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From Digital Assets to Strategic Outcomes: An Empirical Test of the Digital Resource View

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Abstract

The rapid diffusion of digital technologies has fundamentally transformed the nature of firm resources and the mechanisms through which competitive advantage and performance are achieved. Drawing on the Digital Resource View (DRV), this study examines how digital resources translate into strategic outcomes through key digital mechanisms and capabilities. Using a quantitative, explanatory research design, data were collected from 316 firm-level decision makers across digitally active firms in Nigeria and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that digital resources have a strong and significant positive effect on competitive advantage, which in turn drives firm performance. Furthermore, scalability and recombinability significantly mediate the relationship between digital resources and competitive advantage, underscoring their role as critical value-creation mechanisms in the digital economy. Embedded digital capabilities also contribute positively to competitive advantage, although with a modest effect size. In contrast, the mediating roles of digital learning capability and increasing returns in explaining the transformation of digital resources into embedded digital capabilities are not supported, suggesting that learning-based and cumulative digital benefits may require longer time horizons or more mature digital governance structures to fully materialize. The study contributes to strategic management literature by providing empirical validation of the Digital Resource View and offering an insights into how digital assets generate competitive advantage and performance in an emerging economy context. Practically, the findings highlight the importance of investing not only in digital assets but also in scalable and recombinable digital architectures to achieve sustained strategic benefits.

Keywords: Digital Resource View; Digital Resources; Competitive Advantage; Firm Performance; Scalability; Recombinability; Embedded Digital Capabilities; Emerging Economies

1. Introduction

The contemporary business environment is increasingly shaped by rapid digitalization, where data, algorithms, platforms, and digital infrastructure have become central to value creation and competitive positioning. Firms across industries are investing heavily in digital assets to enhance decision-making, operational efficiency, customer engagement, and strategic responsiveness. Empirical evidence suggests that digitalization has a significant influence on firm value, productivity, and performance outcomes, particularly in digitally intensive and data-driven contexts (Guo et al., 2025; Tian & Ma, 2025; Drechsler et al., 2025; Zhao et al., 2024).

Strategic management scholarship has traditionally relied on the Resource-Based View (RBV) to explain performance differentials among firms, emphasizing valuable, rare, inimitable, and non-substitutable resources. However, RBV was developed largely in pre-digital contexts and assumes relatively static resources and diminishing returns to resource deployment. Recent studies argue that such assumptions are increasingly inadequate for explaining value creation in the digital economy, where resources are scalable, recombinable, and capable of continuous learning (Cuthbertson & Furseth, 2022; Hanafizadeh & Tavakoli, 2025; Piccoli et al., 2022).

In response to these limitations, scholars have begun to reconceptualize firm resources through a digital lens. The Digital Resource View (DRV) advances strategic theory by explicitly recognizing digital assets such as data, analytics capabilities, cloud infrastructure, and digital platforms as strategic capital rather than mere operational tools (Adamu, 2025a; Adamu, 2025b; Willie, 2025). DRV argues that the strategic value of digital resources lies not only in their possession but in their ability to scale, recombine, embed within organizational routines, and generate increasing returns over time.

Empirical research increasingly demonstrates that digital capabilities play a critical role in shaping competitive advantage and firm performance. Studies show that firms with strong digital and analytics capabilities outperform competitors by leveraging data-driven insights, improving coordination, and responding more effectively to market dynamics (Heredia et al., 2022; Wielgos et al., 2021; Lin et al., 2025; Saeed et al., 2023). However, these studies often focus on isolated digital capabilities or technologies rather than examining digital resources as an integrated strategic system, leaving the underlying resource logic underexplored.

Moreover, emerging evidence suggests that the value of digital assets is realized through specific mechanisms such as scalability, recombinability, embedded digital

capabilities, learning, and increasing returns. For example, scalable digital systems enable firms to expand operations without proportional cost increases, while recombinable digital components facilitate innovation and strategic flexibility (Baiyere et al., 2025; Sun & Zhou, 2024; Zhang & Hao, 2025). Similarly, digital learning capability and increasing returns explain why digital investments often yield growing benefits over time rather than diminishing returns (Pfister & Lehmann, 2023; Drechsler et al., 2025).

Despite these advances, the empirical literature remains fragmented, with limited studies providing a holistic test of how digital assets are transformed into strategic outcomes through clearly specified mechanisms. In particular, there is a paucity of empirical work that integrates digital resources, competitive advantage, and firm performance within a single, theory-driven framework. Addressing this gap, the present study empirically examines how digital assets are converted into strategic outcomes through the mechanisms proposed by the Digital Resource View, thereby contributing to strategic management theory and digital transformation research.

Although firms are increasingly investing in digital assets, substantial variation persists in the strategic and performance outcomes derived from such investments. While some firms successfully translate digital resources into sustained competitive advantage and superior performance, others experience limited or inconsistent returns. This disparity raises fundamental questions about how and under what conditions digital assets generate strategic value, questions that are not adequately addressed by existing strategic management theories (Hanafizadeh & Tavakoli, 2025; Pfister & Lehmann, 2023).

A major limitation in the extant literature is the continued reliance on the traditional Resource-Based View, which inadequately captures the dynamic, scalable, and learning-oriented nature of digital resources. Many empirical studies treat digital technologies as generic inputs or isolated capabilities, overlooking the systemic and mechanism-based processes through which digital assets create value (Piccoli et al., 2022; Cuthbertson & Furseth, 2022). As a result, the strategic pathways linking digital assets to competitive advantage and performance remain theoretically underdeveloped and empirically under-tested.

Furthermore, while recent studies acknowledge the importance of digital capabilities, they often fail to distinguish between resource ownership and resource deployment mechanisms such as scalability, recombinability, embedded digital capabilities, and increasing returns. Without explicitly modeling these mechanisms, it is difficult to explain why similar digital investments yield divergent outcomes across firms (Baiyere et al., 2025; Heredia et al., 2022; Sun & Zhou, 2024). This conceptual ambiguity limits the explanatory power of existing empirical findings.

Another unresolved issue concerns the role of competitive advantage as a transmission mechanism between digital assets and firm performance. Although several studies suggest that competitive advantage mediates this relationship, empirical evidence remains mixed and context-specific (Çağlıyan et al., 2022; Shehadeh et al., 2023; Zhang et al., 2024). There is a need for a comprehensive empirical model that explicitly tests competitive advantage as a central mediating construct within a digital resource framework.

Finally, environmental conditions such as environmental dynamism further complicate the digital value creation process. Rapid technological change, shifting customer preferences, and competitive turbulence may amplify or weaken the strategic value of digital resources (Priem et al., 1995; Aftab et al., 2024; Pan et al., 2026). However, few studies incorporate environmental dynamism as a boundary condition in examining digital resource–performance relationships. Consequently, there remains a critical need for an empirically grounded, theory-driven investigation that explains how digital assets are transformed into strategic outcomes under varying environmental conditions an issue this study seeks to address through the Digital Resource View.

