Exploring Innovative Approaches to Managing Cultural Heritage for Economic Benefit

Dr. Kajal Chheda[1], Mohan Garg[2], Monika[3], Anila Bajpai[4], Sanjay Bhatnagar[5], Vidhya Lakshmi[6], Anvesha Garg[7]

[1]Assitant Professor, Department of ISME, ATLAS SkillTech University, Mumbai, Maharashtra, India, Email Id- kajal.chheda@atlasuniversity.edu.in
[2]Chitkara Centre for Research and Development, Chitkara University, Himachal Pradesh-174103 India, mohan.garg.orp@chitkara.edu.in
[3]Assistant Professor, Maharishi School of Business Management, Maharishi University of Information Technology, Uttar Pradesh, India, Email Id- monika.bs@muit.in
[4]Program Manager, Department of Management, School of Mangement - UG, JAIN (Deemed to be University), Bangalore, Karnataka, India, Email Id- anilabajpai@cms.ac.in
[5]Centre of Research Impact and Outcome, Chitkara University, Rajpura- 140417, Punjab, India, sanjay.bhatnagar.orp@chitkara.edu.in
[6]Assistant Professor, Parul Institute of Management and Research-MBA, Parul University, Vadodara, Gujarat, India, Email Id- vidhyalakshmi.narayanan24447@paruluniversity.ac.in
[7]Quantum University Research Center, Quantum University, India. anvesha.garg@quantumeducation.in

Abstracts

Cultural heritage management is essential for protecting the historical and cultural significance of sites while contributing to economic growth. This study's objective is to ascertain and evaluate modern management techniques for heritage sites that maximize economic benefits while ensuring sustainable protection. It seeks to discover methods that effectively stabilize heritage conservation with economic development goals. This study investigates the relationship between Economic benefits, Cultural preservation, Public Engagement, Community Impact, Sustainability of Management Practices, and Innovative approaches to managing cultural heritage utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM). A systematic questionnaire with a Likert scale rating was used to collect data from 450 populations. The measurement model assessed the validity and reliability of latent constructs, while the structural model analyzed the relationship between constructs based on the proposed hypotheses. The structural model revealed that EB, CP, and SMP are positively connected to the IMCH, between cultural heritages for economic benefit. ($\beta = 0.55, 0.50,$ and $0.56, p < 0.05$), providing well support for hypothesis 1, 2, and 5. The result shows there are no significant changes to managing cultural heritage for economic benefit.

Keywords: Partial Least Squares Structural Equation Modeling (PLS-SEM), Cultural heritage, economic benefit.

Introduction

Cultural heritage is composed of intellectual and spiritual gadgets that have been passed down through the ages and have shaped the history and identity of a community [1]. Cultural heritage monitoring and renovation at the moment are critical for preserving historic legacies and realizing their economic potential as modernity and globalization accumulate increasing pace [3]. Ancient structures, buildings, artifacts, and landscapes that provide tangible proof of earlier cultures and customs are examples of intellectual heritage. Conversely, traditions, rituals, dialects, music, and oral histories that are passed down through the generations and represent a culture's ongoing customs and ideals make up spiritual heritage [15]. Cultural heritage may also improve a product or service's reputation and market distinction, which may stimulate economic growth in several industries, such as entertainment, gastronomy, and arts [12]. For current and future generations to share a common cultural experience and preserve a feeling of identity, this legacy is essential [4]. Preserving cultural heritage entails keeping these assets secure from harm, deterioration, and loss, as well as making sure that their historical value is transmitted [13]. Heritage, through tourism, education, and cultural industries, may support economic growth in addition to its cultural worth [8]. Societies may commemorate their history and increase their cultural richness and resilience in the contemporary world by encouraging respect and understanding for the different cultural legacies that exist today [16].

The consistency and sensation of the identity of a society are contingent upon the preservation of its cultural legacy. It strengthens social connection by promoting a common cultural experience and assisting communities in making connections with their past [5]. Because it offers perspectives on historical events and cultural change, heritage preservation is also very important for education. Furthermore, through the creative industries and tourist sector, cultural heritage may stimulate economic growth. Heritage sites draw tourists, which boosts regional economies and brings in money, while old crafts and methods can open up new markets [10]. Societies may celebrate their traditions and encourage sustainable growth that preserves and respects their artistic resources for subsequent generations by appreciating and safeguarding their cultural heritage.

