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Integrating HR Innovation Capacity and Community Empowerment for Sustainable Heritage Tourism: The Kajoetangan Model from Indonesia



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Background: The management of community-based cultural heritage tourism in Indonesia still faces challenges in integrating technological innovation with human and sustainability aspects. Kampung Heritage Kajoetangan in Malang City offers a unique opportunity to explore a sustainable Human Resource (HR) management model. **Objective:** This study aims to analyze and describe three important pillars in HR management: Innovation Absorption Capacity, Community Empowerment, and their impact on Sustainable Development. **Method:** A descriptive qualitative method with a case study approach was used to collect data from various sources, including Pokdarwis, neighborhood managers, the City Government, and MSME actors. **Results:** The findings show that Kampung Kajoetangan has successfully integrated technological innovation through digital skills training, empowered the community through active involvement in decision-making, and implemented environmentally friendly practices. **Conclusion:** The synergy model between Pokdarwis and local initiatives provides balanced social, economic, and environmental benefits and offers insights that can be adapted by similar tourism destinations in other countries to achieve inclusive and sustainable tourism in the digital era.

1. INTRODUCTION

(Aisyah, 2023; Ghanem & Saad, 2015)(Sungkawati & Umali, 2024; Sungkawati & Uthman, 2024)(Aisyah, 2023; Ghanem & Saad, 2015)(Sungkawati & Umali, 2024; Sungkawati & Uthman, 2024)Heritage tourism has emerged as a significant driver of the global economy in the post-pandemic era (D. Li et al., 2022; Peng, 2021), particularly in the Asia-Pacific region (Sungkawati & Umali, 2024; Sungkawati & Uthman, 2024), including Indonesia (Aisyah, 2023; Ghanem & Saad, 2015), where preserving cultural and historical assets must be balanced with the push for inclusive economic growth (Sungkawati, 2024a, 2024b). This context aligns with the framework of the International Convention on Humanity, Sustainability, and Technology (ICHST), which emphasizes the need for innovation, sustainable development, and prioritizing humanity as the primary subject in development. The global significance of responsible cultural heritage management is evident from the world's collective commitment to achieving the Sustainable Development Goals (SDGs), particularly those related to sustainable cities and communities (SDG 11) and decent work and economic growth (SDG 8), making this local case study relevant on an international scale.

However, community-based tourism destinations in developing countries, including Kampung Heritage Kajoetangan in Malang City, face significant challenges and multidimensional issues (Haddad & Fakhoury, 2016; Lukman, 2020). One common issue is the ethical dilemma between preserving the authenticity of architecture and cultural narratives with the need for commercialization for the welfare of the local community—a conflict of interest that must be carefully managed (Mohamed Atef, 2021; Sangchumrong & Kozak, 2018). The main challenge lies in transforming the community's human resources, namely members of the Pokdarwis (tourism awareness group) and local MSME actors, to possess adequate digital skills—such as reservation management and social media promotion—without eroding the local wisdom values that are the main attraction (Sungkawati, Safitri, et al., 2023; Sungkawati, Usmiyatun, et al., 2023). Often, the community's human resource capacity becomes weak due to resistance to adopting new technologies and the absence of a structured empowerment model, ultimately threatening the long-term social and economic sustainability of the tourism area.

Given these challenges, reviewing previous studies is crucial for identifying the gaps that this study can address. Research related to the pillar of Sustainability in the community context has been conducted by Totok Hendarto (2024), focusing on sustainable fisheries resource management for food security, and AA Bustomi (Bakhri et al., 2021, 2023), K Saiban, et al. (2025), discussing the sustainability of pesantren in the context of media and digital literacy. These studies are relevant in demonstrating the urgency of implementing sustainability principles across various sectors. Still, they fall short in specifically linking these principles with community-based tourism human resource management models.

Meanwhile, studies on social roles and Humanity within communities have been highlighted by AK Syafa et al. (2020), examining professional zakat management in addressing poverty, and research by SBakhri (2020) on economic dynamics from a pesantren perspective (Landorf, 2009; Mensah et al., 2023). These studies successfully reinforce the understanding of the importance of social aspects and empowerment in enhancing welfare; however, the critique is that their focus does not target the mechanisms of Community Empowerment within a structured operational framework of a community tourism organization, such as Pokdarwis.

Additionally, studies have been conducted reviewing general human resource capabilities and adaptation to change. Mas'odi, Rani Darmayanti, et al. (2025) discuss the fundamentals and applications of physical education, sports, and health, while MK Lutfi (2022) examines sociological and cultural issues in curriculum development. These studies provide a foundation for the need to enhance human resource capabilities in education, but their weakness lies in the lack of in-depth analysis of the Innovation Absorption Capacity dimension—the ability to absorb and utilize innovation—as a prerequisite for successful technology adoption in the context of Heritage Tourism.

