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Sustainability, Digital Transformation, and Firm Outcomes: The Mediating Role of Digitalization

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Abstract

Recent empirical research shows that sustainability and green practices within organizations have, in turn, become tied up with performance management and digital transformation and are thereby given a status strategically vital concerning the context of management engagement. Thus, this study examines the interrelationship between green organizations and management commitment, and the moderating effect played by digitalization in influencing the relationship between green organizations and organizational performance. A quantitative research approach was taken in the study, and a survey study was conducted with 500 professionals of the services sector and information technology industries in Birmingham and Dhaka, Bangladesh. Structural Equation Modeling was performed with the use of SmartPLS software to examine the hypothesized relationships based on the Resource-Based View and the Technology Acceptance Model. The empirical findings both indicate that the management commitment to environmental practices has a meaningful positive effect on organizational performance and that digitalization plays a vital mediating role in the relationship by enhancing the influence of green CE on organizational performance. Moreover, the findings show that the sustainability-competing organizations with integrated digital tools under the sustainable-oriented leadership conditions achieve higher levels of competitiveness, innovation, and profitability. The research contribution is theoretical by combining theoretical resources in the perspectives of strategic resource management and technology acceptance that can be used to explain the contingent role of managerial commitment to form synergetic performance with digitalization. In conclusion, the results suggest that organizations place environmental responsibility within the context of digital strategies in order to increase operating efficiency, legitimacy, and resilience.

Keywords: *Green Practices, Digitalization, Organizational Performance, Management Commitment*

JEL Codes: *M14, O33, Q56, C38*

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1. INTRODUCTION

Organizational performance remains one of the most interesting and challenging issues in management research and practice. In recent years, there has been a rise in the trend for organizations to adopt green practices and digital technologies, which not only contribute to environmental sustainability but also enhance the overall performance outcomes (Orji, 2019; Shumaila et al., 2020; Margolis & Calderon, 2021; Tarigan et al., 2022; Sulehri et al., 2022; Huseyin, 2023). Organizational performance is by nature a multi-dimensional concept that encompasses both the financial and non-financial dimensions that reflect the efficacy and effectiveness of medium and long-term strategic effectiveness (Venkatraman and Ramanujam, 1986; Teixeira et al., 2012). Many researchers have proposed different definitions of the evaluation of performance, not only the achievement of financial objectives but also that of more general objectives related to innovation, well-being of employees, and the satisfaction of customers and social responsibility (Tsuma, 2013; Truss et al., 2013; Torlak, 2004; Syafarudin, 2021; Saleh & Sapengin, 2023; Sulehri et al., 2024). The objective performance methods are predominately in the form of financial ratios, profitability, return on investment, and market share, and the subjective performance measures are managerial appraisals of measures of strategic competitiveness, competitive strength, and satisfaction of the stakeholders (Mahdani et al., 2012; Richard et

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al., 2009; Fadzil, 2021; Bilal & Tanveer, 2023). More recently, sustainability-related indicators, such as environmental efficiency, corporate social responsibility, and green innovation, have been pointed out by researchers as key elements as part of the performance measurement in the digital and sustainability-based economy (Dangelico, 2015; Kabir & Rashid, 2019; Dubey et al., 2019; Khan & Ullah, 2020; Ngo, 2023; Sulehri et al., 2024). The synergy of green and digital policies raises the competence of organizations for achieving the objective of performance in the new contexts and, at the same time, following a competitive, productive, and sustainable income policy. In an ever increasingly remote economy, it is essential to excel in the key determinant of success, sustainability and competitiveness: organizational performance. It contains the achievement of strategic goals, financial results, employee contentment, customer satisfaction, trust in the organization, operational performance, and the capacity for innovation in the organization (Seibert et al., 2001; Schroeder & Flynn, 2001; Sheng & Mykytyn, 2002; Sivasubramanian & Umaselvi, 2010; Soomro, et al., 2011; Wang & Ahmad, 2018; Nasir, 2019; Khan, 2022; Kumar, 2023; Smollan & Mooney, 2024; Sulehri et al., 2024). Organizational performance acts as a comprehensive reflection on the health and effectiveness of the company, in effect acting as the governing quality that decides both the survival, ability to adapt and expand in short-term performance and long-term performance (Kumar & Gupta, 2023; Girod et al. 2023; Siddique et al., 2025). With the emergence of technological change, enterprises have started to realize the synergy relationship between digitalization and performance. The digital technologies have enabled firms to gain access to real-time data, reduce the burden of operations, take better decisions, optimize the use of resources leading to greater business efficiency and firms agility (Mishra and Mohanty, 2014; Vuvor et al., 2025; Amir et al., 2025). In addition to gaining operational benefits in digitalization, it is a key enabler of value creation programs like development programs to develop novel value propositions, customer interaction programs or environmentally sustainable practices etc. (Dubey et al., 2019; Tarigan et al., 2022; Arshi et al., 2025). Yet, sustainability, digitalization, and the deployment of an innovation approach taking the voice of stakeholders into account cannot be considered to be the drivers of modern organizational performance in isolation from a consideration of the financial performance of companies.

Organizations that are able to integrate the digital strategies and tools into the process of their operations aimed at improving the consumer experience are much more responsive to the market demands in shorter timeframes and are on course for long-term success. According to Cress and Kimmerle (2008), digitalized companies are highly dynamic with a greater employment intensity in respect to the researcher's refinement of basic process tasks within the organizational framework. Numerous implementation studies of previous Quality Management Systems (QMS) implementations highlight top management commitment as having importance in rollout (Dawadi et al., 2021; Ali et al., 2025). Quality management initiative is an important fragment that show the path of how the organizations can transform to end-to-end sustainable business model shift which is enabled through digitalization. Beyond strategy operationalization, the firm needs to have an engaged management team that knows the importance of being aware of the purpose and that is responsible for the strategic performance outcomes. Additionally, the empirical data available in recent times also establishes that there is an upholding correlation between leadership support (in this case, through line manager) and environmental prosperity (in terms of reduction in emissions, increased waste management, and an efficacious impact on resource utilization efficiencies; Csiki et al., 2023; Qaisrani et al., 2025). For instance, Vartanian, Gelashvili-Luik, Mateno, and Ledoux, (forthcoming) suggest that management commitment plays a key role in digitalization and AI, but there is a need to also connect both bases in order to actually enhance KM performance and the whole process in terms of sustainability. Even authors such as Elmenzhi and Vera et al (2024), suggest that leading organizations are applying digital technologies to enhance HR practices and performance.