Despite these advantages, there are several difficulties in managing cultural assets for economic advantage. A balanced approach is necessary to ensure that economic activity is not threatening the integrity of cultural treasures. To prevent cultural sites from being overused and deteriorating, effective management plans must combine conservation initiatives with the objectives of economic growth. This study's objective is to ascertain and evaluate modern management techniques for heritage sites that specialize in maximizing economic benefits while ensuring sustainable protection.

The remaining study elements are grouped as follows: In Phase 2, the hypothesis is developed and pertinent research is covered. In Phase 3, the methodology comprising data collection,

question development, and statistical analysis was discussed. While Phase 4 presents the findings, Phase 5 concludes the research,

Related work

Using South Korea as a case study, the research [11] investigated the goal of ICH professionals in the establishment of ICH as an ecological visitor source. The outcomes showed that validity was perceived holistically by ICH practitioners that integrated their identities, passed-down traditions, and inherited meanings. Individuals of ICH agreed that there might be a positive relationship between marketing ICH as a travel resource and disseminating authentic ICH. The strategy was consistent with the circular economy, which tried to lessen the impact on the environment and the exploitation of natural resources by prolonging the usable life of products. The study [2] assessed several reuse scenarios in the event of the COVID-19 pandemic in Castello Visconteo, Italy. The best function for adaptive reuse was identified by integrating qualitative and economic variables in four situations. The creative strategy promoted sustainable growth from a circular economy perspective by creating new values and conserving memories. Reducing resource extraction and environmental waste was the goal [17] of circular economy initiatives. They were especially helpful in urban construction, where repurposing and renovating abandoned structures might boost social and economic growth while reviving areas. A novel framework that incorporated techniques from the architecture and construction industry to lessen lifetime environmental impact appeared to overcome the shortage of information and resources for the adaptive reuse of historical structures. The influence of cultural identification on travelers' desire to consume when visiting historical sites was investigated in the study [6]. It provided a sense of the connections among behavioral perspectives, perceived authority, cultural identity, and personal standards by using the idea of planned behavior. The findings demonstrated that cultural identification impacts tourism-related spending intentions in a positive way, boosting environmental sustainability and raising the value of cultural resources. In the work [7], they offered a multi-criteria decision-supporting methodology for prioritizing valuation methods of cultural heritage assets to foster both cultural and economic advantages in addition to their repair and protection. They demonstrated more deeply an innovative use of the A'WOT examination to assist in the development and adoption of substitute administration plans for traditional property sites that had been deserted. The US Gullah Geechee social connection, a minority with a rich cultural legacy, faces threats from adverse environmental impacts and warming temperatures. 109 publications about the community were examined for the study [14], which found that although the community's cultural legacy was fragile, it might strengthen resilience and encourage the establishment of environmentally friendly tourism and heritage. The study emphasized how important it was for decision-making procedures to take both cultural and economic factors into account. The study [9] investigated how physical cultural heritage affects the allure of Europe for tourists. It was shown that there are 6,000–60,000 more foreign visitors to an average European region from each European nation when there are UNESCO cultural World Heritage Sites. Physical types of legacy defined at the regional or national level, nevertheless, were less important. The geographical degradation effect was mitigated by the existence of UNESCO sites.

Hypothesis development

Hypothesis (H1): Economic benefits are positively connected to the Innovative approaches to managing cultural heritage derived from heritage sites. (EB) → (IMCH)

Hypothesis (H2): Cultural preservation is positively connected to the Innovative approaches to managing cultural heritage sites. (CP) → (IMCH)

Hypothesis (H3): Public Engagement is positively connected to the Innovative approaches to managing cultural heritage sites. (PE) → (IMCH)

Hypothesis (H4): Community Impact is positively connected to the Innovative approach to managing cultural heritage sites. (CI) → (IMCH)

Hypothesis (H5): Sustainability of Management Practices is positively connected to the Innovative approaches to managing cultural heritage sites. (SMP) → (IMCH)

Methodology

The study's key components are shown in Fig.1, where the independent variables are Economic benefits (EB), Cultural preservation (CP), Public Engagement (PE), Community Impact (CI), Sustainability of Management Practices (SMP), while the dependent variables are Innovative approaches to managing cultural heritage (IMCH). They are ultimately the primary focus of this study and are produced through the interaction of several factors.