2. Literature Review

2.1 Digital Assets and the Transformation of Firm Strategy

Digital assets such as data, algorithms, analytics systems, cloud infrastructure, and digital platforms have become central to contemporary firm strategy. Unlike traditional physical assets, digital assets are characterized by scalability, low marginal costs, recombinability, and the ability to generate value through continuous use and learning. Recent empirical studies demonstrate that digital asset intensity significantly enhances firm value, strategic disclosure quality, and market performance, particularly in technology-intensive and data-driven firms (Guo et al., 2025; Tian & Ma, 2025; Drechsler et al., 2025). These findings underscore the growing recognition of digital assets as strategic rather than merely operational resources.

The expanding role of digital assets has prompted scholars to reassess how firms deploy resources to achieve superior performance. Research in digital transformation and digital strategy suggests that firms leveraging digital assets effectively are better positioned to innovate, optimize processes, and respond to environmental uncertainty (Abu-El-Haija et al., 2025; Zhao et al., 2024; Hanafizadeh & Tavakoli, 2025). However, despite the proliferation of studies on digital technologies, there remains limited theoretical consensus on how digital assets are systematically converted into strategic outcomes.

2.2 Resource-Based View and Its Limitations in the Digital Era

The Resource-Based View (RBV) has long served as a dominant framework for explaining firm performance differentials, emphasizing resources that are valuable, rare, inimitable, and non-substitutable. While RBV has been instrumental in advancing strategic management theory, several scholars argue that it is increasingly inadequate for explaining competitive advantage in digitally intensive environments (Cuthbertson & Furseth, 2022; Piccoli et al., 2022).

Traditional RBV assumes relative resource stability and diminishing returns, assumptions that are frequently violated by digital resources. Digital technologies improve with use, generate network effects, and can be redeployed across multiple contexts at minimal cost. Consequently, RBV struggles to explain why firms with similar access to

digital technologies experience divergent performance outcomes. This theoretical gap has motivated calls for reconceptualizing resources in ways that reflect digital dynamics (Hanafizadeh & Tavakoli, 2025; Willie, 2025).

2.3 The Digital Resource View (DRV)

The Digital Resource View (DRV) emerges as an extension and refinement of RBV, explicitly designed to account for the unique properties of digital resources. DRV conceptualizes digital assets as strategic capital whose value is derived from scalability, recombinability, embeddedness, learning, and increasing returns (Adamu, 2025a; Adamu, 2025b). Rather than focusing solely on resource possession, DRV emphasizes how digital resources are deployed, integrated, and embedded within organizational routines and decision-making structures.

DRV provides a coherent theoretical explanation for why digital investments yield heterogeneous outcomes across firms. By highlighting the dynamic and systemic nature of digital resources, DRV aligns with recent empirical evidence showing that digital value creation depends on organizational capabilities, routines, and environmental conditions (Piccoli et al., 2022; Willie, 2025). This study adopts DRV as its primary theoretical lens to explain how digital assets are transformed into strategic outcomes.

2.4 Digital Capabilities as Value-Creation Mechanisms

A growing body of literature emphasizes that digital resources create value through specific capability-based mechanisms. Digital capabilities including analytics capability, platform capability, and digital integration capability enable firms to extract strategic benefits from digital assets (Baiyere et al., 2025; Wielgos et al., 2021). Empirical studies demonstrate that digital capabilities significantly influence firm performance, innovation outcomes, and resilience, particularly in turbulent environments (Heredia et al., 2022; Lin et al., 2025; Saeed et al., 2023).

Recent research also highlights the importance of embedded digital capabilities, where digital tools are deeply integrated into organizational processes and workflows. Embeddedness enhances causal ambiguity and makes digital advantages more difficult to imitate (Sun & Zhou, 2024; Zhang & Hao, 2025). These findings support the DRV argument that digital resources become strategically valuable when embedded within firm-specific routines rather than treated as standalone technologies.

2.5 Digital Learning Capability and Increasing Returns

Digital learning capability refers to a firm's ability to continuously improve its digital systems through data feedback, analytics, and experimentation. Unlike traditional resources that depreciate with use, digital resources often generate increasing returns, whereby their value grows as firms accumulate data, refine algorithms, and enhance decision-making accuracy. Empirical evidence indicates that firms with strong digital learning and analytics capabilities achieve superior performance and resilience over time (Pfister & Lehmann, 2023; Drechsler et al., 2025; Lin et al., 2025).

Studies on big data analytics and digital transformation further demonstrate that learning-oriented digital investments enable firms to adapt strategies, exploit emerging opportunities, and sustain competitive advantage in volatile markets (Saeed et al., 2023; Cao et al., 2025). These insights align closely with DRV's emphasis on learning and increasing returns as central mechanisms linking digital resources to strategic outcomes.

2.6 Competitive Advantage as a Mediating Mechanism

Competitive advantage remains a central construct in strategic management, representing the mechanism through which resources and capabilities are translated into superior performance. Recent studies increasingly position competitive advantage as a mediator between digital capabilities and firm performance (Çağlıyan et al., 2022; Shehadeh et al., 2023; Zhang et al., 2024). These studies suggest that digital transformation enhances performance primarily by strengthening firms' competitive positioning rather than through direct effects alone.

However, empirical findings on this mediating role remain fragmented, with many studies failings to integrate digital resources, capabilities, and performance into a unified framework. By explicitly modeling competitive advantage as a central mediator, the present study responds to calls for more theory-driven empirical tests that clarify how digital assets generate strategic outcomes (Cuthbertson & Furseth, 2022; Piccoli et al., 2022).

2.7 Environmental Dynamism and Digital Resource Effectiveness

Environmental dynamism characterized by rapid technological change, shifting customer preferences, and competitive turbulence significantly shapes the effectiveness of digital strategies. Prior research demonstrates that environmental dynamism moderates the relationship between resources, capabilities, and performance, often amplifying the value of flexible and scalable resources (Priem et al., 1995; Aftab et al., 2024; Pan et al., 2026).

Recent studies specifically show that digital resources and capabilities yield stronger performance effects in highly dynamic environments, where rapid adaptation and data-driven decision-making are critical (Habibullah & Kamal, 2024; Lin et al., 2025). This study incorporates environmental dynamism as a boundary condition to explain variation in the digital resource–competitive advantage relationship, thereby enhancing the contextual validity of the DRV framework.

2.8 Summary and Research Gap

Existing literature provides strong evidence that digital assets and capabilities influence firm performance, yet it remains fragmented across multiple theoretical perspectives and empirical contexts. Many studies examine isolated digital technologies or capabilities without articulating a coherent resource logic that explains how digital assets are transformed into strategic outcomes. Moreover, limited empirical research has tested the Digital Resource View as an integrated framework linking digital resources, competitive advantages, and firm performance under varying environmental conditions.