In the practice through the implementation of new technologies, facilitated by combination of organizations performance analysis and managerial commitment to digitization, which provides the filling of a practical gap in the literature and compelling results of the current research in this regard. There have been only a few previous studies that have considered digitalization as the mediating factor between management commitment and organization-based performance (Khattak et al., 2025; Khalid et al., 2025; Ali et al., 2025; Long et al., 2025; Niaz et al., 2025). Using digitalization as the mediator variable, the present study investigates the influence of management's commitment to green organization practices on the performance of the organization. (Varghese 2012). Prior research has provided useful guidelines for future research in this area, in which the development of organizational sustainability and organizational competitiveness is driven by digital transformation (Lichtenberg, 1995; Kraus et al., 2021; Maik & Frank, 2021; Moore & Rosenbloom, 2016; Ali et al., 2025; Khan et al., 2025).

2. LITERATURE REVIEW

In the age of digital transformation, it is also important for managers to exercise three leadership skills within the context of digital technology: digital technology awareness, digital technology acceleration, and digital technology harmonization (Saleem, 2021) as an imperative to organizational success. The digital technologies have created new possibilities for the firms to gain access to the real-time data, alleviating the burden of operations and making better decisions, improving the use of resources, results in enhanced firms' efficiency and flexibility (Mishra and Mohanty, 2014; Vuvor et al., 2025; Amir et al., 2025). Besides when it comes to operational advantages, it is one of the key facilitators of value creation programs such as development programs to create new value propositions, customer interaction programs or green operations etc. (Dubey et al., 2019; Tarigan et al., 2022; Arshi et al., 2025). Yet, it appears that sustainability and digitalisation or an innovation approach that takes the voice of stakeholders into account can not be evaluated as authentic drivers of modern organisational performance - without regard to a consideration on financial performance of companies. Conceptually speaking, this holistic way not only corresponds to the market

development but also to the need for a critical eye on the development of the technological progress and of a position of corporate sustainability in the context of the business strategy.

Organizations that are able to integrate the digital strategies and tools into the process of their operations aimed at improving the consumer experience are much more responsive to the market demands in shorter timeframes and are on course for long-term success. According to Cress and Kimmerle (2008), digitalized companies are highly dynamic with a greater employment intensity in respect to the researcher's refinement of basic process tasks within the organizational framework. Numerous implementation studies of previous Quality Management Systems (QMS) implementations highlight top management commitment as having importance in rollout (Dawadi et al., 2021; Ali et al., 2025). Quality management initiative is an important fragment that show the path of how the organizations can transform to end-to-end sustainable business model shift which is enabled through digitalization. Beyond strategy operationalization, the firm needs to have an engaged management team that knows the importance of being aware of the purpose and that is responsible for the strategic performance outcomes. Additionally, the empirical data available in recent times also establishes that there is an upholding correlation between leadership support (in this case, through line manager) and environmental prosperity (in terms of reduction in emissions, increased waste management, and an efficacious impact on resource utilization efficiencies; Csiki et al., 2023; Qaisrani et al., 2025). For example, a pivotal element is management commitment in digitalization and artificial intelligence, but there is also the aspect of bridging both foundations through a view so as to truly improve KM performance and sustainability of the entire process. In spite of that, authors such as Elmenzhi and Vera et al (2024) opine that top-performing organizations are using digital technologies to improve human resource (HR) practices and performance. Kilic et al., (2025) stated that there is a need for the investment of longer-term adaptive capacity and resilience. Taken together, these views guide us to see that digitalization based on a vanguard leadership perspective not only addresses performance improvement, but also a sustainable business performance standard from a competitive commerce at scale and across time in today's next normal business world that is turbulent and agile. In practice, organizational performance analysis and management commitment to digitization is combined with the implementation of new technologies, thus bridging a practical gap in the literature and making the current research interesting in this respect. Bottomline, this theory sub-focus of the organizational coordination methods, interdependence of resources, at the level of the larger organization, and processes related to organizational goals and alignment (Scott & Davis, 2007). Because the varying perspectives are internal and external, organizational theory helps to explain the blend of- we believe as well as up. Structure is efficient as well as complex in terms of responding to competitors in the course of adapting appropriately throughout.

Organizational theories have undergone tremendous growth since the early part of the twentieth century. The use of a goal-specific, formalized, and structured division of labor was adopted at the beginning of the rational systems approach. This division tended to be connected with the increase in the specialization of labor, undertaking, and the development of economic activity (Weber, 1947). Subsequently, behavioral, sociological, and institutional dimensions of the organizational life were integrated into the perspective. In particular, institutional theory offers much insight about the genesis and spread of the organizational practice. It postulates that organizations often follow models of more established organizations (industrialized countries, particularly) even though models may be applied in processes that are unlike the original (DiMaggio and Powell, 1983). Furthermore, the theory stresses the importance of ensuring that you offer your employees the right skills, motivation, and opportunities so that they can perform a better job (Boxall and Purcell, 2016). Sustainability, innovation, and organizational outcomes have been receiving an enormous amount of hype in recent coursework, and everybody's trying to work out how all this is connected. Getting back to the question of how-to difficulty question: Management incumbent concern for green innovation taking place in the organisation, and adoption of sound HR practices that can provide guidance to the green innovation really taking place in the organisation, is what the green innovation literature predicaments (Chen et al., 2006; Singh et al., 2020). Big data analytics has come with developmental hand in hand a whole new approach of coupling environmental care in business management such that both accomplishing social and economic sustainability goals will go hand in hand. These findings support what is currently under investigation; the role of big data contributions of enhanced competition for firms on an international basis as well as eco-innovation (George et al., 2014).