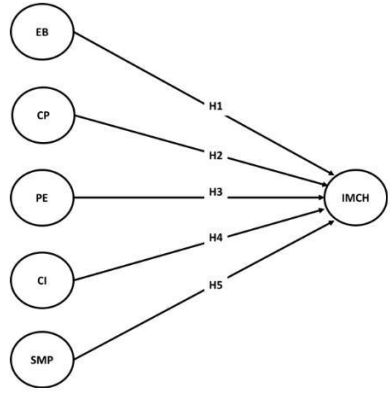

Fig 1 Conceptual framework

Research design

In this study, an assessable technique was applied to managing cultural heritage for economic benefit. The study gathered data to substantiate its hypotheses. The research collected information that verified its hypotheses. Advanced technology analytical methods were applied to evaluate the hypothesis testing. These techniques made it easier to thoroughly investigate the connections between the variables, ensuring strong statistical inference and strengthening the study's characterization framework.

Data collection

Data collection for the "Festival of Lumina" was gathered from a sample of 450 participants, which included 250 festival attendees and 200 local residents. The age distribution was 30% aged was 18–30, with 45% being 31–45, and 25% being 46–65. The gender representation was nearly equal, with 52% female and 48% male participants. Out of the total, 40% were locals and 60% were festival goers. The festival's organization and cultural relevance were better understood through interviews with organizers and merchants, while surveys evaluated visitor happiness, community engagement, and economic effect. Table I shows a sample population.

Table I Demographic details

Demographic Variable	Category	Count	Percentage (%)
Total Participants	450	450	100
Age	18-30	135	30
	31-45	203	45
	46-65	112	25
Gender	Female	234	52
	Male	216	48
Type of participant	Festival Attendees	250	56
	Local Residents	200	44

Questionnaire design

500 questionnaires were distributed within different divisions and activities to collect data for evaluation. As some of the returned surveys were either blank or only partially completed, a total of 450 surveys were determined to be suitable for the study. Creating a questionnaire with seven fundamental elements is the first stage in this approach (refer to Appendix A). Demographic data about the responders is gathered in this section.

- EB: Innovative management approaches enhance the economic benefits of cultural heritage sites.
- CP: Innovative management approaches improve the preservation of cultural heritage.
- PE: Innovative management approaches to increase public participation in cultural heritage activities.
- CI: Innovative management approaches positively impact the local community.
- SMP: Innovative management approaches improve the sustainability of heritage management practices.

- IMCH: Involve new and creative methods for preserving, promoting, and leveraging cultural assets for enhanced value and impact.

A 5-point Likert scale was used to rate 450 survey participants. The feedback is numerous from (1) Not at all (5) Very significantly, (1) Not effective (5) Extremely effective, (1) Poorly (5) Exceptionally well, (1) Very dissatisfied (5) Very satisfied, (1) Very unlikely (5) Very likely, (1) Not at all (5) To a great extent, (1) Strongly disagree (5) strongly agree, (1) Not sustainable (5) Highly sustainable, (1) Not well at all (5) Extremely well Exceeded expectations.

Statistical analysis

The recommended structural model was constructed in this investigation using the SEM-PLS technique since it gives more latitude for data collection and sample size. The six components of the framework (EB, CP, PE, CI, SMP, and IMCH) were examined using CFA. To prevent repetition, we integrated the evaluation of the components and the analysis of the measurement model. The route weighting technique was used by the PLS algorithm on normalized data (mean 0 & variance 1).

Results

Measuring Model Assessment

The examination of reliability and validity is shown in Table II. The FLC was employed to determine the reliability of the indicators, factorial validity, convergence validity, discriminant validity while evaluating the measuring model. The reliabilities of the study's latent constructs were determined and evaluated by the use of α, CR, AVE, M, and SD. The α value range was 0.80 to 0.90, where as the CR value range was 0.83 to 0.90. Standardized factorial weights were used to evaluate factorial validity, and any items with a score higher than 0.74 were considered to have factorial validity. The AVE measurement ranged from0.65 to 0.75, indicating a high degree of convergent validity for the items. The confirmation of discriminant validity was achieved by comparing the AVE square root value with correlation values across constructs. Greater square root values suggested a lack of relationship between the items representing different components and other elements. Each concept's validity and dependability were strong, suggesting that the structural model could incorporate them. The AVE square root values are displayed on the correlations' diagonal. Table III presents the analyses of discriminating validity. In Fig. 2, the measurement model is displayed.

