

Impact of Henan Rural Tourism Development on Local Perceptions, Quality of Life, and Support: A Social Exchange Theory Perspective

*Zhang Ayuan^{1,2}, Liu Lulu², Zurinawati Mohi¹, Mohd Hafiz Mohd Hanafiah³

¹Faculty of Business and Accountancy, Lincoln University College, Malaysia

²Henan Institute of Technology, Xinxiang, Henan, China

³Faculty of Hotel and Tourism Management Universiti Teknologi MARA, Puncak Alam, Selangor, Malaysia

*Corresponding author:

Zhang Ayuan, Faculty of Business and Accountancy, Lincoln University College, Malaysia.

E-mail: ayuan.zhang@hait.edu.cn

Abstract

Local people's perception of tourism's impact and quality of life is a major factor influencing their participation in tourism. Support will be greater if there are more benefits from the local tourism industry. Responsible tourism is seen as one of the alternatives to minimize the negative impacts of tourism and increase the long-term benefits for local tourism. This study aimed to investigate the relationships between the perceived impacts of Henan Rural Tourism Transformation Development (HRTTD), responsible tourism practices, quality of life, and support for the further development of HRTTD. The study applied social exchange theory as an underpinning theory to explain the relationship between the variables. A quantitative approach was applied to a randomly selected group of participants drawn from five active rural tourism villages in Henan. Data was collected face-to-face as respondents needed guidance in filling out the questionnaire. Three hundred and eight-five responses were selected and analyzed, and Partial Least Square Structural Equation Modeling (PLS-SEM) was used to test the hypotheses. This study has confirmed that quality of life partially mediates the relationship between perceived impacts of HRTTD (economic and cultural) and supports further tourism development. The study contributed to the field of tourism research by examining the intricate interplay between local perception, responsible tourism, quality of life, and support for tourism development. Besides, this study enhanced the understanding of how these factors interact and provide actionable insights for fostering sustainable tourism practices and community engagement.

Keywords: Responsible Development; Rural Tourism; Quality of Life; Henan Province; China.

Introduction

Many countries' economic, social, and environmental growths depend heavily on tourism, especially developing ones where it is frequently viewed as a means of improving citizens' quality of life (Jehan et al., 2023; Sharpley, 2014; Zunaidi et al., 2022). It is commonly acknowledged by academics that tourism can have a variety of effects on host communities' economies as well as their natural environments and cultural fabric (Ko & Stewart, 2002; Mateoc-Sirb et al., 2022). Similarly in China, tourism has become a major force behind both cultural development and economic growth, drawing millions of tourists from all over the world to its rich historical and

natural legacy. With its rich cultural heritage and millennia-long history, China has emerged in recent decades as a major player in the world tourism market. China has solidified its status as a top tourist destination with famous landmarks like the Great Wall, the Forbidden City, and the Terracotta Warriors, in addition to breathtaking natural beauties like the Yangtze River and the Yellow Mountains (Statista, 2023). Global tourism in China recorded 60% growth in 2022 while a 30% increase was projected in 2023 (Economist Intelligent Unit, 2023).

In other words, tourism in China is vital for economic, social, and technological development, and lately, rural tourism has emerged as a significant sector within the tourism industry (Yang et al., 2022) owing to its increasing recognition as an important tool for promoting sustainable development in rural areas. Henan is a repository of China's cultural heritage, including UNESCO World Heritage sites such as the Longmen Grottoes and the Shaolin Temple (Winter, 2022). Henan, known as the birthplace of the Chinese civilization, is committed to adopting rural tourism as one of its attractions (Jia et al., 2022). Henan is currently housing several rural tourism programs, and thus, understanding the impact of rural tourism in Henan is vital. Several studies have highlighted the impact of rural tourism on a community, particularly on the quality of life (Biagi et al., 2020; Hassan et al., 2022; Wijijayanti et al., 2020). There is a risk of cultural and social upheaval if rural regions are transformed into tourist destinations (Tolkach & Pratt, 2022). The inflow of tourists may impose external influences, affecting traditional ways of life (Guo, 2023). This trend can produce stress in the community as inhabitants try to balance preserving their cultural history with meeting the expectations of visitors. Changes in local practices, attitudes, and behaviors may occur, affecting the social fabric of the community in Henan (Huijie et al., 2023). While tourism generates cash for local economies, the distribution of economic gains is not always equal among the communities (Wu et al., 2022). Certain individuals or enterprises may gain more benefits, resulting in economic inequities throughout the community. Inequality in income and employment possibilities can cause divisions among the people and jeopardize the local population's general well-being (Jiang et al., 2023; Zhu, 2023).

Furthermore, an increase in visitor numbers might put pressure on the existing local infrastructure (Lucock et al., 2022). Transportation, sanitation, and utilities may be subjected to increasing demand that exceeds their capacity. This strain not only impacts communities' convenience and everyday lives but also poses problems to the area's cultural and natural integrity (Chen et al., 2023). Overburdened infrastructure may deteriorate and reduce overall quality of life (Băndoi et al., 2020). Local communities may find themselves excluded from tourism development decision-making processes in some cases (Kim et al., 2020). Furthermore, residents who believe their opinions are not being heard may become dissatisfied as a result of this lack of engagement (Xiao et al., 2022). Effective community participation is critical for ensuring that tourist development matches local values and needs, generating a feeling of ownership and collaboration. Thus, this study aims to address this issue by understanding the perceived impact of rural tourism development on the quality of life of the Henan local communities. By exploring how rural tourism affects the quality of life of the Henan community, interested parties can take appropriate actions to address its impact.

