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Digital Competence and Sustainable Development of Museums: A Literature Review

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Abstract: ***This systematic review investigates how digital capabilities influence sustainability in museums, drawing on 273 articles from Web of Science (2000-2024). The findings highlight that digital tools boost economic efficiency, minimize environmental impact, and enrich social engagement. Critical mechanisms driving these outcomes include managerial innovations and resource integration, underpinned by theories such as firm capability, resource-based view, and organizational innovation. Despite these insights, research gaps remain, particularly regarding smaller, county-level museums, long-term sustainability effects, and visitor experiences. The review underscores the importance of strategic digital adoption, especially for resource-limited institutions, to enhance sustainability across economic, environmental, and social dimensions. It recommends that future studies prioritize these underexplored areas to deepen understanding and support the museum sector's evolution.***

Keywords: Digital Capabilities; Sustainability; Museums; Performance Evaluation.

1. INTRODUCTION

Museums are very critical establishments in preserving cultural heritage and educating the masses. They face problems achieving sustainability in economic, environmental, and social aspects. Some economic issues include fund acquisition and visitor attraction on one hand, interconnecting with environmental issues such as carbon footprint and resource exploitation, and social requirements to keep the museums relevant and accessible. In this respect, digital capabilities, known as the use of digital technologies in museum operations, administration, and public engagement, create a transformational approach to addressing these multidimensional concerns. Technologically based operational, ecological, and social diffusion will help museums to improve their efficiency besides serving the community.

In this article, we conduct a systematic literature review to unpack the relationship between digital capabilities and sustainability performance of museums. Drawing from 273 articles sourced from the Web of Science database, this review details the conceptualization of the digital capability construct, reviews main key sustainability indicators, and synthesizes empirics showing how digital technologies advance economic viability, environmental stewardship, and social engagement. The paper discusses the theoretical frameworks that inform this relationship and, based on that discussion, spots critical research gaps, most notably the nascent focus on county-level, smaller museums.

The paper will first brief the methodology on literature selection, followed by an exploration of the definition and dimensions of digital capability in museums and a discussion of sustainability performance indicators and the methods used in their evaluation. The paper will then provide and discuss empirics on the impact of digital capabilities on sustainability followed by an elaborate discussion on the mechanisms through which this relationship is fostered, with a discussion of relevant theoretical views. It concludes with a reiteration of the main findings and recommendations for future research based on the need to look into relatively unexplored issues that factor in the challenges faced by county museums, particularly in a case such as Shaanxi, China. By synthesizing existing knowledge gaps, this review sets out an orientation for future research work, helping to guide museum practitioners using digital technologies to attain goals of sustainable development.

2. LITERATURE SEARCH AND SELECTION

The research conducted a literature search through the Web of Science (WoS) database to ensure the authoritative

and systematic nature of the literature review. During the search process, keywords related to the research topic were used, including "digital capability," "museum," "sustainability," etc., with a time range set from 2000 to 2024. The initial search yielded approximately 486 articles, which after screening, resulted in 273 articles included in the review. Through literature analysis, the keyword co-occurrence is shown in Figure 1.