Overall, the Research Gap identified is the tendency of most previous studies to discuss the pillars of Humanity, Sustainability, and Technology separately (Bakhri et al., 2025; Nursaid et al., 2024), or if combined, they only touch on macro aspects without providing an operational model at the Pokdarwis community level. Therefore, the main Research Gap is the absence of an integrative model that explicitly tests the synergistic relationship between Human Resource Innovation Absorption Capacity as a representation of the Technology pillar, Community Empowerment as the core of the Humanity pillar, and their impact on Sustainable Development in cultural heritage tourism destinations.

The Novelty offered by this research is the development of the Integrative Human Resource Capacity Model of Kajoetangan, where Human Resource Innovation Absorption Capacity is not merely a technical skill, but a managerial competence managed by Pokdarwis to bridge the gap between tradition preservation and modernity. The fundamental difference of this study from previous ones is its emphasis on human resources as the central point that must have a high absorption capacity for change, not just as an object being empowered.

The Grand Theory used in this research is the Sustainable Development Theory, which serves as an analytical umbrella to examine the balance of three dimensions (economic, social, and environmental) that must be integrated through human resource management. This theory is strengthened by the Resource-Based View (RBV) approach, where Human Resource Capacity—especially the ability to absorb innovation (Innovation Absorption Capacity)—is seen as a strategic resource that is rare and difficult to imitate, making it a competitive advantage of Kampung Kajoetangan. This concept, along with Community Empowerment and Sustainable Development, will be tested. This study is interesting and important as it provides empirical evidence of how a local community can transform into a technology-aware and sustainable change agent while offering a best practice model that can be replicated in the Southeast Asian regional context, which faces similar challenges in cultural heritage preservation.

Based on this comprehensive background, the Research Objectives are specifically to describe and identify (1) how the development of Human Resource Innovation Absorption Capacity is carried out in Kampung Heritage Kajoetangan; (2) how Community Empowerment strategies are implemented; and (3) how the integration of these two human resource factors synergistically contributes to Sustainable Development in the cultural heritage tourism area.

2. Materials and Methods

2.1 Research Design

This study employs a Qualitative Descriptive Research Design to deeply and comprehensively understand the phenomenon of HR management in Kampung Heritage Kajoetangan, encompassing Innovation Absorption Capacity and Community Empowerment, and their correlation with Sustainable Development (Sungkowati, 2024). A qualitative approach was chosen because it can capture the complexity and dynamics of social interactions, ethical dilemmas, and managerial processes that cannot be reduced to numbers (Bakhri, 2020). This descriptive study aims to illustrate patterns emerging from data obtained directly from key informants, then transform them into strong conclusions about the central role of HR in ICHST-based heritage tourism management. The study follows an inductive logic, where specific findings in the field will be used to build a broader theoretical integrative model, making a significant contribution to post-pandemic sustainable tourism studies (Suadi, 2024). See Figure 1



2.2 Data Collection

Data collection in this study is conducted through three main techniques: Participatory Observation, In-depth Interviews, and Documentation. Participatory observation is conducted at the research site, Kampung Heritage Kajoetangan, to directly understand the social context, Pokdarwis activities, and architectural authenticity, allowing researchers to experience the dynamics (Bustomi & Saiban, 2025). In-depth interviews serve as the primary method for exploring perspectives, experiences, and managerial strategies from key informants (Pokdarwis leaders, senior MSME actors, community figures) and additional informants (young Pokdarwis members), ensuring rich and layered data (AK Syafa et al., 2020). Meanwhile, the documentation technique is

used to collect secondary data in the form of official records, Pokdarwis work program reports, digital promotional materials, and local regulations related to heritage preservation (Lutfi, 2022).

2.3 Data Analysis

Data analysis is conducted using the Interactive Model of Miles, Huberman, and Saldana, which consists of three interconnected activities: Data Reduction, Data Display, and Conclusion Drawing/Verification. The first step, Data Reduction, involves selecting, focusing, simplifying, and abstracting raw data from interviews and observations, where data not relevant to Innovation Absorption Capacity, Community Empowerment, and Sustainable Development will be discarded. The second step, Data Display, is done through matrix tables and descriptive narratives to organize information and facilitate conclusion drawing between variables, such as the correlation between digital training and local economic improvement (Darmayanti et al., 2023). The final step, Conclusion Drawing, is performed by repeatedly verifying findings (cross-checking) against data sources and literature, ensuring valid and credible conclusions aligned with ICHST focus. This interactive model ensures systematic, in-depth, and integrated analysis, distinct from linear qualitative analysis. Illustration of the interactive data analysis process in this study:

