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IMPACT OF STRATEGIC LEADERSHIP ON ORGANIZATIONAL PERFORMANCE: MEDIATING ROLE OF DIGITAL MATURITY AND DIGITAL TRANSFORMATION WITH ORGANIZATIONAL AMBIDEXTERITY AS A MODERATOR

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ABSTRACT

Achieving success in today's competitive environment requires an organization to establish a strong leadership team and implement a well-defined strategic process. The challenge faced by strategic leaders is to make their organization digitalized and technological advanced. In particular, the current research's purpose is to comprehend the understanding in which digital transformation affects organizational performance, a competitive advantage for organizations. Despite significant research on individual factors such as Strategic Leadership, Organizational Digital Maturity, Digital Transformation, and Organizational Ambidexterity, there is a notable gap in understanding their integrated effects on Organizational Performance. Existing studies often address these variables in isolation or in limited combinations, lacking a comprehensive analysis of how Strategic Leadership simultaneously influences Digital Maturity and Transformation and how these elements collectively impact organizational performance. This research has used quantitative methodology. A total of 850 survey questionnaires were distributed among the Board of Directors (BODs) and the top management team (TMT) of the organizations. Of these, 835 questionnaires were returned.

Keywords: *Digital Transformation, Digital Maturity, Organizational Ambidexterity, Strategic Leadership, Organizational Performance*

INTRODUCTION

Strategic leaders such as CEOs, BOD and top managers' impact on organizations have long been a subject of immense interest for management theorists. However, despite comprehensive research in this area, there is a lack of consensus regarding strategic leadership conceptualizations leading to a various definitions in literature (Samimi et al., 2022). According to Singh et al., (2023), in its most fundamental definition of Strategic leaders, states that the style of leadership is present at utmost echelon of organization. This holds BOD's and members of TMT, including c-suite, as well as managers responsible for strategic business units (SBUs). Whereas, numerous research works on the subject of Strategic leadership has been conducted. However, it is noteworthy that Strategic leaders as a management model, a field of scholarship received substantial recognition primarily following the outline of Upper Echelon Theory (UET) in past literature. This theory emphasizes that organizational results tied to the managerial traits of top executives. Indeed, the personality, background and past experiences, and values of top executives, illustrated by multiple studies,

have significantly affect strategic decision-making, consequently, the effects of an organization. (Shao, 2019). Moreover, Strategic leadership havevital contribution in driving innovation and digital transformation (DT) within organizations. Recent studies have also emphasized the significance of innovation as a central theme in Strategic leadership research over the past decade(Singh et al., 2023).

Emphasizing this, researchers have called for investigating Strategic leadership concerning digitalization, which is reshaping business models and governance methods(Singh et al., 2023). In recent times, a great interest generated in technology transformation for enhancing organizational performance. Significant changes in organizational processes enabled by digital transformation, that result in agility seems factor for competitiveness and innovation (Chouaibi et al., 2022). In this regard, aim of research to investigate the aforementioned connection. In particular, the current research's purpose is to comprehend the understanding in which digital transformation affects organizational performance, a competitive advantage for organizations.

The author's(Singh et al., 2023) topic provides valuable reference for guiding future research endeavors for enhancing our comprehension of strategic leadership. These pathways are based on recent disruptive events observed during the review period, such as conflicts and the impact of COVID-19). To further thwart matters, the concept of Organizational ambidexterity; the capacity to at once exploit present capabilities and explore new opportunities, emerges as a significant factor that can affect the Strategic Leadership-digital transformation dynamics (Singh et al., 2023).

Literature review

A management theory named Upper Echelons Theory (UET) by Donald C. Hambrick and Phyllis A. Mason was presented in 1984. It claims that the top

education, values, and cognitive abilities) in SMEs in Pakistan influence the adoption and implementation of digital transformation initiatives, which in turn impact organizational performance (Saiyed et al., 2023). The theory identifies that the beliefs, experiences, and

Advancement of growth in digital tools, particularly in the context of industrial revolutions like IR4.0, has brought forth new avenues for research. The exploration of digital transformation has become vital due to its transformative impact on business operations and value creation.

level management team's managerial backgroun d can predict organizational outcome (Hambrick& Mason, 1984). This study grounded theoretical foundation of Upper Echelons theory (UET), which posits that the background traits, values and knowledge of key members within the influential managerial positions of top tier organizations' s dominant coalition play a substantial role in shaping organizational performance (Jaleha&Machuki, 2018).

These cognitive frameworks, in turn, affect their perceptions, interpretations, and decision-making processes (Hambrick, 2007). In other words, the theory suggests that who you are (your personal characteristics) and where you come from (your experiences and background) significantly influence how you approach and make decisions in an organizational context. Furthermore, strategic management theorists have often linked strategic decisions and organizational success to economic and competitive factors, such as industry-specific conditions (as highlighted by Porter in 1980). However, the Upper Echelons Theory (UET), states that the complexity and ambiguity of strategic situations make perfectly rational decision-making unrealistic. While organizations aim to be rational, carefully analyzing their internal resources and capabilities and external market trends, the reality is that decision-making often involves navigating through unclear and intricate information.In the context of the present research, UET be used to understand how the characteristics and attributes of strategic leaders (such as their prior experiences,

cognitive frameworks of strategic leaders shape their strategic choices and decision-making processes, and ability to lead digital transformation initiatives, thereby influencing the organization's direction and performance outcomes (Popli et al., 2022).