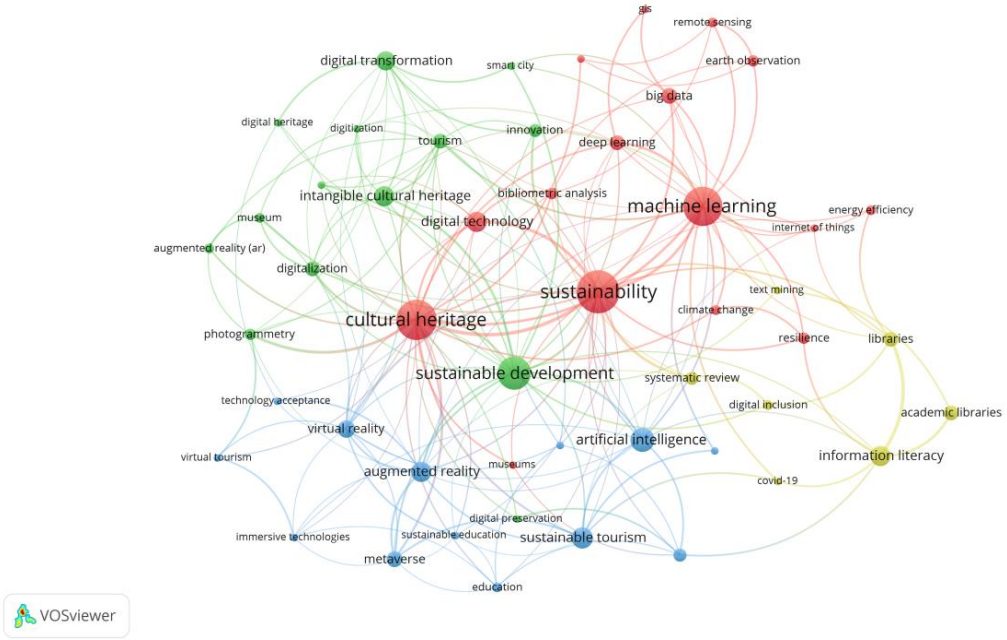

Figure 1: Keyword co-occurrence

The keyword co-occurrence network reveals a multidisciplinary research landscape, where sustainability (32 occurrences, link strength 25) and cultural heritage (29 occurrences, link strength 26) are closely connected, forming a core thematic cluster, and associated with keywords such as sustainable development (22 occurrences, link strength 17) and sustainable tourism (12 occurrences, link strength 8), reflecting the importance of sustainability in cultural asset preservation and management. The prominence of technology-related clusters such as machine learning (28 occurrences, link strength 19), virtual reality (9 occurrences, link strength 9), and digital transformation (10 occurrences, link strength 6) aligns with the literature review's discussion of how digital tools can optimize resource use, reduce costs, and expand public engagement with museums. Although museum (4 occurrences) and museums (3 occurrences) appear with relatively low frequency in the network, their presence indicates that museums are part of this technology-driven sustainability discourse. Additionally, emerging themes in the analysis such as virtual tourism and immersive technologies suggest that museums can achieve sustainable audience interaction through innovative approaches. However, the low frequency of museum-related keywords echoes the research gaps identified in the literature review, particularly the lack of in-depth research on county-level museums, indicating a future need to further explore how these technologies can be adapted to the unique requirements of smaller museums.

3. DEFINITION AND DIMENSIONS OF DIGITAL CAPABILITY IN MUSEUMS

3.1 Definition of Digital Capability in Museums

Digital capabilities of museums denote the systemic reading of root integration, enhancement efficiency, and creative advancement workers through the methodical application of digital technology. It means the true potential of the museum to deploy tools and digital methodologies toward strategic objectives, such as preservation and diffusion of cultural heritage, concerned with public education and enhancing operational efficiency. The ad hoc implementation of digital tools cannot realize this capability; only such tools implemented so as to eventually become part and parcel of the management, operational, and delivery mechanisms of services of the museum can support and enhance its general mission and long-term viability.

This definition is congruent with a much more general trend within the literature in which digital capability is cast as a transformational force within cultural institutions. As an example, Hu Jin and Liu Tengfei (2025) put particular weight on the contribution of digital technology to the construction of a system of science and education

exhibitions, in its promise to expand the frontiers within which a museum applies itself [1]. Along the same lines, Shen Xiao and Tian Le (2025) lay their focus on the innovative potential of digital capability, through the integration of digital exhibitions within cultural and technological fusion [2]. At its core, digital capability is the historical embrace of technology not only towards the retention of the past but also in relationships with immediate audiences and positions for the future.

3.2 Dimensions of Digital Capability in Museums

The digital capacity of museums can be divided into three interacting dimensions, each capturing an important aspect of the way digital technologies are applied and managed within a museum. These dimensions are the Technology Foundation Layer, the Management Application Layer, and the Innovation Diffusion Layer, together constituting a solid construct that allows for the nuanced understanding and enhancement of the digital capacity of a museum.

3.2.1 Technology Foundation Layer

This dimension covers the setup and management of the lagging infrastructure on which the digital operations of a museum are undertaken. It involves the installation of intelligent perception terminals, environmental monitoring sensors, and interactive display systems based on various software and hardware integration systems. The ability of the Technology Foundation Layer to host the requisite technological implements and ensure that they are best utilized is what other digital initiatives depend upon. For instance, the paper by Ning Zhe (2024) speaks to the utilization of IoT technology for electricity safety management at the Northwest University Museum, and it explains how foundational technologies provide support for operational reliability [3]. Museums need a strong technological base to back up more advanced digital strategies.