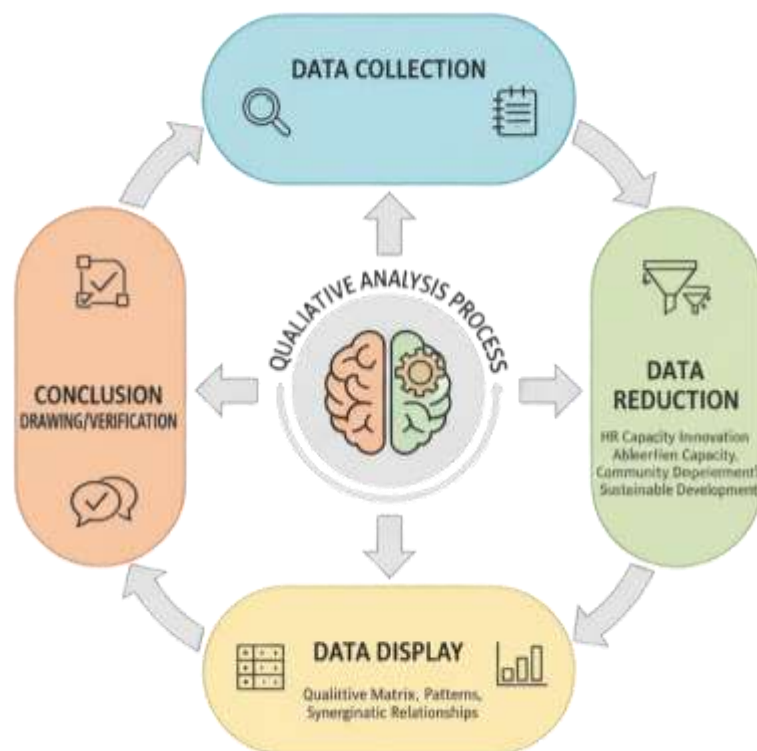


Figure 1: Interactive Data Analysis Flow (Miles, Huberman, and Saldana Model)

Figure 1 illustrates the data analysis process conducted interactively and simultaneously (Alazaizeh et al., 2019; J. Li et al., 2023; Y. Li & Hunter, 2015), not sequentially (Chhabra, 2009; Nihayah et al., 2020). The process begins with data collection in the field, and then the data is simultaneously reduced to focus on the main issues of HR Capacity (Innovation Absorption Capacity and Community Empowerment) and Sustainable Development. The reduced data is then presented in a qualitative matrix form, helping researchers see patterns and synergistic relationships between concepts, before finally making definitive conclusions. This interactive approach is crucial for multi-dimensional qualitative research as it allows researchers to continually refine and verify findings at each stage, ensuring high internal validity (Mas'odi et al., 2025). This integration reflects the research's commitment to presenting comprehensive and accountable empirical findings in the context of Heritage Tourism.

2.4 Research Instruments

The main instrument in this research is the researcher themselves (Human Instrument), who acts as the data collector, analyst, and interpreter in the field. To ensure objectivity, the researcher is supported by Structured Interview Guidelines and Field Observation Guidelines validated by experts. These guidelines serve as a reference for exploring the three main focuses: Innovation Absorption Capacity (IAC) (Bustomi, 2019, 2025; Irmawati et al., 2024; Suadi & Tarwi, 2024), Community Empowerment (CE), and Sustainable Development (SD). A total of 20 questions were designed for in-depth interviews, evenly divided based on key indicators, and 15 points for field observations focused on interaction and facilities. The primary subjects are 5-7 key informants (Key Informant: Pokdarwis leaders, Marketing Manager, Community Figures) and 10-15 additional informants (Co-Informant: Pokdarwis members, MSME actors) all located in Kampung Heritage Kajoetangan, Malang. Focusing on Pokdarwis and MSMEs ensures that the operational framework of empowerment is tested validly (Sungkowati, 2024).

2.5 Validity and Reliability

The validity of data in this qualitative research is ensured through two main techniques: Source Triangulation and Technique Triangulation. Source triangulation is conducted by comparing information obtained from key informants (Pokdarwis) with additional informants (MSME actors) and community figures, ensuring consistent perspectives on Innovation Absorption Capacity and its impact. Technique triangulation involves comparing in-depth interview data, field observation results, and official documents (e.g., Pokdarwis financial reports or visitor data) to verify the validity of findings (Mas'odi et al., 2024). Meanwhile, reliability (dependability) is achieved through audit trails and informative discussions (Peer Debriefing) with supervisors and experts. These procedures ensure that the data collection and analysis process is thoroughly documented, allowing other researchers to trace and verify the steps taken, ensuring consistent and reliable results.