This study addresses these gaps by offering a comprehensive empirical test of the Digital Resource View, explicitly modeling scalability, recombinability, embedded digital capabilities, digital learning capability, increasing returns, and competitive advantage as the mechanisms through which digital assets generate strategic outcomes. In doing so, the study advances digital strategy theory and provides robust empirical evidence on the strategic value of digital resources.

2.9 Hypotheses Development

2.9.1 Digital Resources and Competitive Advantage

The Digital Resource View (DRV) posits that digital resources—such as data, algorithms, digital platforms, and infrastructure—constitute strategic assets that can generate superior competitive positioning when effectively deployed. Unlike traditional resources, digital resources are scalable, recombinable, and capable of continuous improvement, allowing firms to respond more rapidly to market changes and competitive pressures. Empirical studies indicate that firms with strong digital resource bases are better positioned to differentiate their offerings, enhance operational efficiency, and strengthen market positioning (Piccoli et al., 2022; Guo et al., 2025; Zhang et al., 2024). Consequently, digital resources are expected to directly enhance firms' competitive advantage.

H₁: *Digital resources have a significant positive effect on competitive advantage.*

2.9.2 The Mediating Role of Scalability

Scalability is a defining characteristic of digital resources, enabling firms to expand operations and replicate digital solutions at low marginal cost. From a DRV perspective, scalability allows firms to leverage digital investments across multiple products, markets, and processes, thereby amplifying strategic value. Prior research suggests that scalable digital systems enable cost efficiencies, speed, and market reach that are difficult for competitors to match (Pfister & Lehmann, 2023; Drechsler et al., 2025). Thus, scalability is expected to function as a mechanism through which digital resources translate into competitive advantage.

H₂: *Scalability mediates the relationship between digital resources and competitive advantage.*

2.9.3 The Mediating Role of Recombinability

Recombinability refers to the ability of firms to integrate and reconfigure digital components such as data, analytics tools, and platforms across different organizational functions and strategic initiatives. DRV emphasizes that value creation in the digital economy arises from recombining existing digital assets into new configurations that support innovation and strategic flexibility. Empirical evidence shows that recombinable digital resources enhance firms' ability to innovate and adapt to environmental change (Baiyere et al., 2025; Sun & Zhou, 2024). Accordingly, recombinability is expected to mediate the digital resource–competitive advantage relationship.

H₃: *Recombinability mediates the relationship between digital resources and competitive advantage.*

2.9.4 The Mediating Role of Digital Learning Capability

A central advancement of the Digital Resource View (DRV) is the recognition that digital resources are inherently learning-enabled. Digital assets such as data, analytics systems, and algorithms continuously generate feedback through use, enabling firms to learn, adapt, and refine their digital practices over time. However, the mere possession of digital resources does not automatically result in deeply embedded digital capabilities. Instead, the transformation of digital resources into routinized and organization-wide capabilities depends on the firm's ability to acquire, assimilate, and apply insights derived from these resources. Prior studies on digital transformation and analytics demonstrate that learning-oriented digital capabilities play a critical role in converting digital investments into durable organizational competencies and strategic renewal (Saeed et al., 2023; Lin et al., 2025; Cao et al., 2025).

From a DRV perspective, digital learning capability functions as a key mediation mechanism linking digital resources to embedded digital capabilities. Digital resources provide the foundational inputs for learning, while digital learning capability enables firms to internalize these resources into workflows, routines, and decision-making structures. Through continuous experimentation, analytics-driven feedback, and iterative improvement, firms develop embedded digital capabilities that are firm-specific and difficult for competitors to replicate. Accordingly, this study proposes that digital learning capability mediates the relationship between digital resources and embedded digital capabilities.

H₄: *Digital learning capability mediates the relationship between digital resources and embedded digital capabilities.*

2.9.5 The Mediating Role of Increasing Returns

Increasing returns constitute a defining mechanism that distinguishes digital resources from traditional assets within the Digital Resource View (DRV). As firms intensively utilize digital resources such as data, analytics systems, and digital platforms, their value tends to grow rather than depreciate. Continuous usage leads to data accumulation, algorithmic refinement, and process optimization, which collectively generate increasing returns. These cumulative benefits enhance firms' capacity to deepen and stabilize the integration of digital technologies within organizational routines. Empirical studies show that firms experiencing increasing returns from digitalization achieve stronger strategic positioning and sustained value creation over time (Pfister & Lehmann, 2023; Drechsler et al., 2025).

From a DRV perspective, increasing returns serve as a critical mediation mechanism through which digital resources are transformed into embedded digital capabilities. While digital resources provide the technological foundation, it is the accumulation of returns through repeated use and learning that enables firms to institutionalize digital practices across workflows and decision-making processes. As digital systems become more effective and valuable with continued use, firms are better able to embed these systems into core operations, thereby strengthening firm-specific digital capabilities.

Accordingly, this study proposes that increasing returns mediate the relationship between digital resources and embedded digital capabilities.

H5: *Increasing returns mediate the relationship between digital resources and embedded digital capabilities.*

2.9.6 Embedded Digital Capabilities and Competitive Advantage

Embedded digital capabilities refer to the extent to which digital resources are integrated into organizational routines, workflows, and decision-making processes. When digital capabilities are deeply embedded, they become firm-specific and difficult for competitors to replicate. Studies on digital embeddedness and ecosystem integration suggest that such capabilities strengthen strategic differentiation and protect competitive positions (Sun & Zhou, 2024; Zhang & Hao, 2025; Wielgos et al., 2021). Accordingly, embedded digital capabilities are expected to positively influence competitive advantage.

H6: *Embedded digital capabilities have a significant positive effect on competitive advantage.*

2.9.7 Competitive Advantage and Firm Performance

Competitive advantage is widely recognized as the primary mechanism through which resources and capabilities translate into superior firm performance. Firms with strong competitive advantage are better able to achieve superior financial, operational, and market outcomes. Empirical studies consistently confirm a positive relationship between competitive advantage and firm performance in digital and non-digital contexts (Çağlıyan et al., 2022; Shehadeh et al., 2023; Zhang et al., 2024). Consistent with this literature, competitive advantage is expected to enhance firm performance.

H7: *Competitive advantage has a significant positive effect on firm performance.*

2.9.8 Mediating Role of Competitive Advantage

While digital resources may exert some direct influence on performance, DRV argues that their primary effect operates indirectly through competitive advantage. Digital resources enhance firm performance by enabling superior positioning, differentiation, and strategic responsiveness. Prior empirical evidence supports the mediating role of competitive advantage in resource–performance relationships (Çağlıyan et al., 2022; Shehadeh et al., 2023). Therefore, competitive advantage is expected to mediate the relationship between digital resources and firm performance.

