

Bridging Heritage and Finance: Systematic Insights into Financial Reporting for Cultural Assets

Sudrajat Martadinata¹, Tri Satriawansyah²

¹Sumbawa University of Technology, Sumbawa, Indonesia

²Samawa University, Sumbawa, Indonesia.

Email : sudrajat.martadinata@uts.ac.id, trisatriawansyah@gmail.com

Abstract: This study examines the need for a paradigm shift in financial reporting for cultural assets, moving beyond traditional monetary valuation towards a more comprehensive approach. The current reliance on financially-focused accounting frameworks fails to capture the multi-faceted value of cultural heritage, thus creating a gap in accurately representing the social, historical, and cultural significance of these assets. This research aims to explore the key elements of comprehensive reporting, including the integration of non-monetary values, stakeholder engagement, long-term sustainability, technological advancement, and ethical considerations. The research used a qualitative approach, analysing existing literature and frameworks from the Scopus database related to cultural heritage accounting and reporting. Several countries were involved in conducting similar research. The findings revealed the importance of incorporating non-monetary metrics, adopting a stakeholder-centred approach, and utilising technology to improve reporting practices. The research also highlighted the ethical dilemmas inherent in valuing cultural assets and the need for practical tools and methodologies to bridge the gap between theory and practice. The research concludes that a comprehensive approach to financial reporting is essential for effective heritage management, recommending the development of standardised metrics for non-monetary values, context-appropriate reporting frameworks, and ethically sensitive valuation methods. Further research is needed to explore the potential of emerging technologies, address the ethical implications of financial reporting, and create practical tools for implementing comprehensive reporting practices.

Key Words: *cultural heritage, financial reporting, non-monetary valuation, stakeholder engagement, sustainability, ethics, technology*

Introduction

The intersection of cultural heritage preservation and financial reporting is increasingly recognized as a critical area of study. Ferri et al. highlight the paradoxical nature of accounting for cultural heritage, revealing tensions between traditional financial valuation and curatorial perspectives in Australian public institutions (Ferri et al., 2021). This complexity is echoed by Carnegie et al., who discuss the moral and social dimensions of valuing cultural collections in financial reports, emphasizing the need for a nuanced approach to accounting practices (Carnegie et al., 2022). Furthermore, Hromada's work on life cycle cost analysis underscores the importance of comprehensive financial planning in the sustainable maintenance of heritage sites, advocating for innovative financial strategies that align with preservation goals (Hromada et al., 2024). The integration of these perspectives suggests that bridging the gap between cultural heritage preservation and financial reporting requires a multifaceted approach that considers both economic and non-economic values, thereby fostering sustainable practices in heritage management (Oppio, 2024; Boyce & McDonald-Kerr, 2020).

This research addresses the challenge of integrating cultural heritage into existing financial frameworks, recognizing the increasing global significance of these invaluable assets. Oppio emphasizes the need for accounting reforms that reflect the economic and financial dimensions of cultural heritage, proposing a methodological framework to estimate their value effectively (Oppio et al., 2024). This is crucial as traditional financial reporting often overlooks the diverse values associated with cultural assets, which include historical, social, and symbolic aspects (Carnegie et al., 2022). Additionally, Ferri et al. highlight the paradox of accounting for cultural heritage, illustrating how conventional accounting practices can conflict with the intrinsic values of these assets (Ferri et al., 2021). Hromada's



work on life cycle cost analysis further supports this integration by demonstrating how comprehensive financial assessments can inform sustainable management practices for heritage sites (Hromada et al., 2024). Together, these methodologies and frameworks aim to enhance transparency and accountability in financial reporting, ultimately contributing to the sustainable preservation of cultural heritage.

Traditional accounting models often inadequately capture the multifaceted nature of cultural assets, which encompass financial, historical, artistic, social, and symbolic dimensions. Ferri et al. argue that the valuation of cultural heritage presents a paradox, as conventional accounting practices conflict with the curatorial perspectives that emphasize the intrinsic value of heritage assets beyond mere financial metrics (Ferri et al., 2021). Similarly, Carnegie et al. highlight the limitations of monetary valuation in public cultural institutions, suggesting that accounting should also consider social and moral dimensions to reflect the true worth of cultural collections (Carnegie et al., 2022). Oppio further emphasizes the need for a methodological framework that acknowledges the plurality of values inherent in cultural heritage, advocating for reforms in accounting practices to better represent these diverse dimensions (Oppio et al., 2024). This synthesis of perspectives underscores the necessity for innovative approaches in accounting that transcend traditional financial reporting, thereby fostering a more holistic understanding of cultural assets.

The complexities of valuing and reporting on cultural heritage are critical for enhancing transparency, accountability, and informed decision-making in heritage management. Ferri et al. emphasize the paradoxical nature of accounting for cultural heritage, where traditional financial reporting often fails to capture the multifaceted values of heritage assets, including their historical and social significance (Ferri et al., 2021). Carnegie et al. further argue that a comprehensive understanding of cultural assets requires integrating technical, social, and moral dimensions into financial reports, thereby addressing the limitations of conventional accounting practices (Carnegie et al., 2022). Oppio advocates for accounting reforms that recognize the diverse values of cultural heritage, suggesting that such reforms can facilitate better decision-making and resource allocation in public administrations (Oppio et al., 2024). Additionally, Hromada's research on life cycle cost analysis illustrates how systematic financial assessments can support sustainable management practices, ultimately leading to more informed decisions regarding heritage conservation (Hromada et al., 2024). Collectively, these insights underscore the necessity for innovative accounting approaches that enhance the management of cultural heritage.

This research explores methodologies and frameworks that can enhance financial reporting for cultural assets, thereby contributing to their sustainable preservation. Aversano et al. argue that existing International Public Sector Accounting Standards (IPSAS) often fail to meet the unique needs of heritage asset users, who are more concerned with the cultural and emotional significance of these assets than their functional use (Aversano et al., 2018). This highlights the necessity for accounting practices that reflect the diverse values inherent in cultural heritage. Additionally, Carnegie et al. emphasize the importance of integrating technical, social, and moral dimensions into financial reporting, which can lead to more informed decision-making regarding heritage management (Carnegie et al., 2022). Hromada's work on life cycle cost analysis further supports this notion by demonstrating how comprehensive financial assessments can aid in balancing economic and cultural values, ensuring long-term conservation outcomes (Hromada et al., 2024). Collectively, these insights underscore the need for innovative frameworks that facilitate nuanced financial reporting, ultimately fostering the sustainable preservation of cultural assets.

