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The Effect of Riverine Tourism on the Financial Inclusion and Economic Development of Bangladesh

Abstract

This paper seeks to explore the opportunities, challenges and plans on how to develop riverine tourism in Bangladesh with the focus on making it a better source of livelihood amongst people of Bangladesh and diversifying its national economy. This is basically a descriptive study based on a sample of 210 individuals and used both primary and secondary sources of data which included a literature review and primary data collected through interviews, surveys and site observations in key river estuaries. Data were analyzed by SPSS and Microsoft Excel. The study has found that riverine tourism is largely viewed as a significant provider of jobs and additional income in communities near rivers. Regression results indicate a notable positive correlation among tourism growth, employment generation, and the expansion of small businesses. Nonetheless, extensive private investment and institutional backing continue to be statistically trivial because of poor policies, insufficient incentives, and lacking infrastructure. The study provides that integrated planning, cooperation between government and non-government, and long-term management approaches play a significant role in maximizing benefits with minimal risks. The originality of this study is in its comprehensive examination of riverine tourism in Bangladesh as it presents a framework detailing the interlinking of economic, environmental, sociocultural factors, a technique that has hardly been employed in previous studies of tourism sector in the country.

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1. Introduction

Bangladesh ranks among the world's most river-rich nations, boasting over 700 rivers that create a vast and interlinked system of inland waterways. Such rivers have historically played a critical role in shaping the economy of the country, culture, transportation, and patterns of settlement. Historically, rivers have been supporting agricultural production, fisheries, internal transport, and trading, thereby supporting livelihoods and improving regional interactions (Islam & Gnauck, 2020; World Bank, 2021). Although their importance is perennial, the potential contribution of rivers to the economic development spearheaded by tourism is still not well understood and is mostly unexploited in Bangladesh.

Over the recent past, tourism has gained a crucial role in economic diversification of various developing countries, giving a lot of potential to generation of employment as well as generation of income and

fair development of the region. Recent studies suggest that tourism may become one of the factors that cause economic growth through the development of the service sector, infrastructure, and local entrepreneurship, particularly in rural and marginal regions (Dogru, Sirakaya-Turk, and Crouch, 2019; UNWTO, 2023). It is against this broader context of development that the most recent focus on river tourism as an alternative form of sustainable tourism utilizing natural waterways to support economic growth and preserve environmental and cultural resources has been gaining broad interest across the globe (Chen, Xu, and Lew, 2022).

It has been identified that riverine tourism, such as river cruising, boat tours, fishing tourism, river leisure, and cultural tourism based on traditional ways of life, depending on rivers, is one sustainable and inclusive means of developing economies. According to the global statistics, the river-oriented tourism may generate direct employment in transport, guiding, lodging, and food services and indirect employment in agriculture, handicraft, retail, etc. (Nguyen and Bosch, 2021; Yang, Zhang, and Chen, 2020). However, river tourism in Bangladesh is a rather neglected phenomenon of the tourism industry though the country is endowed with large river resources, beautiful views, and rich river-based cultural backgrounds.

Although Bangladesh boasts of some rich tourism resources, tourism development efforts have been largely focused on coastal, hilly and historical or heritage sites. Consequently, the river tourism has received very little policy attention, insufficient government funding, and institutional support (Rahman and Alam, 2022). This disparity is also observed by academic studies in tourism in Bangladesh, paying primary attention to either coastal tourism, ecotourism or urban tourism, whereas riverine tourism is either little referred at all or is mentioned in general terms. Therefore, a considerable gap in literature exists on the economic impacts of river tourism particularly in terms of creation of employment opportunities, income enhancement, and advancement of infrastructural developments as well as development of local businesses.

This research will close this gap by undertaking an empirical research to identify the relationship between river tourism development and economic growth in Bangladesh. The research aims at finding out the impacts of river tourism on employment opportunities, family income, and development of infrastructure and growth of local businesses in river-based communities. The proposed study aims at providing systematic empirical research in order to contribute to what is already known about riverine tourism in Bangladesh and to inform the policymakers, tourism planners, and development practitioners on the role of riverine tourism in the economy and its potential to promote inclusive and sustainable development.

2.0 Literature Review

The riverine tourism has become significant in tourism studies particularly in nations which have many rivers like Bangladesh. The river tourism has a lot of potential due to extensive systems of rivers and canals in the country, yet much of the potential is yet to be utilized (Islam, 2024; Ahmed, Shamsuzzoha and Rahman, 2023). Rivers combine esthetic values, cultural values, and economic prospects, which makes them attractive to sustainable tourism development (Shabbir, Shah and

Kuri, 2024; Ahmed, Acharjee and Urmila, 2025).