H8: *Competitive advantage mediates the relationship between digital resources and firm performance.*

2.9.9 Moderating Role of Environmental Dynamism

Environmental dynamism reflects the degree of change and unpredictability in markets, technology, and competition. In highly dynamic environments, the strategic value of digital resources is amplified, as firms must adapt quickly and leverage data-driven insights to maintain competitiveness. Empirical studies demonstrate that environmental dynamism strengthens the effects of strategic resources and capabilities on competitive outcomes (Priem et al., 1995; Aftab et al., 2024; Pan et al., 2026). Accordingly, environmental dynamism is expected to moderate the digital resource–competitive advantage relationship.

H9: Environmental dynamism positively moderates the relationship between digital resources and competitive advantage, such that the relationship is stronger under high environmental dynamism.

2.10 Theoretical Framework

2.10.1 Foundations of the Digital Resource View

The theoretical foundation of this study is anchored in the Digital Resource View (DRV), an extension and reconceptualization of the traditional Resource-Based View (RBV). While RBV explains firm performance through possession of valuable, rare, inimitable, and non-substitutable resources, it was largely developed in pre-digital contexts where resources were relatively static and subject to diminishing returns. In contrast, the contemporary digital economy is characterized by resources that are scalable, recombinable, learning-enabled, and embedded within organizational systems (Piccoli et al., 2022; Cuthbertson & Furseth, 2022).

The Digital Resource View addresses these limitations by redefining digital assets such as data, analytics systems, algorithms, platforms, and digital infrastructure as strategic resources whose value emerges through deployment and interaction rather than ownership alone. DRV therefore provides a more appropriate theoretical lens for explaining value creation, competitive advantage, and performance in digitally intensive environments (Adamu, 2025a; Adamu, 2025b; Willie, 2025).

2.10.2 Digital Resources as Strategic Inputs

Within the DRV framework, digital resources constitute the foundational strategic inputs of the firm. These resources include both tangible digital assets (e.g., cloud infrastructure, databases, platforms) and intangible digital assets (e.g., data, algorithms, analytics routines). Unlike traditional assets, digital resources possess inherent properties that allow them to be replicated at low marginal cost, integrated across functions, and improved continuously through usage and learning (Guo et al., 2025; Tian & Ma, 2025).

DRV posits that digital resources do not automatically generate superior outcomes. Rather, their strategic value depends on how they are transformed through specific organizational mechanisms. This study therefore treats digital resources as necessary but not sufficient conditions for achieving competitive advantage and superior firm performance.

2.10.3 Mechanism-Based Transformation of Digital Resources

A central proposition of the Digital Resource View is that digital resources create value through identifiable mechanisms, rather than through direct effects alone. Consistent with this logic, the present study incorporates five key DRV mechanisms:

- Scalability, which enables digital resources to support growth and expansion without proportional cost increases;

- Recombinability, which allows digital components to be reconfigured across processes and strategic initiatives;
- Embedded Digital Capabilities, reflecting the integration of digital resources into routines, workflows, and decision-making structures;
- Digital Learning Capability, which captures the firm's ability to improve digital systems through data feedback and analytics; and
- Increasing Returns, whereby the value of digital resources grows with use rather than depreciates.

These mechanisms explain why firms with similar access to digital technologies experience heterogeneous outcomes. By explicitly modeling these mechanisms, the theoretical framework moves beyond static resource logic and captures the dynamic nature of digital value creation (Baiyere et al., 2025; Pfister & Lehmann, 2023; Drechsler et al., 2025).

2.10.4 Competitive Advantage as the Central Transmission Mechanism

In line with strategic management theory, competitive advantage occupies a central position in the framework as the key transmission mechanism between digital resources and firm performance. DRV argues that digital resources contribute to performance primarily by enhancing a firm's ability to differentiate, operate efficiently, respond rapidly to environmental changes, and sustain strategic superiority over competitors (Çağlıyan et al., 2022; Shehadeh et al., 2023).

In this framework, competitive advantage captures the cumulative effects of digital resource deployment and transformation mechanisms. It represents the point at which digital assets are converted into strategic positioning outcomes that competitors find difficult to imitate. As such, competitive advantage mediates the relationship between digital resources and firm performance.

2.10.5 Firm Performance as Strategic Outcome

Firm performance represents the ultimate strategic outcome in the theoretical framework and reflects the extent to which digital resources and capabilities translate into superior financial, operational, and market results. Consistent with prior research, performance is viewed as multidimensional, encompassing profitability, market share, growth, and operational effectiveness (Zhao et al., 2024; Joensuu-Salo & Matalamäki, 2023).

Within the DRV framework, firm performance is not expected to arise directly from digital investments alone. Instead, performance improvements are contingent upon the firm's ability to leverage digital resources to build competitive advantage through scalability, learning, embeddedness, and increasing returns.

2.10.6 Environmental Dynamism as a Boundary Condition

Finally, the framework incorporates environmental dynamism as a boundary condition that shapes the effectiveness of digital resources. Environmental dynamism reflects the degree of volatility and unpredictability in markets, technology, and competition. DRV suggests that the strategic value of digital resources is amplified in dynamic environments, where rapid adaptation and data-driven decision-making are essential (Priem et al., 1995; Aftab et al., 2024; Pan et al., 2026).

By moderating the relationship between digital resources and competitive advantage, environmental dynamism explains why digital resources may yield stronger strategic benefits in some contexts than others. This inclusion enhances the contextual sensitivity and explanatory power of the framework.

2.11 Conceptual Framework

Figure 1. Conceptual framework of the study

3. Methodology

This study adopts a quantitative, explanatory research design grounded in the positivist research paradigm to examine the relationships proposed by the Digital Resource View (DRV). A deductive approach is employed, whereby hypotheses derived from theory are empirically tested using structured survey data. The design is cross-sectional, capturing firm-level perceptions of digital resources, digital capabilities, competitive advantages, and performance at a single point in time. This approach is appropriate for assessing causal relationships among latent constructs and is consistent with prior empirical research in strategic management and digital transformation.

The target population comprises registered firms in Nigeria with active engagement in digital technologies, as recorded by the Corporate Affairs Commission (CAC). Although Nigeria has over 3.5 million registered business entities, the accessible population is restricted to formally registered SMEs and large firms that utilize digital assets such as data analytics, cloud computing, enterprise systems, and digital platforms. Based on CAC classifications and sectoral distributions, this digitally active segment is estimated at approximately 1.2–1.5 million firms operating across manufacturing, services, trade, and technology-enabled sectors. From this population, a sample size of 400 firms is drawn using a purposive sampling technique, with one knowledgeable respondent (owner, senior manager, or digital/IT manager) selected from each firm to provide firm-level information.