Digitalization is expected to be a supporting background to the recent wave of organizational digital maturity, causing a realignment in the management arena, pushing for digitalization around various strategic dimensions. This practice must not just be intelligent and skilled; it must also envision the new form of digital artifact-production in terms of resources that should be at least as disruptive as or more than the disruption. Moreover, managerial technology commitment entails modifications in the tech change change process (Bharadwaj et al, 2013). Digital transformation is not a question related to technological expertise, but also to having a vision and collaboration between the technological side and the daily working operation (Verhoef et al., 2021). As firms undergo the dynamic fluidity of change and evolution over long term effecting on how technology can be related to organizational missions and ensure that innovation is still at play to the ongoing performances can all be influenced by the managers. This area of transformation requires the financial services fintech companies to think in terms of a client-centric operational model. These platforms are working on digital transacting it is super-convenient, and can be a huge differentiator for companies in this super-fast-moving market. But while the new tech is making neo-banks more efficient and provides better customer experiences, it is also creating another array of operational challenges for them to test. All these challenges call for the planning creation of resilient operations that are driven by the customer, and that create a compromise between the tensions between the re-creation and the consistent look and feel. Consequently, researchers are promoting hybrid decision-making models for evaluation of service innovation that synthesize exploration of and

selection of new collaborative partnerships, in order to continue the base business growth (Chesbrough, 2010).
However, we have known, somewhere around since 20 years that the interdependency of leadership and management-pairs with diverging influences on performance at players-at work plays a role in performance. For example, leadership theory focuses on the function of watch over per se and talks concerning the thrust of a correct chief, and such ideas involve the capability to direct, inspire shared worths, and synchronise organisational objectives with worker engagement (Northhouse, 2019). In reality, the management of organizations, groups, and institutions has little without the impact of leadership as their behavioral and cultural context to maintain success collectively. Leadership theories are also applied in order to pick the criteria based on which organizations select people for the leadership role. For instance, in times of crisis, organizations usually require leaders with greater levels of decision-making skills, whilst deliberative environments will need leaders possessing greater levels of relationship-building skills so that the organization does well (Yukl, 2013). Change-oriented approaches, such as the model of organizational change put forward by Kotter, are named organizational transformation and find a crucial role for the leadership role when disruptive periods bring renewal and or renewal brings disruption. Authentic change agents are better able to do both: communicate the urgency felt during implementation of change, and grow both the level of confidence and the level of motivation on the part of followers (Kotter, 1996; Bass and Riggio, 2006).
Human performance research has demonstrated an intrinsic relationship between effective leadership and effective performance. The dedicated leaders would pass across the expectations, with the vision in mind and employees would make the atmosphere of trust. This then, results in an enhanced level of employee engagement in the leadership process, which in turn leads to a cycle of mutuality of commitment and which, is in turn, translated into enhanced levels of organizational performance (Avolio et al, 2009). That being said, leadership theories are the guiding map to help the leader bring inspiration to the employees and establish a culture of innovation, accountability, and sustainability. Furthermore, inclusion of sociological viewpoints like Social Exchange Theory makes the discussion on leadership and commitment even stronger. The concept has evolved to propose that in depression the equivalence problem, which makes of the relation between the manager and the worker, being able to be same, can only live fully if it is aided with some type of compensatory reciprocity. Research demonstrates that when managers demonstrate attitude commitment, behavior through supportive practices and recognition, employees will be likely to demonstrate support of information and self-categorization in the direction of organizational goals (Cropanzano and Mitchell, 2005). Also, Commitment Theory is the examination of psychological and structural aspects of organizational loyalty, including job satisfaction, perceptions of support, and value similarity between employee and institution (Meyer & Allen, 1991). These frameworks focus on managerial practices in the establishment of commitment levels, whether at the individual or collective levels. By establishing alignment between the values in the organization and the expectations of employees, leaders can bolster the short-term wins within the organization as well as the effectiveness and competitiveness of their organizations in the long-term view.
Technology innovation has become one of the most important strategic variables that affects reducing competition and achieving excellent organizational results. Innovation and its positive link with firm performance have been supported by a wide range of research, which has additionally been able to show the influence of innovative activities on other performance indicators, i.e., innovation has to facilitate compulsive firm adjustments to market information and sustain superiorities (Schumpeter, 1934; Damanpour, 1991). However, the literature is not totally conclusive, as some empirical studies indicate that product innovation may have negative/mixed effects on organizational performance. Very often these variations are influenced by such considerations as the implementation costs, the risks taken for a new product, and the interest prize of the competition in the industry (Sorescu et al., 2003). Likewise, while information technology has been recognized as an enabler to transform, it seems that there is evidence that implies that information technology competence is not always thought to translate into better performance of the organization and denotes the contingent nature of the technology adoption (Aral and Weill, 2007). Despite these conflicting results, the mediating effect of innovation has received increasing interest as an explanatory mechanism between technology orientation and technological capability on business performance. The process of transferring technology-related resources into tangible outcomes is an innovation process, and therefore raises the value of digital tools and strategic orientations (Gatignon and Xuereb, 1997; Zhou et al, 2005). The literature on SMEs, though, supports the view that managerial proactive intent to innovate has increased the effectiveness of significant technological breakthroughs in raising the capacity of firms to innovate in terms of products and adapting to market changes (Calantone et al., 2002). By adopting innovation as processes at the organizational level, the managers will find themselves in the position of linking those technological investments back to strategic goals, hence coming out with superior performance in volatile environments.
Frequently, theoretical frameworks have been evoked in order to understand the conceptual basis that underpinned innovation or digitalization. One such normative empirical guide is the Technology Acceptance Model, which assumes the perceptions of relative ease of use and perceived usefulness influence the use of organizational computer systems (Davis, 1989). This model provides a rationale for why staff and managers are willing to take new technologies that not only make sense, but which are demonstrably increasing organizational efficiency. In analysing the development of organisations to manage capability management, it appears to trace its root in the Resource Based View, which focuses on the fact that organisation-specific and valuable capabilities (e.g., digital competencies) make up a crucial set of resources that confer competitive advantage on the business to the extent that they can be integrated at the organisational level (Barney, 1991). For organizations where environmental care is considered a fundamental aspect of the business, digitalization is an enabler of business and a focus for sustainability. By way of a digital technology implementation, resource management, process design, and eco-innovation are built into integrated systems that further