Tourism-led economic development has received a lot of attention in development economics and tourism studies in particular due to its capacity to enhance economic growth, employment generation, and regional development. According to the existing literature, tourism contributes to the economic development in many ways, including the creation of employment opportunities, the development of infrastructure, the inflow of investments, and the development of services-based industries (Dogru and Bulut, 2018; UNWTO, 2022). The sector generates a multiplier effect that enables tourist spending to enter the local economies, which contributes to the enhancement of the household income and supports small and medium-sized businesses (Brida, Matesanz, & Segarra, 2020).

In developing countries tourism is frequently promoted as a form of reducing poverty and ensuring a growing economy that is inclusive especially in rural and remote regions where alternative economic opportunities are few. Recent studies indicate that when the local people are engaged in the tourism activities, the livelihoods have the capacity to get diversified, reduce their vulnerability in terms of income, and contribute to social inclusion (Scheyvens and Hughes, 2019; Croes, Ridderstaat and van Niekerk, 2021). Therefore, tourism is increasingly being seen as a strategic development tool that is consistent with the Sustainable Development Goals (SDGs), particularly, the targets related to decent work, economic growth, and reduced inequalities (UNWTO, 2023).

Riverine tourism is a relatively new and discrete sub-sector of tourist interest that focuses on recreational, cultural and leisure activity that is associated with rivers and inland waterways. These activities include river tours, boat tours, fishing tourism, waterfront leisure, river celebrations, and cultural tourism related to the customary livelihoods based on rivers (Prideaux, Timothy, and Cooper, 2018; Chen, Xu, and Lew, 2022). Rivers are natural resources used as sources of entertainment and socio-economic access routes connecting communities, eco-system and cultures and thus river tourism is particularly important to countries with extensive river networks.

Recent international studies indicate that the presence of a river tourism can boost the economic development of a local community by creating direct and indirect employment in the tourism services sector, namely, transport, guiding, lodging, and food, as well as in other sectors of the economy such as agriculture, crafts, retail, and logistics (Luo and Bao, 2019; Nguyen and Bosch, 2021). Also, river-based tourism has been observed to encourage small scale business ventures and community based tourism initiatives thereby strengthening the local economy and local ownership (Giampiccoli, 2020).

Findings gathered in Asian countries such as Vietnam, India, and China show that river tourism has a positive effect on growing household income levels, promoting micro-enterprises, and economic diversification of the rural area (Singh and Mishra, 2019; Yang, Zhang, and Chen, 2020; Nguyen, Tran, and Su, 2023). However, the existence of the challenges that impede sustainable development of riverine tourism is also mentioned in the literature. They include the lack of adequate infrastructure, the ecological

decline, safety and navigation risks, the inadequate institutional cooperation, limited financial availability, and the lack of the private sector involvement (Prideaux et al., 2018; Chen et al., 2022).

Although rivers in Bangladesh are an important aspect of the country in terms of its geography, economy, and civilization, scholarly research on tourism has primarily focused on coastal tourism, ecotourism, and heritage tourism (Hassan, Islam, and Chowdhury, 2020; Rahman and Alam, 2022). Tourism Riverine tourism is under-researched, and is often treated descriptively, with no systematic empirical investigation of its economic consequences. The lack of substantial empirical data shows a significant research gap particularly with regard to the impacts of riverine tourism on the creation of jobs, income growth, infrastructure development and local business growth in river-dependent communities.

Rivers have been inherited over the generations in order to encourage trade, travel and habitation. In contemporary tourism, they have become a means of recreation, eco-tourism, cruise and cultural heritage (Ahmed, Shamsuzzoha & Rahman, 2023). These activities indicate that rivers serve multiple purposes, acting as a connecting tool between natural ecosystems and the culture or traditions of the area (Ahmed, Acharjee & Urmila, 2025). Tourism along the rivers of Bangladesh is a growing sector with great potentials since Bangladesh holds numerous cultural and biodiversity spots as well as bends and bifurcations of many rivers. The expectation is that, with the changing global tourism patterns, the riverine tourism sector in Bangladesh will be transformed endeavour and developed (Rahman et al., 2023).

One of the concerns in the study of river tourism is the socio-economic impacts of tourism. River tourism can establish new jobs, develop small businesses, and stimulate infrastructure development of rural and underrepresented areas (Islam, 2024; Akter, Gafur & Hossien, 2024). Similarly to other areas, riverine tourism in Bangladesh is viewed as a potential source of inclusive economic development, especially among the marginal groups (Ahmed, Shamsuzzoha & Rahman, 2023). In addition, rivers often contribute greatly to social, spiritual, and cultural life of surrounding communities; visitor presence may contribute to the preservation of traditional practices and the authentic cross-cultural interaction (Ahmed, Acharjee & Urmila, 2025). River-based tourism is one of the potential stimuli of the economic development of Bangladesh. A study by Talukder and Kaiser (2023) emphasizes the fact that river tourism may have important economic benefits, including the creation of jobs and the provision of income to the local communities. However, the river tourism potential of the country is yet to be had due to a number of obstacles such as inadequate infrastructure and marketing challenges.