Table II Reliability and Validity Evaluation

Latent Construct	Items	Loading-value	M	SD	α	CR	AVE
EB	EB1 EB2	0.84 0.78	3.9	0.72	0.81	0.85	0.70
CP	CP1 CP2	0.89 0.85	4.0	0.78	0.83	0.88	0.72
PE	PE1 PE2	0.82 0.80	3.8	0.74	0.79	0.84	0.68
CI	CI1	0.85	3.7	0.76	0.80	0.83	0.69

	CI2	0.81					
SMP	SMP1	0.87	4.1	0.71	0.85	0.89	0.74
	SMP2	0.83					
IMCH	IMCH1	0.87	4.0	0.71	0.84	0.87	0.73
	IMCH2	0.82					

Table II offers complete details on the reliability and validity of numerous latent constructs measured by numerous items in a study. Each construct, such as EB, CP, PE, and others, is assessed through its particular items with consistent loading values demonstrating the strength of each item. The M and SD imitate the essential tendency and variability of responses. Reliability metrics like α and CR measure the interior stability of the constructs, enhancing that the items reliably capture the fundamental construct. The AVE shows how much variation the structure captures in comparison to the measurement error-induced difference. Great loading values, reliability coefficients (α, CR), and AVE signify robust internal consistency and construct validity, ensuring the constructs are both reliable and valid for further analysis.

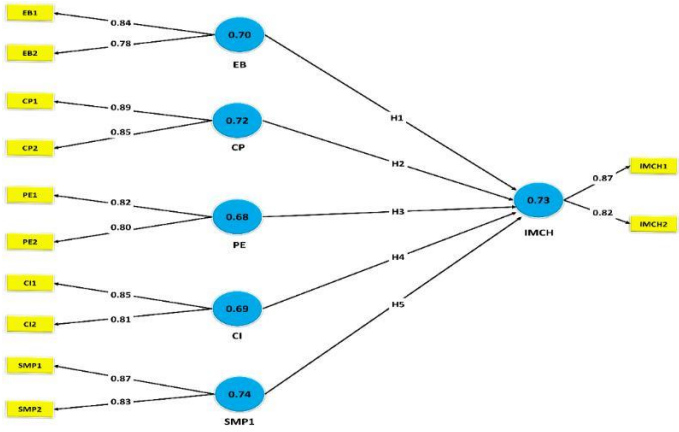

Fig 2 Model's assessment

Table III Discriminating Validity Analysis

Construct	EB	CP	PE	CI	SMP
EB	0.83	-	-	-	-
CP	0.52	0.84	-	-	-
PE	0.48	0.50	0.82	-	-
CI	0.55	0.54	0.49	0.83	-
SMP	0.53	0.58	0.51	0.59	0.86

Structural model

The significances of size (f^2) and the R^2 values of the interior latent variables are the main measures used to analyze the structural model. Based on Table IV, all are far above the acceptable 0.10 threshold. The effect size (f^2), which establishes the relative impact of an external variable on an internal variable, improves R^2 analysis by analyzing changes in R^2 values. Research ensures a comprehensive examination. Fig. 3, which displays the results of the SEM technique and the output of the structural analysis, highlights significant path coefficients among the primary constructs.

Table IV Structural framework

Hypothesis and Connections	β Values	R^2	f^2	P Value	f^2 Effect	Result
H1: (EB) → (IMCH)	0.55	0.40	0.09	<0.05	Medium	Well Supported
H2: (CP) → (IMCH)	0.50	0.35	0.08	<0.05	Medium	Well Supported
H3: (PE) → (IMCH)	0.48	0.30	0.07	<0.05	Medium	Supported
H4: (CI) → (IMCH)	0.52	0.32	0.09	<0.05	Medium	Supported
H5: (SMP) → (IMCH)	0.56	0.38	0.10	<0.05	Large	Well Supported

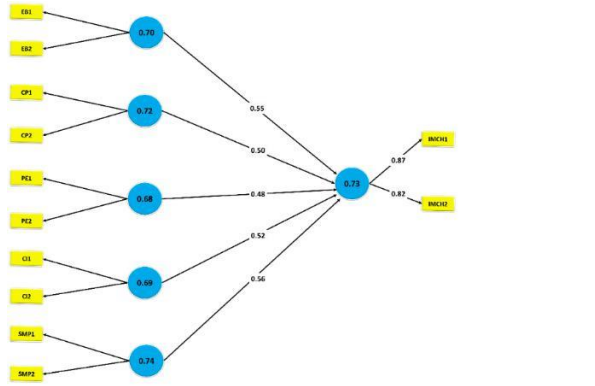

Fig 3 Evaluation of the Structural model

H1: (EB) → (IMCH): The connection between Economic Benefits (EB) and Innovative Approaches to Managing Cultural Heritage (IMCH) indicates a medium effect size and is statistically significant, demonstrating strong support for this hypothesis.