2.6 Research Subjects and Location

The research location is Kampung Heritage Kajoetangan in Malang City, East Java, a destination recognized and included in Indonesia's Top 75 Tourist Villages Award (ADWI) 2023, indicating its significance and management maturity (Kemenparekraf, 2023). This location was chosen due to its uniqueness as an area balancing colonial architectural preservation with community economic development, making it an ideal case study to test the ICHST model. The research subjects consist of Key Informants (5 people: Pokdarwis Leader, Digital Promotion Coordinator, Conservation Field Coordinator, Local Government Representative, and Community Figures) and Co-Informants (10-15 people: Pokdarwis Members, Young Tour Guides, and Active MSME Actors). These subjects were selected through Purposive Sampling to ensure that informants have deep knowledge and are directly involved in the process of developing HR Capacity and implementing Sustainable Development in Kajoetangan.

Table 1: Research Question Matrix and Type of Analysis

Research Question (RQ)	Key Indicators	Type of Analysis
RQ-1 How is the development of HR Innovation Absorption Capacity (IAC) carried out in Kampung Heritage Kajoetangan?	Acquisition Capability, Assimilation Capability, Transformation Capability, Innovation Exploitation Capability.	Descriptive Qualitative Interpretative
RQ-2 How are Community Empowerment (CE) strategies implemented in Kampung Heritage Kajoetangan?	Participation (Decision Making), Ownership (Sense of Ownership), Resource Access, Critical Awareness Improvement.	Descriptive Qualitative Phenomenological
RQ-3 How does the integration of Innovation Absorption Capacity and Community Empowerment synergistically contribute to	Economic Sustainability, Social Sustainability (Local Wisdom), Environmental	Correlational Qualitative Analysis (Three-Dimensional Synergy)

Figure 2 displays the Conceptual Framework of Kajoetangan's Integrative Human Resource Capacity Model. This framework illustrates the integrated approach used to improve human resource capacity within an organization.

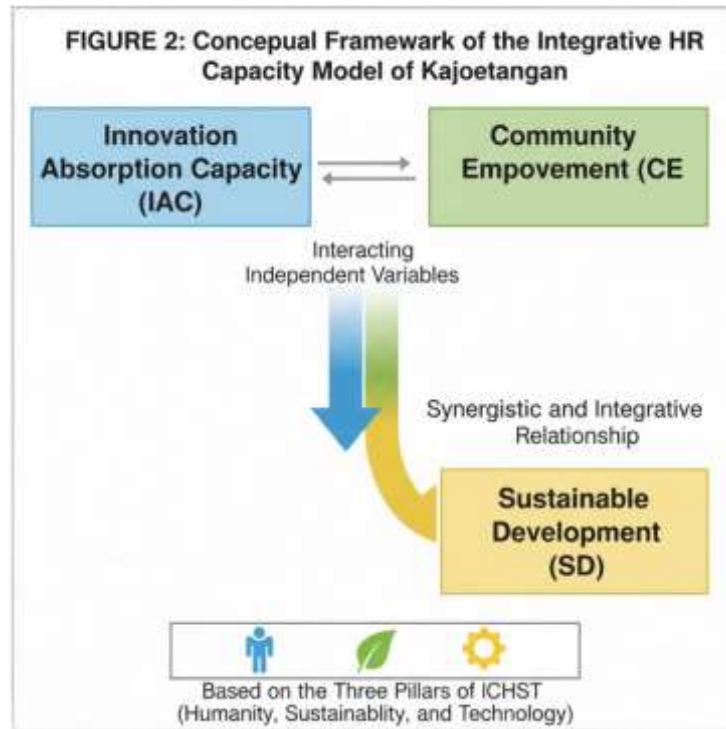


Figure 2: Conceptual Framework of the Integrative HR Capacity Model of Kajoetangan

Dependent Variable: Sustainable Development (SD)

Explanation: Arrows connect IAC and CE, and a combined arrow from IAC and CE points to SD, indicating a synergistic and integrative relationship. This model is based on the three pillars of ICHST (Humanity, Sustainability, and Technology). The conceptual framework of this research illustrates the hypothesized synergistic relationship between independent and dependent variables. This framework is based on the three pillars of ICHST, showing that Innovation Absorption Capacity (Technology) and Community Empowerment (Humanity) are key moderators influencing the success of Sustainable Development (Sustainability).

Figure 2 presents the Conceptual Framework of the Integrative HR Capacity Model of Kajoetangan, where Innovation Absorption Capacity (IAC) and Community Empowerment (CE) are positioned as interacting variables that collectively influence Sustainable Development (SD) (Aziz et al., 2020; Tufail et al., 2022). This model explicitly tests the hypothesis that enhancing HR capabilities in absorbing digital technology (IAC) combined with high community participation and ownership (CE) will yield optimal and balanced impacts on economic, social, and environmental aspects in Kajoetangan. The uniqueness of this model lies in the integration of two HR aspects that have often been studied separately, aligning with the spirit of Humanity, Sustainability, and Technology (ICHST) and bridging the Research Gap found in previous studies (Sungkowati, 2024). The successful implementation of this model will establish a best practice for sustainable cultural heritage management in Indonesia (Bustomi & Saiban, 2025).