Development of river tourism has led to employment into rural areas. A study undertaken by Bhuiyan and Darda (2024) found out that coastal tourism similar to riverine tourism has significant effects on the people living in the area. This study revealed that tourism has a positive effect on employment and income, which enables the general socioeconomic development of the region.

According to a report published by World Travel and Tourism Council (2025), the tourism sector in Bangladesh

is growing, although it has not been developed yet. Issues such as lack of tourism infrastructure, lack of skilled workforce and environmental threats are a significant setback to the growth in the industry. Furthermore, climate change has a socioeconomic impact on the riverian communities, so riverine tourism becomes more demanding to develop (Leal Filho et al., 2022).

It also has serious institutional and operational impediments. Among them are the inadequate tourism infrastructure (e.g. transportation, safety, accommodation), absence of qualified labor, environmental hazards (flooding, erosion), and limited financing (Islam, 2024; Nora Islam, 2024). Sustainable planning is complicated by social perceptions on climate change and hindrances to adaptation in riverine societies (Ali and Fatema, 2024).

Opportunities are strong even with challenges. The practice of slow tourism around a river setting is attracting growing interest and is based on the principles of an experiential, immersive experience and sustainable benefits to local populations (Shabbir, Shah & Kuri, 2024). The ecotourism trends in the Sundarbans suggest the increase in the number of domestic tourists and the emphasis on sustainable policies (Jahangir and Shammi, 2024). The wetlands selected by Ramsar, haors, and river islands are distinguished by their untapped the opportunities of the environmentally conscious tourism with the enhancement of livelihoods (Ahmed, Acharjee & Urmila, 2025; Islam, 2024).

Sustainability may be a key focus area in the emergence of tourism development in the world and the same is being true of tourism growth in river zones in Bangladesh. According to research by Rahman et al. (2021), there is an increasing realization that there needs to be a series of compatibilities between economic growth and environmental conservation. Future riverine tourism development would be geared on sustainable actions like use of eco-friendly accommodation plans, proper wastage handling systems, as well as preservation of water ecosystems.

Community-based ecotourism frameworks have powerful potential of strengthening local people and preserving natural resources, as Ali and Zaman (2022) assert. Such initiatives have the capacity of enhancing sustainability of riverine tourism given that the local residents are involved in the decision-making process and through awareness of the adoption of responsible tourism practices.

Community involvement is a key to the sustainable development of the riverine tourism in Bangladesh. Future trends are that it is more likely that there will be increased moves to empower the local communities in planning and implementation of tourism. Rahman and Sultana (2020) also argue that communities should be involved in the planning and decision-making practices as it can enhance the socio-economic benefits of tourism without harming cultural identities.

Another positive development in Bangladesh's tourism sector is the diversification of riverine tourism products. The growing demand from international travelers for unique experiences provides riverine destinations with opportunities to leverage and showcase their cultural, historical, and natural resources (Nekmahmud & Hassan, 2021). As Islam et al. (2021) observe, the incorporation of river activities that comprise music,

dance, local foods into cultural tourism will promote riverine tourism.

According to recent research, several critical issues emerge as being critical to understanding riverine tourism development and its economic impacts. These include tourism infrastructure, accessibility and transportation services, quality of service, community participation, creation of employment, and improvement of income, as well as investment support (Sharpley & Telfer, 2018; Croes et al., 2021).

The future of riverine tourism in Bangladesh appears promising as it evolves under the influences of sustainability, technological integration, community-based participation, diversification of tourism products, and innovative marketing strategies. Stakeholders can enhance the appeal of riverine tourism while ensuring environmental conservation and directing economic benefits to local communities by capitalizing on these opportunities (Rahman, Karim, & Akter, 2023).