Researchers claim that senior managers hold the necessary freedom and strategic options to significantly impact organizational performance (Crossland & Hambrick, 2011). Achieving success in today's competitive environment requires an organization to establish a strong leadership team and implement a well-defined strategic process Freedman (2015). Furthermore, Ireland and Hitt (1999) noted that strategic leaders establish meaning and purpose for the organization through a compelling vision and mission. Similarly, according to Gill (2011), strategic leaders must be adept at developing the organization's vision, mission, strategies, and culture. Additionally, they need to monitor progress and environmental changes to ensure that the strategies remain focused, relevant, and valid. Supporting this argument, Kirimi & Minja (2010) assert that strategic leadership is undeniably crucial for all organizations. The leader possesses the ability to motivate organizational members to contribute effectively towards achieving predefined goals and objectives (Obiwuru et al., 2011). Similarly, Beatty and Hughes (2005) highlight that strategic leadership plays a key role in helping organizations reach their goals. On the other hand, Hitt et al., (2010) argue that, it has been observed that the failures in many organizations are often attributed to a lack of strategic leadership. An empirical review revealed that strategic leadership directs organizations towards establishing a clear strategic intent and mission (Kitonga et al., 2016). Hence based on the above discussion we hypothesize that:

H1: Strategic Leadership has an impact on Organizational Performance.

Various challenges are encountered by modern organizations including the need for highly customized products and services, efficient business processes, and high-performing supply chains. As a result, digitization has become an essential capability for organizations to address these challenges (Blatz et al., 2018). In a study conducted by (Eremina Y et al., 2019), it was discovered that digital maturity positively influences sales performance. The primary drivers of digitalization are customer demands and the need for quick adaptation to new requirements utilizing organizational assets (Dombrowski& Richter, 2018). According to Ghobakhloo and Ching (2019), digital technologies enhance performance by boosting sales, improving effectiveness in customer and supplier relationships, and strengthening the organization's capabilities. Moreover, digitally mature organizations experience greater profitability and revenue growth compared to those with lower levels of digital maturity (Jafvert & Gustafsson, 2019). Digital maturity is gained not just through the digitization of production processes, but also by transforming organizational culture and outlook to embrace a digital perspective. This shift is crucial as it drives and enhances organizational performance stated by Álvarez Marcos et al., (2019). Moreover, the digital maturity level of SMEs is anticipated to be a significant competency for improving organizational performance, allowing them to respond swiftly to opportunities and threats (Çallı&Çallı. 2021). Hence based on the above discussion we hypothesize that:

H2: Digital Maturity has an impact on Organizational Performance.

According to Matt et al., (2015), Wischnevsky & Damanpour (2006), the term "transformation" refers to a massive shift in the organization's strategy, structure and power dynamics. Digital transformation can be viewed as a continuous process of adapting to a drastically altered digital environment in order to satisfy partners, customers, and employees. At a high level, DT refers to the significant societal and industrial changes driven by digital technologies as stated by Agarwal et al., (2010), Majchrzak et al., (2016). However, at the organizational level, it's been suggested that companies should innovate with new technologies by creating strategies that fully embrace digital transformation to boost their operational performance (Hess et al., 2016). According to Haffke et al., (2016), digital transformation involves the digitization of sales and communication channels, enabling new methods for customer interaction and engagement. In many organizations, digital transformation is a common trend where advanced digital technologies radically change their business models (Zhang & Chen, 2023). It also includes the digitization of a company's offerings both products and services which can either replace or enhance physical offerings.

Hence based on the above discussion we hypothesize that:

H3: Digital Transformation has an impact on Organizational Performance.

Achieving digital maturity goes beyond merely adopting new technologies; it requires a comprehensive integration of digital tools into an organization's processes, culture, and overall strategy (Kane et al., 2017). Furthermore, Leaders need to foster digital mindsets and cultivate agility within their organizations to effectively navigate disruptions caused by digital technologies (Vial, 2019). Kane et al., (2017) stated that this integration is driven by strategic leaders who set a clear vision for DT and align organizational goals with digital strategies. Furthermore, Westerman (2019) emphasizes that digital transformation is more about leadership than technology. Effective strategic leaders navigate the complexities of digital initiatives by promoting a culture of innovation and continuous learning. However, Ahammad et al., (2020) says that Leaders can modify business scenarios and ensure that organizations are prepared to overturn unsuccessful strategic choices. For a digital strategy to be successful, Correani et al., (2020) says it must be complemented by other factors, including alignment with the business model and the evolution of organizational strategies (Lipsmeier et al., 2020). Gurumurthy & Schatsky (2019) highlight the importance of leadership support in achieving higher levels of digital maturity. Their work represents that organizations with advanced digital maturity often have leaders who actively invest in digital initiatives and understand the continuous nature of digital transformation. Hence based on the above discussion we hypothesize that:

H4: Strategic Leadership has an impact on Digital Maturity.

In the modern digital age (Teichert, 2019) companies are navigating a fast-changing environment marked by increasing instability, complexity, and uncertainty. Rapid shifts in competition, consumer demand, technology, and regulatory challenges are driving these changes. As a result, businesses are being pushed to align their strategies with the latest technological advancements to stay competitive (Teichert, 2019). Moreover, Bresciani et al., (2021b) explains that DT involves deliberate alterations grounded in cutting-edge technologies. Leadership plays a pivotal role in facilitating and sustaining a company's DT process (Larjovuori et al., 2018). Moreover, strategic support from the management team, along with the incorporation of the DT process into the firm's strategy, is essential for successful DT (Kokot et al., 2021). Furthermore, a successful digital transformation process necessitates the support of top-level management (Zeike et al., 2019; Tanniru, 2018; Larjovuori et al., 2018). Hence based on the above discussion we hypothesize that:

H5: Strategic Leadership has an impact on Digital Transformation.