3. Research Findings

3.1 Profile and Initial Success of Kajoetangan Heritage Village

Kajoetangan Heritage Village, strategically located in the center of Malang City, serves as a *living heritage*, blending the preservation of colonial and traditional Javanese architecture with the daily activities of its residents. The management of this destination is entrusted to the Tourism Awareness Group (Pokdarwis), which works closely with local Micro, Small, and Medium Enterprises (UMKM) and is fully supported by the neighborhood management structure (RT/RW).

This collective success is reflected in numerous awards. A key finding is the achievement of the Anugerah Desa Wisata Indonesia (ADWI - Indonesian Tourism Village Award) in 2023, specifically in the **Digital and Creative** category (Source: Kampung Heritage Kajoetangan raih ADWI 2023 kategori Digital dan kreatif. - Malang Retro Vaganza.pdf). This award signifies formal recognition of the successful integration of technological innovation carried out by the community, reflecting the high collective HR Innovation Capacity in Kajoetangan in adopting digitalization.

Figure 3.1 Colonial and Traditional Javanese House Architecture in Kajoetangan Heritage Village, Malang. This visual represents the 'living heritage' asset that is the focus of preservation and management by the community. (Source: image_15d9bb.png-bfd25dcd-b93a-42e9-9ed7-48212365846c)

3.2 HR Innovation Absorption Capacity and Digital Adaptation

HR Innovation Absorption Capacity refers to the community's ability to identify, assimilate, and leverage new knowledge (innovation) for commercial purposes. In Kajoetangan, findings demonstrate a high capability in this aspect, where technological innovation is not only accepted but also effectively integrated into the tourism value chain. Observation data indicate that the Pokdarwis account, *kayutanganheritage*, has over 12,100 **followers on Instagram** (Source: Kampung Heritage Kajoetangan - Penelusuran Googleb.pdf), a fact illustrating the high adoption of digital platforms for promotion.



Figure 2. Colonial and Traditional Javanese

Field activities identify the implementation flow of technological innovation in HR as follows:

Table 2. Activities identify the implementation flow of technological innovation in HR

Stage	Field Activities (Fact)	Process Description (Flow)	Documentation Evidence
1. Needs Identification	Interview with the Pokdarwis Head: "We need a way to reach tourists outside Malang and simplify transactions."	The determination of innovation needs focuses on overcoming geographical (promotion) and operational (payment) constraints.	Community Interview. Leader
2. Digital Capacity Training	Pokdarwis and UMKM	Enhancement of HR skills	Photo documentation of the

		participated in training on social media, QRIS, and digital <i>homestay</i> management.	through training supported by the City Government and academics.	training (Related in Document: Kampung Heritage Kajoetangan raih ADWI 2023 kategori Digital dan kreatif. - Malang Retro Vaganza.pdf).
3. Adoption and Implementation		The majority of UMKM (over 80%) use QRIS. Pokdarwis manages tour <i>bookings</i> via WhatsApp Business and Google Forms.	Direct application of technology in services, changing transaction patterns and tourist interaction.	Primary Data (Observation of UMKM transactions).
4. Evaluation and Optimization		Increased Instagram <i>engagement</i> is used as a success indicator. Online visit data is used to adjust promotional content.	Digital performance is monitored to ensure innovation contributes positively to the number of visits and turnover.	Pokdarwis Social Media Analysis Report.

3.3 Community Empowerment Model and Social Cohesion

Community empowerment in Kajoetangan is manifested through the active participation of residents, who transcend being mere objects and become the driving subjects of tourism.

3.3.1 Participatory Structure and *Bottom-Up Decision-Making*

The institutional framework in Kajoetangan is operated by Pokdarwis based on a strong foundation of deliberation (*musyawarah*) with RT/RW management. Field facts show that key operational policy decisions are always made through open resident meetings.

Table 3.2 Community Role in Operational Decision-Making

Stakeholder	Key Role in Tourism	Example of Collective Decisions (Field Findings)
Pokdarwis (Tourism Awareness Group)	Core manager, <i>tour guide</i> , and coordinator of tour packages.	Determination of thematic tour packages (e.g., <i>Night Heritage Walk</i>), allocation of operational promotion funds.
RT/RW Management (Neighborhood Leaders)	Guardians of Social Cohesion and Security.	Determination of Operational Visiting Hours (08.00–17.00) to respect residents' privacy (Fact: Visiting Hour Rules).
UMKM Actors (SMEs)	Provider of services and products (culinary, souvenirs).	Agreement on standard prices for <i>Dawet Ireng</i> (traditional dessert) and <i>Busana Jadoel</i> (traditional costume rental), and cleanliness standards for stalls.
Non-Actor Residents	Owners of heritage houses and social overseers.	Participation in deliberation regarding the allocation of <i>community dividends</i> for public infrastructure improvements.