Secondly, studies have shown that when tourism has a positive impact on the community, the community will show their support for tourism development in their area (Nugroho & Numata, 2022; Ahmed & Mikail, 2023). In Henan, the relationship between quality of life and support for rural tourism is still unclear (Chen et al., 2023). Thus, this study aims to address this issue by exploring the relationship between the quality of life of the Henan local communities and their

support for further rural tourism development. Understanding the relationship can help the community and the industry to work together for everyone's benefit.

Thirdly, past studies have shown that quality of life is one of the mediating factors that can affect tourism development in a community (Su & Swanson, 2020). However, in the Henan community, the mediating impact of quality of life between the relationship between the perceived impacts of rural tourism development and support for further rural tourism transformation and development is unknown (Chen et al., 2023). Thus, this study aims to address this issue by examining the mediating role of the quality of life of the Henan local communities on the relationship between the perceived impacts of rural tourism development and support for further rural tourism transformation and development.

It is hypothesized that Henan local communities' perceived impacts (economic, cultural, environmental, and social) of the rural tourism transformation and development positively affect their quality of life; Henan local communities perceived quality of life impacts their support for further rural tourism transformation and development; and that the quality of life mediates the relationship between Henan local communities' perceived impact of rural tourism and their support for further rural tourism transformation and development.

The Social Exchange Theory (SET) is widely acknowledged as an appropriate theoretical framework for examining how locals view and feel about the rise of rural ecotourism. Economic, environmental, and cultural factors are included in SET and may assist in predicting how inhabitants would react to potential tourism development in key areas of a town (Boonsiritomachai & Phonthanakitithaworn, 2019).

Methodology

The study utilized a survey instrument targeting the population of Henan. PLS SEM analysis was used to investigate the influence of perceived impact on the community's quality of life in Henan. Subsequently, the study addressed how quality of life influences support for tourism.

Research Setting

The target setting in this study is the Henan rural tourism area. Based on the setting, the five active rural tourism villages (Figure 1) in Henan, China, which are Northern Henan -Anyang (Taihang Grand Canyon Rural Tourist Attractions), Eastern Henan -Shangqiu (Mandai Mountain), Western Henan- Sanmen Xia (Swallow Mountain Primitive Ecological Rural Tourism Scenic Area), Southern Henan- Xinyang (Jigongshan Rural Tourism Scenic Area), and Central Henan- Xinxiang (Taihang Rural Tourism Village) were selected.

These areas were chosen to represent the population based on their popularity of being designated rural tourism spots among tourists. In this study, the (participants and non-participants) surrounding five registered rural tourism villages in Henan, China, were selected for unit analysis. The participants represent the local people who actively engage with the rural development program such as local farmers, local entrepreneurs, and permanent residents, while the non-participants represent those who do not actively engage with the rural development but benefit from the development itself such as immigrant, traditional farmers who are not active in any activities and non-residents but stay in the area.



Figure 1. Henan, China location map. Source: Google Maps (2023)

Purposive sampling was adopted as the sampling strategy for the present research. The anticipated sampling size for the current research was set at a minimum of 400 participants, which is deemed sufficient to carry out a thorough statistical analysis. For this study, the inclusion criteria for the participants were: 1) the participants must be at least 18 years old. 2) resided in one of the Northern Henan (Anyang), Eastern Henan (Shangqiu), Western Henan (Sanmen Xia), Southern Henan (Xinyang), and Central Henan (Xinxiang). Then, an official document asking for involvement in the investigation study was delivered to Henan's head of rural tourism. The letter emphasized the impartial and scholarly nature of the study and asked the people to participate voluntarily so that their answers would be kept confidential.

The GPower software was employed to calculate the minimum required size, yielding a minimum of 160 participants given alpha (0.05), power (0.95), and effect size (0.15) with a number of predictors were eight.

Research Survey Instruments

A questionnaire was created for this research's data-gathering procedure. To address the intended research questions, the questions and responses were adequately updated and altered according to an array of literature reviews that connect to the study's subject. The instrument contains a Likert scale with five points that have been employed to gauge participants' acceptance of and happiness with their quality of life. The scale of (1) shows strongly against the decisions or strongly disapproves, (2) shows disagreement, (3) shows a neutral response, (4) is a sign of acceptance, and (5) is a strong agreement. A different rating system was utilized to measure the population's level of satisfaction with their quality of life, in which a value (1) shows strong disappointment or unfavorable behavior, (2) shows disappointment, (3) shows a neutral response, (4) shows fulfillment, and a (5) shows strong satisfaction. Both of the different 5-point Likert scales are illustrated in Table 1.

Table 1
Different 5-point Likert scales

Transformation and Development in Henan and Sustainable Tourism Practices				
Strongly Disagreed	Disagreed	Neutral	Agreed	Strongly Agreed
1	2	3	4	5
Level of Satisfaction with Quality of Life				
Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied
1	2	3	4	5

Pilot Study

A pilot study was conducted, including 100 residents in three registered Henan rural tourism areas, namely; Guoliang Village, Jiaoding Shan Village, and Bali Gou Village. Thus, the questions' language and order underwent minor revisions to produce the survey's final iteration. Additionally, a reliability test was conducted. The result of the pilot test analysis is shown in Table 2. The results revealed a high level of internal consistency for the measurement scales employed in the study. The cultural scale, consisting of 10 items, exhibits an impressive Cronbach's Alpha of 0.972, indicating strong cohesion and reliability in measuring cultural aspects. Similarly, the economy scale, environmental (ENV) scale, quality of life (QOL) scale, responsible Tourism practice (RTP) scale, and social scale all demonstrate commendable internal consistency with Cronbach's Alpha coefficients of 0.980, 0.918, 0.881, 0.891, and 0.890, respectively. These values suggest that the items within these scales are closely interrelated and effectively measure their intended constructs. Although slightly lower, the support (SUPP) scale still maintains good internal consistency with a Cronbach's Alpha of 0.856. Overall, these findings instill confidence in the reliability of the measurement scales, indicating that they are likely to yield consistent and dependable results when employed in the main study.