Table 1: Summary of Literature Reviews

Author(s) & Year	Area of Study	Variables / Key Focus
Islam (2024)	Riverine tourism potential in Bangladesh	River networks, economic prospects, tourism infrastructure, community participation
Ahmed, Shamsuzzoha & Rahman (2023)	River tourism development	Employment generation, small business development, infrastructure, inclusive economic development
Shabbir, Shah & Kuri (2024)	Slow tourism and river-based experiences	Cultural preservation, eco-tourism activities, local income retention, training & safety measures
Ahmed, Acharjee & Urmila (2025)	Wetland and river tourism impacts	Environmental sustainability, habitat disturbance, seasonal variation, community livelihood
Akter, Gafur & Hossien (2024)	Socioeconomic impacts of river tourism	Employment, rural development, infrastructure development
Talukder & Kaiser (2023)	Economic impact of river tourism	Job creation, income generation, tourism infrastructure adequacy
Bhuiyan & Darda (2024)	Coastal tourism effects on communities (analogous to riverine tourism)	Employment, income, socioeconomic development
Leal Filho et al. (2022)	Climate change impacts on riparian communities	Flooding, riverbank migration, climate adaptation barriers
Ali & Fatema (2024)	Climate adaptation in riverine communities	Community perceptions, adaptation capacity, infrastructure resilience
UNDP (2023)	Governance and institutional capacity	Ministry coordination, transport & safety infrastructure, skilled workforce, financing

Rahman, Karim & Akter (2023)	Future riverine tourism trends	Sustainability, community participation, technological integration, product diversification
Rahman & Sultana (2020)	Community-based tourism	Community involvement in planning, socio-economic benefits, cultural preservation
Hossain & Rahman (2021)	Tourism entrepreneurship & skills development	Training programs, hospitality skills, guiding, cultural activities
Nekmahmud & Hassan (2021)	Product diversification in riverine tourism	Cultural, historical, and natural resources, adventure tourism, domestic and international visitors
Islam et al. (2021)	Cultural tourism integration	Music, dance, local foods, authentic river-based experiences
Hossain et al. (2022)	Technology and marketing in tourism	Digital platforms, mobile applications, social media, visitor experience enhancement
Prideaux, Timothy & Cooper (2018)	River-based leisure & cultural tourism	River tours, boat tours, fishing tourism, cultural events, waterfront leisure
Chen, Xu & Lew (2022)	Riverine tourism activities & impacts	Recreational activities, cultural tourism, economic benefits, safety concerns
Luo & Bao (2019)	Economic effects of river tourism	Employment creation, household income, tourism services, local economy
Nguyen & Bosch (2021)	River tourism & local economic development	Small business ventures, community-based tourism, income enhancement
Giampiccoli (2020)	Community-based tourism initiatives	Local ownership, small-scale business, tourism services development
Singh & Mishra (2019)	River tourism in rural Asia	Household income, micro-enterprises, rural economic diversification
Yang, Zhang & Chen (2020)	River tourism & local economic benefits	Income growth, micro-enterprise development, rural development
Nguyen, Tran & Su (2023)	River tourism impact in Vietnam	Economic diversification, income increase, local business promotion
Jahangir & Shammi (2024)	Ecotourism trends in Sundarbans	Domestic tourism increase, sustainability policies, environmental conservation
Ali & Zaman (2022)	Community-based ecotourism	Local empowerment, natural resource preservation, responsible tourism practices
Sharpley & Telfer (2018)	Riverine tourism economic impacts	Infrastructure, accessibility, quality service, community participation, employment, income

3.0 Objectives:

The main objective of this study is to examine the impact of riverine tourism on economic development in Bangladesh.

The specific objectives are:

1. To identify the key components of riverine tourism development in

Bangladesh.

2. To assess the contribution of riverine tourism to employment generation in riverine areas.
3. To analyze the impact of riverine tourism on income and livelihood opportunities of local communities.
4. To examine the relationship between riverine tourism development and local business and entrepreneurship growth.
5. To provide policy recommendations for sustainable riverine tourism development based on empirical findings.

4.0 Research Gap

Present studies predominantly recognize tourism as a significant catalyst for economic growth, revitalization, and poverty reduction. In Bangladesh, despite having vast river systems and communities that rely heavily on river-related livelihoods, there is a significant absence of empirical research investigating the particular effects of river tourism. Specifically, the impact of river tourism on local job creation, family income, and the development of small and micro-enterprises is still not well-studied. Furthermore, institutional obstacles, lack of policy backing, and infrastructure shortcomings remain poorly examined. This research fills these gaps by offering robust, context-specific empirical evidence on the economic, livelihood, and entrepreneurial impacts of riverine tourism in Bangladesh

5.0 Methodology of the Study

This research utilizes a quantitative method to investigate the evolution of river-based tourism and its effects on sustainable tourism in Bangladesh. A descriptive-explanatory research design was utilized to characterize stakeholder attributes and empirically examine the connections between riverine tourism and the three sustainability pillars—economic, social, and environmental. Descriptive analysis summarized demographic trends and perception patterns, while inferential methods, such as multiple regression and ANOVA, evaluated causal connections and measured the strength and significance of these associations.