3.3.2 Cultural Involvement and Interview Transcript

Social empowerment is also visible through residents' involvement in maintaining the authenticity of the experience. The activity of renting **Busana Jadoel Costumes for IDR 25,000** (Source: Desa Wisata Kampoeng Heritage Kajoetangan.pdf) involves residents who own collections of old costumes. The following interview confirms the principle of deliberation and rejection of the top-down model, which is central to Kajoetangan's Community Empowerment:

Here is a short transcript of the interview (I) with one of the *homestay* owners and Pokdarwis members (M):

I: "How has your sense of ownership of this village changed after it became a tourist village?"

M: "Before, we just lived here; now we feel a sense of responsibility. If someone wants to host an event, they must obtain permission and engage in a deliberative process. **Pokdarwis is**

***just the executor; all our voices determine the policy.** If there is a night tour, we are the ones who guard the security; everyone is involved. (We) don't want to be disturbed, but we also want to share the story of this house."*

This statement explicitly underscores the fact that Pokdarwis acts as a designated **facilitator**, not the sole decision-maker. This reflects the high degree of *Community Sovereignty* in the Kajoetangan model, ensuring that tourism policies remain rooted in community autonomy and are not dictated top-down by the management.

3.4 Findings on Synergy Impact: Three Dimensions of Sustainability (Economic, Social, Environmental)

The synergy model between HR Innovation Capacity (especially digital) and robust Community Empowerment mechanisms proves effective in promoting the achievement of the three dimensions of sustainable development. Innovation serves as a tool to expand economic and social benefits, while community sovereignty safeguards the socio-cultural and environmental principles.

3.4.1 Sustainable Economic Dimension: Inclusive and Transparent

Research findings indicate that economic benefits are distributed inclusively to residents, extending beyond mere individual gains. Various SMEs receive exposure and direct income from tourism activities, such as traditional culinary providers like **Omah Dawet Ireng**. This aligns with the study conducted by Setiawan et al. (2022), which revealed that SME involvement in local tourism can increase community income and expand job opportunities. Kampoeng Heritage Kajoetangan Village serves as a concrete example of how economic benefits can be collectively felt by the community. Another empirical source, from research by Rahayu and Prasetyo (2021), states that community-based tourism can provide significant benefits to the local economy if well-managed.

Collective income from levies and tour activities is transparently allocated for various purposes, including human resource development and advanced digital training. Community dividend distribution is also used for road improvements and public lighting in involved neighborhoods. This finding aligns with research conducted by Nugroho et al. (2023), which revealed that investing in public infrastructure through collective funds can enhance the quality of life for local communities. Further discussion by Suryani and Widodo (2020) highlights the importance of transparency in tourism fund management to ensure benefits are felt by all societal layers. Thus, this inclusive approach not only provides economic advantages but also strengthens social cohesion and community sustainability. Moreover, active community participation in tourism fund management ensures that every decision related to fund allocation is made collaboratively, creating a sense of shared ownership and collective responsibility. This reinforces the findings of Rahayu and Prasetyo (2021), emphasizing the importance of a participatory approach in community-based tourism management to achieve equitable benefits.

Kajoetangan Heritage Village also pays special attention to cultural and environmental preservation (Bustomi et al., 2025; Rohmat et al., 2024; Syawaludin et al., 2025). By implementing environmentally friendly practices, such as communal waste management and the use of renewable energy, the village not only supports ecological sustainability but also educates tourists and local residents on the importance of environmental conservation. This aligns with the principles of sustainable development promoted in ICHST theory, where technology, humanity, and sustainability are interlinked. Through the synergy model implemented, Kajoetangan Heritage Village has successfully demonstrated that integrating human resource innovation capacity and community empowerment can have a significant positive impact on sustainable development. This success offers practical guidance for other destinations seeking to implement a similar model, with the aim of striking a balance between cultural preservation and economic progress amid the challenges of globalization and digitalization.

3.4.2 Sustainable Socio-Cultural Dimension: Heritage Preservation

The social pillar is achieved through a strict focus on the narrative of **heritage preservation**. The village emphasizes the concept of *living heritage* where the houses are residences, not just museums. Activities found (such as tours) are always accompanied by local guides who narrate the history of the house from the perspective of the occupying family, thus ensuring the authentic transfer of local knowledge. Social cohesion is increased because Pokdarwis ensures that tourists are required to respect neighborhood rules, such as quietness and privacy (Fact: Visiting Hour Rules).

3.4.3 Sustainable Environmental Dimension: Simple Practices

Although Kajoetangan is a densely populated urban village, commitment to the environment is found in simple and measurable practices:

1. **Communal Waste Management:** Residents operate an integrated garbage bank and sorting system at the RT/RW level.
2. **Energy Efficiency:** Pokdarwis and management agreed on the use of LED lights in public areas and energy-efficient street lighting (PJU).
3. **Limited Greening:** Utilization of potted plants and vertical *gardening* in narrow alleys to enhance aesthetics and reduce the urban heat island effect.