H2: (CP) → (IMCH): The connection between Cultural Preservation (CP) and Innovative Approaches to Managing Cultural Heritage (IMCH) suggests a medium effect size and is statistically significant, indicating strong support for this hypothesis.

- H3: (PE) → (IMCH): The connection between Public Engagement (PE) and Innovative Approaches to Managing Cultural Heritage (IMCH) displays a medium effect size and is statistically significant, providing support for this hypothesis.
- H4: (CI) → (IMCH): The connection between Community Impact (CI) and Innovative Approaches to Managing Cultural Heritage (IMCH) shows a medium effect size and is statistically significant, supporting this hypothesis.
- H5: (SMP) → (IMCH): The connection between Sustainability of Management Practices (SMP) and Innovative Approaches to Managing Cultural Heritage (IMCH) proposes a large effect size and is statistically significant, providing robust support for this hypothesis.

Discussion

Each hypothesis describes a recommended connection among particular elements and their influence on IMCH. The primary hypothesis H1: (EB) → (IMCH), H2: (CP) → (IMCH), and H5: (SMP) → (IMCH) declares that EB, CP, and SMP significantly influences IMCH. This connection is robustly supported by a β value of 0.55, 0.50, and 0.56 demonstrating a positive direct effect. The associated R^2 values of 0.40, 0.35, and 0.38 recommend that EB, CP, and SMP describe 40%, 35%, and 38% of the variance in IMCH, emphasizing its substantial descriptive control. Moreover, the f^2 value of 0.09, 0.08, and 0.10 signifies a large effect size, underscoring the magnitude of EB, CP, and SMP impact on IMCH. With a p-value of less than 0.05, this relationship is statistically significant, affirming its reliability within the study. Subsequent hypotheses (H3 and H4) also explore connections between PE and CI. These hypotheses demonstrate moderate support, as indicated by their β values ranging from 0.47 to 0.58, R^2 values from 0.29 to 0.33, and corresponding f^2 values from 0.06 to 0.10. Each hypothesis meets the criterion of statistical significance ($p < 0.05$), suggesting meaningful relationships that contribute to understanding the factors influencing cultural heritage for economic benefit.

Conclusion

This study employed PLS-SEM to explore the connections between Economic Benefits (EB), Cultural Preservation (CP), and Sustainability of Management Practices (SMP) with Innovative Approaches to Managing Cultural Heritage (IMCH). Data collected from a sample of 450 respondents using a Likert scale questionnaire demonstrated that EB, CP, and SMP positively influence IMCH, with standardized path coefficients of $\beta = 0.55$, 0.50, and 0.56, respectively, and p-values less than 0.05. These findings robustly support Hypotheses 1, 2, and 5, affirming the positive relationships between the studied constructs. The results indicate that managing cultural heritage for economic benefit remains effective, with no significant changes detected in the management practices. The study's shortcomings in analyzing the economic benefits of cultural heritage include its dependence on arbitrary metrics for cultural preservation, which could not accurately reflect real results and possible regional economic differences that could restrict the applicability of its results. To offer an additional perspective, future study might

benefit from adding objective economic indicators and evaluating different preservation strategies in different circumstances. Furthermore, investigating a wider spectrum of management strategies and their long-term viability may improve the relevance and efficiency of cultural heritage activities.

