

Assessing the Mediating Effect of Digital Transformation between Digital Leadership, Learning and Sustainable Performance among the Textile SMEs of Punjab

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Abstract

This research aims to address sustainable performance in a highly turbulent, rapidly changing, and intensively competitive environment that has become a crucial challenge for survival. Digitally equipped workplaces have become a necessity of the present era due to economic and environmental perspectives. Digital transformation has gained importance in the current turbulent environment as a market-driven approach requires the transformation of existing business practices to be successful. The firms focus on devising digital transformation strategies for attaining sustainable performance, which is possible with digital leadership and digital learning. This research effort contributes to the body of knowledge in explaining the phenomenon of sustainable performance by expressing the role of a digitally equipped leadership approach and the crucial importance of digital learning. Digital leadership and learning contribute to digital transformation which further leads to ensure sustainable performance. The research is also novel in explaining and empirically examining the mediation role of digital transformation between exogenous and endogenous constructs. Pakistani textile SME sector is facing crucial barriers in the adoption of digital transformation including lack of government interest, lack of financial, physical and human resources, insufficient infrastructure and training, lack of research culture, and unsupportive behavior of leadership in the adoption and implementation of AI tools. There is a dire need to conduct this study to highlight crucial issues and challenges faced by the textile sector, in the implementation of digital tools for manufacturing purposes, and hurdles in initiating digital transformation drive. This study pinpoints the crucial role of digital leadership and learning to predict digital transformation that further leads to sustainable performance, as prior literature has identified the lacking situation of the textile sector of Pakistan. The researchers argued that digital leadership should be the prime concern in the successful adoption and implementation of digital technological tools for manufacturing purposes and digital learning is necessary in continuous usage and upgradation of technological tools for sustainable performance. The rule of thumb technique was applied for data collection and analyzed on Smart-PLS. It has been reported that digital leadership and learning significantly influence in digital transformation that further leads to sustainable performance. Furthermore, the in the presence of digital transformation the relationship between digital leadership and sustainable performance, and between digital learning and sustainable performance becomes significant. The study's findings suggested ensuring a digitally-oriented leadership approach for ensuring digital transformation and sustainable performance. Further, the relationship between digital learning and sustainable performance becomes significant in the presence of digital transformation.

Keywords: *Digital Transformation, Digital Leadership, Digital Learning, Sustainable Performance, Textile SME Sector.*

INTRODUCTION AND BACKGROUND

Organizational success in the modern industrialized world requires essential optimal practices that cater the financial, social, and environmental goals that is referred as sustainable performance. Rapid technological advancements have altered the base of competition and required advanced capabilities to meet emerging technological implementation necessities through effective expertise and a managerial approach (Whysall et al., 2019). The ability of firms to quickly respond to a constantly changing environment through digitalization indicates achievements that revive economic strength. Technology is considered an asset of the firm that encourages the improvement of employees' skills and abilities to perform task effectively and efficiently. Researchers have encouraged leaders in rapidly changing and challenging work environments to enhance their leadership qualities to manage people and serve organizations with greater dedication (Dandalt, 2021). The sustainable performance consists of environmental, economic, and social performance that brings benefits to the natural environment and society while ensuing economic benefits and contributes in competitive advantage. It depicts the firm's positive impact on the environment through the implementation of sustainable initiatives such as reduction in air pollution, energy utilization, and adherence to environmental standards (Du et al., 2022).

Researchers have explained the concept of sustainability as an economic development to fulfil the need of present generation without compromising the next generation. It is related to products to perform business and transaction for creating an innovative and corporate culture. A suitable culture contributes in developing and enabling the higher performance working environment through maximum utilization of resources and it leads to required outcomes related to environment, economy, and society (Hassan et al., 2018). Researchers have expressed sustainable performance in three categories including environmental, economic, and social sustainability. A suitable sustainable development strategy is required to be devised for the integration of social cohesion, economic growth and environmental protection. The new management paradigm addressed the concept of sustainable management while emphasizing the integration of environment, society and economic perspectives through an effective chain of processes that includes procurement, production, storage, packaging, consumption, transportation and disposal of end-life products through effective coordination to technology management (Moratis et al., 2018).

Sustainable performance is influenced by benchmarking, continuous process improvement, quality assurance, service design and information and analysis, and management leadership. The study incorporated organizational excellence as a mediating variables and introduced human resources management as a moderating variable. The study reported that effective implementation is required for continuous process improvement, benchmarking, quality assurance, service design and information to positively predict sustainability (Akanmu et al., 2021). Another research effort has been made to determine the sustainable supply chain performance influenced by Industrial Revolution 4.0 dynamic capabilities that predict digital business transformation, and organizational ambidexterity. The study examined the mediating role of digital business transformation and organizational ambidexterity between IR 4.0 dynamic capabilities and sustainable supply chain performance. Digital business transformation mediated the relationship between IR 4.0 and sustainable performance (Belhadi et al., 2022). The dimensions of sustainable performance is explained and influenced by entrepreneurial competencies through innovation. The entrepreneurial competencies including opportunity, relationship, conceptual, organizing, strategic and commitment competencies that

ensure sustainable performance. The findings revealed that entrepreneurial competencies promote innovation and sustainable performance among manufacturing SMEs and mediate the relationship between entrepreneurial competencies and sustainable performance (Mokbel Al Koliby et al., 2024).

