digital leadership significantly improves the performance of sustainable supply chains and significantly improves sustainable supply chain performance indirectly via digital orientation. Based on dynamic capabilities theory, the findings support the empirical evidence that digitally competent leaders create strategic digital commitment within supply chains, thereby leading to economic, environmental and social performance. The study makes a valuable contribution to the context of manufacturing in the UK, identifying an important research gap.

Theoretically, this study is an extension of dynamic capabilities theory, as it empirically shows the mediating role of supply chain digital orientation in the chain between digital leadership and sustainable supply chain performance. As well, it supports the Upper Echelons Theory by suggesting that the characteristics of the leader influence digital orientation and sustainability outcomes. In real terms, it is imperative for manufacturing businesses to invest in the development of digital leadership skills such as vision, change management and awareness of technology. Digital transformation has to be the priority of the leaders to construct digital orientation of the supply chain. Policymakers need to prioritise the development of leadership programmes that emphasize digital and sustainability skills. Adoption of digital technology in supply chains can have positive effects that are strengthened by providing incentives.

The following recommendations are suggested based on the results. In the first place, UK manufacturing companies should invest in targeted training and development initiatives, mentorship, and executive education on digital vision, change management, and technology adoption that focus on digital leadership development. Secondly, organisations should invest in digitalising their supply

chains through the adoption of artificial intelligence, internet of things, big data analytics and digital platforms that facilitate real-time information sharing and data-driven decision making. Thirdly, firms should understand that digital orientation of the supply chain is a strategic mediator and invest in it to achieve maximum sustainability results. Fourth, future studies should also use longitudinal designs to help determine causality and examine other factors that can moderate the relationships such as firm size and industry subsector. Fifth, the comparative studies with other national settings would improve the generalisability of the results beyond manufacturing in the UK.

The current study explores the pertinent role of AI and Sustainable Supply chain performance in UK industry. Although the present study focusses on the UK. Future studies can focus on other developed countries like USA or EU bloc or even explore the theme for developing blocs such as Sub-Saharan African (SSA) to either refuse or collaborates our study findings. Additional future study can explore other constructs that are not captured in the current study which our present study does not claim to capture all as it within a scope and serves as shortcoming.

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