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The Economic Value of Digital Traditional Culture Services in Public Libraries

-- A Systematic Review of Research Frameworks and Evidence

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ABSTRACT

Purpose: This study systematically reviews the service forms, economic value manifestations, value evaluation methods, and existing evidence gaps of digital services for traditional culture in public libraries. It also examines the applicability of relevant analytical frameworks in the case of jade cultural activities. Method: The literature search includes four conceptual groups, namely public library, traditional culture, digital service, and economic value. The search databases include Web of Science Core Collection, Scopus, Library, Information Science & Technology Abstracts (LISTA), and Library and Information Science Abstracts (LISA). The study also uses Google Scholar for title verification and citation tracing. The search update covers the period up to August 31, 2026. A total of 110 records enter the screening process, among which 68 studies enter full-text assessment, and 30 studies are finally included in the qualitative-descriptive synthesis. The data extraction content encompasses publication year, research region, traditional culture type, digital service form, research method, economic value indicator, and main research conclusions. The study uses the Mixed Methods Appraisal Tool (MMAT) as the reference framework for quality assessment. Results: Among the 30 included studies, 15 studies provided direct evidence from public libraries, and 15 studies offered transferable evidence from scenarios closely related to digital traditional culture. 19 studies identified clear digital service forms. 10 studies, accounting for 33.3%, provided evidence on direct economic evaluation or investment and costs; 19 studies, accounting for 63.3%, mainly offerred evidence on indirect value or behavioral transformation; 1 study focused on the economic value evaluation indicator system. The existing economic value mainly manifested as cost savings and resource utilization efficiency, willingness to pay, cultural consumption, return on investment, as well as broader public value and community spillover effects. Conclusion: The existing evidence is relatively sufficient in terms of digital service provision and user participation, while direct monetization evaluation remains insufficient. Subsequent evaluation needs to connect the actual project costs, resource reuse, user benefits, behavioral transformation, and long-term outcomes. At the same time, it cannot directly regard page views, satisfaction, or participation intention as economic value itself.

KEYWORDS

Public Libraries; Traditional Culture; Digital Services; Economic Value; Systematic Review; Cultural Heritage.

1. INTRODUCTION

Digital transformation is changing the way public libraries provide cultural services. Traditional research on public-library value has commonly examined reading, information access, education,

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community participation, and social inclusion. As digital resources, remote access, and online programming have expanded, however, the service boundaries of public libraries have extended beyond physical spaces into digital environments (Lee, 2025). Sørensen (2021) argues that the value of public libraries does not come from a single resource; rather, it is jointly produced by collections, spaces, staff, services, and community connections. Blanchard et al. (2026) further classify evidence on the value and impact of UK public libraries into themes including culture and creativity, health and wellbeing, information and digital services, books and reading, economic value and impact, and library space and place.

In the digital era, the evaluation of public-library value faces new questions. On the one hand, digital services can overcome temporal and spatial constraints and increase access to information and cultural resources. On the other hand, they cannot fully replace the social interaction, face-to-face support, and community experience provided by physical library spaces (Ruthven et al., 2023). Digital value is therefore better understood as an extension and reorganization of physical public-cultural services rather than as a simple technological substitute. Nielsen et al. (2023) similarly found that digital services can reach new users, but that content, target audiences, and platforms must be deliberately matched.

Traditional culture is an important component of public-library cultural services. Its scope extends beyond classical texts to include intangible cultural heritage, folk culture, local culture, local memory, traditional arts, traditional crafts, and material culture. In recent years, digital intangible cultural heritage applications, digital twins, AR/VR storytelling, social-media dissemination, and knowledge graphs have increasingly entered cultural-heritage contexts. Existing studies suggest that digitization can improve interactivity, accessibility, and dissemination, but its effectiveness depends strongly on cultural authenticity, user experience, platform design, and community participation (Li & Kim, 2023; Liu et al., 2025; Tan et al., 2026).