Previously, sustainable leadership predicted sustainable performance through the mediating role of social innovation. The framework also introduced the moderation role of managerial discretion between sustainable leadership and social innovation. The study revealed that sustainable innovation partially mediates the relationship between sustainable leadership and sustainable performance. The study was conducted on the employees of China and Pakistan, that reported sustainable leadership and sustainable innovation foster sustainable performance (Iqbal & Piwowar-Sulej, 2022). The researcher have explained the role of digital capabilities, digital insights, and digital strategy to predict sustainable performance through the mediating role of AI. The study revealed that digital capabilities, digital insights, and digital strategy predict sustainable performance through an effective implementation of artificial intelligence (Munir et al., 2023).

This research effort has been made to determine the relationship between digital leadership, digital learning through intervening variable of digital transformation to predict sustainable performance among textile SMEs in Punjab.

LITERATURE REVIEW

Digital Leadership and Sustainable Performance

Leaders has the ability to accept the change enhance by someone and acquire to give the direction, motivation and encouragement to the employees of the organizations to adapt the change that will help to achieve the goals of the firms. Leaders enabled the employees to accomplish the objectives of the organization, the organizations easily achieve their objectives and goals if the leader is properly accomplished and carry the functions of the firms. Effective leader has the ability to enhance the behavior of the individuals, his group members and team is the leaders required for every firm (Wulandari et al., 2021). Digital leadership playing a very crucial role in today's digital technological era, digital leadership use different advance and updated technologies, applications, tools, software's and enabled the employees to use these technologies in the process and business. Digital leadership enhance the performance of the employees effectively in the firm by introducing latest applications and tools which help to increase the productivity, daily task, digital technologies also help to reduce the cost, help to save time and enhance the overall productivity in the organization (Turyadi et al., 2023). By using latest technological tools and applications leaders can analyze, collect information and data of the workers performance, knows the market trend and customer needs it will be help to reshape business strategies and structure and take more effective decision according to the need of market. Digital leaders' proficiency to communicate and collaborate to different people and departments by using different technological tools it will help to exchange information within the employees and given feedback of employees (Ali et al., 2023). Digital technologies help to decrease communication barriers, promote effective communication among different organizations and departments, digital leaders enhance motivation within individuals, by using social platforms leaders promote and enhance company productivity, values and goals, it will help to create a productive culture, inspiration within employees and team to fulfill required goals. In every organization digital leadership play vital role to engage the employees, increase performance and implement innovation strategies (Turyandi, 2020). Research effort has been

made to investigate the association among digital leadership and innovative work behavior in the domain of Turkish textile industry. Findings of the study revealed that digital leadership positively and significantly enhance the innovative work behavior of employees in the organization. Leaders with digital skills allow individuals to adopt these skills and promote innovative work behaviors (Erhan et al., 2022). Another research effort has been done to determine the association between social media usage and innovation capabilities to promote sustainable performance of small and medium size enterprises. Study explained the mediating role of innovation capabilities and moderating role of digital leadership between social media usage and sustainable performance. Results of study stated that usage of social media platform positively and significantly enhance innovation capabilities and sustainable performance of SMEs, findings of study revealed that innovation capabilities positively and significantly influence sustainable performance of SMEs. The study show innovation capabilities mediate the association among social media usage and sustainable performance, digital leadership moderate the association between innovation capabilities and sustainable performance (Borah et al., 2022). Digital leadership has the ability to promote the operational level activities of firms effectively by utilization of digital application, tools such as robotic system, machine learning, automation can reduce the faults, effective utilization of resources, reduce cost and time and influence the profitability, productivity and gain the competitive advantage of organizations (Ahlquist, 2020). Digital leadership help to influence cooperation, sharing information among and outside the firm. Leaders who build cooperative environment and utilize digital technologies enhance best practices, innovation and green focused knowledge (Ruel et al., 2021). Through digital platforms and association within different departments and employee's firms can enhance performance and promote green absorptive capability, digital leaders increase sustainable performance by using digital technologies (Ratna et al., 2024). Research has been made to determined the impact of digital leadership on sustainable competitive advantage in the domain of tourism and hospitality businesses, the study explained the mediating role of green absorptive capability and eco-innovation. The results of study indicated that digital leadership influences the sustainable competitive advantage, green absorptive capability and eco-innovation. The study revealed that eco-innovation mediates the association between digital leadership and sustainable competitive advantage, and green absorptive mediates the relationship among digital leadership and sustainable competitive advantage (Hussein et al., 2024). If the organization want to achieve sustainable competitive edge, they must be having skilled digital leadership that ensure to adopt timely effective technological change but also working and thinking proactively. Digital leadership playing essential role to implement digital technologies such as artificial intelligence, virtual reality, data analytics and machine learning in business activities to boost the performance of firm (Kupiek, 2021). Prior literature discussed the influence of digital leadership between school principals on teachers' incorporation during pandemic situation of covid 19. The results of study demonstrated that digital leadership has the positive effect on teachers and principals related to incorporation of digital technology during covid 19 (AlAjmi, 2022). It has been discussed in previous literature digital leadership has direct and indirect impact on organizational performance. The study explored the mediating role of digital culture and employee digital capabilities. Results show that digital culture and employees digital capabilities mediate the association among digital leadership and organizational performance in context of South Korea (Shin et al., 2023). Another research effort has been made to determine the influence of digital leadership on sustainable organizational performance, the study explored the mediating role of IT capabilities and organizational learning among digital leadership and sustainable organizational performance. Results of study stated that digital