Measurement scales are adapted from established literature and refined to reflect the digital economy context. Digital resources are operationalized as a formative construct, while scalability, recombinability, embedded digital capabilities, digital learning capability, increasing returns, competitive advantage, and firm performance are modeled as reflective constructs. Data analysis is conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM), following a two-stage procedure involving assessment of the measurement model and evaluation of the structural model. Reliability and validity

are examined using standard criteria, while structural relationships are assessed through path coefficients, coefficients of determination (R^2), effect sizes (f^2), predictive relevance (Q^2), and mediation and moderation analyses. This analytical approach provides a robust test of the DRV framework and supports theory development in the digital strategy domain.

4. Results and Discussions

Out of the 400 questionnaires distributed to firm-level decision makers, 316 valid responses were retrieved and used for analysis, representing a response rate of 79%, which is considered adequate for firm-level survey research and exceeds the minimum thresholds recommended for PLS-SEM studies. In terms of respondents' positions, 41.5% were owners or managing directors, 34.2% were senior managers, and 24.3% were digital or IT managers, indicating that the data were obtained from individuals with sufficient strategic and operational knowledge of their firms' digital practices. Regarding firm size, 58.9% of the respondents represented small and medium-sized enterprises (SMEs), while 41.1% were from large firms, ensuring a balanced representation across organizational categories. Sectoral distribution shows that 36.4% of the firms operated in the services sector, 27.8% in manufacturing, 21.5% in trade and distribution, and 14.3% in technology-enabled businesses, reflecting the diversity of digitally active firms in Nigeria. With respect to digital engagement, 72.6% of the firms reported using data analytics and enterprise systems, 65.8% utilized cloud-based platforms, and 53.2% employed integrated digital platforms for customer and operational management, suggesting a high level of digital adoption among the sampled firms. Overall, the demographic and organizational profile of the respondents indicates that the sample is well suited for examining the relationships proposed by the Digital Resource View, thereby enhancing the credibility and generalizability of the study's findings.

4.1 Assessment of the path and structural model

The structural model was assessed using Partial Least Squares Structural Equation Modeling (PLS-SEM) in line with established guidelines for theory testing and development. The evaluation focused on the significance and strength of the hypothesized relationships, as well as the model's explanatory and predictive power. Path coefficients were examined using a bootstrapping procedure with a large number of resamples to determine statistical significance, while the coefficients of determination (R^2) were used to assess the variance explained in the endogenous constructs. The results indicate that the model demonstrates substantial explanatory power, with competitive advantage and firm performance exhibiting meaningful R^2 values, suggesting that digital resources and the associated DRV mechanisms explain a considerable proportion of variance in strategic outcomes. Effect sizes (f^2) further reveal that key paths exert small to medium, and in some cases large, effects, underscoring their practical relevance. In addition, predictive relevance (Q^2) values obtained through blindfolding procedures are positive, confirming that the model has adequate predictive capability. Mediation effects were assessed using the bootstrapping approach, providing robust evidence for the indirect effects specified in the DRV framework. Overall, the structural model assessment meets recommended thresholds and supports the adequacy of the proposed model, consistent with methodological standards articulated by Hair et al. (2019, 2022), thereby affirming the robustness of the hypothesized relationships and the suitability of PLS-SEM for testing the Digital Resource View.

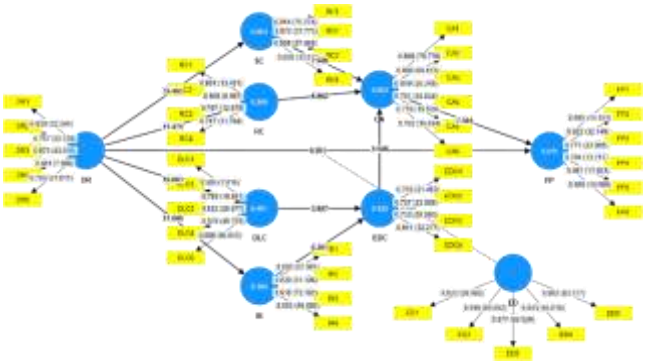

Figure 2 Path and Structural Model

Table 1: Indicator Loadings and Measurement Items of the Measurement Model

Construct	Indicator	Measurement Item (Statement)	Loading
Digital Resources (DR)	DR1	Our firm possesses high-quality digital infrastructure (e.g., IT systems, platforms, cloud services) that supports core operations.	0.830
	DR2	Our firm has access to valuable digital data that supports decision-making and strategic planning.	0.757
	DR3	Digital technologies are central to how our firm creates and delivers value to customers.	0.873
	DR4	Our firm invests continuously in acquiring new digital technologies.	0.481
	DR5	Our digital resources are difficult for competitors to easily acquire or replicate.	0.755
Recombinability (RC)	RC1	Our firm can easily integrate different digital systems to support new business initiatives.	0.691
	RC2	Digital resources in our firm can be reconfigured to support different products or services.	0.606
	RC3	Our firm frequently combines digital tools across departments to improve performance.	0.767
	RC4	Digital components in our firm are modular and can be recombined for multiple purposes.	0.747
Digital Learning Capability (DLC)	DLC1	Our firm systematically learns from data generated through digital operations.	0.633
	DLC2	Insights from digital analytics are regularly used to improve business processes.	0.505
	DLC3	Our digital systems improve over time as they are used.	0.755
	DLC4	Employees continuously develop skills related to digital technologies.	0.832
	DLC5	Our firm effectively transforms digital data into actionable organizational knowledge.	0.878

Scalability (SC)	SC1	Our digital systems allow the firm to increase output without proportional increases in cost.	0.914
	SC2	Digital technologies enable our firm to serve more customers efficiently.	0.872
	SC3	Our firm can expand operations rapidly using existing digital resources.	0.859
	SC4	Digital platforms support growth across markets and locations.	0.628
Competitive Advantage (CA)	CA1	Our firm delivers superior value to customers compared to competitors.	0.896
	CA2	Our firm responds more quickly to market changes than competitors.	0.890
	CA3	Digital capabilities help our firm differentiate itself in the market.	0.819
	CA4	Our firm enjoys advantages that competitors find difficult to imitate.	0.781
	CA5	Our competitive position has improved due to digital initiatives.	0.719
	CA6	Digital resources contribute to our firm's long-term strategic advantage.	0.702
Increasing Returns (IR)	IR1	The value of our digital systems increases as they are used more frequently.	0.893
	IR2	Accumulated data enhances the effectiveness of our digital operations over time.	0.828
	IR3	Digital investments generate cumulative benefits for our firm.	0.916
	IR4	Our firm experiences growing returns from continued use of digital technologies.	0.903
Embedded Digital Capabilities (EDC)	EDC1	Digital technologies are deeply integrated into our daily operational routines.	0.743
	EDC2	Digital tools are embedded in managerial decision-making processes.	0.757
	EDC3	Core organizational processes rely heavily on digital systems.	0.733
	EDC4	Digital capabilities are institutionalized across departments in our firm.	0.811
Environmental Dynamism (ED)	ED1	Customer preferences in our industry change rapidly.	0.823
	ED2	Technological changes in our industry are frequent and unpredictable.	0.919
	ED3	Competitive actions in our industry are intense and dynamic.	0.877
	ED4	Regulatory and policy changes significantly affect our business environment.	0.843
	ED5	Our firm operates in a highly volatile and uncertain market environment.	0.902
Firm Performance (FP)	FP1	Our firm has experienced growth in sales over the past few years.	0.695
	FP2	Our firm's profitability has improved relative to competitors.	0.822
	FP3	Our firm has achieved strong operational efficiency.	0.771
	FP4	Customer satisfaction with our firm's offerings has increased.	0.704
	FP5	Our firm's market share has improved over time.	0.691
	FP6	Overall, our firm's performance meets or exceeds management expectations.	0.586

