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INTEGRATING GEOHERITAGE AND COMMUNITY ENTREPRENEURSHIP: EXPLORING THE UNIQUENESS AND ECOTOURISM POTENTIALS OF GUA MUSANG AS STONG GEOPARK DESTINATION IN KELANTAN

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Abstract:

This study explores the geo-heritage uniqueness of Gua Musang, Kelantan and the emerging entrepreneurial opportunities within community-based ecotourism (CBET) at Stong Geopark. Using a qualitative research design, semi-structured interviews were conducted with local communities, tourism operators and key government stakeholders. Thematic analysis identified five dimensions of Gua Musang's geo-heritage potential: geological, ecological, cultural, adventure values and strategic accessibility and geopark readiness. Therefore, three themes of community entrepreneurship opportunities are: community micro-entrepreneurship, income enhancement through tourism-driven activities and institutional support and capacity building for local economic development. The findings suggest that Gua Musang's rich natural and cultural assets can strengthen the Stong Geopark brand while generating sustainable livelihoods through CBET initiatives. However, challenges remain in infrastructure readiness, capacity building and institutional coordination. The study contributes to the discourse on integrating geo-heritage conservation with local entrepreneurship in geopark contexts.

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Introduction

Geoparks have been a crucial instrument for integrating geo-tourism, sustainable local development and geo-conservation over the past 20 years (Dowling & Newsome, 2018). The concept of geo-tourism centres on activities that provide tourists with recreational opportunities within a geological setting, allowing them to gain an understanding of the geological processes, including geo-heritage and geodiversity, at the visited geo-site (Mansor et al., 2024). As stated by Lanara et al. (2023), the concept of Geoparks is to integrate sustainable development, conservation and local communities' active involvement in the economic growth of the area. Thus, a geopark holds the greatest potential for the region's sustainable tourism development, as it aims to boost the local economy and community. Geoparks, as promoted by UNESCO, play a crucial role in encouraging conservation, eco-friendly, and educational initiatives. According to UNESCO (2025), Geoparks can be defined as single, cohesive geographical areas where sites and landscapes of international geological significance are managed with a holistic approach to protection, education and sustainable development by integrating geological conservation, education, and local community empowerment. It fosters sustainable development and enhances the potential of geo-tourism (Louis et al., 2024). Therefore, these offer unique opportunities to strengthen local economies, preserve biodiversity and celebrate cultural identity.

In Malaysia, Langkawi UNESCO Global Geopark and Kinabalu Geopark have been recognised as UNESCO Global Geoparks (UGG) internationally. As of 2025, Malaysia has been recognised as a national geopark, and one of them is the Stong Geopark, Kelantan (Department of Mineral and Geosains Malaysia, 2023). In this context, the Kelantan government's devotion to developing Gua Musang as a potential Geopark site reflects a rising appreciation for the significance of geological protection in fostering sustainable development. As cited by Gua Musang District Council (2023), Gua Musang provides tourism development opportunities, particularly in ecotourism. It is located in the southern region of the Malaysian state of Kelantan. It acts as a demarcation line that separates the state of Kelantan from Pahang, Terenganu and Perak. This region offers connectivity from the southern part of the state of Kelantan to global tourism circuits and can be accessed especially from Kuala Lipis. Therefore, Gua Musang provides a very important and unique locational attribute. It offers a distinctive landscape of hills surrounding Gua Musang, featuring dense forests and large caves. From this perspective, Gunung Stong exhibits the same features as do almost all of Stong State parks, which cover approximately 21,950 hectares in Dabong. The park is renowned as a destination for nature lovers and adventurers, thanks to its diverse flora and fauna, which include numerous

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unique species. Despite its biological significance, the region is characterised by rocky and hilly topography, abundant tropical rainforest, and spectacular panoramas, all of which contribute to its ecological and recreational value (Rizal et al., 2024).

Gua Musang is fringed by limestone karst formations, caves, rivers, waterfalls, and a variety of traditional livelihoods and cultural narratives. Altogether, these elements comprise a range of limestone karst features, including caves, rivers, and waterfalls, as well as a diversity of traditional livelihoods and cultural stories that contribute to a geo-heritage landscape. These pose both opportunities and challenges in their development. However, for future development, the existing geopark area, now known as the Stong Geopark region, can serve as a basis for future development. Therefore, as cited by Billah (2021); Mansor et al. (2023), Gua Musang has high geo-heritage value owing to its scientifically significant karst cave system and varied geodiversity. Furthermore, the discovery of earth elements enhances the economic importance of the Gua Musang region (Fendy et al., 2023). All of these facts lend support to the integration of Gua Musang into the Stong Geopark.