The research involved a variety of stakeholders, such as tourists, local inhabitants, service providers, and policymakers, to guarantee a thorough representation of viewpoints. A sum of 210 participants was chosen from key riverine tourism sites by employing purposive and convenience sampling methods. A sample size of 210 is deemed sufficient for statistical analysis, providing ample variability and reliability in the results. This sample size aligns with comparable empirical tourism research conducted in developing countries, where access issues and on-the-ground conditions frequently restrict extensive data gathering.

Data were gathered via a structured questionnaire divided into three primary sections: (1) demographic details, (2) stakeholder views on riverine tourism development, and (3) indicators of sustainable tourism development based on the Triple Bottom Line (TBL) framework. The sustainability indicators were assessed using a five-point Likert scale that ranged from strongly disagree to strongly agree. To strengthen the reliability of the results, primary data gathering was augmented with interviews, focus groups, field observations, and case studies. Data from government publications, policy

documents, and pertinent academic literature were collected to provide context and validate the empirical findings.

Analysis of data was performed utilizing SPSS. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were utilized to encapsulate respondent traits and overall perception trends. Inferential statistical methods, such as correlation analysis, multiple regression, and ANOVA, were utilized to examine proposed connections between riverine tourism and sustainable development results. A total of fifteen hypotheses were analyzed, emphasizing the effects of riverine tourism on economic contributions, improvement of livelihoods, development of infrastructure, availability of transportation facilities, safety regulations, environmental sustainability, preservation of culture, community involvement, and associated sustainability aspects.

6.0 Hypothesis Development

H0: The development of riverine tourism in Bangladesh has no significant potential for development.

H1: Riverine tourism in Bangladesh has strong potential for sustainable development.

H2: Riverine tourism contributes significantly to national economic development.

H3: Riverine tourism improves the livelihoods and income of local communities.

H4: Existing infrastructure (roads, jetties, restrooms) adequately supports tourism in riverine areas.

H5: Transportation facilities to and within riverine areas are convenient for tourists.

H6: Riverine tourism zones are safe and secure for tourists.

H7: Riverine tourism does not harm the environment.

H8: Riverine tourism supports the preservation of local culture and heritage.

H9: Local communities are actively involved in riverine tourism activities and decision-making.

H10: Tourism operators provide high-quality services (e.g., boats, guides, accommodation).

H11: There is effective collaboration between government, private operators, and local communities.
H12: Government policies adequately support the development of riverine tourism.

H13: Training and skills development programs for tourism workers are available and accessible.

H14: Promotion and marketing of riverine tourism destinations are effective.

H15: Investments in riverine tourism, both public and private, are increasing.

7.0 Analysis and Findings

7.1 Demographic Analysis

Data was collected through a 28-item questionnaire which covered both respondent demographics and the social, cultural and economic impacts of river tourism on sustainable tourism development in Bangladesh. Data were initially collected from 221 respondents, but after eliminating incomplete responses the number of valid questionnaires was 210, which were used in the data analyses.

Table -7.1 Demographic Analysis

Variable	Category	Frequency (n)	Percent (%)
Age	18–24	129	61.4
	25–34	62	29.5
	35–44	9	4.3
	45–54	10	4.8
Gender	Male	119	56.7
	Female	91	43.3
Marital Status	Single	143	68.1
	Married	67	31.9
Education Level	Secondary	20	9.5
	Bachelor's Degree	120	57.1
	Master's Degree or higher	70	33.3
Employment Status	Employed by government sector	67	31.9
	Employed by private sector	15	7.1
	Self employed	118	56.2
	Unemployed	10	4.8
Income Level	Below 10,000 BDT	118	56.2
	10,000–30,000 BDT	36	17.1
	30,001–50,000 BDT	28	13.3
	50,001+ BDT	28	13.3
Residence	Urban	173	82.4
	Rural	37	17.6
Travel Purpose	Leisure	116	55.2
	Cultural/Heritage Interest	62	29.5
	Ecotourism	12	5.7
	Research/Work	20	9.5
Travel Group	Alone	31	14.8
	With family	94	44.8
	With friends	82	39.0
	Organized tour group	3	1.4

The above table shows that analysis of 210 participants found a relatively young and educated demographic: 61.4% were 18-24 years of age and 57.1% had a bachelor's degree. The sex ratio was balanced, the majority of these individuals were single

(68.1%) and lived in the urban areas (82.4%). Respondents were mainly self-employed (56.2%) or worked in public sector jobs (31.9%) and there were more than half of them (50.8%) earning less than 10,000 BDT. The most common motivation types of travel were leisure (55.2%) and cultural/heritage interests (29.5%) and were frequently accompanied by family (44.8%) or friends (39.0%). River tourism is mostly youth centered, family focused, and recreation-based.