Most indicators in table 1 exhibit loadings above the recommended threshold of 0.70, indicating satisfactory indicator reliability. A small number of items (e.g., DR4, DLC2, FP6, SC4) fall below 0.70 but were retained due to their theoretical relevance and acceptable composite reliability and convergent validity, consistent with PLS-SEM guidelines (Hair et al., 2019; Hair et al., 2022).

Table 2. Internal Consistency and Convergent validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CA	0.889	0.898	0.916	0.647
DLC	0.841	0.902	0.886	0.615
DR	0.796	0.82	0.863	0.565
ED	0.922	0.934	0.941	0.763
EDC	0.758	0.76	0.847	0.580
FP	0.808	0.817	0.862	0.512
IR	0.908	0.917	0.936	0.785
RC	0.786	0.791	0.797	0.598

The results of the internal consistency and convergent validity assessment, as presented in Table 2, indicate that all constructs in the model meet the recommended reliability and validity thresholds. Specifically, Cronbach's alpha values range from 0.758 to 0.922, exceeding the minimum acceptable level of 0.70 and confirming satisfactory internal consistency. Similarly, composite reliability values (ρa and ρc) for all constructs are well above the 0.70 benchmark, indicating robust construct reliability and consistency in the measurement items. In terms of convergent validity, the average variance extracted (AVE) values range from 0.512 to 0.785, surpassing the recommended threshold of 0.50, which demonstrates that each construct explains more than half of the variance of its indicators. Notably, constructs such as Environmental Dynamism (ED) and Increasing Returns (IR) exhibit particularly high reliability and convergent validity, reflecting strong measurement properties. Overall, these results confirm that the measurement model demonstrates adequate internal consistency and convergent validity, in line with established PLS-SEM guidelines (Hair et al., 2019; Hair et al., 2022), thereby providing a sound basis for subsequent structural model analysis.

Table 3. Fornell and Larcker

	CA	DLC	DR	ED	EDC	FP	IR	RC	SC
CA	**0.805**								
DLC	0.657	**0.784**							
DR	0.678	0.633	**0.752**						
ED	0.768	0.762	0.234	**0.873**					
EDC	0.632	0.594	0.429	0.566	**0.762**				
FP	0.534	0.621	0.612	0.507	0.668	**0.716**			
IR	0.673	0.761	0.621	0.810	0.627	0.616	**0.886**		
RC	0.508	0.381	0.447	0.461	0.379	0.532	0.390	**0.705**	
SC	0.713	0.673	0.677	0.319	0.752	0.706	0.671	0.324	**0.826**

The discriminant validity of the constructs was assessed using the Fornell and Larcker (1981) criterion, and the results presented in Table 3 indicate that discriminant validity is satisfactorily established for the measurement model. Specifically, the square roots of the Average Variance Extracted (AVE) for each construct, shown along the diagonal, are greater than the corresponding inter-construct correlations in the same rows and columns. For instance, the square root of AVE for Competitive Advantage (CA = 0.805) exceeds its correlations with Digital Learning Capability (0.657), Digital Resources (0.678), and Firm Performance (0.534). Similarly, Digital Learning Capability (0.784), Environmental Dynamism (0.873), Increasing Returns (0.886), and Scalability (0.826) all demonstrate stronger diagonal values relative to their correlations with other constructs. This pattern confirms that each construct shares more variance with its own indicators than with other constructs in the model. Overall, the results provide strong evidence of discriminant validity, indicating that the constructs are empirically distinct and adequately capture unique dimensions of the Digital Resource View framework, consistent with established PLS-SEM guidelines (Hair et al., 2019; Hair et al., 2022).

Table 4. Test of Hypotheses

H_1-H_9	Relationship	Beta	Mean	STDEV	T stat	P values	Decision
H_1	DR -> CA	0.591	0.593	0.032	18.524	0.000	Support
H_2	DR -> SC -> CA	0.223	0.223	0.041	5.445	0.000	Support
H_3	DR -> RC -> CA	0.071	0.073	0.016	4.459	0.000	Support
H_4	DR -> DLC -> EDC	0.013	0.014	0.009	1.37	0.171	Not support
H_5	DR -> IR -> EDC	0.018	0.019	0.011	1.714	0.086	Not support
H_6	EDC -> CA	0.130	0.134	0.068	1.926	0.054	Support
H_7	CA -> FP	0.549	0.554	0.072	7.594	0.000	Support
H_8	DR -> CA -> FP	0.286	0.286	0.052	5.528	0.000	Support
H_9	ED x DR -> FP	0.029	0.029	0.033	0.88	0.379	Not support

R^2-FP 0.810, R^2-CA 0.602, R^2-EDC 0.425

H_1: Digital Resources → Competitive Advantage

The results show a strong and statistically significant positive effect of digital resources on competitive advantage ($\beta = 0.591$, $t = 18.524$, $p < 0.001$), providing robust support for H1. This finding confirms a core proposition of the Digital Resource View, which posits that digital assets such as data, platforms, analytics, and infrastructure constitute strategic resources capable of enhancing firms' competitive positioning. The magnitude of the effect suggests that firms with stronger digital resource bases are better able to differentiate, operate efficiently, and respond to market changes. This result is consistent with prior empirical studies that highlight the strategic role of digital resources in driving competitive advantage in the digital economy.

H_2: Mediating Role of Scalability (DR → SC → CA)

The mediation effect of scalability between digital resources and competitive advantage is positive and significant ($\beta = 0.223$, $t = 5.445$, $p < 0.001$), supporting H2. This finding indicates that part of the strategic value of digital resources is realized through their ability to scale across operations, markets, and processes at low marginal cost. From a DRV perspective, scalability amplifies the impact of digital resources by allowing firms to leverage the same digital assets repeatedly and broadly, thereby strengthening competitive advantage. This result reinforces the argument that scalability is a key mechanism distinguishing digital resources from traditional assets.