leadership significantly and directly influence the sustainable organizational performance. IT capabilities and organizational learning mediates the correlation between digital leadership and sustainable organizational performance (Mollah et al., 2023).

Digital learning and Sustainable Performance

To achieve sustainable development goals, it is essential for every higher education institution to develop and change their learning practices, change curriculum, policies and practices to achieve sustainable goals globally. Learning higher education institutions are playing a crucial role to achieve sustainable future. Various studies have discussed how universities and colleges are trying to achieve sustainability and facing different challenges and issues in policy making and discipline to promote sustainable learning practices in institutions (Elmassah et al., 2020). Adoption of digital technologies globally in education and all sectors has been seen, higher education system established digitally, learning infrastructure change from physical to digital platform, way of teaching has been totally changed, learning activities, learning curriculum has been changed from paper work pattern to online digital format. Involvement of digital technology in recent years has been change the learning attitude of coming generation and present education system faced many challenges to implement and increase informal learning.

Generation shifted from physical system to digital platform called digital learners, net generation, digital native, millennials and z generation (Goh & Okumus, 2020). Research effort has been made to identify how social media platform and digital application tools promote learning activities perception of tourism and hospitality students. Study used mediation and moderation effect, findings of study revealed that mediation role of sharing an economic platform significantly enhance perception, values and behavior of the students through positive sustainable behavior attitude, moderation role of digital learning playing a complex role to promote sustainable attitude of students to enhance sustainable performance (Horng et al., 2022). Digital learning playing a vital role to enhance capabilities and knowledge sharing in next generation, studying from different digital platform and apps enhance productivity and knowledge of students, digital learning technologies positively and significantly influence learning attitude and behavior of students in higher education sector. Research has been made to determine relationship among students learning behavior, digital learning apps and platforms, inspiration of students, knowledge development. Results of study revealed educational learning digital applications and platforms has the positive influence on learning behavior of students and positively associated students' motivation and knowledge development (Noor et al., 2022). Digital learning is considered one of the most important factors in quality of education, digital education has ability to develop long term quality of education and help to support in different ways like providing flexibility, reduce the cost save time, high efficiency, choices to interact and access users and full rich of instructions, these are the positive benefits of digital learning as compared to physical learning. By using various digital platforms, digital application and tools, digitals technologies help teachers and instructors to enhance and achieve educational goals (Lasfeto, 2020). Prior literature examined the relationship between technological applications, online learning intentions, flexible timings and digital learning behaviors in the context of Chinese students. The study explained the moderating role of goal setting behavior and social pressure. Results of study shows that technological applications, learning intentions and flexible timings positively influence digital learning behavior, and goal setting behavior moderate the association among technological applications and digital learning behavior.

Study indicated that social pressure positively influence flexible timings and digital learning behavior (Zhang, 2021). Previous literature examined the relationship among digital competencies, personal innovativeness and behavior toward digital learning in context China. Study explored the moderating role of level of digitalization among student's trait and learning behavior at higher education institution. Findings of study indicated that digital competencies, personal innovativeness positively influence the digital learning behavior of students and level of digitalization significantly moderate the relationship among personality traits and digital learning behavior (Pan et al., 2024).

Digital transformation and Sustainable Performance

To gain competitive advantage every organization is required to adopt and implement digital technologies in the business, to enhance the productivity and performance organizations must be assure digital practices and strategies to gain the financial benefits. Previous literature findings revealed organization implement the digital technologies and e - learning such as introducing smart factories and this is required for every organization to promote their productivity and performance by using these digital technologies. Study stated that when organizations ensure e - learning in business significantly enhance the performance of the organization (Rahman et al., 2022). Industrial revolution increased the productivity of firm and boost the organization productivity in both service and economy sector, digital transformation enhances performance in logistic and dissimilar economies (Yathiraju, 2022). Concept of digital transformation is advance and modern term that has been discussed and studied in various point of view. Term digital transformation is defined as use of digital technological applications and tools to enhance the productivity of firm and create opportunities that help to meet target objective of organization (Fatorachian & Kazemi, 2021).