However, despite Malaysia's rich geo-heritage resources and the strategic promotion of geopark development, most local communities and ecotourism stakeholders remain insufficiently aware of the long-term socio-economic potential of sustainable ecotourism (Muhammad Badrul Iman et al., 2025; Nor et al., 2018). In particular, the geo-heritage assets of Gua Musang, Kelantan remain under-promoted and under-leveraged despite their significant geological, ecological and cultural value (Rizal et al., 2024). Existing studies have largely focused on geological assessment, conservation strategies and tourism attractiveness with limited attention given to how geo-heritage resources can be systematically translated into structured community-based entrepreneurial opportunities within a geopark framework. Consequently, local communities have yet to fully capitalise on tourism-driven entrepreneurial activities (Rogos et al., 2021), partly due to limited awareness, capacity and knowledge regarding the commercialisation of ecotourism products such as homestays, geo-guiding services and adventure-based activities (Mohd Noor Iqram Rosli, 2024).

This gap is particularly evident in Gua Musang, where extensive limestone karst formations, archaeological discoveries and living indigenous heritage coexist within the emerging Stong Geopark framework, yet their strategic integration into a structured community-based entrepreneurial model has not been systematically examined. This underexplored area is partly attributable to the disciplinary separation between geo-heritage research, which is predominantly geology-oriented, and entrepreneurship studies, which rarely engage with geopark-based resource governance, thereby limiting the development of integrative frameworks within the Malaysian context. Therefore, this study investigates the geo-heritage uniqueness of Gua Musang and explores how these assets can be operationalised into community-based entrepreneurial opportunities to support sustainable local development.

Literature Review

Definition of Geo-heritage

Geo-heritage comprises the geological features of an area and possesses scientific, educational, cultural and aesthetic values. The conceptual structure of the geopark, within the overall umbrella provided by UNESCO, especially merges the aims of geo-conservation, education and sustainable development. The UNESCO Global Geopark framework expressly combines

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geo-conservation, educational and sustainable local development, encouraging bottom-up community involvement as a core principle of geopark practice. This tripe mission positions geoparks as natural incubators of community-level entrepreneurship by interpreting and packaging local assets as visitor experiences and products. Geo-heritage and ecotourism have therefore emerged as major development instruments for rural destinations, particularly in geopark regions where geological, ecological and cultural assets coexist (Louis et al., 2024). As mentioned by Komoo et al. (2022), entrepreneurship of geopark formation at the community-level therefore represents a sustainable strategy that not only safeguards natural heritage resources but can also secure financial resources and enhance their capability at the socio-economic level. Gua Musang and Stong Geopark are regions in Kelantan that are significant for their limestone karst knowledge, home to varied wildlife and with substantial cultural value.

One of the most interesting areas in the Gua Musang region of the Stong Geopark is the diverse range of natural and cultural resources that have developed under the influence of indigenous and local tribes. Community involvement in ecotourism and geo-heritage enterprises could be a viable means of pursuing sustainable development. Involvement of the local communities ensures a comprehensive expansion of the tourism sector and benefits the people economically and also enables the development of a concept of guardianship, crucial for the preservation of geo-heritage resources (Ku Azam Tuan Lonik, 2020).

Community-Based Ecotourism and Entrepreneurship

Community-based Ecotourism (CBET) is defined by Rejito et al. (2024) as tourism that empowers locals and conserves natural resources through planning and management conducted entirely by local communities. CBET is an approach to tourism development that places local communities at the forefront in terms of control and the generation of earnings from tourist resources (Mtapuri & Giampiccoli, 2018). Such an approach ensures economic, social and environmental sustainability by ensuring that income from tourists is distributed within the local community and that community members have ownership and decision-making power. CBET encourages entrepreneurship by investing in local projects, such as guided tours, handicraft manufacturing, and ecotourism lodgings, that promote socio-economic development and cultural preservation (Kunjuraman et al., 2022).

From an economic point of view, the CBET ensures diversification of income for rural communities, alongside their other sources of income. This will ensure the eradication of poverty and spark innovation in the community. It should be noted that the CBET plays a very significant role in ensuring a balanced level of equity, fairness and justice in the tourism sector. Community building that is self-sufficient, environmentally conscious, and culturally respectful. This diversity helps to alleviate poverty while encouraging local innovation and capacity growth. CBET fosters gender equality and social fairness by empowering women and other underrepresented groups to play an active role in the tourism industry. This will ensure a resilient and self-reliant community. This will ensure respect for the cultures, environments, and heritage.