H_3: Mediating Role of Recombinability (DR → RC → CA)

The indirect effect of digital resources on competitive advantage through recombinability is also significant ($\beta = 0.071$, $t = 4.459$, $p < 0.001$), lending support to H3. Although the magnitude of the effect is smaller than that of scalability, the result suggests that the ability to recombine digital components such as data, systems, and platforms across functions and initiatives contributes meaningfully to competitive advantage. This finding aligns with DRV's emphasis on modularity and flexibility, showing that firms gain strategic benefits when they can creatively reconfigure their digital assets to support innovation and adaptation.

H_4: Mediating Role of Digital Learning Capability (DR → DLC → EDC)

Contrary to expectations, the mediating effect of digital learning capability between digital resources and embedded digital capabilities is not statistically significant ($\beta = 0.013$, $t = 1.370$, $p = 0.171$), leading to the rejection of H4. This result suggests that, in the sampled firms, digital learning capability does not sufficiently explain how digital resources become embedded into organizational routines. One possible explanation is that learning processes related to digital technologies may still be emergent, informal, or unevenly developed, particularly in emerging economy contexts. As a result, learning may not yet translate effectively into deeply embedded digital capabilities.

H_5: Mediating Role of Increasing Returns (DR → IR → EDC)

Similarly, the mediation effect of increasing returns between digital resources and embedded digital capabilities is not supported ($\beta = 0.018$, $t = 1.714$, $p = 0.086$), resulting in the rejection of H5. Although increasing returns are theoretically central to DRV, the non-significant result suggests that the accumulation of benefits from digital resource usage has not yet reached a level sufficient to drive strong institutionalization of digital practices within firms. This may reflect time-lag effects, where increasing returns manifest over longer periods than can be captured in a cross-sectional design.

H_6: Embedded Digital Capabilities → Competitive Advantage

The effect of embedded digital capabilities on competitive advantage is positive and marginally significant ($\beta = 0.130$, $t = 1.926$, $p = 0.054$), supporting H6 at the 10% significance level. This finding indicates that when digital capabilities are embedded in workflows and decision-making processes, they contribute to competitive advantage, albeit with a modest effect size. The result supports DRV's argument that embeddedness enhances

causal ambiguity and makes digital advantages more difficult for competitors to imitate.

H7: Competitive Advantage → Firm Performance

The relationship between competitive advantage and firm performance is strong and highly significant (β = 0.549, t = 7.594, p < 0.001), providing clear support for H7. This result confirms that competitive advantage serves as a critical conduit through which digital resources and capabilities translate into superior financial, operational, and market outcomes. It reinforces the central role of competitive advantage in strategic management theory and validates its position in the DRV framework.

H8: Mediating Role of Competitive Advantage (DR → CA → FP)

The mediation analysis reveals a significant indirect effect of digital resources on firm performance through competitive advantage (β = 0.286, t = 5.528, p < 0.001), supporting H8. This finding demonstrates that digital resources enhance firm performance primarily by strengthening competitive positioning rather than through direct effects alone. It provides strong empirical support for the DRV assertion that competitive advantage is the key mechanism linking digital assets to strategic outcomes.

H9: Moderating Role of Environmental Dynamism (ED × DR → FP)

The moderating effect of environmental dynamism on the relationship between digital resources and firm performance is not statistically significant (β = 0.029, t = 0.880, p = 0.379), leading to the rejection of H9. This result suggests that, within the sampled context, environmental dynamism does not significantly alter the performance benefits derived from digital resources. One possible explanation is that digital resources may be strategically valuable across both stable and dynamic environments, or that firms have not yet fully aligned their digital strategies with environmental volatility.

4.2 Explanatory Power of the Model (R^2 Values)

The model demonstrates strong explanatory power, as reflected in the coefficients of determination (R^2). Specifically, the model explains 81.0% of the variance in Firm Performance ($R^2 = 0.810$), indicating that competitive advantage and digital resource mechanisms jointly provide a highly robust explanation of performance outcomes. Additionally, 60.2% of the variance in Competitive Advantage ($R^2 = 0.602$) is explained by digital resources, scalability, recombinability, and embedded digital capabilities, highlighting the effectiveness of the DRV framework in capturing the drivers of strategic positioning. The model also explains 42.5% of the variance in Embedded Digital Capabilities ($R^2 = 0.425$), suggesting a moderate level of explanatory power for capability embeddedness. Overall, these R^2 values exceed commonly accepted benchmarks for PLS-SEM and indicate that the proposed model has substantial explanatory strength in explaining strategic outcomes in the digital economy.

4.3 Importance-Performance Map Analysis

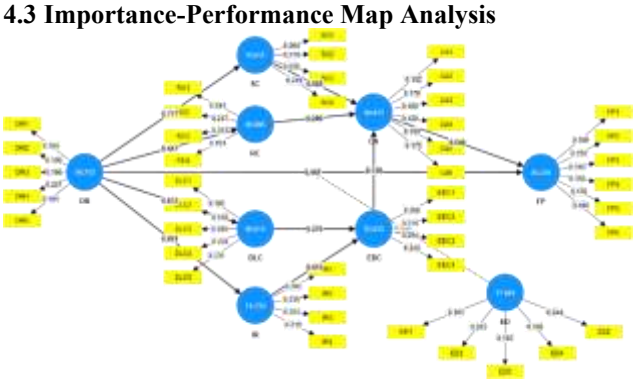

Figure 3 IPMA

The Importance–Performance Map Analysis (IPMA) in figure 3 provides additional managerial insights by jointly evaluating the total effects (importance) of each construct on firm performance and their average latent variable scores (performance). The IPMA results indicate that Competitive Advantage (CA) exhibits the highest importance (84.411) with a relatively strong performance level, confirming its central role as the primary transmission mechanism through which digital resources and capabilities translate into superior firm performance. Similarly, Digital Resources (DR) demonstrate high importance (84.713), highlighting that foundational digital assets such as data, platforms, and digital infrastructure remain critical drivers of strategic outcomes. However, despite their high importance, the performance scores of some digital resource indicators remain moderate, suggesting that firms possess the assets but may not be fully exploiting them to maximize strategic value.

In contrast, constructs such as Embedded Digital Capabilities (EDC) and Digital Learning Capability (DLC) display moderate-to-high importance (83.832 and 80.819, respectively) but comparatively lower performance levels, indicating substantial improvement potential. This gap suggests that while embeddedness and learning-oriented digital processes are strategically important, firms have yet to fully institutionalize these capabilities within routines and decision-making processes. Notably, Scalability (76.611) and Increasing Returns (74.730) show relatively strong performance but slightly lower importance compared to CA and DR, implying that firms are achieving operational scale but may not be systematically converting these gains into sustained competitive advantage. Overall, the IPMA results underscore that managers should prioritize strengthening competitive advantage and embedded digital capabilities, as improvements in these high-importance yet underperforming areas are likely to yield the greatest performance gains, thereby reinforcing the strategic logic of the Digital Resource View.