Using of latest digital technologies to increase the performance, develop new process and structure of the organization to enhance productivity is called digital transformation. Continuous interaction of digital technologies within society and business through developing technological business models and strategies which contribute to boost the performance of firms, digital transformation promotes digital capabilities, digital applications which are used to increase the productivity, and promote customer experience (Konopik et al., 2022). Research effort has been made examined the impact of digital transformation on sustainable performance in domain of China, the study explored mediating role of supply chain agility integration and moderating role of perceived business force. Results of study stated that supply chain agility mediates the impact on economic and social performance in presence of high perceived business force.

Study found there is no impact on environmental performance (Meng et al., 2023). Another research effort has been made to determined relationship among digital transformation, digital strategy, capability, eco- innovation eco-product, eco-process, eco-management and sustainable performance in the domain of manufacturing companies in China. Results of study indicated that digital capability and digital strategy significantly enhance eco-product, eco-management and eco- process, findings revealed eco- process, eco- management and eco- innovation enhance sustainable performance. Eco- innovation mediates association among digital transformation and sustainable performance (Xu et al., 2023). Research has been done to determine the association between digital transformation, dimension of sustainable performance economic and environmental performance findings of study revealed that digital transformation boost economic performance and create a u-shaped association with environmental performance.

Findings of study stated that impact of digital transformation on economic performance is high in the presence of low market turbulence, if market turbulence high, higher the digital transformation in the presence of environmental performance (Li, 2022). Previous study found digital transformation has the positive impact on sustainable performance. Dimensions of digital transformation such as smart factory, Big data and cyber physical system and internet of things has the great impact to enhance the productivity of firms, study revealed big data has more effect to gain sustainable performance (Alathamneh & Al-Hawary, 2023). Manufacturing industries of China facing many problems and issues to maintain sustainable performance, the study explained how corporate culture, transformational leadership and digital transformation playing role to enhance sustainable performance of manufacturing industries of China. Study discussed the mediating role of innovation capabilities and moderating role of environmental dynamism. Results of study found digital leadership, corporate culture and digital transformation significantly promote the sustainable performance of the industries. Findings revealed there is no impact of innovation capability on corporate culture and sustainability, but mediates the association among transformational leadership and digital transformation. Environmental dynamism moderates the correlation among innovation capabilities and business sustainability performance (Xu et al., 2023).

Digital Leadership and Sustainable Performance

Situation of covid 19 has negatively impact education sector, educational institutions are trying to promote digital transformation and leadership skills to increase the performance. Organizations are trying to implement the digital practices and trying to carry digital leadership and digital transformation. It is essential for every organization and institutions to adopt and promote digital technologies to enhance the productivity and increase competencies. Education sector and universities are trying to change the education method from physical learning to shifted online digital platforms to increase the productivity of students in learning (McCarthy et al., 2024). The term leadership is defined as an art to guide and given the direction to others to achieve a common goal and objective, leaders have the ability to motivate their employees, given the direction, inspire individuals or groups to accomplish and achieve a common goal of firms (Byrnes, 2022). When organizations and businesses shifted from physical to technological form such cloud computing, analytical, big data and internet of things it is called digital transformation (Avidov-Ungar et al., 2022).

Research effort has been done to investigate the relationship between digital transformational leadership, digital transformation and organizational agility. The study explored the mediating role of organizational agility among digital transformational leadership and digital transformation. Results of study demonstrated that digital transformational leadership positively influence digital transformation and organization agility mediates the association among digital transformational leadership and digital transformation (Ly, 2024). Another research effort has been made to determine the association between digital leadership, digital leadership capabilities, digital leadership experience, digital leadership predictability, digital leadership vision and firms' financial performance. The study explained the mediating role of digital transformation and moderating role green organizational culture. Findings of study revealed that digital leadership capabilities, experience, predictabilities and vision has not directly influence the organization financial performance but indirectly enhance financial organization performance through digital transformation. Findings indicated that digital transformation and green organizational culture positively enhance the organization financial performance.