Research on economic value also provides an important methodological basis for evaluating public cultural services. Noh (2017) constructed a multidimensional evaluation framework for the economic value of public libraries, covering regional economic value, economic vitality, human resource development, job creation, and investment value. Ko et al. (2012) used the Contingent Valuation Method (CVM) to estimate the user benefits of public libraries in South Korea and obtained an overall Return on Investment (ROI) of approximately 3.66. Cho and Ho (2026) incorporated market replacement value, willingness to pay (WTP), local economic impact, and ROI into the same evaluation framework. This indicated that free public library services could also generate monetizable social and economic value. Gilpin et al. (2024) used long-term administrative data and investment evidence; they found that the returns generated by capital investment in public libraries were not limited to short-term borrowing and visitation.

Existing literature has formed several relatively independent research directions, including the value and ROI of public libraries, digital public services, cultural and creative services, and the digital dissemination and value evaluation of cultural heritage. What is relatively lacking is systematic evidence that takes digital services of traditional culture in public libraries as the core object and incorporates service forms, costs or user benefits, behavior transformation, and economic outcomes into a single analytical chain. There are relatively few studies that directly cover all four dimensions simultaneously. Based on this, the study distinguishes between direct evidence from public libraries and transferable evidence from similar public cultural and digital traditional cultural contexts. In addition, it conducts analysis around three questions: What are the main forms that traditional cultural digital services in public libraries have already taken? What indicators and methods do existing studies use to identify, estimate, or explain their economic value? Where are the obvious gaps in the existing evidence chain, and how can future research solve them?

2. RESEARCH METHODS

2.1. Literature Search and Screening

This study adopts the fundamental research logic of a systematic review, dividing the search topics into four conceptual groups: public libraries, traditional culture, digital services, and economic value. The search databases include Library, Information Science & Technology Abstracts (LISTA), Scopus, Web of Science Core Collection, and Library and Information Science Abstracts (LISA), with Google Scholar used for title verification and citation tracing. The search update time is up to August 31, 2026. The publication period focuses on 2022–2026, while earlier studies directly involving the economic value, ROI, CVM, or digital service valuation of public libraries are also retained.

Within a conceptual group, synonyms and near-synonyms are connected using "OR", and conceptual groups are combined using "AND". The main search terms include public librar, community librar, municipal librar, traditional culture, intangible cultural heritage, folklore, local culture, local history, local memory, traditional art, handicraft, digital service, digitization, digital resource, online exhibition, digital reading, digital storytelling, digital platform, virtual, Augmented Reality (AR), Virtual Reality(VR), metaverse, economic value, ROI, cost, efficiency, cost-benefit, WTP, CVM, choice experiment, purchase intention, and economic impact.

After a secondary verification of the title, author, and Digital Object Identifier (DOI) information, a total of 110 records proceeded to the qualification screening, as shown in Table 1. During the title and abstract review stage, 42 studies with weaker relevance to the research question were excluded, leaving 68 for full-text assessment. In the full-text screening stage, 38 studies were excluded, including 12 that had insufficient connection to public libraries or comparable public cultural service contexts. 9 that lacked elements of traditional culture or digital services. 10 that only reported satisfaction, attitudes, views, or general dissemination effects, making it impossible to identify economic value information. 7 that were reviews, theoretical discussions, or purely technical development studies, without providing original evidence suitable for inclusion in a comprehensive analysis. The final qualitative synthesis included 30 studies. Early classic studies that could provide key evidence of CVM, ROI, or economic value were not excluded due to their earlier publication date.

Table 1. Literature screening record

Stage	Number of literatures
Initial records entered for screening	110
Excluded after title/abstract screening	42
Entered full-text qualification assessment	68
Excluded after full-text assessment	38
Included in qualitative synthesis	30

2.2. Data Extraction and Classification

A unified data extraction form is established for the 30 studies finally included. The analysis fields are limited to those directly related to the research questions, including seven items: publication year, research region, traditional culture types, digital service forms, research methods, economic value indicators, and main research conclusions. Bibliographic information is verified separately and is not used as a variable in thematic analysis. The research objects of traditional culture studies are coded based on the actual content of each document, mainly including intangible cultural heritage, local culture and memory, folk culture, traditional arts and crafts, and material culture. Digital services are classified based on the way resources are supplied and how users interact with them, covering digital

resources, online exhibitions, digital reading and online activities, digital communication, immersive or interactive experiences, digital cultural products, and integrated online-offline services. Page views, satisfaction, and participation rates are not directly encoded as economic value. Only when relevant indicators are further linked to cost savings, resource utilization efficiency, WTP, cultural consumption, ROI, local economic impact, or other identifiable economic outcomes do they enter economic value analysis.