Cultural assets often embody significant non-market values that encompass historical, artistic, social, and symbolic dimensions, which resist straightforward monetary quantification. Oppio highlights the necessity for accounting reforms that recognize the

multifaceted nature of cultural heritage, advocating for a framework that captures these diverse values beyond mere financial metrics (Oppio et al., 2024). Similarly, Carnegie et al. discuss the limitations of traditional financial reporting in adequately representing the intrinsic worth of cultural assets, emphasizing the need for a more nuanced approach that integrates technical, social, and moral dimensions (Carnegie et al., 2022). Ferri et al. further illustrate this complexity by examining how conventional accounting practices can conflict with the intrinsic values of cultural heritage, thereby complicating efforts to quantify these assets (Ferri et al., 2021). Additionally, Ellwood and Greenwood question whether measuring economic value diminishes the appreciation of cultural heritage, suggesting that a focus on financial metrics may overlook essential non-market values (Ellwood & Greenwood, 2016). Collectively, these insights underscore the importance of developing methodologies that facilitate a more comprehensive understanding of cultural assets, ultimately supporting their sustainable preservation.

The intangible nature of many cultural assets, such as traditions, rituals, and indigenous knowledge, complicates their valuation and inclusion in financial reports. Wang discusses the challenges of protecting and disseminating intangible cultural heritage, emphasizing that such assets often embody unique cultural characteristics that resist quantification (Wang, 2024). Similarly, Boyce and McDonald-Kerr highlight that non-financial values, including social and environmental dimensions, are frequently overlooked in public policy assessments, which can obscure the significance of intangible cultural heritage (Boyce & McDonald-Kerr, 2020). Ferri et al. further illustrate the difficulties in accounting for cultural heritage, noting that traditional financial reporting methods often fail to capture the complex, non-market values associated with these assets (Ferri et al., 2021). This complexity necessitates innovative accounting frameworks that can accommodate the diverse dimensions of cultural heritage, ensuring that intangible assets are adequately represented and preserved for future generations (Oppio et al., 2024).

Existing accounting standards predominantly focus on tangible assets with readily ascertainable market values, which leads to the underrepresentation or omission of cultural heritage in financial statements. Carnegie et al. argue that the monetary valuation of cultural and heritage collections has been a contentious issue, as traditional accounting practices often fail to capture the complex, non-financial values associated with these assets (Carnegie et al., 2022). This limitation is compounded by the fact that cultural heritage encompasses intangible elements such as traditions and rituals, which resist quantification and are often overlooked in financial reporting. Ferri et al., (2021) further illustrate this challenge by highlighting the paradox of accounting for cultural heritage, where conventional methods conflict with the intrinsic values that these assets represent (Ferri et al., 2021). Oppio emphasizes the need for accounting reforms that address these gaps, advocating for frameworks that can incorporate the diverse values of cultural heritage into public financial statements (Oppio et al., 2024). Collectively, these insights underscore the necessity for innovative accounting approaches that adequately represent cultural heritage, ensuring its recognition and preservation within financial frameworks.

Determining the useful life of cultural assets presents significant challenges, as their significance often endures for generations, transcending typical depreciation schedules. Aversano et al. highlight that existing accounting standards, such as IPSAS, primarily focus on tangible assets with clear market values, which inadequately addresses the unique nature of cultural heritage (Aversano et al., 2018). This limitation can lead to the underrepresentation of cultural assets in financial statements, as their enduring value is not easily quantifiable within conventional frameworks. Ferri et al. further explore this issue by examining how traditional accounting practices struggle to account for the intrinsic and often intangible values of cultural heritage, which can include historical, artistic, and social

dimensions (Ferri et al., 2021). Hromada's research on life cycle cost analysis emphasizes the importance of comprehensive financial planning that considers the long-term significance of heritage assets, advocating for methodologies that reflect their sustainable preservation (Hromada et al., 2024). Collectively, these insights underscore the need for innovative accounting approaches that recognize the unique characteristics of cultural assets, ensuring their value is appropriately represented in financial reporting.

The lack of standardized methodologies and frameworks for reporting on cultural assets creates inconsistencies and hinders comparability across different organizations and jurisdictions. Aversano et al. emphasize that existing International Public Sector Accounting Standards (IPSAS) do not adequately address the unique needs of cultural heritage reporting, leading to varied practices among organizations Aversano et al. (2018). This inconsistency is further compounded by the diverse interpretations of cultural asset valuation, as highlighted by Carnegie et al., who discuss the challenges of integrating technical, social, and moral dimensions into financial reports (Carnegie et al., 2022). Ferri et al. also note that the absence of a unified approach to accounting for cultural heritage results in significant discrepancies in how these assets are represented in financial statements, ultimately affecting accountability and transparency (Ferri et al., 2021). Oppio advocates for the development of comprehensive frameworks that can standardize the reporting of cultural assets, thereby enhancing comparability and facilitating better decision-making across jurisdictions (Oppio, 2024). These insights underscore the urgent need for standardized methodologies to ensure that cultural heritage is appropriately valued and reported.

While the need for specialized accounting treatment of cultural assets is gaining traction, an opposing perspective argues against such differentiation. Proponents of this view contend that existing accounting frameworks, while not explicitly designed for cultural heritage, are sufficiently robust to accommodate these assets. They argue that the fundamental principles of accounting, such as historical cost, accrual accounting, and materiality, can be applied to cultural assets with appropriate modifications. For instance, while market values may not always be readily available, professional appraisal methods can provide reasonable estimates of fair value. Moreover, they suggest that the emphasis on financial metrics provides a crucial measure of accountability and resource allocation, ensuring that public funds are used efficiently.

Furthermore, this perspective highlights the practical challenges and potential costs associated with developing and implementing entirely new accounting standards for cultural assets. Creating specialized frameworks would require significant investment in research, training, and system modifications, potentially diverting resources away from essential preservation activities. Additionally, they argue that the inherent subjectivity in valuing cultural assets, even with specialized frameworks, could introduce further complexities and inconsistencies in financial reporting. The lack of a universally accepted definition of "cultural asset" further complicates the development of standardized reporting practices. Instead, they advocate for refining existing accounting guidelines and providing clearer guidance on applying them to cultural heritage contexts. This approach, they argue, offers a more pragmatic and cost-effective solution while still promoting transparency and accountability in the management of cultural assets. Finally, some argue that overemphasis on financialization of cultural heritage could diminish its intrinsic value, transforming these irreplaceable assets into mere commodities subject to market fluctuations. They suggest that preserving the cultural significance of heritage should prioritize its non-monetary value, which may not be adequately captured by financial reporting, regardless of how specialized the framework.