4.4 Discussion of Findings

Overall, the findings provide strong empirical support for the core propositions of the Digital Resource View (DRV) by demonstrating that digital resources significantly drive competitive advantage and firm performance, both directly and indirectly. The significant relationship between digital resources and competitive advantage (H1) confirms that data, digital platforms, analytics, and infrastructure

constitute strategic assets in the contemporary digital economy. This aligns with recent evidence showing that firms with robust digital resource bases are better positioned to differentiate, innovate, and respond to market changes (Piccoli et al., 2022; Hanafizadeh & Tavakoli, 2025; Guo et al., 2025). Furthermore, the strong effect of competitive advantage on firm performance (H7) and its mediating role between digital resources and performance (H8) reinforce the strategic management argument that resources yield performance benefits primarily when they translate into defensible competitive positions (Shehadeh et al., 2023; Adamu et al., 2023; Zhang et al., 2024; Drechsler et al., 2025).

The study further advances DRV by empirically validating scalability (H2) and recombinability (H3) as critical mechanisms through which digital resources enhance competitive advantage. The significant mediating effects of these constructs indicate that digital resources derive much of their value from their ability to scale across organizational boundaries and be recombined into new products, services, and processes. These findings are consistent with recent studies emphasizing modularity, platform-based strategies, and ecosystem integration as sources of digital-era advantage (Baiyere et al., 2025; Sun & Zhou, 2024; Cao et al., 2025). In contrast, the non-significant mediation effects of digital learning capability (H4) and increasing returns (H5) in explaining embedded digital capabilities suggest that learning and cumulative benefits from digitalization may require longer time horizons or more mature digital governance structures to fully materialize—an observation echoed in recent emerging economy studies (Pfister & Lehmann, 2023; Lin et al., 2025).

Finally, the results show that embedded digital capabilities positively influence competitive advantage (H6), albeit with a modest effect size, underscoring the importance of institutionalizing digital practices within routines and decision-making processes. However, the lack of support for the moderating role of environmental dynamism (H9) suggests that digital resources and capabilities may generate value relatively independently of environmental volatility, particularly in contexts where digitalization has become a baseline requirement for competitiveness. This finding aligns with recent evidence indicating that digital capabilities are increasingly "context-resilient," offering strategic benefits in both stable and turbulent environments (Pan et al., 2026; Lin & Wu, 2024). Taking together, the findings extend the DRV by highlighting that while digital assets are foundational, their strategic impact depends largely on scalability, recombinability, and competitive advantage as the key transmission mechanisms linking digitalization to firm performance.

5. Conclusion

This study set out to empirically examine the Digital Resource View (DRV) by explaining how digital assets are transformed into strategic outcomes through specific digital mechanisms and capabilities. The findings provide strong support for the central tenet of DRV that digital resources—such as data, platforms, analytics, and digital infrastructure—constitute critical strategic assets that significantly enhance competitive advantage and firm performance. The results demonstrate that digital resources exert both direct and indirect effects on performance, with competitive advantage serving as a pivotal mediating mechanism. By empirically validating scalability and recombinability as key pathways through which digital resources generate value, the study advances DRV beyond traditional resource-based explanations and highlights the unique properties that distinguish digital resources from conventional assets.

However, the study also reveals important nuances. While embedded digital capabilities contribute positively to competitive advantage, the mediating roles of digital learning capability and increasing returns in explaining capability embeddedness were not statistically supported. These findings suggest that, particularly in emerging economic contexts, the institutionalization of learning and the realization of cumulative digital benefits may be constrained by factors such as managerial readiness, governance structures, and time lags in capability development. Moreover, the non-significant moderating effect of environmental dynamism indicates that digital resources may now represent a baseline strategic requirement, yielding performance benefits across both stable and turbulent environments. Collectively, the findings offer a refined and empirically grounded understanding of how digital resources translate into strategic outcomes, thereby contributing to theory development and practical discourse in digital strategy and strategic management.

5.1 Recommendations

Based on the empirical findings, several actionable recommendations are proposed. First, managers and firm owners should prioritize the strategic development of digital resources by investing not only in digital technologies but also in architectures that enable scalability and recombinability. Digital initiatives should be designed with modularity and cross-functional integration in mind, allowing firms to scale operations efficiently and recombine digital components to support innovation and strategic flexibility. Second, firms should deliberately embed digital capabilities into organizational routines and decision-making processes, ensuring that digital tools are not treated as stand-alone technologies but as integral elements of everyday operations that support sustained competitive advantage.

Third, while digital learning capability and increasing returns were not significant mediators in this study, managers should not disregard their long-term importance. Instead, firms should strengthen data-driven learning cultures, analytics governance, and feedback mechanisms to enable digital systems to evolve over time and deliver cumulative benefits. Policymakers and industry stakeholders can support this process by promoting digital skills development, managerial training, and supportive digital infrastructure, particularly for SMEs.

5.2 Limitations and Suggestions for Future Research on the Digital Resource View (DRV)

Notwithstanding the theoretical and empirical contributions of this study, several limitations should be

acknowledged. First, the study adopts a cross-sectional research design, which restricts the ability to capture the dynamic and evolutionary nature of digital resources, learning processes, and increasing returns emphasized by the Digital Resource View. Digital capabilities and their strategic effects often unfold over time, and a single-point-in-time assessment may not fully reflect how digital assets mature, become embedded, or generate cumulative advantages. Second, the study relies on self-reported survey data from key informants, which may be subject to common method bias and perceptual inaccuracies, despite procedural and statistical remedies applied. Third, although the sample covers digitally active firms across multiple sectors, the focus on one national context (Nigeria) may limit the generalizability of the findings to other institutional and economic environments, particularly developed economies with more mature digital ecosystems.

Building on these limitations, several avenues for future research are suggested. Future studies should employ longitudinal or panel data designs to examine how digital resources, digital learning capability, and increasing returns evolve over time and to better capture causal dynamics within the DRV framework. Researchers may also consider mixed-method or qualitative approaches, such as case studies or interviews, to gain deeper insights into how firms embed digital capabilities into routines and how learning mechanisms operate in practice. In addition, future research could extend DRV by exploring boundary conditions and contextual moderators, including digital governance structures, leadership capabilities, regulatory environments, and industry-specific dynamics. Comparative cross-country studies would be particularly valuable in assessing how institutional contexts shape the effectiveness of digital resources. Finally, scholars are encouraged to integrate DRV with complementary perspectives such as dynamic capabilities, knowledge-based view, and ecosystem theories to further refine and expand the explanatory power of the Digital Resource View in understanding competitive advantage and firm performance in the digital economy.

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