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Review Paper on the Methodological Choice for Assessing the Economic Contribution of Pilgrimage Site

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Abstract

Pilgrimage sites attract millions of people worldwide, driven by religious faith, and significantly stimulate economic activities. These sites create employment opportunities for hundreds of thousands people around the world, generate substantial income, and positively impact local business growth, contributing to overall economic prosperity and revitalization but remain in shadow in the absence of rigorous theoretical discussion to adopt appropriate methodologies to capture these aspects. This paper provides a precise theoretical and empirical review of literature on measuring the economic contribution of pilgrimage tourism around the world. It aims to deepen understanding of the theoretical underpinnings and empirical practices to explore potentiality of using Individual Travel Cost Method under revealed preference techniques to measure the economic contribution made by popular pilgrimage sites on national economy. In this context, the literatures for this review was traced from peer-reviewed journal articles, conference proceedings, books, and research reports that address the economic impact of pilgrimage tourism around the world. The key economic dimensions and indicators include visitors' satisfaction, consumers' satisfaction, employment generation, and local business growth.

Keywords: *Pilgrimage tourism, economic contribution, employment generation, impact on local business growth and GDP*
JEL Classification*: L83, Z12, R11*

Introduction

Pilgrimage tourism has long been a significant part of the global tourism industry, with the substantial growth of religious and spiritual journeys to sacred sites with the devotion of their religious belief around the world each year (El-Gohary et al., 2017; Ghimire, 2011).Essentially, this form of tourism encompasses both individual and group travel for purposes such as pilgrimage, and religious missionary work that has the potential to make substantial contributions to local and regional economies (Gulomjonovna & Sobirjonovna, 2019). In other words, pilgrimage sites with traditional rituals has positively impacted income generation, employment, business growth and economic prosperity, making it an essential factor in revitalizing the economy (Budovich, 2023, Ghimire et al., 2022; Gautam & Adhikari, 2016). Moreover, pilgrimage tourism, a subset of cultural and religious tourism, is gaining recognition for its potential economic impacts on local and national economies (Griffin & Raj, 2017; Collins-Kreiner, 2016; Pandey, 2016). In other words, the economic contributions of such sites extend far beyond spiritual fulfillment as they encompass employment generation, local business stimulation, and infrastructure development. In this context, it is pertinent to carry out precise review of theoretical and empirical literatures focused on measuring the economic contribution of pilgrimage tourism around the world. In this regard, the aim of this literature review is to deepen academic understanding of the theoretical underpinnings and empirical practices to explore potentiality of using Individual Travel Cost Method under revealed preference techniques to measure the economic contribution made by popular pilgrimage sites on national economy. Therefore, this paper provides a comprehensive review of related theoretical as well as empirical literature that assessed the economic contribution of pilgrimage tourism on the basis of non-market valuation techniques.

Methodology

This is a review paper to identify precise method to be adopted for measuring the economic contribution of pilgrimage sites on national economy. The literatures for this review was traced from peer-reviewed journal articles, conference proceedings, books, and reports that address the economic impact of pilgrimage tourism around the world. These sources were selected to ensure a comprehensive understanding of both theoretical and empirical perspectives on the topic. The study draws on academic databases such as Web of Science, Google Scholar, and JSTOR, analyzing global,

regional, and site-specific studies. The aim of the review paper is find basis for measuring economic contribution of pilgrimage sites on national economy based the earlier works around the world. Therefore, the primary focus of review is to locate and review the quantitative literature on the theme. But, for their cross validation, literatures on qualitative and mixed-method approach were also reviewed.

Choice of the Economic Valuation Methods for Contribution of Pilgrimage Sites

Pilgrimage sites tourism is a rapidly growing segment in the tourism industry of any country. This is offering significant economic, social, and cultural benefits to the society. It plays a critical role in attracting both domestic and international visitors. Despite its importance, a notable gap is visible in empirical studies that quantitatively measure the economic contribution of pilgrimage tourism to the local and national economy. Pilgrims reach to the pilgrimage destination covering long distance and incurring substantial expenditure for their spiritual satisfaction which is not directly measurable. This notion is called non-market activities and revealed preference technique is to be adopted to measure. In other words, the Travel Cost Method (TCM)is popular under revealed preference valuation technique in economic valuation. Essentially, these methods infer the value of non-market public goods (such as religious, cultural resources or environmental sites) based on people's actual behavior and choices in related markets. In this context using TCM in economic valuation becomes more precise as it derives values from observed actions rather than stated intentions. Therefore, a major research gap is methodology gap. In other words, so far no study is conducted using this method.