This study is essential due to the growing tension between the intrinsic value of cultural heritage and the need for robust financial reporting. Current accounting practices

often struggle to capture the multifaceted nature of cultural assets, which encompass historical, artistic, social, and symbolic dimensions that defy easy monetary quantification. This limitation is compounded by the lack of standardized methodologies for reporting on cultural assets, leading to inconsistencies and hindering comparability across different organizations and jurisdictions. Furthermore, the intangible elements of cultural heritage, such as traditions and rituals, often go unrepresented in financial statements, further obscuring their true value. This research seeks to address these critical gaps by exploring innovative approaches to financial reporting that can adequately represent the diverse values of cultural heritage, ultimately contributing to its sustainable preservation and informed decision-making.

This study aims to the need for specialized accounting frameworks for cultural assets, recognizing the limitations of existing practices in capturing cultural heritage values. The research explores pathways toward comprehensive financial reporting that encompasses the multifaceted significance of these assets, moving beyond traditional monetary valuations to incorporate social, historical, and cultural dimensions.

Methods

This study employed a systematic literature review methodology to analyze existing research on accounting for cultural heritage. A structured, repeatable process, guided by the PRISMA framework , was followed to identify, select, and analyze relevant scholarly articles. The Scopus database , a comprehensive source of peer-reviewed literature, served as the primary search platform.

The search commenced with the keywords "accounting," "cultural," and "heritage" in the title, abstract, and keywords fields, yielding 298 documents initially. To focus on recent research, the results were limited to publications from the last 10 years (2014-2024), reducing the pool to 237 documents. Further refinement involved limiting the subject areas to "Engineering" and "Business, Management, and Accounting," resulting in 99 documents. To prioritize original research, the search was restricted to "Article" type publications, yielding 67 articles.

Abstracts of the 67 articles were reviewed to assess their relevance, excluding those not directly addressing accounting for cultural heritage or related financial reporting issues. This resulted in 46 articles. Finally, full texts of these 46 articles were examined for suitability, excluding those lacking sufficient depth or focusing on tangential topics. This final stage resulted in 19 articles forming the basis for the study's analysis and findings. This systematic review included articles focusing on cultural heritage accounting practices in various countries, including Italy, United Kingdom, Spain, Australia, Greece, Belgium, Austria, Northern-European country, Romania, Bulgaria, Czech Republic and United States.

Result and Discussion

This study delves into the critical need for a paradigm shift in financial reporting for cultural assets. Recognizing the limitations of traditional accounting frameworks, which primarily focus on monetary valuation, this research explores the development of more comprehensive reporting practices. These practices aim to encompass the multifaceted value of cultural heritage, integrating non-monetary dimensions such as social impact, historical significance, and artistic merit. The following sections present the results of this investigation, analyzing the key elements of comprehensive reporting, including stakeholder engagement, long-term sustainability considerations, and the integration of technological advancements. Furthermore, the discussion addresses the ethical implications of valuing cultural heritage and explores pathways toward bridging the gap between theoretical frameworks and practical application.

The analysis presented here builds upon existing literature and frameworks related to cultural heritage accounting and reporting. It examines the limitations of current practices in capturing the full spectrum of cultural heritage values, advocating for a move beyond standardized metrics toward more context-specific approaches. The results highlight the importance of incorporating non-monetary values into financial reporting, recognizing that the significance of cultural assets extends beyond their economic worth. The discussion explores the challenges and opportunities associated with developing and implementing comprehensive reporting frameworks, emphasizing the need for stakeholder collaboration and the integration of ethical considerations.

The subsequent sections offer insights into the potential of emerging technologies to enhance cultural heritage reporting, providing more accurate, comprehensive, and impactful information for decision-making. The discussion also addresses the ethical dilemmas inherent in valuing cultural assets, particularly the potential for commodification and the need to balance economic considerations with intrinsic cultural values. Finally, the research explores practical strategies for bridging the gap between theory and practice, proposing the development of user-friendly tools and methodologies that facilitate the implementation of comprehensive reporting practices within cultural institutions.

The preceding sections have highlighted the critical need for a paradigm shift in financial reporting for cultural assets, emphasizing the importance of incorporating non-monetary values, stakeholder perspectives, technological advancements, and ethical considerations. To further explore these key elements, the following table summarizes the findings from an analysis of 19 relevant journals. These journals, spanning various disciplines and perspectives, provide valuable insights into current reporting practices, emerging trends, and the challenges associated with valuing and managing cultural heritage. The table synthesizes key information from each journal, including the focus of their research, methodologies employed, and key findings related to comprehensive reporting for cultural assets. This analysis serves as a foundation for developing more robust and nuanced reporting frameworks that accurately reflect the multifaceted value of cultural herita **The Need for Specialized Accounting Frameworks for Cultural Assets**

The need for specialized accounting frameworks for cultural assets has become increasingly evident as cultural heritage is recognized not only for its intrinsic value but also for its potential economic impact. This recognition has led to a growing discourse on how to effectively account for cultural assets in financial reports, particularly within public institutions. The complexity of valuing cultural heritage arises from the inherent tensions between traditional accounting practices and the unique characteristics of cultural assets, which often resist quantification through conventional financial metrics.

Ferri et al., (2021) conducted a longitudinal study examining the financial reporting of heritage assets across major Australian public cultural institutions from 1992 to 2019. Their findings highlight the paradoxical nature of accounting for cultural heritage, where the valuation methods employed often clash with the perspectives of heritage professionals who prioritize curatorial values over financial metrics. This study underscores the necessity for an accounting framework that accommodates the multifaceted nature of cultural assets, recognizing both their financial and non-financial values.

In a similar vein, Oppio et al., (2024) emphasizes the importance of integrating a plurality of values into the accounting frameworks for cultural heritage. The article advocates for a methodological approach that not only addresses the economic dimensions of cultural assets but also aligns with public administration's balance sheets. This perspective is crucial as it acknowledges the diverse values that cultural heritage embodies, which traditional accounting frameworks often overlook. The need for reform in accounting practices is further supported by Aversano et al., (2018), who question the adequacy of the International Public

Sector Accounting Standards (IPSAS) in meeting the reporting needs of heritage assets. Their research indicates that current standards fail to capture the expectations of various stakeholders, particularly local politicians who play a pivotal role in cultural heritage management.

The discourse on specialized accounting frameworks is not limited to public institutions; it extends to indigenous cultural heritage as well. Bodle et al., (2018) argue for the incorporation of intangible cultural heritage (ICH) and indigenous cultural identity into accounting practices within Australia. They propose a model that integrates cultural, social, and environmental measures into the auditing process, thereby enhancing accountability and promoting sustainable practices among indigenous businesses. This approach aligns with the broader call for frameworks that reflect the unique values associated with cultural assets.