2.3. Quality Appraisal and Evidence Synthesis

These studies involve qualitative, quantitative, mixed methods, and multi-method studies. The methodological quality is evaluated with reference to the Mixed Methods Appraisal Tool (MMAT), and appropriate evaluation items are selected according to different study designs. For qualitative research, the focus is mainly on the consistency among data sources, analysis procedures, and study conclusions. For descriptive or non-randomized quantitative research, the focus is mainly on sampling, measurement tools, handling of missing data, and related confounding factors. Mixed methods research simultaneously examines the quality of qualitative and quantitative components, as well as whether the two types of evidence are reasonably integrated.

The evaluation results are recorded as "conformity", "non-conformity," or "insufficient information". The quality of the study does not use a single score after simple summation, nor does it automatically exclude research because of the shortcomings of an evaluation item. Quality evaluation is mainly used to adjust the evidence weight of different research conclusions in comprehensive analysis.

The evidence synthesis is mainly based on qualitative-descriptive analysis, supplemented by classified statistics that can be recalculated. Descriptive statistics are used to present publication year, research design, service form, and economic evidence type. Contrastive coding is employed to analyze the relationship among traditional cultural objects, digital service forms, and economic value indicators. The conclusion is organized around the theme of service type - value measurement - value form - value creation path.

In order to reduce duplicate counting, when a study can identify a clear digital service form, each study is classified into only one major digital service category. At the same time, only one major economic evidence category is determined for each study. The included studies have significant heterogeneity in terms of research objects, indicators, measurement units, and valuation methods, lacking a unified effect size basis. Therefore, meta-analysis statistics are not conducted in this study.

3. RESULTS

3.1. Basic Characteristics of the Included Literature

A total of 30 studies are ultimately included in the evidence synthesis. Among them, 15 are direct evidence from public libraries, and 15 are transferable evidence from digital traditional culture or similar public cultural contexts. The distribution of publication years is depicted in Figure 1. There were 26 studies published between 2023 and 2026, accounting for 86.7%. The studies in 2012 and 2017 involved the measurement of the economic value of public libraries, each accounting for 3.3%.

Classified by research methods (in Figure 2), there are 16 quantitative and 8 qualitative studies, accounting for 53.3% and 26.7%; 6 mixed-method, multi-method, or method-development studies, accounting for 20.0%.

The distribution of research indicator categories is exhibited in Table 2. In 30 studies, 19 studies can identify clear digital service forms, accounting for 63.3%. From the perspective of economic evidence, 10 studies, accounting for 33.3%, provide direct monetary valuation, investment or cost outcomes. 19 studies, accounting for 63.3%, mainly offer evidence on indirect value or behavioral

transformation. 1 study, accounting for 3.3%, is used to construct an economic value evaluation indicator system. Existing studies provide significantly more evidence in the service usage and value formation stages than in direct monetization.