3.2.2 Management Application Layer

It is the use of digital technologies in the management and operational processes within the museum. This entails the use of any forms of digital tools, e.g., in the management of collections, visitor analytics, or resource allocation. The Management Application Layer is meant to make operations smoother, to make decisions better, and to enhance the efficiency of the whole organization. This dimension is exemplified by how digital tools optimize internal processes in the data management of digital asset management within the National Museum of China, as described by Yang Chao and Li Lan (2020) [4]. Museums could then return the favor by increasing sustainability when resources could be well managed and they answer well to all forms of operational challenges.

3.2.3 Innovation Diffusion Layer

This dimension is about the capacity of the museum to innovate and diffuse digital knowledge and practices. This includes activities occurring both inside the museum, among staff and collections, and those extended to external stakeholders. The creation of new digital services, digital content creation, and the use of digital platforms in audience engagement adds up to this dimension. Indeed, this is the Innovation Diffusion Layer, so important for keeping museums abreast, and also on the front foot, in the fast-changing digital landscape. Li Xinyan and Wei Ling (2024) echo this in their work on digital exhibits featuring ancient bronze drum culture in Guangxi because these innovative exhibits better engage their audiences [5]. Wu Meng (2024) descants on knowledge augmentation at the Dagaoxuan Temple Digital Museum to underline the role of innovation in digital cultural dissemination [6]. This layer guarantees that museums not only take up technology but also work toward exploiting its full potential to enhance their missions.

Each of these three dimensions is a part of the web of interconnections that comes together to develop the wholeness of digital capabilities. The Technology Foundation Layer builds infrastructure, the Management Application Layer uses this practically, and the Innovation Diffusion Layer applies great influence outward—all three together help the capability of museums to sustain cultural heritage, deliver public education, and remain sustainable in the digital age. This has received support in empirical studies. For example, Gao Zheng argued that AI along with digital technologies can enable high-quality museum development (2024) [7], while Liu J emphasized digital cultural creation as a means to empower the living protection of cultural relics (2024) [8].

4. PERFORMANCE EVALUATION FOR SUSTAINABILITY IN MUSEUMS

4.1 Key Performance Indicators of Sustainable Development

The economic dimension of sustainability in museums is their capacity to generate and spend adequate funds in the short and long-term. This is an aggregate indicator measuring the potential of museums to sustain development over the long term.

4.1.1 Economic Performance

Economic sustainability revolves around the capacity of a museum to generate and lead financial operations. Direct income is raised from ticket sales, membership, and selling cultural products, whereas indirect includes placing the community on tourism. For example, the museums have depended on income from the tickets but innovative marketing shall help diversify the finding especially when prices are reduced for the wider access. Cultural products that were designed with sustainably also add a very high percentage to the revenue. In the other positive way, museums trigger economic activities in their own localities because they attract visitors who benefit the hospitality sector and trigger even regional innovation. Evidently, research reflects this influence in the economic activities of the National Museum of Egyptian Civilization.

4.1.2 Environmental Performance

Sustainability from an environmental standpoint is to reduce the environmental impact of operations. In a new, emerging trend, museums are increasingly installing energy-efficient technologies like LED lighting and HVAC systems that optimize energy use [13]. Museums also incorporate water-conservation measures with a "zero-waste" policy, which would decrease operating costs and align with global environmental goals [14]. Research on museums in China has drawn a lot of attention to the tendency of increasingly installing such energy-saving measures [15]. While all such measures duly lower greenhouse gas emissions, it is also fair to address museums as leaders of resource efficiency and environmental stewardship.

4.1.3 Social Performance

The social dimension reflects the function of the museum in the preservation of cultural heritage, education, and community involvement. The programs of the museum reach heterogeneous factions to further increase knowledge of cultures [16]. For instance, exhibitions and events can enlighten the public about matters of culture and history; hence they have public interest [17]. Study tours and innovative programs add to the social value through accessibility [18]. The research confirms the museums to be the main educational resources especially in matters concerning the visual arts [19]. This dimension underlines their contribution to cultural continuity and public comprehension of sustainable issues.

They are economic, environmental, and social indicators, which are interrelated. Profit increases make investments in environmental activities possible and the strong social activity within the precinct drives visitation and revenue, thus making sustainability possible.