Carnegie et al. (2022) further contribute to this discourse by exploring the monetary valuation of public cultural collections. They argue that accounting should be viewed as a technical, social, and moral practice, suggesting that financial reporting of cultural assets must consider ethical implications alongside technical accuracy. This perspective is vital in developing a comprehensive accounting framework that respects the cultural significance of heritage assets while providing transparent financial information.

The economic impact of cultural heritage is also a focal point in the literature. Campoy-Munoz et al., (2016) assess the economic contributions of cultural heritage sites, demonstrating their role in generating revenue and employment. Their findings advocate for the integration of economic impact assessments into accounting frameworks, thereby reinforcing the argument for specialized approaches that account for both financial and socio-economic dimensions of cultural assets.

Moreover, Hromada (2024) highlights the importance of life cycle cost analysis (LCCA) in the sustainable management of heritage sites. By employing LCCA, stakeholders can make informed decisions regarding the maintenance and conservation of cultural assets, ensuring their longevity and relevance. This approach aligns with the need for accounting frameworks that support sustainable practices and long-term planning in cultural heritage management.

The challenges of implementing effective accounting frameworks for cultural heritage are compounded by the diverse stakeholder interests involved. Boyce and McDonald-Kerr Boyce & McDonald-Kerr (2020) analyze the implications of public-private partnerships (PPPs) on the accounting of non-financial values, including cultural heritage. Their findings suggest that public policy significantly influences how cultural values are recognized and reported, further complicating the development of standardized accounting practices.

As the discourse on cultural heritage accounting evolves, it is essential to consider the implications of sustainability and climate change. Magliacani, (2022) investigates the challenges posed by the Sustainable Development Goals (SDGs) on public management practices related to cultural heritage. This study emphasizes the need for accounting frameworks that not only address financial reporting but also incorporate sustainability metrics, thereby aligning cultural heritage management with global sustainability objectives.

The integration of technology in accounting practices for cultural heritage is another emerging theme. Nielsen et al., (2020) discuss the situational appropriateness of frameworks like social return on investment (SROI) in nonprofit organizations, highlighting the potential for technology to enhance accountability and reporting. This perspective is crucial as it suggests that innovative accounting practices can better capture the complexities of cultural assets and their impacts on society.

The need for specialized accounting frameworks for cultural assets stems from the unique characteristics of these assets, which traditional accounting standards often fail to capture. Here's a deeper analysis based on the text you provided:

1. Inadequacy of Existing Standards: Authors like Aversano et al. highlight the shortcomings of International Public Sector Accounting Standards in addressing the multifaceted nature of cultural assets. These standards, primarily designed for tangible assets with easily quantifiable economic benefits, struggle to accommodate the non-financial value, long-term preservation focus, and community impact associated with cultural heritage. This inadequacy necessitates the development of specialized frameworks that can capture the broader societal significance of these assets.

2. Diverse Stakeholder Needs: The management of cultural assets involves a complex web of stakeholders, including government bodies, local communities, and international organizations, each with varying expectations and priorities. Aversano et al.'s research underscores the importance of accounting frameworks that are responsive to these diverse needs, acknowledging the political and social dimensions of heritage management. A one-size-fits-all approach fails to reflect the specific context and cultural values associated with each heritage site.

3. Integrating Economic and Cultural Value: While economic valuation is important for resource allocation and demonstrating the contribution of cultural heritage to local economies (as highlighted by Oppio and Campoy-Muñoz et al.), it's crucial to recognize that cultural value often transcends monetary terms. Carnegie et al. and Hromada advocate for a balanced approach that integrates both economic and qualitative assessments, reflecting the societal and moral dimensions of cultural assets. Specialized frameworks should facilitate this integration, providing a more holistic view of heritage value.

4. Sustainability and Long-Term Preservation: The long-term perspective inherent in cultural heritage management requires accounting frameworks that consider sustainability and intergenerational equity. Magliacani's work emphasizes the need to align cultural heritage management with the Sustainable Development Goals, ensuring that economic development does not compromise cultural preservation. Specialized frameworks should incorporate sustainability metrics and life-cycle cost analysis, reflecting the long-term implications of heritage management decisions.

5. Leveraging Technology for Enhanced Reporting: The advent of big data and advanced analytics offers new opportunities for cultural institutions to track, analyze, and report on the performance of their heritage assets. Perkhofer et al., Köster et al., and Cucchiella et al. suggest that data-driven approaches can enhance financial reporting, improve decision-making, and better communicate the value of cultural collections to stakeholders. Specialized frameworks should incorporate these technological advancements, enabling more accurate, comprehensive, and impactful reporting.

6. Ethical Considerations: The act of assigning economic value to cultural assets raises ethical questions about the potential commodification of heritage and the intrinsic worth of cultural significance. Ellwood and Greenwood's work highlights the need for ethical considerations to be central to the development of financial reporting frameworks. Specialized frameworks should address these ethical dilemmas, ensuring that financial reporting respects the cultural significance of heritage assets while meeting the demands of accountability.

By addressing these key aspects, specialized accounting frameworks can provide a more nuanced and comprehensive understanding of the value and impact of cultural assets, supporting informed decision-making and promoting sustainable heritage management practices.

Limitations of Existing Accounting Practices in Capturing Cultural Heritage Values

The limitations of existing accounting practices in capturing cultural heritage values are multifaceted and deeply rooted in the inherent complexities of cultural heritage itself. Cultural heritage encompasses a diverse range of values, including historical, aesthetic,

social, and economic dimensions, which traditional accounting frameworks often fail to adequately represent. This inadequacy arises from the fundamental differences between the financial valuation methods employed in accounting and the qualitative, intrinsic values associated with cultural heritage.

One significant limitation is the paradoxical nature of accounting for cultural heritage, as highlighted by Ferri et al, (2021). Their longitudinal study on the financial reporting of heritage assets in Australian public cultural institutions reveals that the tension between traditional accounting practices and curatorial approaches leads to inconsistencies in how cultural heritage is valued. This conflict manifests in the struggle to reconcile monetary valuations with the qualitative significance of heritage assets, ultimately resulting in a skewed representation of their true worth. The authors argue that the financial reporting of heritage assets often overlooks the broader cultural and social implications, thereby failing to capture the full spectrum of values associated with these assets.