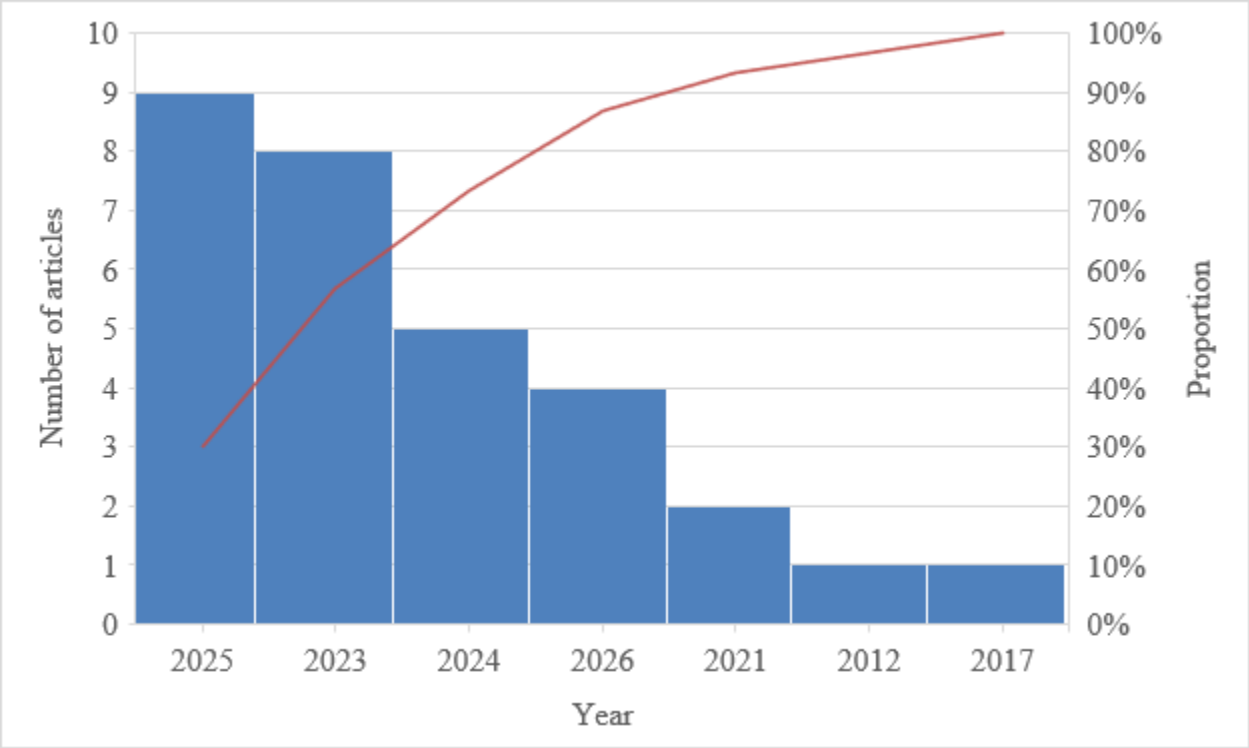


Figure 1. Distribution of literature years

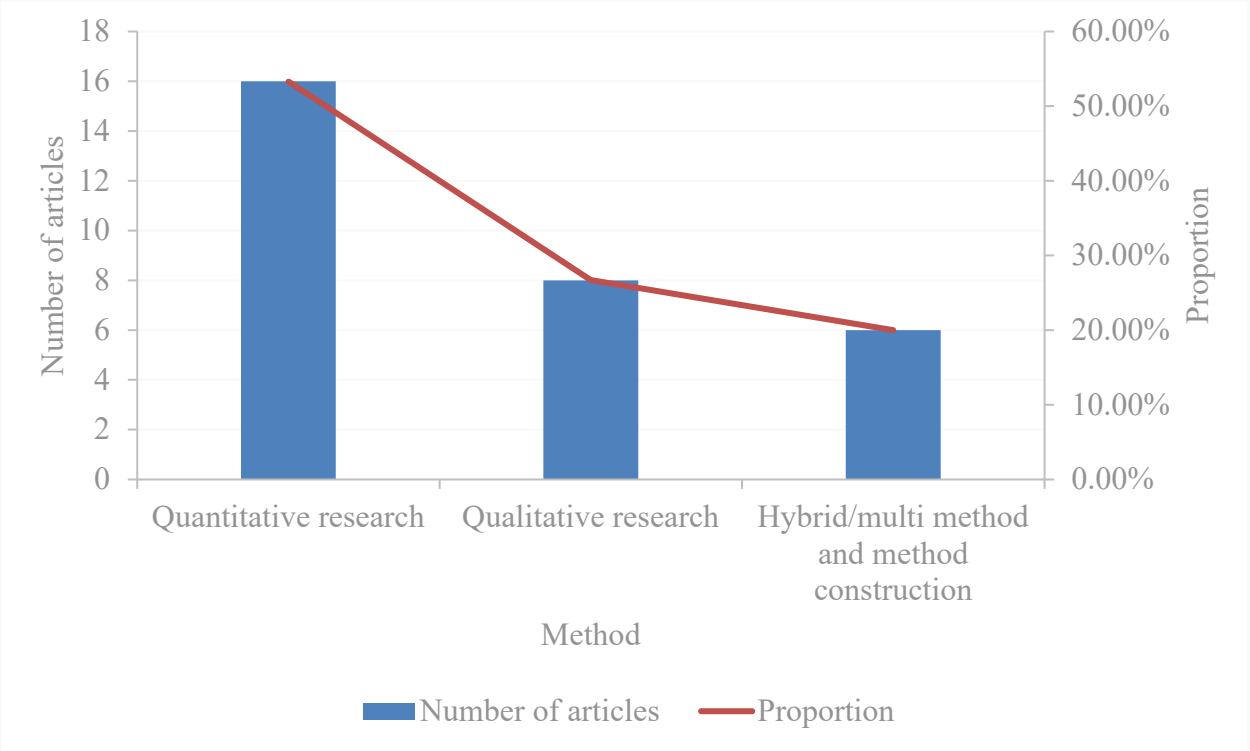


Figure 2. Distribution of research methods

Table 2. The distribution of research indicator categories

Indicator	Category	Number of articles	Proportion
Digital service	Clarify the form of digital services	19	63.3%
	Mainly provide valuation/cultural scenario evidence; unclear digital service form	11	36.7%
Economic evidence	Direct economic evaluation or investment/cost results	10	33.3%
	Indirect value/behavioral conversion evidence	19	63.3%
	Methodological evidence of evaluation indicators	1	3.3%

3.2. Major Forms of Digital Traditional Culture Services

Statistics on service types are listed in Table 3. Among the 30 included studies, 19 are able to clearly identify the main forms of digital services. 8 studies, accounting for 26.7% of the total sample, mainly involve digital resources and online public services, including e-books, online library services, digitized collections, digital cultural heritage information, and digitized collection management. These services highly align with the traditional strengths of public libraries in collection organization, retrieval, preservation, and long-term use. They are also suitable for the digital organization and reuse of cultural resources such as local literature, oral histories, traditional craftsmanship knowledge, images, and community memory (Bui et al., 2025). The remaining 11 studies mainly provide evidence in terms of value evaluation, investment efficiency, cultural scenarios, or research methods, and do not incorporate them into specific types of digital services.

Another category of research focuses on digital cultural platforms and the integration of online and offline services, with a total of 5 studies, accounting for 16.7%. Related services involve digital platforms for cultural heritage, metaverse environments, physical-digital (phygital) services, and digital experiences that can guide subsequent physical participation. Digital