ensure that corporate environmental responsibility and improved business performance mutually strengthen one another (Hart & Dowell, 2011). The existing studies, underscore on the managerial commitment significant in channelling the sustainability effect and performance organisation outcomes Csiki et al, 2023, Gelashvili-Luik et al, 2025, Kilinc et al., 2025, and digitalization progress significant in being efficient, flexible and innovative Dolley, 2019, Mishra, Mohanty, 2014, Verhoef, van Veenendaal, Jamies, 2021 the relation between these dimensions are scattered in the literature. Many studies have used the dimensions of green practices, digital transformation, and leadership commitment in isolation as antecedents of performance (Shumaila et al., 2020; Orji, 2019; Tarigan et al., 2022), with little attention given to digitalization as a mediator through which green practice conduction and management commitment can lead to good organizational performance. This gap identifies the need to analyze managerial commitment to green-related organizations coupled with digitalization in order to achieve force synergistic effects for better organizational performance towards profitability, survivability and sustainability.

3. THEORETICAL LINKS

The theoretical framework of this study can be viewed in the conceptual convergence of sustainability-based management, and digital transformation and organization performance with both of these firmly established in two complementary frameworks. The Resource Based View (RBV), The TAM model. Barney (1991) conceptualizes organization commitment, resource-based view (RBV) conceptual model as a strategic intangible asset that permits firms to form a successful competitive edge (SCE) in market. Sustainability orientation was measured in the light of managerial sensitiveness to green mandates as indicating the assumption that the environment is an organizational competency which is scarce and valuable for increasing efficiency, eco-innovation and legitimacy. Hart & Dowell (2011) wrote "When they make these commitments as part of their corporate strategy, businesses are better positioned to pursue not just term resiliency but efficiency and ultimate competitiveness." In contrast, the Technology Acceptance Model (Davis 1989) is a theory which explains how digitalization is a mediating variable in this relationship as it pinpoints the mechanisms involved in the concerned adoption and deployment of the digital technology by the organization. The Technology Acceptance Model poses the idea that the perception of ease of use of digital systems and the perceived usefulness of digital systems are the primary determinant of digital system take-up in the organizations. In this regard, digitalization is an essential catalyzing link between management commitments as regards sustainability on the one hand, and changes in operational performance that can be measured and monitored on the other. Consequently, wide acceptance of the integration of digital technologies continues to make it easier for firms to optimize utilization of resources, monitor sustainability actions, and activate process innovations, thereby intensifying the positive influence of managerial commitment (Verhoef et al., 2021). In this model integration phenomenon, it seems that management commitment towards green organizations positively impacts the performance of the organization directly, but also, indirectly through the mediator of digitalization as it channels the organizational performance. Institutional theory argues that organizations not only acquire green practices and information technology, but do so not only because of efficiency, but because they legitimize their practices by demonstrating that they conform to standards in competition and to global standards in terms of sustainability (DiMaggio & Powell, 1983). Further, leadership theories complete such a frame in that transformational leaders facilitate direction and the development of shared values, where the friends coach and engage employees in adoption of environmental sustainability digital transformation which will strengthen the long term performance (Bass & Riggio, 2006; Northouse, 2019).

4. METHODOLOGY

This paper utilized a quantitative research design within which to empirically examine the relationships among the selected variables. Sample: The sample is the study area of the professional associations and companies that are engaged in providing service activity in the IT field in Dhaka located in Bangladesh. We were particularly keen to places to be represented in the domain of green business initiatives and digital transformation where we wanted to have people that have the participants at the intersection of the sustainability and development in technology. To assure a thorough and diverse coverage for the organizational contexts to the research question, we gave a sample type to manufacturing companies, but we also gave one to service companies. We used convenience sample because we needed variety of industries to represent the variation. Data were obtained from a structured questionnaire, which was emergencies taken from existing good questionnaires in the literature, and good reliability and validity was assured based on the second author's experience and test-retest. With 500 responses in hand, we felt that the sample size was healthy with statistical weight. Structural Equations Modeling (SEM) was employed as an analytical object with the structure that we hypothesized of the variables. The benefit of the MVFvA analysis was that we simultaneously could test the measurement model and structural relations. Statistical analyses using the Structural Equation Analysis (SPSS system) and version 4.0 Smart Partial Least Squares were realized conduction which allows for an in-depth extraction of the data, which allows for the determination of the precise parameters, as well as improved interpretability of the structural relationships which were being studied.