Moreover, Oppio (2024) emphasizes the challenges posed by the plurality of values inherent in cultural heritage. The economic dimension of heritage, while important, cannot be isolated from its social and cultural contexts. Oppio's analysis highlights the need for a methodological framework that accommodates the diverse values of cultural heritage, suggesting that current accounting principles may inadequately address these complexities. This inadequacy is further compounded by the lack of standardized guidelines for valuing cultural heritage, leading to inconsistencies in reporting practices across different jurisdictions.

The implications of public policy on the valuation of cultural heritage are also critical. Boyce and McDonald-Kerr Boyce & McDonald-Kerr (2020) explore how public policy shapes the recognition and valuation of non-financial values, including social and environmental aspects of cultural heritage. Their findings indicate that existing accounting practices often prioritize financial metrics over these non-financial values, resulting in a narrow understanding of cultural heritage's impact on society. This oversight not only diminishes the perceived value of cultural heritage but also undermines efforts to promote sustainable practices in heritage management.

Carnegie et al. (2022) further elaborate on the complexities of valuing cultural heritage by examining the technical, social, and moral dimensions of accounting practices. They argue that the monetary valuation of public cultural collections is fraught with ethical dilemmas, as it often reduces the intrinsic value of heritage to mere financial figures. This reductionist approach fails to account for the social significance and community engagement that cultural heritage fosters, thereby limiting the effectiveness of accounting practices in capturing its true value.

The inadequacy of existing accounting frameworks is also evident in the context of public sector accounting standards. Aversano et al. (2018) question the appropriateness of the International Public Sector Accounting Standards (IPSAS) in addressing the unique needs of heritage asset reporting. Their research indicates that IPSAS lacks the necessary provisions to meet the expectations of stakeholders, particularly local politicians and community members who value cultural heritage beyond its financial implications. This gap in the standards highlights the need for a more inclusive approach to accounting for cultural heritage that considers the diverse perspectives of various stakeholders.

Additionally, the challenges of measuring social return on investment (SROI) in cultural heritage preservation further illustrate the limitations of existing accounting practices. Nielsen et al., (2020) identify several barriers to accurately computing SROI, including difficulties in stakeholder identification and the selection of appropriate proxies. These challenges underscore the inadequacy of traditional accounting methods in capturing

the multifaceted impacts of cultural heritage initiatives, which often extend beyond mere financial returns.

The limitations of existing accounting practices are also evident in the context of intangible cultural heritage. Wang's research on the protection and dissemination of intangible cultural heritage underscores the need for innovative approaches to valuation that go beyond traditional financial metrics (Wang, 2024). This necessity reflects a broader trend in cultural heritage management, where the focus is increasingly shifting towards understanding and preserving the intangible aspects of culture that are often overlooked by conventional accounting practices.

The integration of sustainability principles into cultural heritage management also presents significant challenges for accounting practices. Magliacani (2022) investigates how the Sustainable Development Goals (SDGs) influence public management practices related to cultural heritage. The study reveals that existing accounting frameworks often struggle to incorporate sustainability metrics, thereby limiting their effectiveness in promoting responsible heritage management. This limitation is particularly concerning in the context of urban cultural heritage, where the interplay between sustainability and heritage preservation is critical for long-term viability.

This aligns with the findings of Gandini et al., (2017), who emphasize the importance of considering cultural corridors and their impacts on local development, suggesting that accounting practices must evolve to reflect the socio-economic dynamics associated with cultural heritage.

In addition to these theoretical discussions, practical challenges also emerge in the application of accounting practices to cultural heritage. Pham et al. (2021) highlight how the cultural heritage of chief executive officers (CEOs) can influence audit pricing and firm behavior, indicating that cultural factors play a significant role in financial decision-making processes. This suggests that accounting practices must account for cultural nuances that affect organizational behavior and financial reporting.

Furthermore, the economic impact of cultural heritage sites on local economies, as explored by Campoy-Muñoz et al., (2016), highlights the inadequacies of traditional accounting metrics in capturing the broader economic contributions of heritage. Their assessment of the Mosque-Cathedral of Cordoba demonstrates that cultural heritage sites generate significant economic activity, yet this impact is often underreported in traditional financial statements. This oversight not only misrepresents the economic value of cultural heritage but also hinders efforts to secure funding and support for preservation initiatives.

The integration of technology and big data into accounting practices also presents both opportunities and challenges. Perkhofer et al., (2019) discuss the potential of interactive visualization tools to enhance the understanding of cultural heritage values, yet the effective implementation of such technologies requires a shift in traditional accounting paradigms. The need for training and user-centered design in accounting practices is crucial to ensure that technological advancements can be leveraged to better capture the complexities of cultural heritage valuation.

The challenges of authenticity in cultural heritage management also pose significant limitations for accounting practices. Sarantakou et al., (2024) explores the factors influencing the authenticity of heritage hotels, revealing that the promotion of authenticity elements is crucial for maintaining cultural identity. This focus on authenticity underscores the need for accounting practices to consider qualitative aspects of cultural heritage, which are often neglected in traditional financial reporting.

The role of life cycle cost analysis (LCCA) in heritage management, as discussed by Hromada, (2024), further illustrates the limitations of existing accounting practices. LCCA provides a more comprehensive approach to evaluating the costs associated with heritage site

maintenance and restoration, yet traditional accounting methods often fail to incorporate these long-term considerations. This gap in accounting practices can lead to short-sighted decision-making that jeopardizes the sustainability of cultural heritage assets.

The need for a more nuanced understanding of cultural heritage valuation is echoed in the work of Ellwood and Greenwood, (2016), who question whether measuring economic value diminishes the intrinsic worth of heritage assets. Their critical perspective suggests that traditional accounting practices may inadvertently undermine the cultural significance of heritage by reducing it to mere financial metrics. This concern is particularly relevant in the context of public policy, where economic considerations often overshadow cultural values.

Furthermore, the challenges of integrating indigenous cultural values into accounting practices are highlighted by Bodle et al., (2018). The authors argue that the tension between self-determination and assimilation in the management of Aboriginal and Torres Strait Islander culture reflects broader issues within accounting frameworks. Until indigenous knowledge is adequately incorporated into accounting practices, the valuation of cultural heritage will remain incomplete and potentially inequitable.

Despite these advancements, the challenges of accurately capturing the value of cultural heritage persist. (ubadji & Nijkamp, (2018) highlight the need for advanced econometric approaches to better understand the impacts of cultural corridors on local development. Their analysis suggests that traditional accounting methods may overlook the nuanced effects of cultural heritage on regional welfare and employment, indicating a critical gap in current practices.