Integrating Geo-heritage and Community Entrepreneurship in Geoparks

Geoparks provide a powerful paradigm for long-term regional development by combining geo-heritage protection with community entrepreneurship. According to Xu and Wu (2022), Geoparks are designated locations that protect geo-heritage sites while fostering sustainable

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tourism driven by local people. This integration boosts entrepreneurship by allowing communities to develop geo-tourism products, such as guided educational tours, local handicrafts inspired by geological motifs, and cultural displays that protect geo-heritage while also generating income (Azman et al., 2010; Komoo, 2010).

Geoparks offer authentic experiences for a niche market of tourists seeking educational, responsible interactions with nature, focusing on accommodations that highlight the location's unique geological features and historical culture. This has a multiplier effect, including multiple income sources and encouraging more accommodation, thereby contributing to economic growth. The governance model followed by geoparks enhances networking among communities, researchers, and the government, thereby contributing to economic sustainability.

The combination of entrepreneurial spirit and geo-heritage conservation inspires a sense of pride within a community in geo-heritage management and promotion. In addition to geo-heritage conservation, geoparks can be used for development purposes to meet the basic objective of ensuring earth integrity and improve societies' well-being (Farsani et al., 2011; Kumar, 2025).

Methodology

In-depth expert interviews and observation, along with secondary data sources, were used to gather information from multiple sources. A face-to-face personal interview was chosen because it is easier to guide and grasp the interview agenda and it allows a single person's ideas to be captured. It is also safe to record the interview for evidence, since there is only one voice to be recognised at a time. It comprises nine key interview informants from 3 different target groups. The rationale for selecting these target groups is their knowledge, experience and responsibility for gathering in-depth information on their opinions and feelings about geo-heritage, as well as their contributions to CBET development (see Table 3.1). Factual information was also included in interview questions. A list of questions was prepared as an interview guide. So, deep information was collected through taking detailed notes.

Table 3.1: Samples of Study

No.	Sample Stakeholder	Quantity	Rationale for selection
Local Authorities: -			
1.	Ministry of Tourism, Arts and Culture Malaysia, Kelantan (MOTAC, Kelantan)	2	Involved in product development, promotion, certification (eg: Homestay Malaysia Program and engagement with local stakeholders in tourism).
2.	KESEDAR Officer	2	Responsible for regional socio-economic development in Kelantan. Implementing government development blueprints and coordinating cross-sector collaborations.
3.	Minerals and Geosciences	1	National expert agency in geosciences, geology mapping, geohazard monitoring and geological

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	Department of Kelantan (JMG)		heritage conservation. Provides technical assessment and certification for geopark proposals including the geological significance of sites.
4.	District Officer of Gua Musang (MDGM)	1	Represents the highest administrative authority at the district level responsible for coordinating development planning, land use, tourism and economic activities.
Tourism Operators: -			
5.	Homestay Providers (Gua Musang)	1	Involved in community tourism networks especially in rural and geopark adjacent areas. Provide accommodation services within the community, offering tourists a chance to experience local culture, traditions and daily life. Acts as informal cultural ambassadors, showcasing traditional foods, language, crafts and values to guests.
6.	Tour Guide (Muse Ecopark Gua Musang)	1	Serves as the main intermediary between tourists and natural or heritage sites. Deep understanding of local stories, legends, biodiversity and geosites. Often certified by tourism associations and many collaborate with local or state-level tourism bodies.
Local Communities: -			
8.	Head of Villages (Gua Musang)	1	A key intermediary between the community and government agencies and helps coordinate development programmes, acts as a bridge to the state and district offices and supports implementation of projects at the local level.
	Total	**9**	

Observation is another main instrument used to collect and record important information about potential tourism resources, services, facilities and infrastructure, as well as challenges to the development of Gua Musang as a potential geopark, such as Stong Geopark, and entrepreneurial opportunities for CBET in the study area. Details of the structured observation checklist were used.

Secondary data sources, such as journal articles, reports and policy documents relevant to the topic under study were also reviewed and used for analysis. Among them including:

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1. Media articles: Relevant news articles and reports on Gua Musang and Stong Geopark, Dabong.
2. Local Development Plans: Documents such as *Pelan Strategik Gua Musang Melangkah Kehadapan (2016-2025), Pelan Strategik Jabatan Mineral Geosains (JMG) (2016-2020), Pelan Pembangunan Geopark Negara (2021-2030)*
3. National Government Policies: Policies related to ecotourism, conservation, geopark and sustainable development.