4.2 Assessment Methods and Tools

4.2.1 Financial Indicators

Tracking financial outcomes is revenue growth, cost savings, and most notably, return on investment. Typically, museums compare income from tickets, memberships, and product sales with the costs involved in operations. Though in the example of energy-saving projects, intervening would simply mean monitoring reduced utility expenses, no further action should be taken in the mere mentions of digital exhibitions saving physical resource use and expanding audiences [20]. Financial modeling, therefore, proves able to predict long-term benefits of sustainability initiatives, certainly a field of practice supported by museum management studies [21].

4.2.2 Carbon Footprint Analysis

Carbon footprint analysis is used to determine the environmental impacts of museums through quantification of greenhouse gas emissions from energy use, transport, and waste associated with museum activities. Tools such as carbon calculators have been and are still being used by museums to monitor their emissions as well as assess interventions. For example, the study of green building practices at Jin Museum, China, helps to specify

carbon-reduction strategies that work effectively. Such an analysis would help the museums to develop and implement environmental goals.

4.2.3 Social Impact Assessments

Social performance can be measured quantitatively – for example, by counting the number of visitors or by studying the perception (satisfaction surveys); or qualitatively, through tools such as interviews or focus group discussions. Such forms of measurement gauge both the reach and impact of educational programs as well as community engagements [24]. While qualitative data sheds light on how museums maintain heritage and community connections, digital analytics enable tracking rising online engagements [26]. Research into visitor behavior, as well as digital tools, reinforces the need for such evaluations [27].

The financial indicators, the carbon footprint analysis, and the social impact assessments offer museums strong tools to judge and improve their performance sustainability, matching economic, environmental, and social goals.

5. THE RELATIONSHIP BETWEEN DIGITAL CAPABILITIES AND SUSTAINABILITY PERFORMANCE IN MUSEUMS

Digital capabilities are core to the sustainability that museums can achieve across economic, environmental, and social dimensions. Therefore, this section provides an analysis of empirical proof regarding how digital capabilities influence sustainability performance and the mediators through which it does, such as managerial innovations and resource integration.

5.1 Empirical Evidence on the Impact of Digital Capabilities

The empirical evidence so far indicates that digital capabilities play a transformational role in fostering sustainability performance in museums. The benefits are very conspicuous in terms of economic, environmental, and social outcomes.

5.1.1 Economic Performance

Economic performance, in other words, is the result of the economic activity in the country. It is measured using the change in GDP. The other way of measuring an economy's performance is by looking at the level of GDP. Reaching a high level of GDP means that a country is producing enough to meet the needs of its citizens.

Digitization drives economic survival by cheapening operations while adding new outlets for income. Practices such as virtual exhibitions and online ticket sales save on cost while at the same time broadening access to the market, such that both visitation and revenue are increased. For instance, the study by Dong et al. (2022) found that data-driven management improves efficiency in resource allocations hence leading up to substantial cost savings. Digital marketing strengthens the role played by diversity in reaching more people and increasing the financial sustainable capacity of museums. This finding reveals a larger body of work on transforming digital representations and indicating that the availability and use of digital capabilities produce cost savings and diversification of revenue sources [28].

5.1.2 Environmental Performance

In terms of environment, digital capabilities aid museums in reducing resource use and carbon emission. As such, there is no need for physical mobility in the museums' carbon footprints from transportation of visitors. A study of Green IT in cultural institutions revealed that technologies such as energy-efficient data storage and cloud computing lower energy consumption in cultural organizations. Another option that reduces energy consumption includes digitalized environment qualities of the exhibition space; such was found in green museum building designs as well. It contributes to the reduction of emissions in the long run as it relates to sustainability at large.

5.1.3 Social Performance

Improved digital accessibility, advanced learning, and community engagement become the driver of social sustainability. Since it is more about accessible content, even in the context of museum contents to social groups around the globe, more inclusive practice is manifested. Surveys showed that more responsive digital services

increase visitor satisfaction and education results. Meanwhile, technology helps open responsive ways of bringing the community into the sphere of cultural preservation, such as crowdsourcing campaigns to digitize different forms of collections. Capability reframes the imperative roles of the museum as a place for social interaction and education.

This, in fact, thus, in particular, therefore valid for certain, explicit proof confirmed decisions of studies — is the collective affirmation to the positive influence of digital capabilities on sustainability performance in the forms of increasing efficiency leading to social engagement and environmental impact reduction.