Digital maturity is closely related to digital transformation (DT) and has been defined in various ways. According to Gökalp and Martinez, (2021) it refers to the state where an entity's digital technology has revolutionized its activities, skill engagement, and business frameworks. Whereas, Hägg and Sandhu (2017) describe it as the situation where an organization has successfully addressed the challenges of the digital business landscape through transformation. Schumacher et al., (2016) view maturity as a state of being perfect or complete, signifying the advanced phase of a system's development. In the realm of digital transformation, terms like "digitization" and "digitalization" frequently emerge in literature. Despite their distinct definitions, these concepts are often used interchangeably, as research has shown by Bloomberg, (2018). Teichert (2019) uses the term DT maturity to emphasize that the connection between digital transformation and digital maturity includes both technological and managerial elements. According to Berghaus and Back (2016), a maturity model provides guidance on how companies can plan and implement digital transformation. These maturity frameworks mainly help in assessing the current status and suggest a likely, expected, or typical development path towards the desired target state. However, Digital maturity models enable organizations to evaluate their ability to respond to digital transformation by using predefined milestones. Hence based on the above discussion we hypothesize that:

H6: Digital Maturity has an impact on Digital Transformation.

The risk-averse behavior of SMEs suggests they need to see tangible operational benefits to actively pursue digital maturity. Despite this caution, the literature generally agrees on the practical advantages of achieving high digital maturity (Grooss et al., 2022). Furthermore, Decision-making capabilities, coupled with the effective utilization of data through analytic tools, are argued to lead to significant improvements in performance for companies (Parra X et al., 2019). Also Digital technologies undoubtedly influence the environment, improve product quality, and promote sustainability says Nabavi-Pelesaraei & Damgaard, (2023); Ghasemi-Mobtaker et al., (2022). Additionally, they help in cost reduction (Saeidi et al., 2022) while in view of Moosavi-Nezhad et al., (2022); Hatim et al., (2023) they also enhancing organizational performance and the enterprise life cycle. Additionally, the role of strategic leadership in driving organizational performance has gained substantial attention. Increasingly, this relationship is mediated by digital maturity, a concept that encompasses the extent to which an organization can leverage digital technologies to achieve strategic objectives. According to Zhou et al., (2021), managers need to harness new technologies to creatively redefine employee skills and work experiences, which in turn perpetually boosts the organization's value creation. Digital maturity reflects not just the adoption of digital tools, but the integration and optimization of these tools across the organization's processes and culture (Kane et al., 2017). Hence based on the above discussion we hypothesize that:

H7: Digital Maturity mediates the relationship between Strategic Leadership and Organizational Performance.

Verhoef et al., (2021), stated that DT is a comprehensive concept that modifies organizational structures, culture, and business strategies by integrating people and technology (Abbu et al., 2022; Nadkarni & Prügl, 2021). This transformation impacts both the internal operations of organizations and the external aspects of customer value propositions (Vogelsang et al., 2018), leading to the creation of enhanced value through new products and services says Loonam et al., (2018). The swift changes brought about by digital transformation stated by Sebastian et al., (2020) necessitate that leaders seize these opportunities to stay competitive and effectively manage change. However, navigating these transformations requires leadership that understands the challenges and possesses the necessary skills. Moreover, organizations need to transform their traditional leadership approaches to achieve successful digital transformation (Erhan et al., 2022). Furthermore, for successful digital transformation, firms must adapt their human resources to meet market demands (Ireland & Hitt, 2005; Jones & Pitelis, 2015). This adaptation enables firms to gain a competitive edge and cultivate a dynamic, flexible, and up-to-date work environment as stated by Eisenhardt et al., (2010). Furthermore, Kwon & Park, (2017) says for effective DT in the workplace, it is essential for leaders to motivate their employees by sharing a captivated and empowering vision.

Hence based on the above discussion we hypothesize that:

H8: Digital Transformation mediates the relationship between Strategic Leadership and Organizational Performance.

Ambidexterity is a critical quality of successful strategic leaders, according to recent study (Teece et al., 2018; Beveridge et al., 2021; DeCieri et al., 2020).However, Duncan (1976) was the pioneer in using the term "organizational ambidexterity," but it was March's influential work in 1991 that truly sparked the field's development. In recent years, there's been a growing awareness of the need to tackle societal challenges while still achieving business goals. Although the literature provides various findings, there is a noticeable research gap concerning the role of strategic leadership in creating shared value, which encompasses both business and social outcomes stated by Porter and Kramer, (2019). A review of the literature reveals that contextual ambidexterity is a key leadership trait. Furthermore, Leaders need to foster digital mindsets and cultivate agility within their organizations to effectively navigate disruptions caused by digital technologies (Vial, 2019).Moreover, Contextual ambidexterity refers to a leader's capacity to exploit the firm's

current resources while simultaneously exploring future opportunities and trends. Hence based on the above discussion we hypothesize that:

H9: Organizational Ambidexterity mediates the relationship between Strategic Leadership and Digital Maturity.

Digital transformation offers significant benefits, such as customer-centric collaboration and self-service, mobile applications and devices for quick information delivery, in-depth analytics (Zhang, 2012; Berman & Marshall, 2014) and dashboards for strategic decision-making, and real-time information sharing via cloud computing (e.g., remote access via mobile/internet).According to Lansiti and Lakhani (2014), the advent of digital technologies has revolutionized various industries and posed significant challenges to conventional business models. Whereas, Since the required organizational capabilities change during the transformation process, it is advisable for organizations to conduct a digital maturity assessment says Klötzer and Pflaum, (2017). However, Verhoef et al., (2019) outlined three progressive stages of digital transformation: the conversion of analog information into digital data (digitization), the adoption and integration of digital technologies (digitalization), and the transformation of business models through these digital technologies (digital transformation). Hence based on the above discussion we hypothesize that:

H10: Digital Transformation mediates the relationship between Digital Maturity and Organizational Performance.