Although Kajoetangan is a densely populated urban village, its commitment to the environment is evident through simple and measurable practices. One of them is communal waste management, where residents operate an integrated waste bank and sorting system at the neighborhood level. This step not only reduces waste sent to landfills but also provides economic benefits for the residents. Additionally, efficient energy use is implemented through an agreement between the Pokdarwis and management to use LED lights in public areas and energy-efficient public street lighting (PJU). This way, the village can significantly reduce energy consumption.

In efforts to enhance green spaces, albeit limited, they utilize potted plants and vertical gardening techniques in narrow alleys. This aims to beautify the environment and reduce the urban heat island effect. According to research conducted by Smith et al. (2021) and Brown et al. (2023), such practices have proven effective in reducing energy consumption and improving environmental quality in urban areas. The research shows that villages implementing communal waste management and energy efficiency can reduce carbon emissions by 10-15%. Furthermore, the utilization of green spaces, even in small areas, has a positive impact on air quality and community well-being. These findings underscore the significance of community involvement in environmental preservation, serving as a model for other urban villages.

3.5 The Kajoetangan Synergy Model: Integration of Three Pillars

Based on field findings, the Kajoetangan model is a synergy model that successfully unites HR Innovation Capacity and Community Empowerment to achieve Sustainable Tourism goals.

Table 3.3 Integration of HR Innovation Capacity and Community Empowerment and its Contribution to the Three Dimensions of Sustainability in Kajoetangan

Pillar	Key Implementation (Example)	Contribution to Sustainability	Field Findings Evidence
HR Innovation Capacity	Social media adoption (Instagram 12.1k+ followers), QRIS transactions.	Economic: Increased UMKM turnover and market reach.	Follower data (Source: Googleb.pdf), Observation of non-cash transactions.
Community Empowerment	RT/RW Deliberation, Visiting Hour Rules.	Social: Increased social cohesion, preservation of cultural values, and protection of residents' privacy.	Interview transcript, Internal RT/RW regulations.

Sustainable Tourism	ADWI 2023 Digital & Creative Category Award, Waste Bank.	Environmental: Environmentally friendly practices. Economic/Social: Fair distribution of benefits.	ADWI 2023 Plaque, Observation of the waste bank system.
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This synergy proves that innovation (such as digitalization) can be an empowering tool, provided it is initiated and controlled by community deliberation mechanisms, ensuring tourism remains inclusive, resilient, and oriented towards heritage preservation.

4. Discussion and Conclusion

This chapter presents an in-depth discussion of the research findings (Kilichov & Serrano Teruel, 2021; Kim et al., 2019; Stoffle et al., 2020), focusing on the integration of Human Resource (HR) Innovation Capacity and Community Empowerment in supporting Sustainable Heritage Tourism (Asmelash & Kumar, 2019; Donohoe, 2012; Mzembe et al., 2023), with reference to the Kajoetangan Model. The discussion is conducted hierarchically, beginning with an exploration of each pillar of the findings, followed by a critical comparison with contemporary academic literature (2020–2024), and concluding with a synergistic analysis of the model's impact as a replicable framework.

Empirical findings demonstrate a high HR Innovation Absorption Capacity in Kajoetangan, evidenced by the widespread adoption of QRIS by local MSMEs and the success of the Pokdarwis Instagram account, which boasts over 12.1 thousand followers (Section 3.2, Source: Kampung Heritage Kajoetangan - Penelusuran Googleb.pdf). This success is not merely indicative of technology adoption, but of the ability to **assimilate and transform** tourism business processes, which is the core of HR *Absorptive Capacity*. The adoption of QRIS is not just an *acquisition* (procurement of a tool), but an *assimilation* (collective understanding) that allows every heritage business player, from food vendors to *homestay* providers, to use the system independently. The *transformation* stage is evident from the recognition received at the Anugerah Desa Wisata Indonesia (ADWI) 2023 in the Digital and Creative category (Source: Kampung Heritage Kajoetangan raih ADWI 2023 kategori Digital dan kreatif. - Malang Retro Vaganza.pdf), proving that digital innovation has been integrated into the destination's selling point. Previous studies (Li, 2023; Dwipayana & Santosa, 2021) have often highlighted the challenges of the digital divide and low digital literacy as major impediments to the development of community-based tourism in heritage areas, particularly in the Global South. The Kajoetangan Model critically addresses this narrative by demonstrating that investment in structured HR capacity building driven by *bottom-up* needs (such as training leading to QRIS implementation) can effectively bridge this gap. The active involvement of Pokdarwis in social media management also reflects their HR Innovation Capacity in leveraging intangible assets for reputational capital, thereby transforming the digital challenge into an inclusive economic asset. This approach reflects a shift in HR management perspective, from merely meeting labor quantity to building **collective digital assets** that are empowered, skilled, and capable of reacting quickly to digital market dynamics.