Green organizational culture digital leadership predictability, digital leadership vision has the positive impact on digital transformation. Results of study also demonstrated that digital transformation mediates the association among digital leadership vision, experience, capabilities and organizational financial performance (Senadjki et al., 2023). Previous study found abilities that is required for digital leadership to promote and enhance business practices to transform business into digital one. To gain competitive advantage, achieving and accomplishment of digital transformation firms are depended and required on competent digital leaders. Results of study indicated that different technological skills such as adoptability of digital tools, innovativeness, dignity and honesty and integrity, strong communication skills and collaboration and long - term transformative vision positively influence productive and successful digital transformation in the sector of manufacturing industries. Digital leadership playing an essential role to reshape the business strategies, business models, products, design and create innovation in business development to enhance the performance of organization by creating values (Malik, Raziq, Sarwar, & Gohar, 2024). A systematic literature has been done in previous study, digital leadership increase the performance of firms and study emphasis what kind of skills are required for digital leadership to promote the productivity and these skills are to reshape the business strategies, reshape business model and introduce digital technologies in organization for accomplishment of successful digital transformation. Results of study revealed that to promote digital transformation in organization various characteristics such as innovativeness, openness, democratic and transformational, skills such as technological, social, cognitive and digital abilities are required in digital leadership (Malik, Raziq, Sarwar, & Tariq, 2024).

Digital Learning and Digital Transformation

Research has been done to investigate the integration of information and communication technology, e-information quality, e-service quality the perception online learning of universities students related to brand image and students' satisfaction. Findings of study revealed that e-information quality, information communication technology and e-service quality positively influence the perception of e-learning related to brand image and word of mouth which enhance the satisfaction of universities students of public and private in the domain of Pakistan (Shehzadi et al., 2021). Prior study investigated the relationship between environmental performance, big data analytics in the domain of Vietnam, study explored the mediating role of environmental process as a mediator and environmental strategy and digital learning orientation as a moderator variable. Results of study show that big data analytics positively influence the environmental performance and digital learning orientation positively moderate association among big data analytics and environmental process. Findings revealed that environmental strategy moderates the relationship among environmental process and environmental performance (Abu Afifa & Nguyen, 2022). Previous literature determined the association among digital learning and innovative work behavior. Study explored how these learning practices enhance teaching procedure in higher education institutions and increase productivity. Findings of study indicated that digital learning orientation influences innovative work behavior. The study showed that organizations enhance digital learning practices to achieve the desire innovative work behavior and learning performance (Aboobaker & KA, 2020). Involvement of digital technologies required the organizations to reshape business strategies and process to increase the productivity. Study explored the relationship between management innovation and digital transformation that able the firms to adopt advanced technologies and change the business process model. Results of study indicated that environment has the great influence of management innovation which further leads to digital

maturity as compared to lower environment. Study shows that management innovation mediates the relationship among digital technology and digital maturity (Chen et al., 2024). Study found digital transformation significantly influence the frugal innovation and small and medium size enterprise, results of study indicated that frugal innovation has the significant influence on small and medium size enterprise resilience. Study found the significant influence of digital transformation, frugal innovation and small and medium size enterprise resilience (Al Omoush et al., 2023). Research has been made to investigate relationship between digital learning, innovative work behavior. Study explained the mediating role of readiness for change and moderating role of organizational learning culture. Results of study indicated that digital learning has the significant inverse influence on innovative work behavior via readiness for change. Mediating role of readiness for change has the indirect influence between organizational learning and innovative work behavior. Organizational learning culture moderate the association (Aboobaker & KA, 2021).

Research Framework

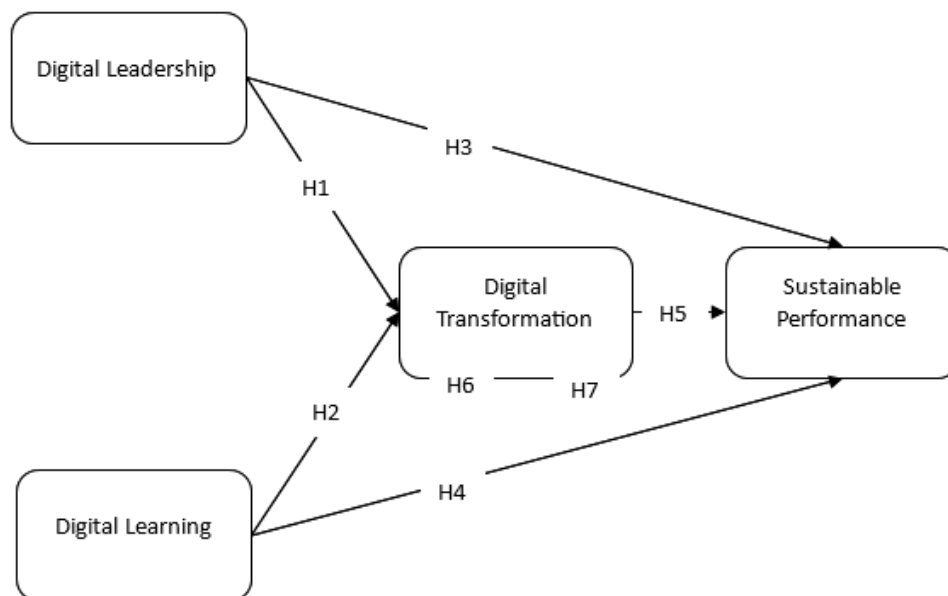


Figure 1: Research Framework

Hypothesized statements

- H1: Digital leadership influences digital transformation among textile SMEs of Punjab
- H2: Digital learning influences digital transformation among textile SMEs of Punjab
- H3: Digital leadership influenced sustainable performance among textile SMEs of Punjab
- H4: Digital learning influences sustainable performance among textile SMEs of Punjab
- H5: Digital transformation influences sustainable performance among textile SMEs of Punjab
- H6: Digital transformation mediates the relationship between digital leadership and sustainable performance among textile SMEs of Punjab
- H7: Digital transformation mediates the relationship between digital learning and sustainable performance among textile SMEs of Punjab