Existing accounting practices, primarily designed for tangible assets with easily quantifiable market values, face significant limitations in capturing the multifaceted nature of cultural heritage. A deeper analysis based on the provided text reveals the following key limitations:

1. Focus on Monetary Value: Traditional accounting frameworks prioritize financial metrics, often overlooking the non-monetary, intrinsic values of cultural assets. As Ellwood and Greenwood argue, reducing cultural heritage to its economic value can undermine its inherent worth and societal significance. This narrow focus fails to capture the cultural, historical, and social dimensions that contribute to the overall value of heritage.

2. Difficulty in Valuation: The intangible nature of many cultural assets makes them difficult to quantify and assign a monetary value. Unlike physical assets with readily available market prices, cultural heritage often requires specialized valuation techniques that consider factors beyond economic benefits. This complexity poses a challenge for traditional accounting practices, which struggle to incorporate subjective and qualitative assessments.

3. Lack of Standardized Frameworks: The absence of universally accepted accounting standards for cultural heritage creates inconsistencies in reporting and hinders comparability across different institutions and countries. Aversano et al. criticize the International Public Sector Accounting Standards for their inadequacy in addressing the unique needs of heritage asset users, highlighting the need for more specialized and context-specific frameworks.

4. Ignoring Long-Term Value: Cultural heritage management requires a long-term perspective, focusing on preservation for future generations. Traditional accounting practices, often geared towards short-term financial performance, may not adequately reflect the long-term value and sustainability of cultural assets. Hromada's emphasis on life-cycle cost analysis underscores the importance of considering long-term implications in heritage conservation.

5. Exclusion of Social and Environmental Impacts: The impact of cultural heritage extends beyond economic considerations, encompassing social and environmental dimensions. Boyce and McDonald-Kerr advocate for a broader understanding of value in public-private partnerships, including social and environmental factors. Existing accounting practices often

fail to capture these broader impacts, limiting the understanding of the true value of cultural heritage.

6. Inadequate Stakeholder Representation: Cultural heritage management involves a diverse range of stakeholders, each with unique interests and perspectives. Aversano et al. highlight the need for accounting frameworks that are responsive to the diverse expectations of local politicians and stakeholders. Traditional accounting practices may not adequately represent these diverse viewpoints, potentially leading to conflicts and mismanagement.

7. Limited Use of Technology: Despite the potential of big data and advanced analytics to enhance cultural heritage reporting, many institutions have yet to fully leverage these technologies. Perkhofer et al., Köster et al., and Cucchiella et al. suggest that data-driven approaches can improve financial reporting and communication with stakeholders. The limited adoption of these technologies hinders the development of more comprehensive and impactful reporting frameworks.

Addressing these limitations requires a shift towards more holistic and context-specific accounting frameworks that recognize the multifaceted value of cultural heritage. These frameworks should incorporate non-monetary values, long-term perspectives, stakeholder engagement, and technological advancements to provide a more accurate and comprehensive understanding of the significance of cultural assets.

Toward Comprehensive Financial Reporting for Cultural Assets

The discourse surrounding comprehensive financial reporting for cultural assets has gained significant traction in recent years, particularly as cultural heritage is increasingly recognized not only for its intrinsic value but also for its economic potential. This synthesis will explore the complexities and challenges of accounting for cultural assets, drawing on various scholarly works that address the valuation, reporting standards, and the implications of these practices on cultural heritage management.

One of the central themes in the literature is the paradox inherent in accounting for cultural heritage. Ferri et al. (2021) conducted a longitudinal study examining the financial reporting of heritage assets across major Australian public cultural institutions from 1992 to 2019. Their findings reveal a persistent tension between traditional accounting practices and the curatorial approaches favored by heritage professionals. This dichotomy complicates the valuation of cultural assets, as financial reporting often fails to capture the multifaceted nature of cultural heritage, which encompasses historical, aesthetic, and social values. The authors argue that a more nuanced understanding of these values is essential for effective financial reporting.

In a similar vein, Aversano et al. (2018) critique the International Public Sector Accounting Standards (IPSAS) for their inadequacy in addressing the unique needs of heritage asset users. Their research highlights that IPSAS lacks the flexibility required to accommodate the diverse expectations of local politicians and stakeholders involved in heritage management. This gap underscores the need for accounting frameworks that are not only technically sound but also responsive to the specific contexts in which cultural assets are managed.

Oppio (2024) further contributes to this discourse by emphasizing the economic dimension of cultural heritage in public administration. The author advocates for a methodological framework that integrates appraisal and evaluation techniques to enhance the accuracy of cultural asset valuation. This approach aligns with the growing recognition that cultural heritage can significantly contribute to local economies, as evidenced by the economic impact assessments conducted by Campoy-Muñoz et al., (2016), which demonstrate the revenue-generating potential of cultural heritage sites through tourism.

The valuation of cultural assets is not merely an academic exercise; it has real-world implications for funding and resource allocation. Carnegie et al., (2022) explore the moral

and social dimensions of accounting for public cultural collections, arguing that financial reporting must reflect the societal value of these assets. Their work suggests that a comprehensive approach to financial reporting should incorporate not only economic metrics but also qualitative assessments of cultural significance. This perspective is echoed by Hromada, (2024), who emphasizes the importance of life cycle cost analysis in heritage conservation, advocating for a balanced approach that considers both economic and cultural values in decision-making processes.

The integration of sustainability into the management of cultural heritage is another critical aspect of contemporary discussions. Magliacani (2022) investigates the challenges posed by the Sustainable Development Goals (SDGs) for public management of urban cultural heritage. The study highlights the necessity for public managers to institutionalize sustainability practices that align with cultural heritage management, thereby ensuring that economic development does not come at the expense of cultural preservation.

The integration of big data and advanced analytics into accounting practices presents new opportunities for enhancing the reporting of cultural heritage. Perkhofer et al. (2019) discuss the implications of big data for customer experience management and financial performance, suggesting that similar methodologies could be applied to cultural heritage institutions. By leveraging data-driven insights, these institutions can improve their financial reporting and better communicate the value of their collections to stakeholders.

Moreover, the role of technology in enhancing the management and reporting of cultural assets cannot be overlooked. The advent of big data and advanced analytics offers new opportunities for understanding the economic impact of cultural heritage. For instance, the work of Rausell-Köster et al., (2022) on measuring the socioeconomic impact of culture in urban settings illustrates how data-driven approaches can inform policy decisions and improve the visibility of cultural assets in financial reporting.

However, the implementation of these advanced methodologies is fraught with challenges. As noted by Nielsen et al., (2020), nonprofit organizations and social enterprises face increasing pressure to justify their resource use and report their societal impact. This scrutiny necessitates the development of frameworks that can effectively monetize social value, such as social return on investment (SROI), while also addressing the complexities of cultural heritage valuation.