Table 2
Pilot Study - Reliability Test

Scale name	No. of Items	Cronbach's Alpha
CULTURAL	10	0.972
ECONOMY	12	0.980
ENV	9	0.918
QOL	12	0.881
RTP	14	0.891
SOCIAL	7	0.890
SUPP	6	0.856

ENV = Environment, QOL = Quality of life, RTP = Responsible tourism practice, SUPP: Support for further development

Data Analysis

The data analysis process employed the Statistical Package for Social Science (SPSS), version 24.

This software was utilized for tasks such as data entry, coding, conducting normality tests, and performing descriptive analyses. Subsequently, various statistical measures, including frequencies, percentages, mean scores, and standard deviations were computed to succinctly summarize the extensive sets of quantitative information generated. The research hypotheses were then examined through the Partial Least Squares-Structural Equation Modeling (PLS-SEM) approach, employing two distinct methods known as the Reflective Measurement Model and the Structural Measurement Model. The Reflective Measurement Model assessed the reliability of indicators, internal consistency, and discriminant validity of the model, while the Structural Measurement Model focused on analyzing the coefficient of determination (R²), effect size (F²), and predictive relevance (Q²). To test the hypotheses, the researcher utilized the Path Coefficient to examine both direct and indirect effects, employing Bootstrapping Procedures to discern how the moderator variable could potentially influence other variables within the research framework. The exploratory principal component factor analysis procedure with varimax rotation was used for the items in the independent, mediating, and dependent constructs or variables in this study, namely: i) Perceived Economic, Environmental, Social, and Cultural impacts of the Henan Rural Tourist Development and Transformation (HRTTD), ii) Quality of Life as a mediating variable, and iii) Responsible Tourism. In this study, rather than 30, a factor loading larger than .05 was employed to provide stronger items in assessing the individual constructs (Hair et al., 2010; Levant et al., 2020).

Results

Only 385 of the questionnaires were found to be useable from a total of 400 questionnaires collected, which resulted in a response rate of just 96% (Table 3). Thus, 4% of the total questionnaires (15/400) were deemed useless and eliminated from the analysis because the respondents had either supplied insufficient information or had omitted some responses.

Table 3
Distribution of Questionnaires to Five Active Rural Tourism Villages in Henan, China

Districts	Total Respondents Surveyed	Participant	Non-Participant	Useable Respondents Surveyed
Taihang Grand Canyon Rural Tourist Attractions	89	70	139	65
Mandai Mountain Swallow Mountain Primitive Ecological Rural Tourism Scenic Area	68	22	26	77
Jigongshan Rural Tourism Scenic Area	73	11	14	79
Taihang Rural Tourism Village	89	20	40	98
	81	10	48	66
Total	400	133	267	385

Demographic Profiles

The gender distribution of the respondents is shown in Table 4. There were 51.4% (n=198) female respondents as compared to 48.6% (n=187) male respondents. The majority of respondents were 50 years old or older, accounting for 35.3% (n=136), followed by 40 to 49 years old, accounting for 26.2% (n=101) of the total respondents. The respondents aged 30 to 39 years were around 22.6% (n=87), while the lowest category of the respondents, 15.9% (n=61) was found in the age group ranging from 18 to 29 years. The data showed that older citizens are more likely to participate in the HRTTD.

According to the results of the frequency test, only 14.6% (n=56) of the respondents had a Bachelor's degree, whereas 5.5% (n=21) had a college diploma. The majority of respondents, 59.7% (n=230) had completed secondary school and 10.1 (n=39) % completed elementary school. Minority groups in this research include individuals who completed vocational school at 1.8% (n=7) and those who possess a Doctor of Philosophy at 0.5% (n=2) while respondents with other certifications made up about 5.5% (n=21) of the total number of respondents. According to the results of the occupations of the study's respondents, 36.4% (n=140) of all of the respondents were self-employed, 14.0% (n=54) were farmers, 13.0% (n=50) worked in the private sector, 7.5% (n=29) were government servants, 0.8% (n=3) were fishermen, 1.8% (n=7) were teachers, 6.5% (n=25) were retirees, and 20.0% (n=77) worked in other sectors.

In terms of monthly income, 40.0% (n=154) of respondents earned less than RMB1,000 per month, 30.1% (n=116) earned between RMB1,000 and RMB2,000 per month, and 21.3% (n=82) earned between RMB2,000 and RMB3,000 per month. Meanwhile, 5.2% (n=20) of the respondents earned between RMB3,001 and RMB4,000 per month, while 3.4% (n=13) earned more than RMB4,000.