RESEARCH METHODOLOGY

This research paper is quantitative in nature as data was collected from firms through a questionnaire. The questionnaire was adopted from previous studies for each variable. The data was collected from textile SMEs from the leading cities in the business of textile including Faisalabad and Lahore. The SME sector is the backbone for exports that contributes to economic strength.

In Pakistan, SMEs contribute by 35% in total addition, 80% to non-agricultural employment, 40% to exports and GDP (Sajjad et al., 2022). According to statistics, there are approximately two million SMEs operating in Pakistan, including 400,000 manufacturing units, 600,000 relates to service sector and one million are related to commercial sector units. Around 41% SMES are in rural, and 59% are in urban areas (Nazir & Khan, 2024).

The textile sector of Pakistan is the largest sector that provides employment and contributes to economic strength. Pakistani SME sector is lacking in learning, innovating, perception of politics, empowerment, knowledge-sharing, management, retailing, and wholesaling processes (Sajjad et al., 2022). The sample size determination is done through rule of thumb by (Sekaran, 2009). That states sample size must be greater than 30 and smaller than 500. So, in Faisalabad and Lahore there are 300 SME firms. Therefore, the sample size must be 10 times more than number of variables. In this study there are four variables and the sample size should be 40 or more.

Measurement instruments for each variable was adopted from previous literature. The 17 items of sustainable performance was adopted from (Mousa & Othman, 2020). The 5 items measurement scale of digital transformation was taken from (Ukko et al., 2019). The four items measurement scale of digital learning was taken from (Abu Afifa & Nguyen, 2022). The six items of measurement scale of digital leadership was taken from (Oktaysoy et al., 2023).

DATA ANALYSIS

This section consists of two sections. Section one is measurement model assessment that determined the reliability and validity of the constructs. The acceptability is determined on the base of 0.70 or higher value of Cronbach alpha, and composite reliability. There convergent validity must be higher than 0.50 for the acceptable average variance extracted. Table 1 presents the value for reliability and convergent validity.

Table 1

Constructs	Cronbach Alpha	CR	AVE
Digital learning	0.808	0.811	0.635
Digital leadership	0.906	0.909	0.682
Digital transformation	0.947	0.947	0.824
Sustainable performance	0.928	0.930	0.501

The above table demonstrated the acceptable values for Cronbach alpha, composite reliability and average variance extracted.

Discriminant validity

This section determined the discriminant validity based on (Fornell & Larcker, 1981). Table 2 presents the discriminant validity.

Table 2

Construct	Digital learning	Digital leadership	Digital transformation	Sustainable performance
Digital learning	0.797			
Digital leadership	0.548	0.826		
Digital transformation	0.645	0.542	0.908	
Sustainable performance	0.541	0.600	0.509	0.705

The above table 2 demonstrated the satisfied discriminant validity. The square root of AVE that is shown in diagonal values found to be higher than other correlational values.

Measurement Model Assessment

The figure 2 below presents the model drawn and extracted from Smart PLS.