interpretation and digital storytelling can transform static displays into interactive communication. Meanwhile, the evaluation of content also needs to extend from views and likes to audience cognition, sustained engagement, and subsequent behavior (Liu, 2020; Yan et al., 2025). The study by Pesce and Franzè (2025) showed that the value of digital cultural platforms could come from efficiency, complementarity, novelty, and the connection between participants and resources.

3 studies, accounting for 10.0%, mainly focus on immersive and interactive digital experiences, including intangible cultural heritage applications (apps), digital twins, and mobile AR. Research on traditional handicraft applications shows that virtual scenes, cultural symbols, craft communities, interactive contexts, and cultural narratives are all important elements affecting user experience (Li & Kim, 2023). Digital twin research further links display, personalized design, the production process, and final outcomes. This allows digital functions to gradually extend from preservation and display to participation and potential consumption (Li et al., 2024).

There are three other studies, accounting for 10.0%, mainly covering digital cultural products, live streaming, and transaction-oriented services. These studies advance traditional cultural digital services from resource access and experience to the stage of potential consumption. The quality of cultural products, degree of interaction, perceived benefits, and contextual experience all affect purchase intentions (Xu et al., 2024). These services do not replace basic digital resources but extend the digital service chain from information access to interaction, offline participation, connection with cultural products, and sustained cultural engagement. Research on the metaverse of cultural heritage also indicates that positive online experiences may enhance users' willingness for subsequent offline participation, rather than simply crowding out physical engagement (He & Qin, 2024).