The concept of digital transformation in businesses has been extensively explored, focusing on various methods firms use to navigate the evolving economic environment. Jussila et al., (2014), says that Research covers a wide range of topics, including strategies for social media, the development of mobile applications. Furthermore, Kane (2017) suggests that for strategic managers to effectively adapt their organizations to the rapid advancements in the digital world, they need to move beyond focusing solely on digital transformation and instead aim for digital maturity. While achieving digital transformation requires strategic leadership to create and implement a clear vision for the digitalization process (Engesmo&Panteli, 2021), digital maturity goes a step further. It involves not just adopting new digital technologies, but also aligning the company's strategy, workforce, culture, and structure to meet the evolving expectations of customers, employees, and partners. Moreover, leaders must foster an environment where digital innovation is encouraged and digital capabilities are continually developed. This maturity, in turn, leads to improved organizational performance by enabling more efficient operations, better decision-making, and enhanced customer experiences (Kane et al., 2017). Hence, based on the above discussion we hypothesize that:

H11: Digital Maturity and Digital Transformation has a serial mediation between Strategic Leadership and Organizational Performance.

Research Methodology

Sample and data collection procedure

For the current study, the unit of analysis will be Organization, The BOD's and the members of the top management team (TMT), including the c-suite executives in Pakistan's SME sector that are found in the triangle of gold (Sialkot, Gujranwala, and Gujrat) will be the respondent of the questionnaire. The author has traveled to SMEs that are conveniently located, and the rest SMEs have been researched by acquaintances, coworkers, and institutional connections. A total of 850 questionnaires were distributed among the Board of Directors (BODs) and the top management team (TMT) of the organizations. Of these, 835 questionnaires were returned. However, 16 of these contained missing values in both Section A (participants' information) and Section B (major variables). Consequently, these incomplete responses were excluded from the final dataset. The final dataset consists of 819 fully completed questionnaires.

Measurements

All 76 items are divided into 5 sections: Ten items make up Strategic Leadership (SLT); thirty-two items make up Digital Maturity (DMT); twelve items make up Digital Transformation (DTT); twelve items make up Organizational Ambidexterity (OAT); and ten items make up Organizational Performance

(OPT). The author uses a five-point Likert scale. The scale, which goes range "strongly disagree" to "strongly agree".

Demographics

In Table 1, it is shown that the sample of study consisted of 62.51% male. 27.22% of respondents fell within the 41-50 age range. 26.37% of respondents reported having 7-10 years of work experience. 41.75% held a graduate degree. These individuals are employed as board members and TMT in SMEs located in the golden triangle of Punjab, Pakistan.

Table 1: Demographic

Demographic Variables	Category	Frequency	Percent (%)
Gender	Male	512	62.51
	Female	307	37.4
	21 - 30	52	6.35
	31 - 40	178	21.73
	41 - 50	223	27.22
	51 - 60	202	24.66
Age	Above 60	164	20.04
	Less than 1 year	106	12.94
	1 – 3	186	22.71
	4 – 6	203	24.78
	7 – 10	216	26.37
Experience	Above 10 years	108	13.20
	Diploma	98	12
	Matric	44	5.4
	Intermediate	129	15.7
	Graduate	342	41.75
Education	**Postgraduate**	206	25.15

Results

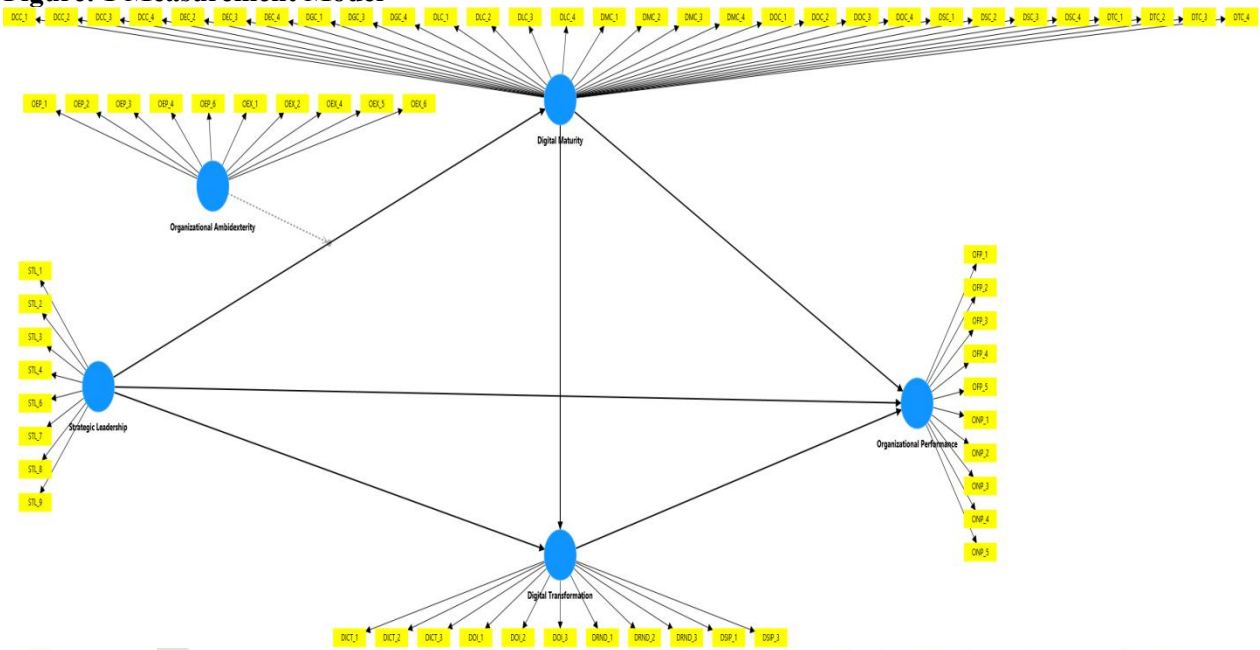
Descriptive Statistics of Study Variables