WORKS CITED

Al-Adilee, S.M.S. "THE INFLUENCE OF CULTURE AND HERITAGE ON ARCHITECTURAL DESIGN." The American Journal of Interdisciplinary Innovations and Research, 6(08), pp.56-74, 2024. https://doi.org/10.37547/tajiir/Volume06Issue08-06

Basu, A., Paul, S., Ghosh, S., Das, S., Chanda, B., Bhagvati, C. and Snasel, V. "Digital restoration of cultural heritage with data-driven computing: A survey." IEEE Access, 11, pp.53939-53977, 2023. https://doi.org/10.1109/ACCESS.2023.3280639

Bottero, M., D'Alpaos, C. and Marello, A. "An application of the a'WOT analysis for the management of cultural heritage assets: the case of the historical farmhouses in the aglie castle (Turin)." Sustainability, 12(3), p.1071, 2020. https://doi.org/10.3390/su12031071

Dell'Ovo, M., Dell'Anna, F., Simonelli, R. and Sdino, L. "Enhancing the cultural heritage through adaptive reuse. A multicriteria approach to evaluate the Castello Visconteo in Cusago (Italy)." Sustainability, 13(8), p.4440, 2021. https://doi.org/10.3390/su13084440

Elyasi, S. and Yamaçlı, R. "Architectural sustainability with cultural heritage values." Cultural Heritage and Science, 4(2), pp.55-61. https://doi.org/10.58598/cuhes.1282179

Foster, G. "Circular economy strategies for adaptive reuse of cultural heritage buildings to reduce environmental impacts." Resources, Conservation and Recycling, 152, p.104507, 2020. https://doi.org/10.1016/j.resconrec.2019.104507

Genc, V. and Gulertekin Genc, S. "The effect of perceived authenticity in cultural heritage sites on tourist satisfaction: the moderating role of aesthetic experience." Journal of Hospitality and Tourism Insights, 6(2), pp.530-548, 2023. https://doi.org/10.1108/JHTI-08-2021-0218

Ghahramani, L., McArdle, K. and Fatorić, S. "Minority community resilience and cultural heritage preservation: A case study of the gullah geechee community." Sustainability, 12(6), p.2266, 2020. https://doi.org/10.3390/su12062266

James-Williamson, S.A., Dolphy, J.E. and Parker, S.Y. "Absence heritage: A critical analysis for awareness, preservation and resilience." International Journal of Geoheritage and Parks, 12(1), pp.1-19, 2024. https://doi.org/10.1016/j.ijgeop.2023.12.001

Keskin, E., Aktaş, F., Yayla, Ö. and Dedeoğlu, B.B. "The importance of nostalgic emotions and memorable tourism experience in the cultural experience." Journal of Quality Assurance in Hospitality & Tourism, 25(1), pp.1-21, 2024. https://doi.org/10.1080/1528008X.2022.2097976

Kim, S., Whitford, M. and Arcodia, C. "Development of intangible cultural heritage as a sustainable tourism resource: The intangible cultural heritage practitioners' perspectives." In Authenticity and Authentication of Heritage (pp. 34-47). Routledge, 2021.

Nursanty, E., Rusmiatmoko, D. and Husni, M.F.D. "From Heritage to Identity: The Role of City Authenticity in Shaping Local Community Identity and Cultural Preservation." Journal of Architecture and Human Experience, 1(2), pp.131-150, 2023. https://doi.org/10.59810/archimane.v1i2.17

Panzera, E., de Graaff, T. and de Groot, H.L. "European cultural heritage and tourism flows The magnetic role of superstar World Heritage Sites." Papers in Regional Science, 100(1), pp.101-123, 2021. https://doi.org/10.1111/pirs.12562

Shah, A.A., Chanderasekara, D.P. and Naeem, A. "Preserving the Past and Shaping the Future: An Articulation of Authenticity of Heritage within Urban Development." J. Int. Soc. Study Vernac. Settl, 10, 2023. https://doi.org/10.61275/ISVSej-2023-10-12-31

Yan, W.J. and Li, K.R. "Sustainable cultural innovation practice: heritage education in universities and creative inheritance of intangible cultural heritage craft." Sustainability, 15(2), p.1194, 2023. https://doi.org/10.3390/su15021194

Zhang, G., Chen, X., Law, R., and Zhang, M. "Sustainability of heritage tourism: A structural perspective from cultural identity and consumption intention." Sustainability, 12(21), p.9199, 2020. https://doi.org/10.3390/su12219199

Zheng, Q., Zhang, S., Liang, J., Chen, Y., and Ye, W. "The impact of cultural memory and cultural identity in the brand value of agricultural heritage: A moderated mediation model." Behavioral Sciences, 13(2), p.79, 2023. https://doi.org/10.3390/bs13020079