Table 3. Statistics of service types

Main forms of digital services	Number of articles	Proportion of 30 articles	Explanation
Digital resources and online public services	8	26.7%	E-books, online library services, digitized collections/resources, algorithmic collection management, etc.
Digital cultural platforms and online-offline integration	5	16.7%	Metaverse, phygital platforms, digital cultural platforms, and digital experiences guiding offline participation
Immersive and interactive digital experiences	3	10.0%	Intangible cultural heritage apps, digital twins, and mobile AR
Digital cultural products and live streaming/transactions	3	10.0%	Digital cultural creation, live e-commerce, and digital trading of cultural products
Unspecified digital service forms	11	36.7%	Mainly provides evidence for economic valuation, investment efficiency, and measurement of local or traditional cultural value
Total	30	100.0%	Uses mutually exclusive main coding, with each article classified into only one main category

3.3. Economic Value and Evaluation Methods

Cost Savings and Resource Utilization Efficiency. Direct economic evidence is more commonly reflected in the relationship between service output and resource input. Austin (2024) found that combining usage, costs, and resource substitutability could help identify low-value electronic resource expenditures. Liu et al. (2023), using a multi-output cost function analysis on 1,629 public libraries in the United States, also identified potential economies of scale between increased service output and cost savings. For traditional cultural digital projects, per-use costs, project costs, per-participant costs, platform maintenance expenses, and the number of subsequent reuses of digital content better reflect resource use efficiency than mere access volume.

User Benefits, Non-market Valuation, and WTP. Public libraries and public cultural services are mostly provided for free, so direct revenue cannot fully reflect their value. CVM, WTP, market replacement value, and choice experiments can convert user preferences into comparable monetary values. Ko et al. (2012) applied this idea to the evaluation of public library services. Zhu et al. (2026) applied WTP valuation to intangible cultural heritage scenarios. Choice experiment studies showed that different cultural service attributes corresponded to different marginal WTPs (Zhao & Chan, 2023; Xiao et al., 2023). These methods can compare the value differences of different service design schemes, rather than just determining whether users are satisfied.

ROI and Long-term Socio-Economic Benefits. ROI evaluates the effectiveness of investment by comparing public input with monetized or assessable returns (Gómez-Zapata & del Barrio-Tellado, 2023). Ko et al. (2012) measured the overall ROI of public libraries in South Korea to be approximately 3.66. Cho and Ho (2026) further incorporated market replacement value, WTP, local economic impact, and ROI into a unified framework. Research by Gilpin et al. (2024) indicated that capital investment in public libraries was linked to library visits, borrowing rates, and student reading outcomes. Such evidence suggests that the economic returns of public libraries may extend to long-

term outcomes at the human capital and community levels, and are not limited to current service transactions.

Cultural Consumption and Behavioral Transformation. Digital experiences can influence cultural interest, perceived value, offline participation, and purchase intention. These outcomes can only be recognized as realized economic results when they are linked to actual transactions or monetized gains. He and Qin (2024) supported the behavioral pathway of online experience—offline participation. Hu et al. (2025) associated mobile AR experiences with the willingness to purchase intangible cultural heritage crafts. Live streaming studies also indicated that the quality of cultural products, interaction, and situational experience affected purchase intention (Xu et al., 2024; Gu & Zhao, 2025). These variables can illustrate the behavioral conversion mechanism in the process of forming economic value. However, when there is a lack of real behavior or actual expenditure data, it is inappropriate to directly state them as realized economic benefits.