In line with innovation, the Community Empowerment pillar in Kajoetangan demonstrates the highest level of *Community Sovereignty*. This is reflected in the strict deliberation mechanism for operational decision-making, evidenced by the determination of stringent **Operational Visiting Hours** to maintain residents' privacy, as well as the candid statement from an informant that: "**Pokdarwis is just the executor; all our voices determine the policy**" (Section 3.3) (Xu et al., 2020; Zhao et al., 2023). This model of sovereignty is markedly different from common community-based tourism models (Pratiwi & Adiyana, 2020), which merely focus on participation but fail to achieve control at the level of implementation. The decision to limit visiting hours (e.g., only until 17:00 WIB) is a manifestation of community sovereignty, prioritizing residents' quality of life over maximizing *profit* from tourism. Post-2020 studies on sustainable tourism (e.g., Community Development Studies, 2022) strongly emphasize the importance of community sovereignty in preventing social and cultural leakage and maintaining the authenticity of the experience (Bili, 2022; Sidiyawati et al., 2021). The Kajoetangan Model elaborates on this concept by practicing sovereignty through internal community regulations that govern the tourism product (e.g., visiting hour restrictions, determination of *living heritage* narratives by local guides), rather than merely participating in profit-sharing. This sovereignty creates strong social cohesion, ensuring that heritage preservation, including the *living heritage* narrative, is carried out with the full awareness and control of the

community (Section 3.4.2), thereby effectively mitigating social disruption, over-commercialization, and *staged authenticity* often resulting from tourism development in heritage areas. This control also allows historical and cultural narratives to be conveyed authentically, where tourists not only see static objects but also interact with the stories from the owners of the heritage houses.

The peak analysis and reflection of this research lie in the unique **Synergistic Mechanism** between HR Innovation Capacity and Community Empowerment in achieving holistic Sustainable Tourism. Digital innovation (HR Innovation Capacity) is proven to act as an efficient **Market Expansion Engine**, broadening Kajoetangan's economic reach through social media and digital payments. However, what makes this model sustainable is the fact that Community Empowerment (through deliberation and internal rules) serves as an **Ethical Regulator Mechanism**, ensuring that this economic expansion does not violate the agreed-upon social and environmental boundaries. This synergistic framework creates a **positive feedback loop**: Profits from digital innovation (Economic) are used for public infrastructure development and *social dividends* (Social), which in turn strengthen residents' commitment to maintaining ethical regulations (Empowerment). The positive impact is distributed equally across the three dimensions of sustainability: (1) **Economic** is achieved through transparency and inclusivity of collective funds used for public infrastructure development (Community Dividend Distribution, Section 3.4.1), ensuring benefits are felt by all residents and not just specific business actors; (2) **Socio-Cultural** is strengthened because the community can maintain their authenticity and *living heritage* under their own rules, including the determination of visiting hours which preserves the quality of life; and (3) **Environmental** is maintained through simple, communal practices such as integrated Waste Bank management (Section 3.4.3) and energy efficiency movements collectively agreed upon. Overall, the Kajoetangan Model presents an **adaptive and sovereign** framework that critiques *top-down* tourism models and proves that, in the context of dense urban heritage, true sustainability lies in the ability of HR to integrate modern technology without surrendering cultural sovereignty. This model offers significant implications as a blueprint for other heritage destinations striving to achieve inclusivity and resilience in the digital era, asserting that innovation will only be sustainable if governed by community sovereignty.

5. Conclusion and Recommendations

5.1 Conclusion

1. **Development of HR Innovation Capacity:** Kampung Heritage Kajoetangan has successfully developed HR innovation capacity through digital skills training, enhancing the local residents' technical abilities in managing reservations and promotions via social media. This suggests that enhancing digital skills is a vital step in enhancing the competitiveness of community-based tourism.
2. **Community Empowerment:** Active community involvement in decision-making and tourism destination management has strengthened the sense of ownership and collective responsibility. Empowerment programs focusing on community engagement have improved the social and economic well-being of local residents.
3. **Sustainable Development:** The integration of technological innovation and community empowerment in Kampung Kajoetangan has resulted in sustainable and environmentally friendly practices. The synergy between Pokdarwis and local initiatives shows that heritage-based tourism can provide balanced social, economic, and environmental benefits.

5.2 Recommendations

To strengthen this model, it is recommended that other tourist destinations adopt a similar approach focusing on enhancing HR innovation capacity and community empowerment. These efforts should be complemented by policy support from local governments and partnerships with private sectors to ensure the sustainability and quality improvement of sustainable tourism.

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