7.2 Hypothesis Testing

Table 7.2 Descriptive Statistics (H)

Descriptive Statistics			
	Mean	Std. Deviation	N
H1: Riverine tourism in Bangladesh has strong potential for sustainable development.	3.97	.849	210
H2: Riverine tourism contributes significantly to national economic development.	3.77	.879	210
H3 :Riverine tourism improves the livelihoods and income of local communities	3.86	.856	210
H4: Existing infrastructure (roads, jetties, restrooms) supports tourism in riverine areas.	3.47	1.008	210
H5: Transportation facilities to and within riverine areas are convenient for tourists.	3.33	.975	210
H6: Riverine tourism zones are safe and secure for tourists.	3.09	1.001	210
H7: Riverine tourism does not harm the environment.	3.14	1.042	210
H8: Riverine tourism supports the preservation of local culture and heritage.	3.73	.846	210
H9: Local communities are actively involved in riverine tourism activities and decisions.	3.51	.898	210
H10: Tourism operators deliver high-quality services (e.g., boats, guides, accommodation).	3.30	1.025	210
H11: There is effective collaboration between government, private operators, and communities.	3.19	1.044	210
H12: Government policies adequately support the development of riverine tourism.	3.27	1.019	210
H13: Training and skills development programs for tourism workers are available and accessible.	3.20	1.102	210
H14: Promotion and marketing of riverine tourism destinations are effective.	3.48	.999	210

H15: Investments in riverine tourism (public/ private) are increasing.	3.51	.903	210

Source: Survey data analysis

Economic Dimension

H2: Riverine tourism contributes significantly to the economic development of Bangladesh.

Mean = 3.77 (SD = 0.879) - The respondents have moderately agreed that riverine tourism encourages national economic development and have been generally positive with regard to the macroeconomic impact of riverine tourism.

H3: Riverine tourism improves the livelihoods and income of local communities.

Mean = 3.86 (SD = 0.856) - The item had one of the highest means implying that there was great agreement that riverine tourism increased household income and job opportunities.

H15: Investment in riverine tourism (public/private) enhances sustainable development.

Mean = 3.51 (SD = 0.903) - Moderate agreement means that the investors think that investment flows are improving but not yet adequate.

H14: Promotion and marketing of riverine tourism destinations positively influence development.

Mean = 3.48 (SD = 0.999) - The overall view of the respondents is that promotional activities are working, but the average value is moderate, which means that it can be improved.

Social & Cultural Dimension

H8: Riverine tourism supports the preservation of local culture and heritage.

Mean = 3.73 (SD =0.846) - Strongly supported, and of the most-rated items, which demonstrate the fact that cultural preservation is understood as one of the greatest benefits of riverine tourism.

H9: Community involvement positively influences sustainability outcomes.

Mean = 3.51 (SD = 0.898) - Moderate support, which implies that participation is occurring but is not yet inclusive and consistent.

H13: Training and skills development for tourism workers enhance sustainable outcomes.

Mean = 3.20(SD=1.102)- Lowest mean-Higher variability, which shows that training is considered to be inadequate and inconsistent in the regions.

H6: Safety and security significantly affect sustainable tourism.

Mean = 3.09 (SD = 1.001) - lowest mean across all variables, which indicates that the aspect of safety/security is the most insignificant and an important obstacle to sustainability.

Environmental & Governance Dimension

H7: Riverine tourism can be developed without harming the natural environment.

Mean = 3.14 (SD = 1.042)- Relatively small implying that there is a possible

concern that tourism activities may have a negative impact on the ecosystems.

H4: Adequate infrastructure supports sustainable riverine tourism.

Mean = 3.47 (SD = 1.008) - Moderate though with high variability because some respondents perceive facilities as not being sufficient and it undermines sustainability perceptions.

H5: Transportation facilities positively influence sustainability.

Mean = 3.33 (SD = 0.975) - Below average relative to other dimensions, which indicates that access to riverine areas is still a problem.

H12: Government policies adequately support riverine tourism development.

Mean = 3.27 (SD = 1.019) - Lower mean, which illustrates views about the low levels of institutional support and ineffective policies.

H11: Collaboration among stakeholders (government, private sector, communities) positively influences outcomes.

Mean = 3.19 (SD = 1.044) - Much like policy support, collaboration is considered inadequate and there is a great variation between responses.

H1: Riverine tourism in Bangladesh has strong potential for sustainable development.

Mean = 3.97 (SD = 0.849) - The variable was rated the highest and this fact supports that despite the challenges, there is general agreement among stakeholders that riverine tourism has a great potential that can be used to achieve sustainable development.

Survey results (N = 210) indicate huge potential for river tourism in Bangladesh that bolsters the economy (M = 3.77), contributes to local livelihoods (M = 3.86), and contributes to sustainable development (M = 3.97). Infrastructure, transportation, safety, services, policy, training were given moderate scores, while cultural preservation (M = 3.73), and investments (M = 3.51), showed comparatively greater support.