Table 2 Descriptive Statistics

Variable	Mean	Std. Deviation	Skewness	Kurtosis
Strategic Leadership	0.002			
Digital Maturity	0.002	0.858	-0.797	0.111
Digital Transformation	0.002	0.745	-0.799	0.110
Organizational Ambidexterity	0.002	0.768	-0.799	0.107
Organizational Performance	0.002	0.735	-0.797	0.113

Following Table 2 shows the descriptive statistics (i.e. mean, standard deviation, skewness, and Kurtosis of all study variables.

Figure: 1 Measurement Model



Assessment of Outer Loadings

The exogenous composite constructs of the study are strategic leadership, Digital Maturity, Digital transformation, Organizational Ambidexterity and Organizational Performance that is denoted as STL, DMT, DTT, OAT and OPT respectively. The outer loadings of all the constructs are observed and all items have more than 0.70 outer loading value and all are significant as per threshold. Therefore, the ranges of outer loadings are 0.316-0.781, 0.602-0.728, 0.708-0.783, 0.410-0.802 and 0.441-0.792. respectively. The outer loadings with their significant values are mentioned in Table 3.

Table: 3 Outer Loadings

	Outer loadings
DCC_1 <- Digital Maturity	0.671
DCC_2 <- Digital Maturity	0.629
DCC_3 <- Digital Maturity	0.656
DCC_4 <- Digital Maturity	0.631
DEC_2 <- Digital Maturity	0.627
DEC_3 <- Digital Maturity	0.663
DEC_4 <- Digital Maturity	0.687
DGC_1 <- Digital Maturity	0.665
DGC_3 <- Digital Maturity	0.643
DGC_4 <- Digital Maturity	0.639
DICT_1 <- Digital Transformation	0.773
DICT_2 <- Digital Transformation	0.738
DICT_3 <- Digital Transformation	0.732
DLC_1 <- Digital Maturity	0.670
DLC_2 <- Digital Maturity	0.671
DLC_3 <- Digital Maturity	0.659
DLC_4 <- Digital Maturity	0.717
DMC_1 <- Digital Maturity	0.660
DMC_2 <- Digital Maturity	0.656
DMC_3 <- Digital Maturity	0.733
DMC_4 <- Digital Maturity	0.697
DOC_1 <- Digital Maturity	0.685
DOC_2 <- Digital Maturity	0.675
DOC_3 <- Digital Maturity	0.710
DOC_4 <- Digital Maturity	0.632
DOI_1 <- Digital Transformation	0.729
DOI_2 <- Digital Transformation	0.741
DOI_3 <- Digital Transformation	0.772
DRND_1 <- Digital Transformation	0.781
DRND_2 <- Digital Transformation	0.781
DRND_3 <- Digital Transformation	0.744
DSC_1 <- Digital Maturity	0.577
DSC_2 <- Digital Maturity	0.669
DSC_3 <- Digital Maturity	0.673
DSC_4 <- Digital Maturity	0.683
DSIP_1 <- Digital Transformation	0.750
DSIP_3 <- Digital Transformation	0.711
DTC_1 <- Digital Maturity	0.714
DTC_2 <- Digital Maturity	0.659
DTC_3 <- Digital Maturity	0.647
DTC_4 <- Digital Maturity	0.640
OEP_1 <- Organizational Ambidexterity	0.763
OEP_2 <- Organizational Ambidexterity	0.804
OEP_3 <- Organizational Ambidexterity	0.753
OEP_4 <- Organizational Ambidexterity	0.769
OEP_6 <- Organizational Ambidexterity	0.784
OEX_1 <- Organizational Ambidexterity	0.405
OEX_2 <- Organizational Ambidexterity	0.750
OEX_4 <- Organizational Ambidexterity	0.778
OEX_5 <- Organizational Ambidexterity	0.730
OEX_6 <- Organizational Ambidexterity	0.753
OFP_1 <- Organizational Performance	0.739
OFP_2 <- Organizational Performance	0.794

OFP_3 <- Organizational Performance	0.783
OFP_4 <- Organizational Performance	0.766
OFP_5 <- Organizational Performance	0.754
ONP_1 <- Organizational Performance	0.731
ONP_2 <- Organizational Performance	0.431
ONP_3 <- Organizational Performance	0.710
ONP_4 <- Organizational Performance	0.761
ONP_5 <- Organizational Performance	0.727
STL_1 <- Strategic Leadership	0.673
STL_2 <- Strategic Leadership	0.746
STL_3 <- Strategic Leadership	0.727
STL_4 <- Strategic Leadership	0.772
STL_6 <- Strategic Leadership	0.759
STL_7 <- Strategic Leadership	0.753
STL_8 <- Strategic Leadership	0.689
STL_9 <- Strategic Leadership	0.635

Reliability analysis - Cronbach Alpha: The acceptable threshold for Cronbach alpha is ≥ 0.70 (Nunnally & Bernstein, 2010; Kline, 2016) while Hair et al. (2011) recommended that ≥ 0.60 is also acceptable. Table 4 demonstrated the Cronbach alpha results and all constructs stands within the range.