Table 4
Demographic Profiles

Characteristics	Categories	Number (n)	Percentage (%)
Gender	Male	187	48.6
	Female	198	51.4
Age group	18 – 29 years	61	15.9
	30 – 39 years	87	22.6
	40 - 49 years	101	26.2
	50 years and above	136	35.3
Level of Education	Primary School	39	10.1
	Vocational School	7	1.8
	Secondary School	230	59.7
	Diploma (College)	21	5.5
	Bachelor's Degree	56	14.6
	Master's Degree	9	2.3
	Doctors of Philosophy	2	0.5
	Others	21	5.5
Occupation	Teacher	7	1.8
	Farmer	54	14.0
	Government Servant	29	7.5
	Fisherman	3	0.8

	Retirees	25	6.5
	Corporate Sector	50	13.0
	Self-Employed	140	36.4
	Others	77	20.0
Monthly income excluding Rural Tourism Business Operators in the Village	Below RMB 1,000	154	40.0
	RMB 1,001– RMB 2,000	116	30.1
	RMB 2,001– RMB 3,000	82	21.3
	RMB 3,001– RMB 4,000	20	5.2
	More than RMB 4,000	13	3.4

Evaluation of the Measurement Model

The PLS-SEM measuring model incorporated seven different dimensions (economic, social, cultural, environmental, quality of life, responsible tourism practice, and support for further development (Figure 2). The first four categories were initially presented by Almeida-Garcia et al. (2016) and Andereck et al. (2005), while the two conceptions (quality of life and responsible tourism practice) were conceived of by Kim (2002), Spenceley (2012), and Stanford, (2006). The dependent construct, which was initially taken from Woo et al.'s (2015) work, was support for ongoing development. The structural model hypothesized that the economic, social, and cultural constructions, as well as the environment, quality of life, and responsible tourism practice components, all have an impact on the level of support for ongoing growth. In addition, a conjecture is offered that the correlations between the independent and dependent constructs are regulated by responsible tourism practice.

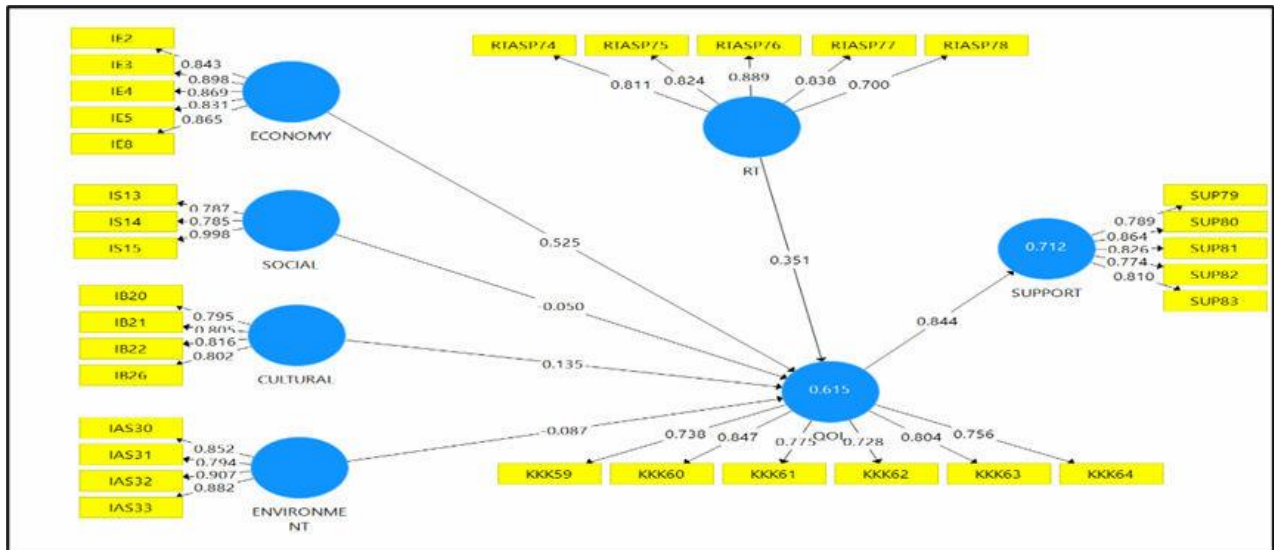


Figure 2. Measurement Model

The associations between the independent and dependent variables were examined using the SmartPLS algorithm's output. The route link shown in the model was analyzed using the regression coefficient (β) value to test the level of significance. The PLS Bootstrapping procedure was used to produce the t-values, which were used to determine the significance of the regression coefficient. The results of the t-statistics were used to determine the significance of each link. For each hypothesized path, the path coefficients, observed t-statistics and significance levels are listed in Table 5. The submitted hypotheses were approved or not based on the path assessment results, as explained in more detail in the next section.

The structural model is depicted in Figure 3, along with the significance levels and path coefficient results.