5.2 Mechanisms Influencing the Relationship

The relationship between digital capabilities and sustainability performance can critically be expressed by underpinning mechanisms: managerial innovations as well as resource integration that increase the effectiveness of investments in digital artifacts for museums.

5.2.1 Managerial Innovations

Managerial innovations, such as adopting new digital management practices, are pivotal in leveraging digital capabilities for sustainability. For instance, using data analytics to analyze visitor behavior allows museums to design exhibitions that boost engagement, encouraging repeat visits and enhancing social sustainability. Research by Vaccro (2013) and others underscores that digital tools enable process optimization and workflow redesign, improving operational efficiency [29, 30]. Furthermore, exploratory innovations—like creating novel digital service models—enhance museums' adaptability, supporting both economic and social outcomes [31]. These innovations ensure digital capabilities are effectively embedded into museum operations.

5.2.2 Resource Integration

Another critical mechanism is resource integration whereby digital tools are aligning with human expertise. The museums, in this case, will be capable of aligning their digital processes with staff skills. The latter will optimize their internal processes and enhance their external services. For instance, digital asset management will streamline collection management, freeing staff to develop other educational and creative initiatives. Studies on digital transformation in cultural institutions affirm that integrated resources maximize the value of investments in digital technologies with improved sustainability performance [32].

Furthermore, collaborative efforts—digital archiving projects with community partners—also extend the reach and impact of the museum [33].

5.3 Research Gaps and Future Directions

5.3.1 Lack of Empirical Studies on County Museums

What is striking is the gap in the literature concerning a lack of empirical research focusing on museums at the county level. Most of the previous studies are on the operation of large and better-funded institutions, and the specific problems of resource-poor museums, particularly those of a smaller scale, are often overlooked. For example, we have access to studies like those of Yang Chao and Li Lan (2020) of digital asset management within some of the leading museums, but county-level museum equivalents are almost non-existent. This forces practitioners to generalize a possibly context-specific strategy to the lower end of the sector. This omission curtails the ability to adjust digital strategies to the even lower-context specifics and therefore impedes a full view of digital capability implementation across the entire museum sector.

5.3.2 Limited Long-Term Impact Analysis

Most of the research channels currently stress the short-term outcomes of digital adoption, on which immediate improvement of operational efficiency comes through, whereas there is a lack of longitudinal study to estimate its sustained impacts on sustainability performance. For example, Dong et al. (2022) proved short-term efficiency gains, but there is little evidence to know if such gains shall sustain in the long run and whether new challenges will arise along with the evolution of technologies. It leaves a gap in the academic literature regarding the long-term values and potential risks that digital investments bring to museums.

5.3.3 Insufficient Focus on Visitor Experience

Although some works such as Zhou Poyin (2024) study the impacts of digital services on visitor perceptions, there appears to be no systematic research into the much broader impact of digitization on the other aspects of visitor experience, particularly cultural engagement and educational outcomes. More assessments tend to revolve around such aspects as operational or economic metrics, and this underemphasizes the qualitative dimension of the influence of digital tools on visitor interactions. As a result, this oversight constrains the view of how digitization underpins museums in their core missions in education and cultural preservation.

5.4 Suggestions for Future Research

To further widen existing knowledge, it may be preferable that future studies attempt a cross-cultural comparison in analyzing how digital capabilities influenced sustainability performance for the same research results but on different grounds—in different regions and cultural backgrounds. For instance, a comparison of digital adoptions by county museums in China, Europe, or North America would reveal the influence of cultural attitudes toward technology and heritage upon outcomes. Such studies will put underlined factors into perspective as to how they can either enhance or limit the effectiveness of digital strategies about sustainability in museums from around the world.

Critical future area of exploration and interest will be to study how digitization influences the visitor experience, with special focus on cultural immersion and learning. Ethnographies or interviews with the audience on the qualitative front will bring out how much the digital tool actually adds value or takes away from the authenticity of the academic nature of the museum visit. It could also study how digital skills can be incorporated for different types of learners, further improving the contribution of museums to social sustainability.

To attend to cross-sectional shortfalls in long-term analysis, longitudinal designs following the life cycles of Digital investments in their effect on sustainability performance can be taken up in future studies. For example, a study that lasts several years on the county museum may use longitudinal means, so that it is possible to see the evolution of effects on its economic resilience, then its environmental practices, and later with social engagement. Such an application could, therefore, identify long-term benefits and risks appearing from the process of digitization, hence guiding investment decisions with greater strategy.