5. ANALYSIS AND RESULTS

Table 1 includes descriptive statistics of the variables (demographic variables) included in the sample of the study, i.e., gender, age, education, level of current position, job experience, monthly income, the type of organization, and industry types in which respondents work. The mean, standard deviation, skewness, and kurtosis values introduce a higher level of understanding of the distributional character of the data, which is important as part of the analysis process to identify

the roughness of further statistical analysis. An overview of energetic drink consumption in young adults, derived from the 2014 National Health and Nutrition Examination Survey, revealed a low standard deviation in addition to higher-than-average negative skewness outcomes, recommending that replies tend to be clustered in one category with minor variability. This had the implications that the sample can be unbalanced in terms of the gender representation, which is aligned to previous warnings made in the organizational and technology adoption research, in which underrepresentation of one gender can affect the generalizability (Ahuja, 2002; Venkatesh & Morris, 2000). With a kurtosis value close to zero, the distribution appears normal, but also with a strong skew to disproportionate participation.

The age variable is showing positive skew with very high kurtosis, which means that while the majority of respondents are prone to be younger, the difference between proactive and influence skills' roles was larger due to the proportion of older participants who have a strong impact on the general distribution. The heavy-tailed nature of the empirical data implies clustering at younger generations and is typical in digital tools and artificial intelligence studies since younger generations typically are early technology adopters (Morris & Venkatesh, 2000; Venkatesh et al., 2012). The substantial kurtosis is very important for the interpretation of intergenerational behavioral differences. Education reflects relatively low variability with moderate positive skew, suggesting that most respondents are considered in lower to mid-level education levels, with fewer respondents occupying higher education levels. This diffusion, in turn, supports evidence from several other studies that diffusion of digital artifacts is not always a matter of a high degree of education but rather exposure and training by organizations (Igbaria & Iivari, 1995; Compeau & Higgins, 1995). The value of the kurtosis charge is slightly above the normal value, which indicates a balanced distribution but slightly elongated. For the position level, the current position level shows a high mean value with moderately skewed distribution and low kurtosis, thus indicating that the majority of the respondents occupy mid to senior level positions. This results in the approach that decision-making with respect to artifacts for using artificial intelligence technologies within organizations is generally performed by persons with higher hierarchical positions in professional groups who are more likely to influence the development and implementation (Swanson, 1994; Orlikowski, 1992). Also, a low kurtosis is an indication of a relatively rough, even distribution among these groups. The form of organization variable contains a large mean, low variance, slightly positive skewness, and negative high kurtosis. This implies that responses are concentrated in a narrow range, suggesting the possibility of domination of some types of organization, such as service organizations, which are more common in the studies of digital adoption. Consistent with other studies that investigate organizational characteristics as determinants of technology adoption (Thong, 1999; Teo et al., 2009), a positive relationship emerged between organizational characteristics and information and environmental scanning, whereas no relationship was found between the two

Table 1: Descriptive Statistics

	Mean	Std. Deviation	Skewness	Kurtosis
Gender	5.6543	0.4412	-4.0848	0.6874
Age	6.0956	0.4457	1.2356	8.8941
Education	1.5561	0.416	1.1106	0.8607
Current Position Level	8.544	0.4791	0.8836	0.3616
Type of organization	9.8523	0.1546	0.306	-2.3098
Work Experience	7.807	0.452	-0.6209	0.3521
Monthly Income	9.4565	9.5047	1.5638	6.9977
Primary industry of your organization	8.0963	0.2883	2.2067	-2.8969

The experience variable is negatively skewed to a relatively small degree and has slightly less than median dispersion, implying that the respondents are likely to be concentrated both around the high and also very short, characterized by a few respondents. This is in line with studies that cite extended work experience improves familiarity with organizational processes and possibly impacts receptivity toward integrating artificial intelligence (Gefen & Straub, 1997; Igbaria & Tan, 1997). A low kurtosis value signals the presence of a distribution with less variability than expected (indicating that the distribution will have broad spreads, or thin tails with few outliers). The data distribution has significant skewness and positive skewness with a high coefficient of kurtosis, which gives a clear picture of the monthly income distribution along with a large variability. This result shows that although a preponderance of respondents aggregate within lower income ranges, a small number of high-income respondents exert a disproportionately higher influence on the distribution. Within socioeconomic literature, such inequality has been associated with a host of consequences, not least of which is the greater access that high-earners have to technologies that embody advanced communication and discussion (Castells, 2000; DiMaggio & Hargittai, 2001). Lastly, the main industry of organizations presents moderate and low variance, high positive skew, and very negative kurtosis, suggesting, as an example, concentration in certain industries with a long right tail, implying less frequent industries. This pattern is similar to those found in digital transformation literature, where industries are ahead in using artificial intelligence, among them being information technologies and services, while other industries are underrepresented (Porter & Heppelmann, 2014; Bharadwaj et al., 2013). Taken together, Table 1 highlights the demographic diversity of respondents and, at the same time, finds inequities related to gender, industry, and income distributions. However, these features warrant caution for

interpretation, since demographic and organizational factors are known to have a substantial moderating effect on technology acceptance and organizational efficacy in the actual use of artificial intelligence applications (Venkatesh et al., 2003; Davis, 1989).

The correlation matrix of the relationship between organizational performance, organizational effect, digitalization, management commitment, and green organizations is presented in Table 2. Correlation coefficients were evaluated at a strong level, and discovered that all three variables displayed significant positive statistical implications in relation to the results. This indicated that the degree of commitment at the management level concerning green organizational practices was positively linked with both the degree of digitalization and organizational performance. The obtained results are comparable with previous efforts in terms of sustainability-oriented leadership and its role in encouraging innovation and digital transformation in organizations and its relationship with performance outcomes (Dangelico 2015; Aragon-Correa and Sharma 2003). The positive relationship between the green organizations and the commitment of the management and the organizational performance is of great interest, due to the high positive utility. This would imply that firms with leaders who are more sustainability and environmentally conscious are more likely to display improved performance results than fellow enterprises. Prior studies have demonstrated how environmental stewardship is not merely a feel-good issue but effective in both improving corporate image, helping one their compliance with existing regulations, managing corporate operations more effectively, and improving the bottom line (Epstein & Roy, 2001; Porter & Van der Linde, 1995). So the answer we can derive, the lesson for us, of this particular paper is that we shouldn't consider environmental policy just as a cost center, but rather as something that actually could provide a firm with a competitive advantage.