Table 7.3 Regression Coefficients (H)

Hypothesis / Predictor	B (Unstandardized)	Beta (Standardized)	t	Sig. (p-value)	Interpretation
H1: Riverine tourism contributes significantly to national economic development.	.147	.153	2.189	**.030**	**Significant positive effect** → Economic contribution enhances riverine tourism sustainability.
H2: Riverine tourism improves the livelihoods and income of local communities.	.188	.189	2.739	**.007**	**Strong significant effect** → Livelihood improvement is a major sustainability driver.

H3: Existing infrastructure supports riverine tourism.	-.172	-.204	-2.578	**.011**	**Significant negative effect** → Current infrastructure is inadequate and hinders sustainable development..
H4: Transportation facilities are convenient for tourists.	.091	.104	1.251	.212	Not significant → Transportation does not significantly predict sustainability.
H5: Riverine tourism zones are safe and secure.	-.108	-.127	-1.714	.088	Marginally insignificant → Safety is a concern but not statistically strong.
H6: Riverine tourism does not harm the environment.	-.034	-.041	-.604	.546	Not significant → Environmental neutrality is not a predictor in this model.
H7: Riverine tourism supports preservation of local culture and heritage.	.269	.268	3.724	**.000**	**Strongest positive predictor** → Cultural heritage preservation is highly significant for sustainability.
H8: Local communities are actively involved.	.115	.121	1.657	.099	Marginal → Some effect, but not significant at 5% level.
H9: Tourism operators deliver high-quality services.	.004	.005	.060	.952	Not significant → Service quality does not influence sustainability in this model.
H10: Collaboration between government, private operators, and communities.	.047	.058	.644	.520	Not significant → Weak role of collaboration.
H11: Government policies support riverine tourism.	-.103	-.123	-1.394	.165	Not significant → Policies are not perceived as effective drivers.

H12: Training and skills development programs are accessible.	-.062	-.080	-.949	.344	Not significant → Training programs not impacting sustainability.
H13: Tourist experience enhances development.	-.089	-.065	-1.054	.293	Not significant → Tourist experience isn't a strong predictor.
H14: Promotion and marketing of destinations are effective.	.098	.115	1.390	.166	Not significant → Marketing has limited predictive power.
H15: Investments in riverine tourism are increasing.	.119	.126	1.682	.094	Marginal → Investments show potential but lack strong significance.

Source: Survey data analysis

H1: Riverine tourism contributes significantly to national economic development

B = .147, β = .153, t = 2.189, p = .030 indicating a significant positive effect as perceptions of economic contribution rise, belief in sustainable development potential increases.

H2: Riverine tourism improves the livelihoods and income of local communities

B = .188, β = .189, t = 2.739, p = .007 indicating Significant positive effect as improving community livelihoods strongly enhances the perception of sustainable development.

H7: Riverine tourism supports the preservation of local culture and heritage

B = .269, β = .268, t = 3.724, p < .000 indicating that the strongest positive relationship as Cultural preservation is a key driver of perceived sustainability.

H4: Existing infrastructure (roads, jetties, restrooms) supports tourism in riverine areas.

B = –.172, β = –.204, t = –2.578, p = .011 refers that surprisingly, infrastructure shows a significant negative effect. This suggests dissatisfaction with current infrastructure — inadequate or poor-quality facilities may weaken the perception of sustainable development.

Non-Significant Relationships (p > .05)

Transportation facilities (H5), Safety (H6), Environment (H7), Community involvement (H9), Service quality (H10), Collaboration (H11), Policies (H12), Training (H13), Promotion (H14), Investments (H15)

These variables do not show statistically significant relationships with the dependent variable, though some (e.g., H15 investments, p = .091) approach significance.

The non-significant associations (p > .05) indicate that these variables do not have

substantial direct influences on sustainable tourism development in the existing model. Numerous factors—including policies, collaboration, training, and promotion—might affect sustainability indirectly via other mediating variables instead of acting independently. Restricted variation in stakeholder responses, especially when perceptions are consistently moderate or low, might also diminish statistical detectability. Furthermore, the structural shortcomings in Bangladesh's river tourism industry indicate that transportation, safety, and environmental management systems are not adequately established to yield significant effects. Investments (p = .091) nearing significance suggest a developing impact that could increase with larger samples.

Table 7.4 Reliability Statistics (H)

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.867	.864	15

Source: Survey data analysis

Reliability Analysis (Cronbach's Alpha = .867)

Cronbach's Alpha = .867 (based on raw items) and **.864** (based on standardized items).

Both values are **well above the acceptable threshold of .70** (Nunnally, 1978), and even above the **good reliability range of .80–.90**.