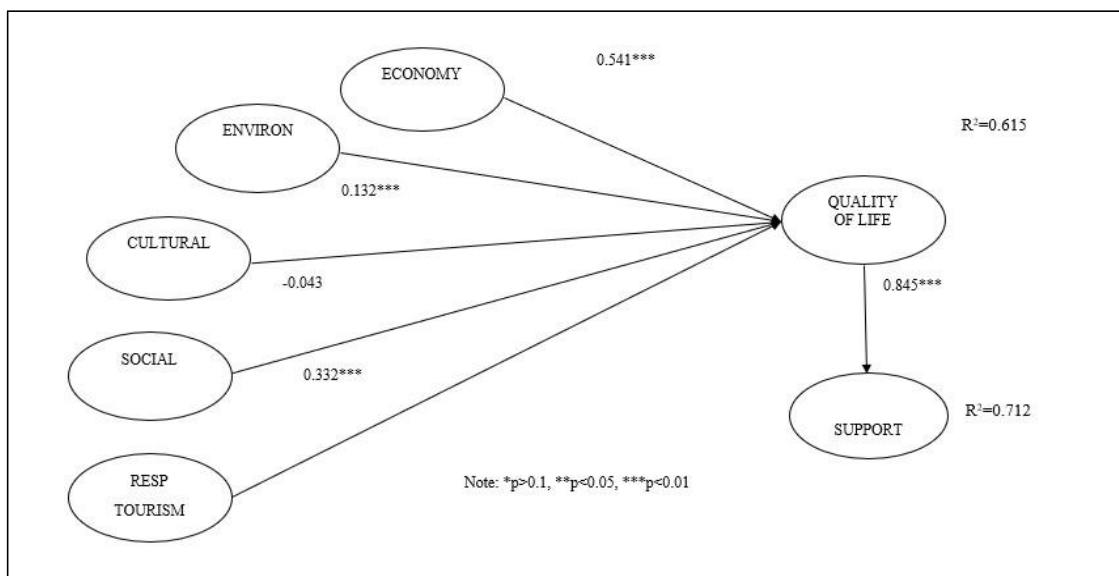


Figure 3. Results of the Structural Model

Regarding this research, four hypotheses were examined to determine whether or not responsible tourism practices had a moderating effect on the connection between the perceived economic, social, cultural, and environmental impact of the HRTTD and quality of life as the key parameter. The emphasis of these hypotheses was on the moderating influence of responsible tourism practices. Table 4 illustrates the results of the hypothesized moderating effect in this research.

Table 4
Moderating effect

	Beta	Standard Error	T Statistics	P Values	Result
Economic Impact+ Moderating Effect 1 → QOL	-0.293	0.072	4.127	0.000	Significant
Social Impact + Moderating Effect 2 → QOL	-0.002	0.041	0.056	0.955	Not Significant
Cultural Impact + Moderating Effect3 → QOL	0.103	0.041	2.543	0.011	Significant
Environmental Impact + Moderating Effect 4 → QOL	-0.008	0.046	0.020	0.984	Not Significant

Note: **p>. 05, ***p<0.001

The findings of the direct effect model showed that responsible tourism practice, which was considered to be a moderator variable, had a substantial correlation with the association involving economic impact and cultural impact. The findings showed that responsible tourism practice considerably moderates the link between quality of life and perceived economic effect ($\beta = -0.293^{***}$) and perceived cultural impact ($\beta = 0.103^{***}$). On the other hand, it was shown that responsible tourism practice does not substantially modify the association between quality of life and perceived social effect ($\beta = -0.002$) and perceived environmental impact ($\beta = 0.008$). According to the findings presented above, one may draw the following conclusion: responsible tourism practice has a strong moderator influence on the link between the perceived economic impact, the perceived cultural impact, and the quality of life.

Discussion

The results validated the alternative hypothesis of this study by demonstrating a strong correlation between the perceived economic impact of the HRTTD and the quality of life in the nearby villages ($\beta = 0.673$ and $t = 5.345$, $p = 0.000$). This finding follows the social exchange theory and a study by Andereck and Ruiz et al. (2021), Mamirkulova et al. (2020), and Woo et al. (2018) that found a favorable association between perceived economic impact and quality of life. Furthermore, there was a weak association between local community quality of life and perceived environmental impact ($\beta = -0.182$, $t = 1.773$, $p = 0.077$). Overall, the outcome demonstrated that the program had no negative effects on the local population's quality of life in terms of the environment. This conclusion contrasted with that of earlier studies (Hanafiah et al., 2021; Jurowski & Gursoy, 2004; Naidoo & Sharpley, 2016; Uysal et al., 2016), which found that the concerns of pollution, littering, traffic congestion, and noise caused by tourism affected hosting people. Additionally, this outcome gives the necessary authorities proof to encourage them to keep promoting and growing the project. With this outcome, it is also demonstrated that the program has no detrimental effects on society

as a whole and that the environmental problems generated by HRTTD are manageable by the communities. It is also possible that the program's advantages outweigh any potential drawbacks. There was, however, no correlation between the local community's quality of life and the perceived social impact ($\beta = -0.231$, $t = 0.801$, $p = 0.424$). In other words, the outcome showed there was no conclusive link between the local communities' quality of life and the perceived social impact. This finding conflicts with a study conducted by other academics (Kim et al., 2013; Nillahut, 2010; Ramkissoon, 2023), who found a beneficial association between perceived social effect and quality of life. The outcome, however, is consistent with the notion of the cycle of evolution in tourist areas, which explains how the tourism region changes over time. In this context, even though the HRTTD has been in existence for 15 years, the program can be viewed as being unrelated to local communities' quality of life, particularly from a social perspective. From a different angle, this conclusion is distinct from those of the other investigations, perhaps as a result of the varied research environment and time frame.

According to the findings, there is a connection between the perceived cultural effect and the quality of life in the communities in the areas. The finding shows that there is a significant association between the perceived cultural effect and the quality of life ($\beta = 0.847$, $t = 3.387$, $p = 0.001$). It is incredibly interesting to note that this association is connected to cultural activities, one of the primary components emphasized in the HRTTD.