Considering the distinctive needs of county museums, it has been suggested that future studies place the priority on these institutions to develop realistic, resource-stingy digital strategies. A participatory study with the staff of museums might be a way to identify workable solutions for integrating digital capabilities in the event of low funding and low levels of expertise. This factor not only pays due attention to an under-researched aspect but also provides valuable feedback on how sustainability can be improved in smaller museums.

6. THEORETICAL BASIS

The theoretical frameworks that adequately define how digital capabilities and sustainability performance come together in museums are of extreme importance. In the discussion below, their applicability shall be tested concerning the study of museums; the later part of the discussion checks the strengths and weaknesses of such theories, emphasizing their applicability and constraints in the specific arena of study.

6.1 Firm Capability Theory

Firm capability theory, particularly its dynamic capabilities framework, explains how organizations adapt to changing environments through sensing, seizing, and transforming opportunities. In museum studies, this theory is applied to understand how museums leverage "digital dynamic capabilities" to innovate and sustain operations. For instance, "museums use digital tools to create virtual exhibitions, responding to the need for remote access during the COVID-19 pandemic" [34]. Research suggests that "dynamic capabilities drive organizational performance" [35], and in museums, this manifests as digital investments enabling adaptation to technological and societal shifts, such as enhancing sustainability through virtual access [36].

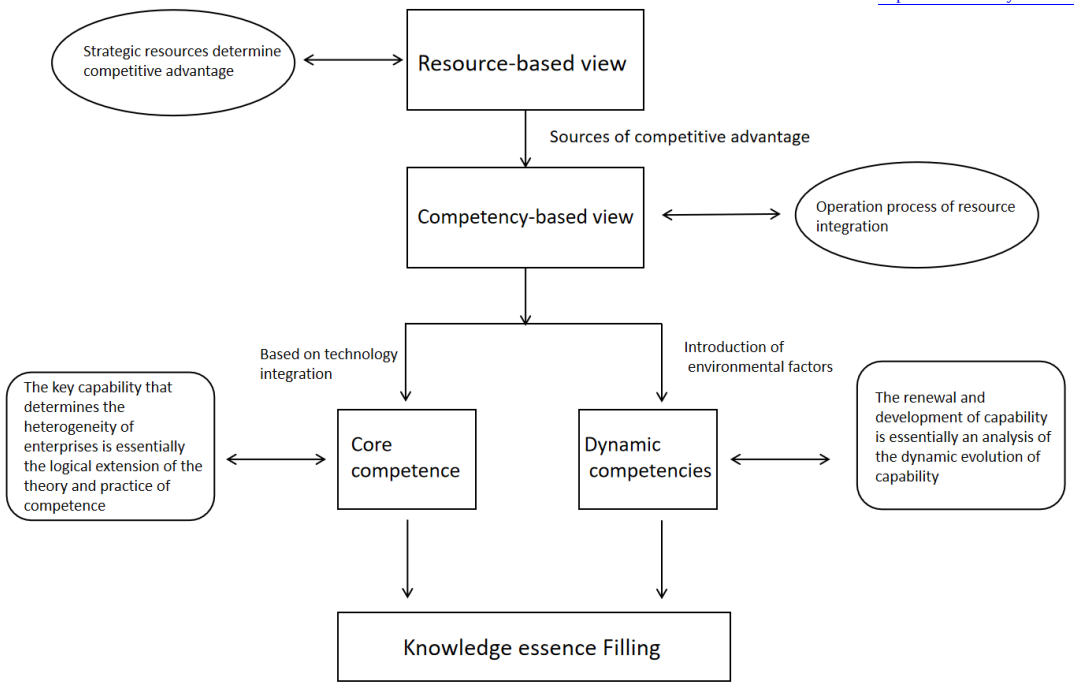

Figure 2: Relational diagram of firm capability theory

The dynamic capabilities framework excels in explaining adaptation in dynamic settings. It "emphasizes the importance of continuous learning and resource reconfiguration," which aligns with museums navigating the "fast-evolving digital landscape" [37]. This focus makes it highly relevant for studying how museums use digital tools to remain resilient and sustainable. A key limitation is its traditional focus on profit-driven firms, which may not fully suit museums. As noted, "the theory may overlook the unique non-profit nature of museums, where financial performance is not the sole indicator of success," given their emphasis on cultural and educational missions.