Table: 5 Fornell-Larcker discriminant validity analysis

~~Constructs~~	~~Digital Maturity~~	~~Digital Transformation~~	~~Organizational Ambidexterity~~	~~Organizational Performance~~	~~Strategic Leadership~~
Digital Maturity	0.665				
Digital Transformation	0.808	0.751			
Organizational Ambidexterity	0.824	0.872	0.737		
Organizational Performance	0.786	0.786	0.808	0.726	
Strategic Leadership	0.846	0.735	0.759	0.729	0.721

Composite reliability: Resultant value of composite reliability above 0.95 represent that individual indicators are measuring the same concept that is not acceptable (Hair et al., 2020). Table 4 demonstrated the composite reliability results and all constructs have above the mark composite reliability scores. It shows all variables have good reliability over time.

Table 6: Heterotrait-Monotrait validity analysis

Constructs	Digital Maturity	Digital Transformation	Organizational Ambidexterity	Organizational Performance
Digital Maturity				
Digital Transformation	0.857			
Organizational Ambidexterity	0.881	0.950		
Organizational Performance	0.843	0.855	0.894	
Strategic Leadership	0.926	0.817	0.851	0.818

Validity analysis: Hair et al. (2017) recommended two major types of validity analysis to test the measurement model (i.e. convergent validity and discriminant validity).
Convergent validity: The acceptance value of AVE is 0.50 and above. Which denote that this construct explained variance is more than 50%. Table 4 demonstrated the AVE scores and all constructs have above the mark AVE scores. It shows all variables have good validity.

Discriminant validity: *Hair et al. (2019) define the discriminant validity as the degree to which a composite distinct empirically from remaining composite variables in structural model. Evaluation of discriminant validity can be derived through three metrics i.e. cross loadings, Fornell-Larcker method (Fornell & Larcker, 1981), and heterotrait-monotrait ratio (HTMT) (Henseler et al., 2015).*

Fornell-Larcker discriminant validity analysis

Table 5 demonstrated the discriminant validity score as per Fornell-Larcker method. The diagonal values are square root of AVE. All diagonal values are greater than its respective correlation scores. It shows all variables have good discriminant validity as per Fornell-Larcker method.

Heterotrait-monotrait discriminant validity analysis

Table 6 demonstrated the HTMT scores and all constructs HTMT scores do not cross the limit i.e. $HTMT_{0.95}$. It shows all variables have good discriminant validity as per HTMT ratio method.

Table 7: Cross loadings validity analysis

	Digital Maturity	Digital transformation	Organizational Ambidexterity	Organizational Performance	Strategic Leadership
DCC_1	0.671	0.528	0.550	0.487	0.549
DCC_1	0.671	0.528	0.550	0.487	0.549
DCC_2	0.630	0.513	0.515	0.456	0.542
DCC_2	0.630	0.513	0.515	0.456	0.542
DCC_3	0.655	0.514	0.519	0.472	0.576
DCC_3	0.655	0.514	0.519	0.472	0.576
DCC_4	0.631	0.568	0.556	0.537	0.540
DCC_4	0.631	0.568	0.556	0.537	0.540
DEC_1	0.602	0.488	0.500	0.437	0.550
DEC_1	0.602	0.488	0.500	0.437	0.550
DEC_2	0.638	0.497	0.522	0.495	0.561
DEC_2	0.638	0.497	0.522	0.495	0.561
DEC_3	0.667	0.543	0.535	0.488	0.601
DEC_3	0.667	0.543	0.535	0.488	0.601
……	…….	……..	…….	…….	…….

Cross loadings discriminant validity analysis

Table: 4: Reliability Analysis

Latent Variables	Cronbach Alpha	CR	AVE	Discriminant Validity
1. Strategic Leadership	0.867	0.871	0.519	Yes
2. Digital Maturity	0.956	0.957	0.443	Yes
3. Digital Transformation	0.922	0.923	0.563	Yes
4. Organizational Ambidexterity	0.903	0.913	0.543	Yes
5. Organizational Performance	0.897	0.907	0.528	Yes

Table 7 demonstrated the cross loadings score
s and all constructs cross loadings are
higher than the respective cross loadings in the row. It shows all variables have good discriminant validity as per cross loadings method.

Structural Model

Table 8: Multicollinearity analysis of inner model

Constructs	Digital Maturity	Digital Transformation	Organizational Ambidexterity	Organizational Performance
Digital Maturity		1.000		1.000
Digital Transformation				1.000
Organizational Ambidexterity	1.000			
Strategic Leadership	1.000	1.000		1.000

After measurement analysis, structural model is analyzed which is as follow.

Step-1 multicollinearity analysis

Multicollinearity is the first step of analysis of structural model. Results revealed that there is no issue collinearity in the data as all values of VIF is less than 3 as per the threshold of Hair et al. (2020). Results are in Table 8.

Step-2 evaluate size and significance of path coefficients

After running the algorithm of PLS-SEM, structural model relationship estimates are obtained that represent the path coefficients that show the hypothesized relationship between study variables. The coefficient values of PLS path model represent the ordinary least square regression beta coefficients (β) (Ringle et al., 2018). The estimated value of standardized regression coefficient (β) depicts the relationship among the independent variable and dependent variable on the condition that estimated p-score is statistically significant for standardized regression coefficient (β) (Anderson, Babin, Black, & Hair, 2014). The standardized value of path coefficients fall between -1 and +1. The resultant value of path coefficient close to +1 represent strong positive relationship while the value of path coefficient close to -1 represent strong negative relationship that are usually significant. When the value of coefficient is near to 0 that show weaker relationship. The value that is very close to 0 is usually insignificant (Henseler et al., 2017). Demonstrated in table 9.