Cultural Capital, Digital Capital, Public Value, and Social Spillovers. Leguina et al. (2021) found that public libraries could be used as important reservoirs of cultural and digital capital, expanding opportunities for cultural participation and potentially narrowing the cultural and digital gaps between different groups. Values (such as governance, service design, regional development, and community benefits) were difficult to directly monetize in the short term (Sandriester et al., 2025). Among 30 studies, only 10 provided direct evidence of economic impact, investment, or costs. Most studies mainly explained perceived value, behavior transformation, cultural participation, or public value (Leguina et al., 2021; Heikkilä, 2026). Such research can explain mechanisms of value formation but should not be conflated with direct economic benefits. The statistical results of economic value are outlined in Table 4.

Table 4. Statistics of economic value

Main economic value evidence	Number of articles	Proportion of 30 articles	Main methods/indicators
Monetization valuation and WTP/ROI	8	26.7%	ROI/SROI, CVM, WTP, Choice Experiment, and market replacement value
Cost efficiency and investment outcomes	2	6.7%	Cost functions, long-term administrative data and investment outcome analysis
Cultural consumption and purchase intention	4	13.3%	SEM, regression, purchase intention models, and live e-commerce behaviors
Perceived value, behavioral transformation and cultural/digital capital	7	23.3%	Questionnaires, regression, SEM, interviews, cultural capital/perceived value indicators
Public culture, regional, governance and service design value	8	26.7%	Case studies, grounded theory, mixed methods, user experience evaluation
Economic value evaluation indicator Framework	1	3.3%	Delphi indicator construction
Total	30	100.0%	Using mutually exclusive primary coding, each article is assigned to only one main economic value category

3.4. Value-Creation Pathways and Evidence Gaps

By combining the two types of evidence, the value creation process of digital services for traditional culture in public libraries can be organized as: resource input → digital service supply → user exposure and participation → cultural and behavioral outcomes → economic value. This path

represents an integrative induction of dispersed research evidence and does not imply that existing studies have completed a unified causal test across the entire chain. Research on public libraries provides relatively sufficient evidence on collections, platforms, personnel, capital input, service usage, and costs. Transferable studies on traditional culture supplement content such as immersive experiences, offline participation, WTP, cultural product consumption, and platform value. The focus of the analysis is on connecting different stages, avoiding treating process indicators directly as final economic outcomes.

There is a significant evidence gap between different value links. Among the 30 samples, no study simultaneously takes public libraries, traditional culture, and explicit digital services as a complete research object and further completes a direct monetization evaluation. The number of studies on direct economic evaluation is also relatively small, with only 10 studies, accounting for 33.3%, providing monetary, investment, or cost results. 19 studies, accounting for 63.3%, mainly offer indirect value or behavior conversion evidence. 1 study is used to construct an indicator system.

Project development costs, maintenance expenses, personnel time costs, and opportunity costs are rarely fully presented in the same study, limiting the implementation of comprehensive ROI or cost-benefit analysis. Long-term tracking studies that link digital reach with repeated engagement, actual cultural consumption, learning outcomes, or community impact are also scarce. There are differences in cost structures and user preferences across regions, institutions, and cultural projects. At present, research that can conduct cross-project and cross-regional comparisons is still limited.

4. DISCUSSION

4.1. Interpreting Economic Value

The economic value of digital services for traditional culture in public libraries cannot be simply equated with charging income or project profits. Public libraries have a clear public service nature. The benefits generated by digitization may manifest as reduced time and access costs for users, increased utilization of public cultural resources, expanded coverage of digital services, enhanced willingness to participate in cultural consumption, and long-term spillover effects at the educational and community levels. If the evaluation logic of "revenue minus cost" is simply adopted, it is easy to underestimate the overall value of such services.

Positive cultural experience outcomes cannot automatically be equated with economic value. Among the 30 studies included in this study, only 10 provide direct evidence of economic evaluation or investment and cost. Most studies focus on perceived value, satisfaction, participation, behavioral intentions, or related mechanisms. Page views, likes, event participation, cultural identity, and purchase intentions can reflect whether a service has generated attention or potential conversion paths. However, they do not in themselves prove that actual economic benefits have been realized.

A more rigorous evaluation requires further linking these process indicators to WTP, replacement value, unit resource cost, actual offline participation, real cultural product purchases, charitable donations, or the cost dilution effect brought by multiple reuses of digital content. Thus, service usage data and economic outcomes form a continuous evidence relationship.