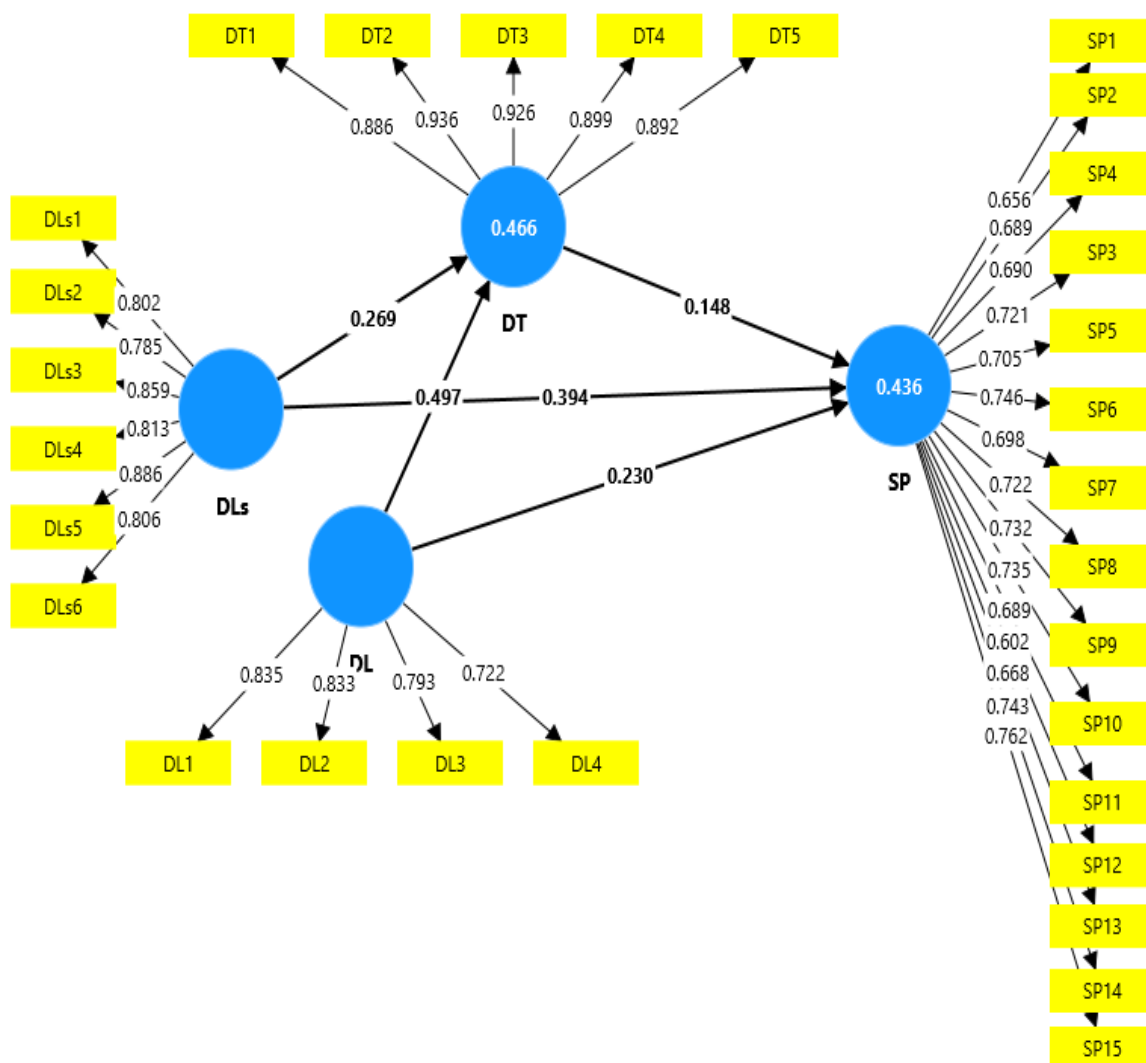


Figure 2: Measurement Model Assessment

Structural Equation Model

This section determined the significance of relationship between variables and verifies the hypothesized statements based on β -value, t-value and p-value executed through bootstrapping method of Smart-PLS.

The table 3 presents the results of hypothesis testing

Hypothesis H1: First hypothesis investigated the relationship between digital leadership and digital transformation. The findings revealed that β is 0.269, t-value is 3.332 and p-value is 0.001; hence the hypothesis is accepted and significant.

Hypothesis H2: Second hypothesis investigated the relationship between digital learning and digital transformation. The result shown in table 3 depicted that relationship is significant based on the β -value reported as 0.497, t-value as 7.347, and p-value as 0.000. Hence, the relationship is significant.

Hypothesis H3: Third hypothesis investigated the relationship between digital leadership and sustainable performance. The results in table 3 shows that β value is 0.394, t-value is 5.276 and p-value is reported as 0.000. Hence, the relationship is statistically significant.

Hypothesis H4: Fourth hypothesis investigated the relationship between digital learning and sustainable performance. The results in table 3 depicted statistically significant relationship between variables. The β value is 0.230, t-value is 2.606 and p-value is reported as 0.009. Hence, the relationship is significant.

Hypothesis H5: Fifth hypothesis determined the relationship between digital transformation and sustainable performance. The results in table 3 depicted β value as 0.148, t-value as 1.924 and p-value 0.054. The relationship is insignificant and rejected on statistical grounds.

Table 3: Direct Relationships

Hypotheses	β	t-value	p-value	Remarks
DLs→DT	0.269	3.332	0.001	Accepted
DL→DT	0.497	7.347	0.000	Accepted
DLs→SP	0.394	5.276	0.000	Accepted
DL→SP	0.230	2.606	0.001	Accepted
DT→SP	0.148	1.924	0.054	Rejected

Mediation analysis

This section presents the mediation analysis based on same criteria.

Hypothesis H6: Sixth hypothesis determined the mediation effect of digital transformation between digital leadership and sustainable performance. The values for β is 0.073, t-value is 1.770 and p-value is reported as 0.077. Hence, the hypothesis is rejected.