In addition to staying with the host family throughout their time in the project, the tourists also take part in the cultural events that are offered by the communities in which they are stationed. According to Chang et al. (2018) and Mamirkulova et al. (2020), this finding demonstrates that the inclusion of visitors and members of the local communities in the program will have a beneficial impact on the quality of life of the local populations and may even contribute to the preservation of the culture of the areas. As a consequence of this, it is in the best interest of the relevant stakeholders to continue using the HRTTD as a platform to promote and maintain local traditions, as it is advantageous to this outcome. Academically speaking, this finding will add to the body of research that emphasizes the influence that the growth of tourism may have on the quality of life of the communities that are directly affected by it.

The findings demonstrated a strong association between the quality of life of the local communities and the support of the local communities for future HRTTD development ($\beta = 0.847$ and $t = 28.025$, $p = 0.000$), which supported the second hypothesis of this research. This conclusion is in line with the findings of research that was carried out by Abbas et al. (2020) and Woo et al. (2015), who said that the effect of tourism on the quality of life of the community is one of the factors that influence support from the community. Furthermore, it is claimed that the community would continue to provide their support if tourism can bring larger advantages for them (Chuang, 2013; Higgins-Desbiolles, 2020; Nunkoo & So, 2016; Long Pham, 2012).

According to our hypothesis, the link between the perceived economic effect of HRTTD and support for continued HRTTD development is mediated by an individual's quality of life. The perceived economic impact of HRTTD is shown to have a favorable effect on the quality of life, with the significance of the association being 0.673, and it lessens the direct effect by boosting enthusiasm for the further development of HRTTD. The link between the perceived economic benefit of HRTTD and support for future HRTTD development is influenced in a roundabout way by the quality of life. Moreover, the result of the Sobel test demonstrated a statistically significant correlation between the perceived economic effect of the HRTTD and support for the continued development of the HRTTD, with the quality of life serving as a mediator in this relationship. The

bootstrap confidence interval for the mediating effect is 95% (Z -value=6.98***), which confirms the effect. To put it another way, the quality-of-life acts as a partial mediator in the link between the perceived economic benefit and support for the further growth of HRTTD. This conclusion is in line with the findings of research that was carried out by Andereck and Nyaupane (2011), Mamirkulova et al. (2020), and Ramkissoon (2023). They found that the perceived economic effect had an overall favorable influence on the quality of life. According to Almeida-Garca et al. (2016) and Scheyvens & Hughes (2021), the residents will provide additional assistance for the plan if they see an increase in the personal advantages, they get from participating in the tourism program. This conclusion lends credence to the preexisting body of information, which discovered that the fiscal advantage affects both the homestay operator's quality of life and that of the communities in which they are located (Shukor et al., 2014). This data lends credence to the theory that the length of time a village participates in a homestay program determines the level of improvement in the overall quality of life for the surrounding villages. As a result, they will continue to fund the initiative for its further development. On top of that, the results provided the possibility that the financial aspect is still dominant among the various variables influencing the quality of life of the residents in a community. This conclusion is also in accordance with the research carried out by Almeida- Garcia et al. (2016), who claimed that the monetary aspect has a major effect on community life. It has been shown that the perceived social impact of HRTTD has a negative effect on the quality of life, with the strength of the connection being -0.231. As a result, it diminishes the direct effect of support for the continuing development of HRTTD. The perceived societal impact of HRTTD and support for continued HRTTD development are related in a way that is influenced indirectly by quality of life. Meanwhile, the results of the Sobel test indicated that there was no significant link between the perceived societal effect of HRTTD and support for the further development of HRTTD, with quality of life serving as the mediator. This mediating impact is supported by bootstrap confidence intervals with a 95% level of reliability (Z -value: -2.39***). People's opinions on how HRTTD impacts society have an indirect effect on how much they support its further advancement by affecting their own quality of life. According to this mediation pathway, raising people's standard of living might be a key to winning them over to rural development programs like HRTTD. In other words, the quality of life does not operate as a mediator in the connection between the perceived social effect and support for the further growth of HRTTD. Therefore, it may be concluded that the evidence does not support the hypothesis. In this respect, the data reveals something different, namely that not all perceived impacts of tourism have an immediate correlation to the quality of life of the areas in which they are located. This outcome is also at odds with the results of a previous study that focused on the influence on society and the quality of life. The majority of the earlier research found that quality of life has a direct influence on the link between perceived social impact and support for further tourism development (Kim et al., 2013; King et al., 1993; Ramkissoon, 2023; Stylidis et al., 2014; Su & Swanson, 2020). This result is perhaps similar to other empirical research, which shows that diverse study settings, the tourist life cycle, and other geographical backgrounds may generate different outcomes. This conclusion is probably comparable with other direct evidence research, which implies that various study contexts, the tourism life-cycle, and distinct geographical backgrounds could produce outcomes that vary.

Conclusion

The study demonstrates that the HRTTD program had no negative effects on the local population's quality of life in terms of the environment, thus giving the necessary authorities the proof to encourage them to keep promoting and growing the project. The program also has no detrimental effects on society as a whole and that the environmental problems generated by HRTTD are manageable by the communities. There is a connection between the perceived cultural effect and the quality of life in the communities in the study areas. The link between the perceived economic effect of HRTTD and support for continued HRTTD development is, however, partially mediated by an individual's quality of life.

Declaration of interest statement

None

Acknowledgments

The authors appreciate the technical support from Lincoln University College and Henan Institute of Technology, Xinxiang, Henan, China.