Table 9: Examination of relevance and significance of structural paths

Structural path	B Value	T Value	P values	Decision
Digital Maturity -> Digital Transformation	0.655	14.646	0.000	
Digital Maturity -> Organizational Performance	0.327	6.174	0.000	
Digital Transformation -> Organizational Performance	0.410	9.371	0.000	
Organizational Ambidexterity -> Digital Maturity	0.460	13.851	0.000	
Strategic Leadership -> Digital Maturity	0.555	16.249	0.000	
Strategic Leadership -> Digital Transformation	0.181	3.692	0.000	
Strategic Leadership -> Organizational Performance	0.150	3.358	0.000	
Organizational Ambidexterity x Strategic Leadership -> Digital Maturity	0.109	4.248	0.000	

Step-3 examination of coefficient of determination (R2)

The next and third step in structural model evaluation is to analyze the R2 (coefficient of determination) value of endogenous composite constructs. Value of R2 examine the variance that is explained in each endogenous variable, and it is also called a measure of explanatory power of model (Shmueli & Koppius, 2011; Hair et al., 2019).. The range of R2 is from 0 to 1 and

greater variable. The threshold of effect size (f^2) is 0.02 values showing a higher explanatory power. For a threshold, 0.25, 0.50, and 0.75 could be considered as weak, moderate, and substantial (Henseler et al., 2009, Hair et al., 2011, Hair et al., 2019). Table 10 demonstrate the R2 scores of variables i.e. digital maturity, digital transformation, and organizational performance. All considered substantial.

Table: 10 Examination of coefficient of determination R2

Constructs	R-square	R-square adjusted
Digital Maturity	0.805	0.804
Digital Transformation	0.663	0.662
Organizational Performance	0.689	0.688

for small effect, 0.15 for moderate effect, and 0.35 for large effect (Chin, 1998a; Cohen, 1988). Table 11 demonstrate the f^2 scores of exogenous variables i.e. digital maturity, digital transformation, organizational ambidexterity and strategic leadership. All exogenous variables have large effect size with organizational performance.

Indirect Effects

Table:11 Examination of effect size f^2

Indirect Effect	**Digital Maturity**	**Digital Transformation**	**Organizational Performance**
Digital Maturity	0.361		0.072
Digital Transformation			0.183
Organizational Ambidexterity	0.443		
Strategic Leadership	0.658	0.028	0.020
Organizational Ambidexterity	0.054		

Indirect Effect	P Value	T Value	P values
Strategic Leadership -> Digital Maturity -> Digital Transformation -> Organizational Performance	0.149	7.523	0.000
Digital Maturity -> Digital Transformation -> Organizational Performance	0.269	7.617	0.000
Strategic Leadership -> Digital Maturity -> Digital Transformation	0.364	11.573	0.000
Strategic Leadership -> Digital Transformation -> Organizational Performance	0.074	3.449	0.000
Organizational Ambidexterity x Strategic Leadership -> Digital Maturity	0.072	4.272	0.000
Strategic Leadership -> Digital Maturity -> Organizational Performance	0.182	5.597	0.000

Step-4 examination of effect size f2

The next and fourth step to evaluate the structural model is to measure effect size (f^2). It is used to gauge change in value of R^2 of overall model, the f^2 effect size is used when researcher want to study whether omission of certain variable have significant impact on endogenous variables. Sarstedt, Schwaiger, & Taylor (2017) stated that effect size is calculated as variation in value of R^2 relative to percentage of variance which is remain unexplained in endogenous latent

The Table demonstrate indirect effect the mediation relationships among variables.

Discussion and conclusion

Hypothesis 1 posits that strategic leadership has an impact on organizational performance. This assertion aligns with a vast body of research indicating that leadership is a crucial determinant of an organization's success. Strategic leadership covers not just overseeing daily operations, but also planning long-term agendas, formulating strategies, and inspiring. Recent studies have also reaffirmed the significance of innovation as a

Table: 12 Examination of predictive accuracy Q2

Contracts	**Q^2predict**
Digital Maturity	0.707
Digital Transformation	0.537
Organizational Ambidexterity	0.552
Organizational Performance	0.499

central theme in Strategic leadership research over the past decade (Singh et al., 2023). Hypothesis 2 posits that Digital Maturity significantly impacts on organizational performance. Digital maturity is a benchmark for emerging organizations so this study investigate the impact of Digital Maturity on Organization Performance. Hypothesis 3 posits that Digital Transformation has an immense influence on organizational performance. Singh et al. (2023) describe DT as leveraging technologies like automation, cloud computing, data analytics, AI, and IoT to enhance productivity, customer experiences, innovation, and new business models. Wolfswinkel et al. (2013) explains DT as a process aimed at improving organizational properties through information, computing, communication, and connectivity technologies. Hypothesis 4 posits that Strategic Leadership significantly impacts on Digital Maturity. The success of digital transformation largely depends on the ability of strategic leaders to guide their organizations through the complexities of integrating digital technologies into every aspect of their business. Hypothesis 5 posits that Strategic Leadership significantly impacts on Digital Transformation. Research on the connection between strategic management and digital transformation is still in its early stages. Hypothesis 6 posits that digital maturity significantly impacts on digital transformation. The idea that an organization's level of digital maturity significantly impacts its potential to successfully implement and sustain digital transformation initiatives. Digital maturity refers to an organization's readiness, capabilities, and cultural alignment to adopt and leverage digital technologies effectively (Tanko et al., 2023). In contrast, organizations with low digital maturity may struggle with outdated technologies, a lack of digital skills, and resistance to change (Kalender & Žilka, 2024). Hypothesis 7 posits that digital maturity significantly mediate between strategic leadership and organizational performance suggests that the impact of strategic leadership on an organization's performance is mediated by the organization's level of digital maturity. This discussion explores how strategic leadership influences digital maturity, how digital maturity, in turn, impacts organizational performance, and why digital maturity is a key mediator in this relationship.