Hypothesis H7: Seventh hypothesis determined the mediation role of digital transformation between digital learning and sustainable performance. The relationship is determined based on β value that is 0.040, t-value is determined as 1.599 and p-value is reported as 0.110. Hence, the hypothesis H7 is rejected.

Table 4

Hypotheses	β	t-value	p-value	Remarks
DLs→DT→SP	0.040	1.770	0.077	Rejected
DL→DT→SP	0.073	1.599	0.110	Rejected

SEM model

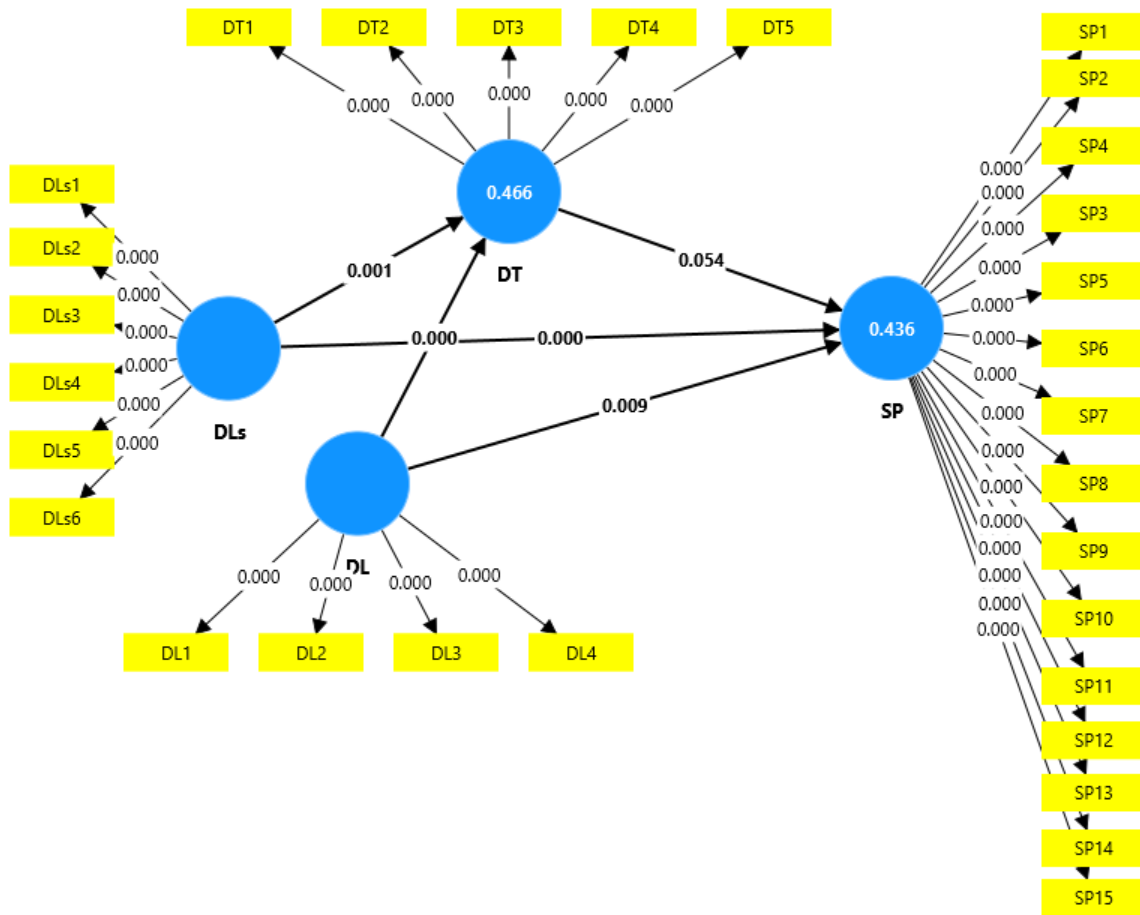


Figure 3: SEM

CONCLUSION

This research paper determined the phenomena of sustainable performance. The current global environment has been changed rapidly that has negatively impact the environment in different perspectives. The higher competition has emerged due to globalization and digitalized world and it has become tough to compete and sustain the competitive advantage. This research paper focused on the assessing the role of digital leadership and digital learning in explaining sustainable performance. The researcher coined the concept of digital transformation as a mediating role to explain the relationship between digital leadership and sustainable performance. The study also determined the mediating role of digital transformation between digital learning and sustainable performance. The study was conducted on the textile SME firms in Faisalabad and Lahore. The 40 firms were considered randomly for data collection and data was analyzed on Smart PLS. The findings reported that digital leadership and digital learning significantly predict digital transformation and sustainable performance. But digital transformation has insignificant relationship with sustainable performance. Surprisingly, insignificant mediation effect is found by digital transformation between digital leadership, learning and sustainable performance. The study suggests to develop the policies for ensuring digital leadership approach, digital learning and effective transformation for sustainable performance.

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