Also, with digitalization, performance is directly related. Digital transformation makes sense and has begun to deliver positive impacts in enhancing internal processes, increasing flexibility, reducing waste and other positive outcomes. In addition, this is confirmed by research demonstrating that digital means companies use resources in smarter ways, interact more intelligently with customers and make decisions based on data (Bharadwaj et al., 2013; Hess et al., 2016). There is significant and complex evidence of the importance of digitalization in service-intensive and new technology-based businesses in terms of improvements in performance. In the end the data reveals an extremely high positive relationship between the attention of the organization on other aspects of management greening on the one hand and digitalization on the other. It is also known that these are complementary and synergistic to each other, so they strengthen each other severalfold. Our results show that especially firms with performance-enhancing eco-profiles are more likely to take up digital technologies and that this result may imply that sustainability and digitalization strategies are likely to go hand in hand. This aligns with the recent literature, which portrays green practices and digital innovation as 'synergistic agents for organizational transformation wherein digital technologies are facilitated to better monitor, transparently track, and thereby more efficiently achieve sustainability concerns' (George et al. 2021).

On the other hand, Table 2 suggests that there exist mutually reinforcing relationships between green organizational environment (Mov Deport Green) and globalization, and digitalization, with organizational performance. These findings have implications for more general theoretical stances such as the Resource-Based View that proposes that firms build sustainable competitive advantage by leveraging strategic resources such as digital capability and orientation to environmental conditions (Barney, 1991; Hart, 1995). The extent to which the allocations correlate strongly indicates that managers should not pursue sustainability, digital transformation, and performance as stand-alone objectives, but instead employ sustainability research, digital transformation, and performance improvement as complementary strategic components of a unified strategy.

Table 2: Correlation Matrix

		McGo	OP	D
McGo	Pearson Correlation	1.0000	.721**	.532**
	Sig. (2-tailed)		0	0
OP	Pearson Correlation	.721**	1.0000	.710**
	Sig. (2-tailed)	0		0
D	Pearson Correlation	.532**	.710**	1.0000
	Sig. (2-tailed)	0	0	

Table 3 summarizes the results of the reliability and validity of measured constructs in the study by using Cronbach's alpha, composite reliability, and average variance extracted. Cronbach's alphas on all constructs came out low, with digitalization, management commitment with green organizations, and organizational performance far below the generally accepted standard of 0.70 deemed to be acceptable for internal consistency (Nunnally & Bernstein, 1994). This means there may be little correlation among the items that are used in measuring the constructs, and therefore, other limitations (weak points) in the measurement scale are addressed by this. However, Cronbach's alpha has been noted as being sensitive to the number of items and the number of samples, and so this suggests that these results have limitations when they are interpreted (Cortina, 1993). Composite measures of reliability are more diverse. Further, the composite reliability of the organizational performance is well above the acceptable level, which shows a high degree of homogeneity among the items used to measure this construct. This generates greater confidence that organizational performance is being more reliably measured in the model. On the other hand, the composite reliability in digitalization

and management commitment in green organizations is less than acceptable levels, which calls into question the reliability of the constructs of the question. Since it has been found that consistency of measurement tends to be affected by the measurement homolog, it is also recommended that measurement homologs of the measurement items should be refined, which was recommended in previous research studies concerning measurement scales validation and adaptation for sustainability and technology adoption studies (Hair et al., 2010; Fornell & Larcker, 1981). The average variance extracted is another measure of convergent validity because we assume that the measure represents the proportion of explained variance on the construct (which is in contrast to measurement error). In this case, the yields of average variance extracted values over the threshold of 0.50 with green organizations and organizational performance yielded sound convergent validity values with commitment to management. However, below this threshold, there is digitalization, in which the premises being measured are not sufficient in order to represent the underlying construct. This lack of agreement means that we need either re-specification or additional indicators of digitalization that much more closely align with this conceptual definition in organizational settings (Bagozzi & Yi, 1988).

Table 4 also offers the Heterotrait-Monotrait ratio values, which serve as an indicator of discriminant validity, taking into account the problem with the distinctiveness of constructs from each other. At a minimum, the reported B-values below, of 0.22 to 0.66, are lower than the conservative standard for establishing discriminant validity (i.e., 0.85) (Henseler et al., 2015). This provides positive evidence that the measurement model differentiates digitalization and management commitment sufficiently from one another as well as from organizational performance. For green organizations, the maximum value seen for organizational performance vs. management commitment is less than the cutoff value; thus, organizational performance and management commitment, although clearly correlated, are not overlapping (redundant) constructs. Generally, Tables 3 and 4 also show that the construct of organizational performance has measure reliability, has convergent and discriminant validity, whereas digitalization and management commitment of green organizations still need further refinement in the measurement. The results of factorial validity showed that the composite reliability and the Cronbach's alpha levels were too low, and this means that there are some issues regarding the internal consistency, where the results of discriminant validity may be considered to be well determined. This result is similar to larger measurement problems in sustainability and digitalization research, whereby a lot of research conceptual constructs overlap (which could only be precisely operationalized in such a way as validity can be conferred, Podsakoff et al., 2003; Diamantopoulos and Siguaw, 2000).