Setting a vision, making informed decisions, and guiding an organization towards its long-term objectives are the core aims of strategic leadership. In the context of the digital age, effective strategic leadership includes a clear understanding of the role digital technologies play in maintaining competitiveness and driving innovation. Leaders who are strategic recognize the importance of digital maturity, which refers to an organization's readiness and capability to integrate and leverage digital technologies effectively (Mui et al., 2018). While Digital maturity reflects an organization's ability to utilize digital technologies to enhance its operations, innovate, and compete in the market. As a mediator, digital maturity serves as the channel through which strategic leadership exerts its influence on organizational performance. The relationship between digital maturity and organizational performance is well-documented, with digitally mature organizations often outperforming their less mature counterparts (Vass, 2018).

Hypothesis 8 posits that digital transformation significantly mediate between strategic leadership and organizational performance suggests that the impact of strategic leadership on an organization's performance is channeled through the process of digital transformation. This discussion explores how strategic leadership drives digital transformation, how digital transformation, in turn, influences organizational performance, and why digital transformation serves as a critical mediator in this relationship. As a mediator, digital transformation translates the strategic vision and actions of leadership into tangible improvements in organizational performance. The relationship between digital transformation and organizational performance is well-established. The process of implementing and integrating digital technologies, strategies, and practices throughout an organization to radically alter how it functions, provides value, and engages with stakeholders is referred to as digital transformation. According to Singh et al. (2023), it entails utilizing digital technologies like automation, cloud computing, data analytics, artificial intelligence, and the Internet of Things (IoT) to boost productivity, improve consumer experiences, spur innovation, and develop new business models. Organizational change has numerous facets that affected by digital transformation. According to this report, digital transformation refers to significant adjustments made to an organization's internal processes, organizational structure, business model, and personnel skill sets using newer digital technologies (Liu et al., 2023). In recent times, a

great interest generated in technology transformation even research projects have focused on the digital prospects for enhancing Organizational performance. Significant changes in organizational processes enabled by digital transformation, that result in agility seems factor for competitiveness and innovation (Chouaibi et al., 2022). The hypothesis 9 that posits that the ability of an organization to balance exploitation (refinement of existing capabilities) and exploration (innovation and experimentation) plays a crucial intermediary role in translating the effects of strategic leadership into enhanced organizational performance.

Organizations that exhibit ambidexterity are able to simultaneously pursue exploration and exploitation activities, enabling them to innovate and adapt while maintaining efficiency and stability. This concept recognizes that organizations need to be agile and responsive to external changes and opportunities, while also leveraging and maximizing the value of their existing resources and capabilities (Aslanova & Kulichkina, 2020).The hypothesis that organizational ambidexterity moderates the relationship between strategic leadership and digital maturity underscores the importance of balancing innovation with operational excellence. Hypothesis 10 posits that Digital Transformation significantly mediate between Digital Maturity and Organizational Performance suggests that an organization's digital maturity impacts its performance not directly, but through the intermediary process of digital transformation. This discussion examines how digital maturity influences digital transformation, how digital transformation, in turn, affects organizational performance, and why digital transformation serves as a critical mediator in this relationship. Digital maturity provides the necessary capabilities and readiness, but it is through the process of digital transformation that these capabilities are actualized to improve performance. Therefore, organizations seeking to enhance performance should focus not only on building digital maturity but also on effectively executing digital transformation initiatives. This dual focus ensures that the potential of digital capabilities is fully realized, leading to sustained competitive advantage and superior organizational performance (Vass, 2018).Hypothesis 10 posits that Digital Maturity and Digital Transformation significantly serial mediate in the pathway from Strategic Leadership to Organizational Performance. Specially, it suggests that the influence the Strategic Leadership on Organizational Performance is channeled through two intermediate variables: Digital Maturity and Digital Transformation. The hypothesis that digital maturity and digital transformation serve as serial mediators between strategic leadership and organizational performance provides a compelling explanation for how leadership initiatives translate into tangible business outcomes. Effective Strategic Leadership is proposed to enhance an organization's Digital Maturity, which as a result facilitates DT. This DT then leads to improved Organizational Performance. Therefore, the relationship between Strategic Leadership and Organizational Performance is not direct but rather mediated in sequence by the organization's level of Digital Maturity and its ability to undergo Digital Transformation.This hypothesis underscores the importance of developing digital capabilities and embracing digital change as crucial steps for leaders aiming to improve their organization's overall performance. By advancing through stages of Digital Maturity and leveraging Digital Transformation, organizations can better translate strategic leadership into tangible performance outcomes (Hess et al. 2016).

Implications for Theory and Practice

The research expands the Upper Echelon Theory by incorporating digital maturity and digital transformation as mediating factors in the relationship between strategic leadership and organizational performance. Theory, posits that the backgrounds, experiences, and cognitive processes of top executives influence organizational outcomes. Understanding how strategic leadership impacts performance is essential for leadership scholars and practitioners. This research also explores the serial mediation of digital transformation and digital maturity. It helps in understanding how leadership decisions and actions related to digitalization can influence a firm's performance. The resultant of the research can have significant practical implications for business leaders and executives. Organizations should focus on developing leaders who are not only visionary and strategic but also digitally savvy. Leadership development programs should incorporate training on digital maturity and transformation, emphasizing the importance of these capabilities in achieving organizational success. Leaders need to be equipped to understand and drive digital

transformation initiatives, ensuring that their strategic vision is effectively translated into performance improvements.

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