References

- Abbas, J. (2020). Impact of total quality management on corporate green performance through the mediating role of corporate social responsibility. *Journal of Cleaner Production*, 242, 118458. <https://doi.org/10.1016/j.jclepro.2019.118458>
- Ahmed, I. A., & Mikail, M. A. (2023). Interactive Instructor for a Synergistic Student-Centered and Personalized Teaching: A Biosocial Approach. *Education and Urban Society*, 55(8), 996-1018. <https://doi.org/10.1177/00131245221106717>
- Almeida-García, F., Peláez-Fernández, M. Á., Balbuena-Vazquez, A., & Cortes- Macias, R. (2016). Residents' perceptions of tourism development in Benalmádena (Spain). *Tourism Management*, 54, 259-274.
- Andereck, K. L., & Nyaupane, G. P. (2011). Exploring the nature of tourism and quality of life perceptions among residents. *Journal of Travel Research*, 50(3), 248- 260.
- Andereck, K. L., Valentine, K. M., Knopf, R. C., & Vogt, C. A. (2005). Residents' perceptions of community tourism impacts. *Annals of Tourism Research*, 32(4), 1056-1076.
- Andereck, K., & Vogt, C. (2021). Quality of life and stakeholder involvement in sustainable tourism planning. *Handbook of Tourism and Quality-of-Life Research II: Enhancing the Lives of Tourists, Residents of Host Communities and Service Providers*, 303-316.
- Băndoi, A., Jianu, E., Enescu, M., Axinte, G., Tudor, S., & Firoiu, D. (2020). The relationship between development of tourism, quality of life and sustainable performance in EU countries. *Sustainability*, 12(4), 1628.
- Biagi, B., Ladu, M. G., Meleddu, M., & Royuela, V. (2020). Tourism and the city: The impact on residents' quality of life. *International Journal of Tourism Research*, 22(2), 168-181.
- Boonsiritomachai, W., & Phonthanukitithaworn, C. (2019). Residents' support for sports events Tourism development in Beach City: The role of community's participation and tourism impacts. *SAGE Open*, 9(2), 215824401984341. <https://doi.org/10.1177/2158244019843417>

- Chang, K., Chien, H., Cheng, H., & Chen, H.-i. (2018). The Impacts of Tourism Development in Rural Indigenous Destinations: An Investigation of the Local Residents' Perception Using
- Chen, J., Zhai, S., Song, G., Huang, S., Liu, H., Jiang, X., ... & Wu, W. (2023). Evaluation and determinants of satisfaction with the urban-rural interface area liveability toward "15-min city": A case study in Henan Province, China. *Ecological Economics*, 214, 107994.
- Chuang, S. T. (2013). Residents' attitudes toward rural tourism in Taiwan: A comparative viewpoint. *International Journal of Tourism Research*, 15(2), 152- 170.
- Guo, P. (2023). Contributors to economic benefits of tourism from the perspective of ecological factors. *Environmental Engineering & Management Journal (EEMJ)*, 22(9).
- Hanafiah, M. H., Jamaluddin, M. R., & Zulkifly, M. I. (2013). Local community attitude and support towards tourism development in Tioman Island, Malaysia. *Procedia-Social and Behavioral Sciences*, 105, 792-800.
- Hassan, T. H., Salem, A. E., & Abdelmoaty, M. A. (2022). Impact of rural tourism development on residents' satisfaction with the local environment, socio- economy and quality of life in Al-Ahsa Region, Saudi Arabia. *International journal of environmental research and public health*, 19(7), 4410.
- Higgins-Desbiolles, F. (2020). The "war over tourism": challenges to sustainable tourism in the tourism academy after COVID-19. *Journal of Sustainable Tourism*, 29(4), 551–569. <https://doi.org/10.1080/09669582.2020.1803334>
- Huijie, L., Rola, A. C., Atienza, V. A., Perez, J. E. M., Maquito, F. C., & Paunlagui, M. M. (2023).
- Jehan, Y., Batool, M., Hayat, N., & Hussain, D. (2023). Socio-Economic and environmental impacts of tourism on local community in Gilgit Baltistan, Pakistan: A local community prospective. *Journal of the Knowledge Economy*, 14(1), 180-199.
- Jia, Z., Jiao, Y., Zhang, W., & Chen, Z. (2022). Rural tourism competitiveness and development mode, a case study from Chinese township scale using integrated multi-source data. *Sustainability*, 14(7), 4147. <https://doi.org/10.3390/su14074147>
- Jiang, L., Chen, Y., Liang, W., & Zhang, B. (2023). Convergence Analysis of Cross- Province Human Well-Being in China: A Spatiotemporal Perspective. *International Journal of Environmental Research and Public Health*, 20(3), 1858. <https://doi.org/10.3390/ijerph20031858>
- Jurowski, C., & Gursoy, D. (2004). Distance effects on residents' attitudes toward tourism. *Annals of Tourism Research*, 31(2), 296-312.
- Kim, K. (2002). The effects of tourism impacts upon quality of life of residents in the community. (Unpublished PhD dissertation). Virginia Polytechnic Institute and State University, Blacksburg, VA.
- Kim, K., Uysal, M., & Sirgy, M. J. (2013). How does tourism in a community impact the quality of life of community residents? *Tourism Management*, 36, 527-540.
- Kim, S., & Kang, Y. (2020). Why do residents in an overtourism destination develop anti-tourist attitudes? An exploration of residents' experience through the lens of the community-based tourism. *Asia Pacific Journal of Tourism Research*, 25(8), 858-876.
- Ko, D.-W., & Stewart, W. P. (2002). A structural equation model of residents' attitudes for tourism development. *Tourism Management*, 23(5), 521-530.
- Lucock, X., Woodford, K., & Li, X. (2022). Sustainable Land Use and Livelihood Dynamics in Henan County on the Qinghai–Tibet Plateau—A Transdisciplinary Systems Perspective. *Sustainability*, 14(13), 7785.