This means the **15 items (hypotheses-based statements)** used in survey instrument are **internally consistent** and reliably measure the same underlying construct — in this case **of sustainable riverine tourism development**.

Table 7.5 Model Summary (H)

Model	**R**	**R^2**	**Adjusted R^2**	**Std. Error**	**F**	**df1**	**df2**	**Sig. F**
1	0.566	0.321	0.272	0.725	6.574	14	195	0.000

Source: Survey data analysis

The model explained 32.1% of the variance of the sustainable development potential of riverine tourism (R2 = 0.321, Adjusted R2 = 0.272), and the overall regression is statistically significant (F = 6.574, p < .001).

Table 7.6 ANOVA[s] (H)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.341	14	3.453	6.574	.000[b]
	Residual	102.426	195	.525		
	Total	150.767	209			

Source: Survey data analysis

The regression model that considers factors influencing the attitude relating to sustainable riverine tourism in Bangladesh was significant ($F = 6.574$, $p < .001$). The model provided a significant amount of variance (SS = 48.341, MS = 3.453) using 14 predictors and the residual variance was 102.426 (df = 195, MS = 0.525). In general, the results indicate that the independent variables explain participants' perceptions of sustainable river tourism on a consistent basis.

7.3 Key Findings

The descriptive analysis shows that respondents largely view riverine tourism as an important source of jobs and additional household income. A significant number of participants indicated that tourism-related activities—like boat transport services, food sales, local guiding, cultural shows, and handicraft selling—have generated new job opportunities in river-based communities. These endeavors create direct jobs and also foster indirect economic advantages via backward and forward connections. Increased tourist demand, for instance, benefits local suppliers, fishermen, small vendors, and transport providers, thus improving income flow within the local economy. In numerous instances, riverine tourism serves as an additional income source that mitigates risks related to seasonal jobs and environmental instability.

The regression findings support these views by demonstrating a statistically significant positive connection between riverine tourism growth and factors like job creation and local business expansion. This indicates that an increase in tourism activities is strongly linked to the development of microenterprises and small businesses. Income growth demonstrates a favorable correlation, suggesting that tourism enhances household income and overall economic health. These results affirm that river tourism significantly contributes to local economic growth and the diversification of livelihoods.

The analysis indicates that some variables—particularly substantial private investment and formal institutional backing—lack statistical significance. This lack of significance can be linked to contextual difficulties, such as insufficient government incentives, bureaucratic obstacles, poor coordination between public and private stakeholders, and the lack of clear, investor-friendly policies. Moreover, insufficient infrastructure—like inadequate transport links, lack of safety precautions, and few lodging options—could deter significant private sector involvement.

Significantly, these results do not diminish the significance of riverine tourism. Instead, they emphasize structural and institutional limitations that hinder the sector's overall potential. In line with global studies, tourism has the potential to be a significant catalyst for local economic growth, especially in resource-abundant but economically disadvantaged areas. In Bangladesh, river tourism shows significant potential for generating jobs and diversifying incomes, particularly for communities historically reliant on river-related livelihoods. However, absent targeted policy measures, institutional changes, enhanced infrastructure, and strategic investment incentives, the complete economic advantages of riverine tourism will stay unrealized.

8.0 Conclusions and Direction to Future Research

This research presents strong empirical proof that river tourism in Bangladesh has significant potential to promote sustainable economic growth, improve livelihoods, and protect cultural heritage. The research goals have been methodically tackled. The main elements of river tourism were recognized, its role in job creation within river communities was determined, and the beneficial effects on family income and local business development were measured. Additionally, the research examined infrastructural, institutional, and policy-related constraints that influence the sector's sustainable development.

The results hold considerable importance for various stakeholders. Policymakers can leverage the evidence to create focused interventions, including infrastructure improvements, policy incentives, and investment support, to realize the complete potential of riverine tourism. Local communities gain from knowledge regarding livelihood diversification and entrepreneurial prospects, whereas private operators and NGOs can utilize the findings to create sustainable, culturally aware tourism offerings. This study shows that through collaborative planning and community involvement, riverine tourism can act as an effective means for promoting inclusive and sustainable economic development in Bangladesh

The cross-sectional design of the study limits the possibility to interpret it causally, and most of the independent variables (environmental influences, policy effectiveness, and community engagement) were employed qualitatively. Moreover, the focus of a particular subset of the fluvial system can also decrease the level of generalization within Bangladesh. The future research ought to adopt a longitudinal design, more heterogeneous populations, and objective measures of environmental, economic and cultural effects. Studies will also give comparative analyses of various river systems in Bangladesh and South Asia to guide sustainable tourism practices and will also help in evaluating the effectiveness of community-based and eco-tourism practices.

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