The process of data analysis and drawing a conclusion employed a qualitative analysis method. It was contextualised and themed into similar characteristics and triangulated to reach a conclusion. A textual description was used to present the study's results.

Result

The thematic analysis, integrating all three research questions, revealed one overarching theme, supported by five major themes that cut across participants' perspectives on the uniqueness, attractiveness, and geopark potential of Gua Musang.

Overarching Theme: Holistic Geo-Cultural and Natural Heritage Identity of Gua Musang as a Foundation for Geopark Development

Theme 1: Exceptional Natural and Geological Heritage

Gua Musang demonstrates exceptional natural and geological heritage, particularly through unique limestone formations, a cave system and endemic flora. Respondent 1 highlighted.
"*There are unique limestone elements. The limestone caves here host plants found nowhere else. There are two to three species of Bungonio that only exist in the State of Kelantan."* (R1)

Next, rare paleontological findings help to bolster its geological character. Respondent 3 expressed the following, emphasising the scientific relevance. The existence of important rivers, such as the Galas River *(Sungai Galas)*, Nenggiri River *(Sungai Nenggiri)*, and Ketil River *(Sungai Ketil)*, contributes to the natural value.

"In Chiku, there is Gua Neon where dinosaur skeletons have been found…" (R3)

Gua Neon

(Sinar Harian, 2024).

This natural heritage is also represented in biodiversity hotspots such as the Lojing Highlands. Respondents 9 and 11 stated.

"The Raflessia flower in Lojing Highlands is one of the unique flora." (R9)

"The hot water of Kolam Ber in Lojing Highlands is very unique because of its heat." (R11)

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Rafflesia Flower Kolam Ber

Theme 2: Archaeological, Historical and Industrial Heritage

Gua Musang holds tremendous archaeological significance due to its human remains, historic cave settlements, and longstanding mining activities. Respondent 1 explained that.

"Gua Cha is the site of the earliest discovery of human skeletons in Malaysia." (R1), whereas Respondent 10 reinforced this by saying.

"In Gua Musang there is a discovery of human skeletons…identified as Mek Kledung." (R10) Respondent 3 added that.

"Gua Musang is known as a gold and tin mining area where gold mining activities continue until now." (R3)

Moreover, historical narratives also enhance the region. For instance, Respondent 3 said that;

"Gua Ning also has a history…Princess Saadong (Puteri Saadong) once slept in the location." (R3),

reflecting both tangible and intangible cultural memory. Meanwhile, Respondent 11 emphasised the cultural significance of Nyet Sui Temple, stating;

"The temple has hundreds of years of paintings that have been recognised." (R11)

Theme 3: Living Cultural Heritage of the Orang Asli Communities

The Orang Asli community plays a significant cultural role in Gua Musang. Respondent 1 noted its demographic and cultural significance.

"The Orang Asli ethnic population…estimated at 10,000 to 15,000 people…still practice traditional life." (R1)

Their traditions, rituals and daily activities add to the district's living heritage. Respondent 14 highlighted that;

"The authenticity of Orang Asli culture is still preserved including dance, customs such as Aisewang and their traditional beliefs." Similarly, Respondent 13 highlighted genuine cultural practices, noting;

"The community…still exists and the food is still cooked in bamboo."

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These cultural manifestations have substantial interpretive value for geo-tourism and align with Indigenous knowledge frameworks used in geopark development.

Theme 4: Tourism Appeal, Attractions and Adventure-Based Potential

Gua Musang has significant tourism potential that rivals Stong Geopark, thanks to its diverse natural, historical, and recreational features. Respondent 1 explained that;

"Tourists come…enjoy recreational activities…are attracted by the unique flora and fauna…and the attractions of the mountains here because they are categorised as G7." (R1).

The adventure tourism activities offered in Etnobotani Park *(Taman Etnobotani)* reinforce this appeal. Respondent 13 described;

"At Etnobotani Park (Taman Etnobotani) there are activities…rock climbing, flying fox, abseiling…water tubing." (R13)

Taman Etnobotani

Religious and iconic architectural attractions further enrich the visitor experience. Respondent 14 highlighted.