6.2 Resource Base View (RBV)

The resource base view (RBV) asserts that organizations gain competitive advantages from unique, valuable resources. In museums, digital resources like "digitized collections and interactive platforms" are pivotal for sustainability. For example, "research on digital asset management systems illustrates this, showing how museums like the National Museum of China use digital resources to enhance operational efficiency". RBV frames these digital assets as strategic tools that optimize resource use and improve service delivery, positioning museums to meet both cultural and operational goals effectively.

RBV's strength lies in its ability to pinpoint how "digital assets can be used to create value and differentiate museums from competitors" [38]. It provides a clear framework for assessing how museums leverage unique resources, such as digital collections, to enhance sustainability and efficiency. However, "RBV assumes resources are static," whereas "digital resources require constant updating and maintenance" [39]. Furthermore, it may undervalue external influences like government funding, which are vital in the museum sector but less emphasized in RBV's internal focus.

6.3 Organizational Innovation Theory

Organizational innovation theory examines how new practices enhance organizational performance. In museums, it applies to the adoption of digital technologies for managerial and service improvements. For instance, "museums implement digital ticketing systems or AI-based visitor analytics to enhance operational efficiency and visitor experience". Additionally, "studies highlight that innovation in digital services, such as personalized visitor apps, fosters social sustainability by improving accessibility". This theory underscores how digital innovation supports museums in achieving broader sustainability objectives.

This theory's focus on adopting new practices makes it "highly applicable to museums," particularly in explaining

how "digital innovations lead to improved sustainability performance" [40]. It effectively captures the link between technological adoption and enhanced visitor experiences or operational outcomes. Its applicability is tempered by "cultural and institutional constraints in museums, where tradition and heritage preservation can slow innovation adoption" [41]. Additionally, it "often assumes a linear relationship between innovation and performance," which may oversimplify the complex realities of museum operations [42].

7. DISCUSS AND SUMMARIZE

7.1 Study Findings

The literature on digital capabilities and sustainability in museums reveals that digital tools significantly enhance museums' ability to achieve sustainability across economic, environmental, and social dimensions. By integrating digital capabilities—spanning technology infrastructure, management applications, and innovative dissemination—museums can optimize resource use, reduce operational costs, minimize environmental impacts, and expand public engagement. Mechanisms such as managerial innovations and resource integration are crucial for effectively leveraging these capabilities, enabling museums to streamline operations and align digital tools with their cultural missions. However, research gaps persist, particularly concerning county museums, long-term impacts, and visitor experiences, highlighting the need for further study to address these underexplored areas. Theoretical frameworks like dynamic capabilities, resource base view, and organizational innovation theory provide valuable insights into how museums can adapt and innovate in the digital age, though their application must account for the unique, non-profit nature of museums, where success extends beyond financial metrics to include cultural and educational outcomes. In essence, this synthesis posits that digital capacities are strategic drivers of sustainability, imperative for museums—county museums, particularly those situated in under-resourced regions such as Shaanxi, China, to keep heritage, educate society, and contribute to regional development considering the tremendous and fast transformations within the technological realm.

7.2 Summary

It was concluded in the literature review that digital capabilities are a necessary condition for museums' sustainability, with a significant transformative effect on its economic, environmental, and social performance. Major findings include some support for the argument that digital tools help in optimizing the use of resources, decreasing the level of operational cost, reducing the negative environmental impact, and increasing the level of public involvement by museums. Therefore, Managerial Innovations and Resource Integration have to play a critical role in ensuring that these capabilities are used effectively. The study, however, provides ample scope for future research as it overlooked the following research gaps: no such documented studies concerning museums at the county level; long-time impacts need to be discussed further, and lack of focus on the visitor experience regarding the driver mechanisms of digital capabilities. The above gaps, therefore, provide directives into further research, namely exploring how smaller museums with limited resources can cope with the challenge, the sustained effects of digital investments, and the role digitization plays in creating visitor engagement. In theory, aspects like dynamic capability frameworks and resource base view should be adaptive but further translation is needed to fit the nonprofit, cultural nature of museums. For museum managers, these results will make them think about how they can strategically place innovation within the framework of their institutional missions by building digital literacy as well as ensuring that it responds for that mission. The overall positioning of digital capacities anchors how far an institution can be resilient and relevant in a moment marked mainly by smaller scale institutions reeling to keep pace with digital demands on a dynamic planet.

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