- Mamirkulova, G., Mi, J., Abbas, J., Mahmood, S., Mubeen, R., & Ziapour, A. (2020). New Silk Road infrastructure opportunities in developing tourism environment for residents' better quality of life. *Global Ecology and Conservation*, 24, 1-13. <https://doi.org/10.1016/j.gecco.2020.e01194>
- Mateoc-Sîrb, N., Albu, S., Rujescu, C., Ciolac, R., Țigan, E., Brînzan, O., ... & Milin, I. A. (2022). Sustainable tourism development in the protected areas of Maramureș, Romania: Destinations with high authenticity. *Sustainability*, 14(3), 1763. <https://doi.org/10.3390/su14031763>
- Naidoo, P., & Sharpley, R. (2016). Local perceptions of the relative contributions of enclave tourism and agritourism to community well-being: The case of Mauritius. *Journal of Destination Marketing & Management*, 5(1), 16-25.
- Nillahut, W. (2010). Local resident's perception towards impacts from tourism development in Phuket, Thailand. Doctor of Philosophy. Universiti Sains Malaysia, Penang, Malaysia.
- Nugroho, P., & Numata, S. (2022). Resident support of community-based tourism development: Evidence from Gunung Ciremai National Park, Indonesia. *Journal of Sustainable Tourism*, 30(11), 2510-2525. <https://doi.org/10.1080/09669582.2020.1755675>
- Nunkoo, R. (2016). Toward a more comprehensive use of social exchange theory to study residents' attitudes to tourism. *Procedia Economics and Finance*, 39, 588- 596.
- Nunkoo, R., & So, K. K. F. (2016). Residents' support for tourism: Testing alternative structural models. *Journal of Travel Research*, 55(7), 847-861.
- Ramkissoon, H. (2023). Perceived social impacts of tourism and quality-of-life: A new conceptual model. *Journal of Sustainable Tourism*, 31(2), 442-459. <https://doi.org/10.1080/09669582.2020.1858091>
- Scheyvens, R., & Hughes, E. (2021). Can tourism help to “end” poverty in all its forms everywhere? The challenge of tourism addressing sdg1. Routledge.
- Sharpley, R. (2014). Host perceptions of tourism: A review of the research. *Tourism Management*, 42, 37-49.
- Shukor, M. S., Salleh, N. H. M., Othman, R., & Idris, S. H. M. (2014). Perception of homestay operators towards homestay development in Malaysia. *Jurnal Pengurusan (UKM Journal of Management)*, 42.
- Spenceley, A. (2012). *Responsible tourism: Critical issues for conservation and development*: Routledge.
- Stanford, D. (2006). Responsible tourism, responsible tourists: What makes a responsible tourist in New Zealand?
- Statista. (2023). Overseas visitor arrivals in China from 2010 to 2020 with an estimate for 2021. Retrieved from <https://www.statista.com/statistics/234785/international-tourists-arrivals-in-china/>
- Su, L., & Swanson, S. R. (2020). The effect of personal benefits from, and support of, tourism development: The role of relational quality.
- Tolkach, D., & Pratt, S. (2022). Globalisation and cultural change in Pacific Island countries: the role of tourism. In *Island Tourism Sustainability and Resiliency* (pp. 10-35). Routledge.
- Uysal, M., Sirgy, M. J., Woo, E., & Kim, H. L. (2016). Quality of life (QOL) and well- being research in tourism. *Tourism Management*, 53, 244-261.
- Winter, T. (2022). *The Silk Road: Connecting Histories and Futures*. Oxford University Press.

- Woo, E., Kim, H., & Uysal, M. (2015). Life satisfaction and support for tourism development. *Annals of tourism research*, 50, 84-97.
- Woo, E., Uysal, M., & Sirgy, M. J. (2018). Tourism impact and stakeholders' quality of life. *Journal of Hospitality & Tourism Research*, 42(2), 260-286.
- Wu, W., Li, Y., & Liu, Y. (2022). What constrains impoverished rural regions: A case study of Henan Province in central China. *Habitat International*, 119, 102477. <https://doi.org/10.1016/j.habitatint.2021.102477>
- Xiao, C., Zhou, J., Shen, X., Cullen, J., Dobson, S., Meng, F., & Wang, X. (2022). Rural Living Environment Governance: A Survey and Comparison between Two Villages in Henan Province of China. *Sustainability*, 14(21), 14136. <https://doi.org/10.3390/su142114136>
- Yang, Q., Li, J., & Tang, Y. (2022). The dilemma of the great development of rural tourism from the sustainable environment perspective. *Journal of environmental and public health*, 2022. <https://doi.org/10.1155/2022/7195813>
- Zhu, K. (2023). Rural area and agricultural region revitalisation modelling. *Land Degradation & Development*, 34(1), 42-51. <https://doi.org/10.1002/ldr.4442>
- Zunaidi, A., Nofirman, N., Juliana, J., & Wurarah, R. N. (2022). The impact of the development of cultural tourism on the cultural, economic, and social aspects of local communities. *Dinar: Jurnal Ekonomi dan Keuangan Islam*, 9(2), 1-18.