Table 3: Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
D	0.3536	0.6952	0.0608	0.39
McGo	0.3551	0.0886	0.2012	0.7901
OP	0.1683	0.0849	0.8429	0.6355

Table 4: Heterotrait-Monotrait (HTMT) Ratio

	Heterotrait-Monotrait ratio (HTMT)
McGo <-> D	0.2218
OP <-> D	0.5021
OP <-> McGo	0.6596

Table 5 and Table 6, at the same give insights on the explanatory power of the model as well as structural relationships on management commitment with green organizations, digitalization, and organizational performance. Table 5 R-squares indicate the percentage of variation explained by the independent variables. The R-square value is the amount of deviation explained by digitalization that shows the commitment of green organizations for digitalization; it is termed as moderate, but the adjusted R-square is considerably smaller and possibly implies losses in predictive power and/or the presence of explainer noise. It does mean that, although management commitment does exert an influence on digitalization, other contextual factors like organization culture, resource availability or technology infrastructure can also play important roles (Zhu et al., 2006; Bharadwaj et al., 2013). Similarly, when it comes to organizational performance, the value of R-squared is much higher, indicating a large portion of their variance can be explained by the model. The adjusted R square is slightly lower but indicates that there is some predictive validity in this regard, whereby resorting to digitalization and management commitment on the end of green organizations seems to be a significant contribution in forecasting relevant performance outcomes. This is in line with literature suggesting that digitalization and sustainable-oriented leadership are complementary enablers of superior performance, both in regard to the possibility to be process efficient, but also to establish legitimacy in the market (Porter and Van der Linde, 1995; Dangelico, 2015).

The detailed results of the hypotheses of the structural model are presented in Table 6. Digitalization to organizational performance is also strongly-and positively-correlated with digitalization to organizational performance, suggesting that digitalization and organizational performance are associated positively and hence high levels of digitalization are associated with high performance results. This is backed by the literature with regards to the significance of digital capabilities to enhance data-driven decision making, better customer engagement and efficiencies within the operations

which directly translate into competitive advantage (Bharadwaj et al. 2013; Hess et al. 2016). This finding demonstrates the strength and importance of this relationship, which is significant in pointing at digitalization as a key resource driver which transforms organizational resources into tangible benefits for its sustainable performance, in terms of performance measurements. The other relationship (and in this case the one relating to the digitalization process with managerial levels of commitment to green strategies within organizations) is also very significant. This study validates the hypothesis that sustainable leadership might contribute to a higher openness with regards to the implementation of digital technologies that support monitoring, reporting and governance of environmental practices. In theory, it should be the case that companies with a high management intention to engage in green design exhibit a tendency to perceive digital technologies as the providers of heightened transparency and accountability with respect to ensuring environmental sustainability (George et al, 2021; Bocken et al, 2014). Thus, as mentioned, the internal strain of the relationship acts as a synonym for the need of digitalization, not only as an enabler for performance but more critically as an addition to managerial sustainability dependence. Especially because the causal connection from green leadership organizations' leadership commitment to organizational performance applies to the wider business domain, rather than just the domain of digitalization, focus needs to be paid more attention to these larger scale outcomes of sustainable commitment leadership. This finding is consistent with some previous studies, which showed CSR leadership positively affects performance via improved reputation, reduction of regulatory risk, and increased consumer trust (Epstein & Roy, 2001; Agarragon & Sharma, 2003). Importantly, the significance of both direct and indirect paths at once implies the partial mediating influence of digitalization on the link between the commitment to sustainability and the organizational performance, which is often discussed in strategic management and resource-based viewpoints (Hart, 1995; Barney, 1991). Overall, the results in Tables 5 and 6 show the interrelatedness of managerial support for sustainability, digital transformation, and performance outcomes. The explanatory power of the model tells us that although digitalization is a significant factor when it comes to determining a performance improvement, it is the combination of the two factors, for instance, an adopted sustainability-oriented leadership and the use of technological products, that makes the widest sustainable impact. These findings reinforce the idea from the theoretical field that suggests that sustainability and digitalization do not constitute strategic alternatives to each other, but cooperating pathways to success for organizations for a long-lasting, long-term perspective (Dangelico, 2015; George et al., 2021).

Table 5: R-Square

	R-square	R-square adjusted
D	0.319	0.1082
OP	0.687	0.4047

Table 6: Structural Model

Hypothesis	Relationship	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
H2	D -> OP	0.8082	0.1202	0.0814	5.1706	0.000
H1	McGo -> D	0.4405	0.4452	0.5333	3.5457	0.000
H3	McGo -> OP	0.5218	0.265	0.3947	7.6502	0.000

Thus, Table 7 shows the findings of the indirect effect of management commitment with green organizations through digitalization on organizational performance. When observing the results, it is shown that the relationship of this pathway is positive, but has a significant relationship at a high level since the values of t are far greater than the usual threshold, and the values of p are 0.000. In addition, these results also justified the position of digitalization as the overarching mediating channel that transforms the micro-level outcome observed in the above-sustainable managerial practices into the performance outcomes. Our results suggest that organizations, which pay greater attention to environmental responsibility, generate a performance effect, directly and indirectly, through their electronic transformation. This was corroborated by past work, which has created the term of sustainability-based leadership as an enabling factor of emerging technologies commercialization enhancing efficiency, monitoring and innovation (Bocken et al. 2014; George et al. 2021). In parallel with the digitisation of the process, or actually with the digitisation of the process, digitalisation has an indispensable role in the cross-linking of environmental processes and data-based decision-making for an efficiency gain in the operation and thus competition in the long term. This indirect effect is significant, thus confirming the resource-based view and natural resource-based view, which suggest that coordinated embedded intangibles (strategic commitment and technological know-how) together generate synergistic effects (Barney, 1991; Hart, 1995). In this context, the digitalization paradigm includes a further positive impact that affects the sustainability-oriented management, meaning that the combined implementation of green strategies and technology generates even better outcomes than a segregated implementation of technology and a greener behavior. However, the presence of both a large direct effect as well as a large indirect effect indicates the presence of partial mediation. This means that management commitment (MG-CO) has an independent positive effect on organizational performance; however, digitalization counseling and centered on strengthening and enhancing this relationship. Further, we find in the literature that digital innovation has often been thought of as an intermediary variable linking strategic focus -

including environmental responsibility - with performance (Dangelico, 2015; Porter & Van der Linde, 1995). The results of Table 7 have yielded clear evidence that the relationship from management commitment to performance is both direct as well as indirect, and that digitalization had a significant filtering effect on this relationship. This constitutes a critical strategic need - the integration of sustainability action processes with digital transformation initiatives to ensure the organization's performance in terms of efficiency, reputation, and resulting competitiveness (Epstein and Roy, 2001; Zhu et al., 2006).