4.2. Application Case: Jade Culture Activities

The “Jade Youth” event is aimed at young readers, combining explanations of jade culture, appreciation of jade objects, bracelet-making, and public welfare displays. In addition, it conveys corresponding cultural meanings through seasonal themes. The current digital components mainly include promotion via the WeChat public account, dissemination through reader communities, online registration, and sharing of images after the event. At present, a complete digital resource platform for jade culture has not yet been established.

The current activity plan shows that the budget for a 20-person event is approximately 1,000 yuan. Based on the planned number of participants, the unit cost per participant is about 50 yuan. The combined price for the lecture and Do It Yourself (DIY) is 59 yuan. If all 20 spots are paid for and participants actually attend, the corresponding revenue would be 1,180 yuan. The 180 yuan difference can only be understood as the potential budgetary surplus and cannot be directly regarded as realized profit. The existing information has not yet fully accounted for expenses such as venue opportunity costs, platform maintenance, promotion, human resource management, payment processing fees, and subsequent digital content production.

The price of the four-season themed bracelet is 39.9 yuan, and the gift box is priced at 49.9 yuan. Without the actual sales volume and the corresponding product costs, it is also impossible to calculate the actual sales yield.

A more appropriate evaluation method is to continuously record real data, rather than preset economic benefits before the event starts. Trackable indicators include digital content reading and sharing, registration conversion, actual attendance, total event cost, cost per participant, digital content reuse frequency, repeat participation, WTP, actual purchases, and charitable donations. Income from charitable donations should be accounted for separately from operating income.

This activity can form a potential value path of digital dissemination of jade culture → cultural understanding and interest → offline DIY participation → cultural consumption or public welfare participation. This path is theoretically reasonable, but specific economic effects still need to be based on actual costs, transactions, resource reuse, and long-term behavior data.

4.3. Implications and Future Research

The evaluation of traditional culture projects in public libraries needs to gradually shift from focusing on the number of activities and page clicks to the relationship between resource investment, service usage, user benefits, and sustainability. At the project initiation stage, costs for content production, material expenses, personnel time, platform fees, maintenance expenses, and other operational inputs can be recorded simultaneously. Meanwhile, digital resource access, registration conversion, attendance, repeat participation, actual purchases, charitable donations, and the reuse of digital content are continuously tracked.

Using relatively standardized units for participation cost, per-use cost, resource reuse rate, and WTP indicators helps compare the input efficiency and user value of different traditional cultural projects. Long-term studies can also examine value differences among different age groups, regions, and traditional cultural projects.

Future research can include cost and operational data at the project level to conduct ROI, cost-benefit analysis, and unit cost analysis. For free or low-cost cultural services, non-market value assessment can be conducted using CVM, WTP, market replacement value, and choice experiments. Long-term tracking can link digital engagement with real offline participation, repeat use, purchases, donations, learning outcomes, and community impact. Different age groups, regions, and traditional cultural projects can also use consistent indicators to carry out comparative studies.

The lifecycle and reuse of digital cultural content are also suitable to be included in the scope of value evaluation. After digital assets are used multiple times, the initial construction costs can be spread over more service processes, making resource reuse an important indicator for observing the long-term efficiency of digital projects.

5. CONCLUSION

This study is based on 30 included studies and systematically organizes the main forms, economic value evidence, and evaluation methods of digital services for traditional culture in public libraries.

The study shows that the truly weak link in current research is not the lack of evidence that digital cultural services can attract users. However, there is still a disconnect between service usage indicators and verified economic outcomes. Subsequent evaluations need to incorporate actual project costs, digital resource reuse, user economic benefits, real behavior conversion, and long-term outcomes into the complete chain of resource input → service supply → user participation → cultural and behavioral outcomes → economic value. Using the "Jade Youth" activity as a scenario, this framework can be applied to costs, digital dissemination, registration, attendance, resource reuse, purchases, donations, and long-term participation data. Meanwhile, it can clearly distinguish between expected value and economic returns verified by actual data.

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