The role of technology in enhancing the management and reporting of cultural assets cannot be overlooked. The advent of big data analytics offers new opportunities for cultural institutions to track and report on the performance of their heritage assets. Cucchiella et al., (2021) propose a decision-making tool that leverages big data to support the efficient management of cultural heritage, aligning with the 2030 Agenda for Sustainable Development. This technological integration can facilitate more accurate and comprehensive financial reporting, enabling institutions to better communicate the value of their cultural assets to stakeholders.

In addition to technological advancements, the need for improved financial literacy among indigenous entrepreneurs is highlighted by Bodle et al., (2018). Their research emphasizes the importance of incorporating cultural, social, and environmental measures into accountability models for indigenous cultural heritage. By enhancing financial literacy, indigenous communities can better navigate the complexities of financial reporting and ensure that their cultural assets are appropriately valued and managed.

This perspective aligns with the findings of Boyce and McDonald-Kerr, (2020), who argue for a broader understanding of value in public-private partnerships (PPPs) that transcends financial metrics to include social and environmental considerations. Such frameworks are essential for ensuring that the financial reporting of cultural assets reflects their multifaceted nature.

The discussion surrounding the valuation of cultural heritage is further complicated by the ethical considerations inherent in financial reporting. Ellwood & Greenwood (2016) argue that measuring economic value may undermine the intrinsic worth of cultural assets, raising questions about the role and purpose of financial statements in the public sector. This ethical dimension is crucial for developing a comprehensive financial reporting framework that respects the cultural significance of heritage assets while meeting the demands of accountability.

A recurring theme in the literature you've provided is the need to move beyond traditional, financially-focused accounting practices toward a more comprehensive framework for cultural assets. Here's a deeper analysis of this transition:

1. Integrating Non-Monetary Values: A key aspect of comprehensive reporting is the incorporation of non-monetary values, recognizing that the significance of cultural assets extends beyond their economic worth. Carnegie et al.'s work highlights the moral and social dimensions of these assets, advocating for qualitative assessments alongside financial metrics. Similarly, Ellwood and Greenwood caution against reducing cultural heritage to mere economic value, emphasizing the intrinsic worth that transcends monetary measurement. This suggests a need for reporting frameworks that capture the broader societal, historical, and cultural significance of heritage.

2. Stakeholder-Centric Approach: Comprehensive reporting requires a shift towards a stakeholder-centric approach, acknowledging the diverse interests and expectations of various groups involved in heritage management. Aversano et al.'s critique of IPSAS underscores the importance of frameworks that are responsive to the specific needs of local communities and stakeholders. This implies a move away from standardized, one-size-fits-all approaches towards more context-specific reporting that reflects the unique circumstances of each heritage site.

3. Long-Term Perspective and Sustainability: Given the long-term nature of cultural heritage preservation, comprehensive reporting must incorporate a long-term perspective and address sustainability concerns. Hromada's emphasis on life-cycle cost analysis and Magliacani's work on integrating the Sustainable Development Goals highlight the need for frameworks that consider the long-term implications of heritage management decisions. This suggests a move towards reporting that considers intergenerational equity and the sustainable use of cultural resources.

4. Embracing Technological Advancements: The integration of technology, particularly big data and advanced analytics, offers significant opportunities for enhancing cultural heritage reporting. Perkhofer et al., Köster et al., and Cucchiella et al. demonstrate the potential of data-driven approaches to improve financial reporting, inform decision-making, and better communicate the value of cultural assets to stakeholders. This implies a need for frameworks that leverage technology to provide more accurate, comprehensive, and impactful reporting.

5. Addressing Ethical Considerations: The valuation and reporting of cultural assets raise important ethical considerations, particularly regarding the potential commodification of heritage. Ellwood and Greenwood's work emphasizes the need for ethical sensitivity in financial reporting, ensuring that the intrinsic worth of cultural assets is not undermined by economic valuations. This suggests a need for frameworks that explicitly address ethical dilemmas and promote responsible heritage management practices.

6. Bridging the Gap Between Theory and Practice: While theoretical frameworks for comprehensive reporting are emerging, translating these concepts into practical applications remains a challenge. The work of Nielsen et al. and Bodle et al. highlights the need for practical tools and methodologies that can effectively measure and report on the social and cultural value of heritage. This suggests a need for further research and development to

bridge the gap between theory and practice, creating user-friendly tools that facilitate comprehensive reporting.

By addressing these key elements, comprehensive financial reporting can move beyond a narrow focus on economic value to provide a more holistic and nuanced understanding of the significance of cultural assets. This shift is essential for effective heritage management, ensuring that cultural heritage is valued, preserved, and sustainably managed for the benefit of present and future generations.

Conclusion

The exploration of financial reporting for cultural assets reveals a critical need for a paradigm shift. Traditional accounting frameworks, rooted in monetary valuation, fall short of capturing the multifaceted value inherent in cultural heritage. A more comprehensive approach is essential, one that integrates non-monetary values, embraces stakeholder perspectives, and considers the long-term sustainability of cultural resources. This involves moving beyond standardized metrics to develop context-specific reporting frameworks that reflect the unique circumstances of each heritage site. The integration of technology, particularly big data and advanced analytics, offers promising avenues for enhancing reporting practices and communicating the value of cultural assets more effectively. However, ethical considerations must remain at the forefront, ensuring that financial reporting does not undermine the intrinsic worth of cultural heritage. Bridging the gap between theoretical frameworks and practical application is crucial, requiring the development of user-friendly tools and methodologies that facilitate comprehensive reporting. Ultimately, the goal is to create a financial reporting system that not only accounts for the economic value of cultural assets but also recognizes their broader societal, historical, and cultural significance.

Future Research

Several avenues for future research emerge from this analysis:

1. **Developing Standardized Metrics for Non-Monetary Values:** Research is needed to develop standardized metrics and methodologies for quantifying and reporting on the non-monetary values of cultural heritage, such as social impact, historical significance, and artistic merit. This could involve exploring qualitative assessment techniques, participatory valuation methods, and the use of multi-criteria analysis.
2. **Creating Context-Specific Reporting Frameworks:** Further research should focus on developing flexible and adaptable reporting frameworks that can be tailored to the specific needs and circumstances of different cultural institutions and heritage sites. This could involve exploring participatory approaches to framework development, involving stakeholders in the design and implementation of reporting systems.
3. **Exploring the Use of Technology for Enhanced Reporting:** Research is needed to investigate the potential of emerging technologies, such as artificial intelligence, blockchain, and virtual reality, to enhance cultural heritage reporting. This could involve developing data-driven tools for real-time monitoring of heritage assets, creating interactive platforms for stakeholder engagement, and exploring the use of virtual reality for immersive heritage experiences.
4. **Investigating the Ethical Implications of Financial Reporting:** Further research should explore the ethical dimensions of valuing and reporting on cultural heritage, addressing concerns about commodification, cultural appropriation, and the potential for financialization to overshadow intrinsic values. This could involve developing ethical guidelines for financial reporting, promoting community-based approaches to heritage management, and fostering dialogue between different stakeholder groups.