Table 7: Indirect Effect

Indirect Effect	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
McGo -> OP	0.5961	0.1879	0.7667	8.9059	0.000

Table 8 summarizes the results of mediation; it refers to the results of the mediation found for management commitment that relies on digitalization effectiveness of organization with green organization performance. The result is published relations with respect to direct effects, indirect effects, and variance explained (= VAF), which is used for calculating a mediation. Through the statistical disclosure, the combining effects of management commitment to the green organizations on the organizational performance are strong and significant. On the other hand, these problems indicate that the managerial attitude towards sustainability becomes crucial in the outcomes of performance. This study validates the empirical literature hitherto and the hypothesis that sustainable leadership is positively correlates with compliance, legitimacy, profitability, and stakeholder satisfaction (Aragon-Correa & Sharma, 2003; Epstein & Roy, 2001). Finally, the indirect influence (labeling, linking the managerial dedication and digitization on the goal of guidance outcome: integrating synergies of digitalization) merits his attention. According to the results from the two limiting examples of this paper, we conclude that a sustainability-oriented management orientation produces digital transformation, which produces stronger impact on performance targets. The mediating nature of digitalization: Strongly mediated by previous literature that suggests digitalization as a driver of organizational transparency, efficiency, and flexibility in organizations taking more sustainable transformations (Bocken et al., 2014; George et al., 2021). By rendering data analysis and reporting possible, in real-time and through better technologies, digital technologies allow a crucial channel for the real dimensions of environmental commitment.

Table 8: Mediation Outcomes

Type of effect	Effect	Path Coefficient	Path Coefficient	T State
Total effect	McGo -> OP		0.3022	21.956***
Indirect Effect	McGo ->D-> OP	McGo ->D-> OP	0.5434	3.847***
Direct Effect	McGo -> OP		0.6431	6.605***
VAF	IE/TE		0.6434	

The direct effect remains statistically significant when controlling for the mediating effect: Partial mediation rather than full mediation occurs between the two variables. This relates to the fact that even though the digitalization takes a significant proportion of the relationship, Table 2, green organizations' management commitment, there is still a positive and independent influence of it on the performance of the organizations. This trend is in accord with the Resource-Based View and Natural Resource-Based View, where both intangible resources, such as leadership commitment and capabilities, such as digitalization have a direct impact on performance (Barney, 1991; Hart, 1995). The variance explained (VAF) is fairly high; in this case, a significant percentage of the total effect passes through the indirect route via digitalization. This supports the notion that the relationship between management commitment and performance is not linear and is exacerbated when digital transformation progresses and increases are increasingly present. Prior research has shown that organizations that integrated sustainability and corporate digital in their organization were in a better position (in terms of results) than organizations that tried to follow the two individually or work towards them as two comparable activities that are not related (Porter and Van der Linde 1995; Dangelico 2015). Altogether, the results in Table 8 suggest a strong mediation role of digitalization on the link between sustainability-oriented leadership and performance. Results underscore the importance of both the direct and indirect paths by which management commitment affects performance, not only through strategic alignment directly, but also by the adoption of e-business tools indirectly. These results confirm the view that, in order to maximize performance, firms must combine environmental stewardship with digitalization strategies and consequently rely on sustainability as a normative motivator and source of a competitive advantage (George et al., 2021; Zhu et al., 2006).

6. CONCLUSION

This study aimed to investigate the influence of management commitment with green organizations on the organizational performance and to find the mediator factor with digitalization. Measurements for the study were conducted through a quantitative research design with a sample size of 500 professionals who are involved with service-oriented organizations and the information technology sector in Dhaka, Bangladesh. In this study, one-way variance analyses were performed using SmartPLS (Smoke Particle Laboratory's 1st generation Small Technical PackageTM) in

combination with structural equation modeling for both validating the Resource-Based View and the Technology Acceptance Model. Direct and indirect associations between constructs were compared, which provided empirical proof that an organization's green-attractiveness has a strong positive direct effect on institutional performance. We show that sustainability-executive link and digitalization wave has a positive and significant effect on efficiency, effective-competitiveness, and performance; arguing that digitalization channels the or the effect of green-commitment to-executives mercy on yet ultimate performance, in performance studies. The theoretical contribution is to conceptualise further complementarities based on a synthesis between the concepts of the Resource-Based View and the Technology Acceptance Model to explain the complementarities between digital technologies and immaterial managerial resources. Whereas previous studies differentiated sustainability, digital transformation and goodwill of management, this research highlights convergence to be at the core of the equation, showing the possibility that such integration could be the foundation for decision-making that assures the delivery of superior performance in the emerging-economy markets. The digitization of technologies opens the way to new ways of seeing and practiced leading on the one hand to efficiency supply and strategy innovation; on the other hand, the digital highlighted society is a multiplier of sustainability actions resulting in revolutionary products, processes, and business models. However, the study does have limitations including that the small sample size means a lack of generalizing statements which can be made, also that the cross-sectional nature means that causal evidence regarding the long-term outcomes does not exist, having been carried out prior to termination.

Future studies need to grow the aggregate sample to sub-nationality or across the globe, adopt longitudinal designs, and include individual-level explanatory controls (e.g. organisational culture, resources or industry-specific propensities) to unpack their respective significance. In the final analysis, the data offer interesting evidence of both direct as well as indirect effects of management orientation towards green topics defended via a high degree of digitalization. The confluence between sustainability and digital transformation will empower operations in organizations and create resilience, and thus enable sustainable diamond operations for long-term growth.

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