"Masjid Razaleigh has a history…and has a mini Kaaba, and Masjid Buluh… is made of bamboo." (R14)

Masjid Razaleigh Masjid Buluh

Theme 5: Strategic Accessibility and Geopark Readiness

Gua Musang's geographic location enhances its potential for geopark integration. Respondent 1 emphasised that;

"Gua Musang is the main gateway to several destinations…known to many as a one-stop centre." (R1)

Participants also perceived strong alignment with geopark criteria. Respondent 12 stated;

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"Gua Musang has more potential to be designated as a Geopark…it has various unique features such as Orang Asli, culture, history, geology, fossils and limestone formations." (R12)

Respondent 3 reinforced this by explaining; *"Gua Musang has the largest geopark in Kelantan."* (R3), while Respondent 13 noted growing community readiness;

"It can be…the community in Gua Musang is also growing." (R13)

Collectively, these perspectives demonstrate strong internal support and readiness for geopark designation.

Next, the thematic analysis across all three research questions yielded one overarching theme, supported by three major themes that collectively describe how CBET contributes to the socio-economic empowerment of local communities.

Overarching Theme: Strengthening Local Livelihoods Through Entrepreneurial-Based Ecotourism in Gua Musang

Theme 1: Community-Based Tourism Micro-Entrepreneurship

Findings reveal that micro-entrepreneurship forms the backbone of community economic activity in Gua Musang, particularly in the form of home-based food products, small-scale hospitality and culturally rooted businesses. Respondent 2 described the diversity of local micro-enterprises by stating;

"There are 10 people who sell their own business products at home…palm cendol, kuih sarang tebuan, kuih loyang made into chips and chilli sauce by the Ila family" (R2)

Traditional gastronomic micro-enterprises also stand out, with Respondent 2 adding;

"There is also a community that tries to make pekasam using kolam merah, it is a traditional food of the community here." (R2)

Tourism-related micro-enterprises such as restaurants and homestays were also widely mentioned. Respondent 3 stated;

"The types of businesses run area mostly include restaurants and homestays." (R3)

Respondent 11 highlighted CBET's micro-entrepreneurship niche involving bird's nest products, explaining;

"He produces edible bird's nest juice and nests…visitors can taste the products and learn how birds build nests and the process." (R11)

Collectively, these micro-enterprises illustrate how CBET functions as a platform for community-led economic participation.

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Theme 2: Income Enhancement through Tourism-Driven Participation

Tourism participation directly contributes to improved household income. Respondent 2 reported incentive-based earnings through homestay involvement;

"The community gets RM100 for each Adopted Child Program (Program Anak Angkat)…the more adopt children (visitors), the bigger the incentive." (R2)

Tourism events and exhibitions further create income opportunities, particularly for food producers and small vendors. As Respondent 11 explained;

"Many communities produce their own kuih-kuih and products to sell to tourists in the Masjid Buluh and Muse Ecopark area." (R11)

These findings reflect a clear link between CBET micro-entrepreneurship and livelihood enhancement for local residents.

Theme 3: Institutional Support and Capacity Building for Local Economic Development

The results show that institutional actors such as MOTAC, KESEDAR and local tourism bodies provide substantial support through funding, training and promotional programs. Respondent 10 stated;

"CBT programs are widely done at Muse Ecopark and MOTAC supports PPUN (*Permohonan, Pemuliharaan, Ubahsuai & Naiktaraf*) *initiatives…in Lojing Highlands there are GSPP events such as TNNBY Tok Nenek Bubu Yong Yap) to promote tourism"* (R10)

Volunteer-based tourism programs also support exposure for rural communities. Respondent 10 added;

"Volunteerism programmes are held in Orang Asli areas such as Pos Brooke and Pos Dakoh to promote the areas." (R10)

Craft-based micro-entrepreneurship is fostered through KESEDAR initiatives. Respondent 14 highlighted;

"KESEDAR has its own entrepreneurs…some produce bamboo and handmade goods." (R14)

These institutional initiatives provide an enabling environment that promotes CBET readiness and long-term economic sustainability.

Discussion

The combined findings 4.1 demonstrate that Gua Musang has an integrated geo-cultural heritage identity that closely aligns with the conceptual foundations of UNESCO Global Geoparks. According to UNESCO (2025) A geopark must have outstanding geological value complemented by cultural, ecological and community dimensions. The geological features highlighted by respondents, including limestone formations, endemic flora, and dinosaur

fossils, correspond directly with the concept of geodiversity, which forms the scientific foundation of geopark development (Kaur, 2022).