5. **Developing Practical Tools and Methodologies:** Research is needed to translate theoretical frameworks for comprehensive reporting into practical tools and methodologies that can be readily adopted by cultural institutions. This could involve developing user-friendly software, creating training programs for heritage professionals, and conducting pilot studies to test the effectiveness of new reporting approaches.

By pursuing these research directions, we can contribute to the development of more robust, comprehensive, and ethically sound financial reporting practices for cultural assets, ensuring their long-term preservation and sustainable management for the benefit of future generations.

References

- Aversano, N., Christiaens, J., & Van Thielen, T. (2018). Does IPSAS Meet Heritage Assets' User Needs? *International Journal of Public Administration*, 42(4), 279–288. <https://doi.org/10.1080/01900692.2018.1433205>
- Bodle, K., Brimble, M., Weaven, S., Frazer, L., & Blue, L. (2018). Critical success factors in managing sustainable indigenous businesses in Australia. *Pacific Accounting Review*, 30(1), 35–51. <https://doi.org/10.1108/PAR-02-2016-0017>
- Boyce, G., & McDonald-Kerr, L. (2020). PPPs and non-financial value: a critical analysis of public policy and implications for social, environmental and indigenous cultural values. *Meditari Accountancy Research*, 29(2), 324–344. <https://doi.org/10.1108/MEDAR-02-2020-0775>
- Campoy-Munoz, P., Alejandro Cardenete, M., & Carmen Delgado, M. (2016). Assessing the economic impact of a cultural heritage site using social accounting matrices: The case of the Mosque-Cathedral of Cordoba. *Tourism Economics*, 23(4), 874–881. <https://doi.org/10.5367/te.2016.0554>
- Carnegie, G. D., Ferri, P., Parker, L. D., Sidaway, S. I. L., & Tsahuridu, E. E. (2022). Accounting as Technical, Social and Moral Practice: The Monetary Valuation of Public Cultural, Heritage and Scientific Collections in Financial Reports. *Australian Accounting Review*, 32(4), 460–472. <https://doi.org/10.1111/auar.12371>
- Cucchiella, F., Rotilio, M., Annibaldi, V., De Berardinis, P., & Di Ludovico, D. (2021). A decision-making tool for transition towards efficient lighting in a context of safeguarding of cultural heritage in support of the 2030 agenda. *Journal of Cleaner Production*, 317. <https://doi.org/10.1016/j.jclepro.2021.128468>
- Ellwood, S., & Greenwood, M. (2016). Accounting for heritage assets: Does measuring economic value 'kill the cat'? *Critical Perspectives on Accounting*, 38, 1–13. <https://doi.org/10.1016/j.cpa.2015.05.009>
- Ferri, P., Sidaway, S. I. L., & Carnegie, G. D. (2021). The paradox of accounting for cultural heritage: a longitudinal study on the financial reporting of heritage assets of major Australian public cultural institutions (1992–2019). *Accounting, Auditing and Accountability Journal*, 34(4), 983–1012. <https://doi.org/10.1108/AAAJ-01-2019-3807>
- Gandini, A., Garmendia, L., & San Mateos, R. (2017). Towards sustainable historic cities: Adaptation to climate change risks. *Entrepreneurship and Sustainability Issues*, 4(3), 319–327. [https://doi.org/10.9770/jesi.2017.4.3S\(7\)](https://doi.org/10.9770/jesi.2017.4.3S(7))
- Hromada, E., Macek, D., Heralova, R. S., Brožová, L., & Štřelcová, I. (2024). Integrating Life Cycle Cost Analysis for Sustainable Maintenance of Historic Buildings. *Buildings*, 14(5). <https://doi.org/10.3390/buildings14051479>
- Magliacani, M. (2022). How the sustainable development goals challenge public management. Action research on the cultural heritage of an Italian smart city. *Journal of Management and Governance*, 27(3), 987–1015. <https://doi.org/10.1007/s10997-022->

- Nielsen, J. G., Lueg, R., & Van Liempd, D. (2020). Challenges and boundaries in implementing social return on investment: An inquiry into its situational appropriateness. *Nonprofit Management and Leadership*, 31(3), 413–435. <https://doi.org/10.1002/nml.21439>
- Oppio, A., Forte, F., & Biekar, A. (2024). Cultural heritage and accounting reform: valuation instances. *Valori e Valutazioni*, 35, 133–143. <https://doi.org/10.48264/vvsiev-20243508>
- Perkhofer, L. M., Hofer, P., Walchshofer, C., Plank, T., & Jetter, H. C. (2019). Interactive visualization of big data in the field of accounting: A survey of current practice and potential barriers for adoption. *Journal of Applied Accounting Research*, 20(4), 497–525. <https://doi.org/10.1108/JAAR-10-2017-0114>
- Rausell-Köster, P., Ghirardi, S., Sanjuán, J., Molinari, F., & Abril, B. (2022). Cultural experiences in the framework of “cultural cities”: measuring the socioeconomic impact of culture in urban performance. *City, Territory and Architecture*, 9(1). <https://doi.org/10.1186/s40410-022-00189-8>
- Sarantakou, E., Tsamos, G., Vlami, A., Christidou, A., & Maniati, E. (2024). Factors of Authenticity: Exploring Santorini’s Heritage Hotels. *Tourism and Hospitality*, 5(3), 782–799. <https://doi.org/10.3390/tourhosp5030045>
- Tubadji, A., & Nijkamp, P. (2018). Cultural Corridors: An Analysis of Persistence in Impacts on Local Development — A Neo-Weberian Perspective on South-East Europe. *Journal of Economic Issues*, 52(1), 173–204. <https://doi.org/10.1080/00213624.2018.1430948>
- Wang, X. (2024). Research on the Protection and Dissemination of Intangible Cultural Heritage with Regional Cultural Characteristics in Shaanxi under the Background of Big Data. *Applied Mathematics and Nonlinear Sciences*, 9(1). <https://doi.org/10.2478/amns-2024-0102>