The strong archaeological presence in Gua Musang supports Hose (2012) claim that heritage sites with geo-archaeological features have greater interpretative geo-tourism potential. Verbatim statements like *"(discovery of prehistoric human skeleton"* (R1, R10) and *"dinosaur skeleton"* (R3) support this theoretical alignment. Next, this living cultural heritage of the Orang Asli reflects the emphasis on Indigenous knowledge and cultural sustainability within geoparks (Pásková et al., 2024). Their traditions including Aisewang, bamboo-cooked food and ancestral belief system, demonstrate intangible cultural heritage that enriches experiential tourism. This support Smith (2015) assertion that authenticity and sense of place are pivotal in shaping meaningful tourism experiences. Additionally, the tourism attractions identified geotourism principles where natural, recreational and cultural elements coexist (Dowling & Newsome, 2018). These attractions further enhance Gua Musang's comparative appeal relative to Stong Geopark. Hence, Gua Musang's strategic accessibility corresponds Lohmann and Duval (2011), tourism mobility theory, where gateway positioning increases visitor flows and regional connectivity. The recognition by respondents that Gua Musang serves as a *"one-stop centre"* strengthens its viability as an entry point to the broader geopark network.

In a nutshell, these interconnected dimensions confirm that Gua Musang meets the multi-layered criteria for a geopark and has strong potential to be formally integrated into the Stong Geopark development framework.

Furthermore, the combined findings 4.2 show an excellent connection between community-based ecotourism (CBET) activities in Gua Musang and worldwide models of inclusive, locally driven tourism development. CBET promotes community empowerment, local ownership and sustainable resource use, which is consistent with conceptual frameworks proposed by Dangi and Jamal (2016) and Goodwin (1996). The diversity of home-based enterprises, including traditional food production, homestays and cultural crafts, reflects the grassroots entrepreneurial dynamism required for effective CBET implementation. Thus, micro-enterprise involvement is a critical method for achieving economic empowerment and autonomy within the CBET system (Fortunato & Alter, 2015; Markley et al., 2015).

The highlighted entrepreneurial activities including traditional culinary products and homestay operations are consistent with the research, which indicates that rural communities frequently exploit local cultural assets to enhance tourism attractiveness (Kunjuraman et al., 2022). For example, the production of *pekasam, kerepek kuih loyang* and edible bird's nest products demonstrates how local knowledge may be monetised through tourism markets, thus strengthening both economic resilience and cultural preservation. The study also confirms that community involvement in tourism produces a significant economic impact, which is consistent with community-based tourism economic theories (Wondirad et al., 2020). Respondent accounts such as *"The more children adopted…the greater the incentive"* (R2), indicated the direct financial benefits derived from tourism engagement.

Thus, institutional support from MOTAC, KESEDAR and private initiatives reflects the enabling conditions required for CBET development. This is aligned with Scheyvens (1999) empowerment model which emphasises the importance of structural support like training, marketing, infrastructure and policy facilitation in strengthening local capacity. Programs such as PPUN, PPHM *(Program Pengalaman Homestay Malaysia)* and GGSP, funded activities

provide the institutional scaffolding that helps transform community participation into sustainable entrepreneurship.

In addition, despite strong geo-cultural capital, the integration of geo-heritage conservation with structured entrepreneurship remains constrained by infrastructure gaps, limited entrepreneurial capacity and fragmented institutional coordination. The findings reflect a broader disciplinary divide between conservation-focused geopark management and economic development planning, limiting systematic operationalisation of geo-heritage assets into sustainable entrepreneurial ecosystems.

Additionally, this study contributes by bridging geo-heritage conservation and community entrepreneurship within a unified analytical perspective. It extends CBET literature by embedding geo-heritage specificity into entrepreneurial analysis and provides governance insights for emerging geopark regions by emphasizing the need for coordinated institutional support and capacity-building mechanisms. The finding offers an integrative understanding of how geo-cultural capital can support sustainable local development in transitional geopark settings.

Conclusion

This study demonstrates that Gua Musang has a geo-cultural heritage identity that harmonises with UNESCO Global Geopark standards. The presence of precious geological geo-land of significance for geo-tourism. Furthermore, being located at a strategic position and acting as a gateway for the whole region has further amplified its importance to be included within the scope of Stong Geopark.

Simultaneously, the findings reveal that CBET practices in Gua Musang are consistent with global models of inclusive and locally driven tourism development. Community participation through home-based enterprises, cultural production and homestay operations illustrates how local resources and indigenous knowledge are transformed into sustainable economic opportunities. Supported by institutional facilitation, this synergistic CBET system enhances local livelihoods while safeguarding geo-cultural heritage, reinforcing Gua Musang's strategic role in regional geopark-driven development.

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