Travel Cost Method for Economic Valuation of Contribution of Pilgrimage Sites

The TCM is an economic valuation technique that is systematically used for utility analysis of behavioral microeconomics. Popularly it is used to estimate the recreational value of natural or cultural resources, such as pilgrimage sites, national parks, and heritage landmarks. Basically, it is underpinning on the idea that the money and time people spend to access a site can be used to estimate its monetary value. Primarily, Zonal Travel Cost Method (ZTCM) and Individual Travel Cost Method (ITCM) (Khan & Phukan, 2013) are two categories of TCM. ZTCM aggregates visitors based on geographic zones and estimates demand for the site by analyzing visitation rates from each zone. This method assumes people living farther incur higher travel costs, which

affects their visitation likelihood. ITCM analyzes travel costs and other variables at the individual level, rather than aggregating by zones. In other words, it allows for a more detailed analysis of individual visitor's preferences and behaviors. ITCM is based on the proposition that the value of a pilgrim site can be inferred from the amount of money and time people are willing to spend to visit it. The individual travel costs (for instance transportation, accommodation, entry fees) serve as a proxy for the price that visitors are willing to pay, allowing researchers to estimate the demand for the site. For religious sites, the ITCM can be used to assess the economic value that pilgrims and tourists place on their visit to these sacred places.

Theoretical Foundation

The paper is focused to explore potentiality of using non-market valuation techniques**,** particularly the ITCM**,** to assess the economic value that sacred sites generate on account of spiritual utility derivation from the specific site**.** Moreover, ITCM enables the estimation of the demand for pilgrimage sites, providing a valuable measure of their economic significance. In this context, ITCM's ability to model the relationship between individual travel costs and visitation frequency makes it ideal for understanding the economic contributions of these sites. Essentially, the travel costs, which include transportation, accommodation, and entry fees, serve as an approximation of what visitors are willing to pay for the pilgrimage experience. In this regard, key underlying theories under this include Consumer Demand Theory and Utility Maximization Framework. Essentially, Consumer Demand Theory is applicable to estimate visitors' willingness to pay for access to the site based on their travel costs. Similarly, Utility Maximization Framework is to be taken into consideration to assess how pilgrim visitors allocate time and resources to maximize their spiritual satisfaction from site visits. Estimating pilgrim visitors demand as a function of sacred site travel costs and socio-economic characteristics.

The theory surrounding the ITCM and its application is relatively convincing and straightforward. In fact, it is rooted in the microeconomic theory of consumer behaviour which states that an individual consumer maximizes his/her utility derived from the consumption of goods and services subject to budget constraints (Khan & Phukan, 2013). Marshallian demand function is utilized for the general solution of this constrained maximization. This analogy is extended to public goods and services such

as religious sites, public parks and other recreational services (Heidari et al., 2018). In this special case, a representative individual visitor/pilgrim to a religious site is thought of as a consumer of a marketable goods and non-marketable environmental goods or recreational goods and services, including pilgrimage sites (denoted as vi) and all other private goods and services (denoted as xi), who faces budgetary and time constraints (Nepal et al., 2018; Subedi, 2018, Subedi, 2017). Let's assume xi and vi to represent a vector of private marketable goods and a vector of a non-marketable public goods such as pilgrimage site respectively. Moreover, the prices of these two goods be px and pv respectively. Essentially, the representative visitor or consumer can therefore spend his or her income (denoted as Yi) on the purchase of these two set of private marketable goods and non-marketable public goods. Given the situation, the budget constraint of the individual pilgrim or visitor is given as:

$$Y_i = w\ Tw = Px\ Xi + Pv\ Vi \quad \ldots(1)$$

In the equation (1) above, Y stands for income level of the individual visitor. Likewise, w and Tw denote the hourly wage rate and the total number of hours worked respectively. The individual visitor/pilgrim also faces a time constraint as he/she must decide on how much time to spend on his work and leisure or recreation activity (Khan & Phukan, 2013). Similar to equation (1) above, the time constraint can then be stated as:

$$T = Tw + TL \quad \ldots (2)$$

In the equation (2) above, T, Twand TL denote the total time endowment of the visitor/ pilgrim total time devoted to work and total time devoted to leisure (recreation) respectively. Obviously, it is to be noted that the pilgrims'/ visitors' choice visiting the site will dependent on quality of pilgrimage sites.If we denote qi as the quality yardsticks of a pilgrimage sites, then the utility function of the representative pilgrim/visitors can be written as:

$$Uij = U(\ xi\ vi\ qj\ ) \quad \ldots(3)$$

Marshallian demand function for marketable private goods and non-marketable pilgrimage sites is estimated by maximizing the equation (3) subject to budget and time constrain represented by equation (1) and (2). Therefore, the ordinary demand functions of marketable private goods and non-marketable public goods or pilgrimage sites or spiritual utility goods are:

$$Xij = U(Px\ Pv\ Yi\ qj) \quad \text{... (4)}$$

$$Vij = U(Px\ Pv\ Yi\ qj) \quad \text{... (5)}$$

In the above equation (4) and (5) represent the ordinary demand functions of marketable private goods and non-marketable pilgrimage sites or spiritual utility goods, respectively. Likewise, Yi is pilgrim visitors' income, and qi is perceived quality of sacred site. However, demand function of the site is represented by equation (5). Obviously, it problematic to measure the flow of the spiritual utility or recreational services derived from non-marketable public goods or spiritual sites. Therefore, the number of trips of visits made by pilgrims to the pilgrimage sites or recreational site is used as surrogates or proxy. Essentially, equation (5) is vital to estimate the utility in terms of consumer surplus (CS) per trip. The corresponding coefficient is estimated employing appropriate econometric tool as considering the count data nature of dependent variable of this types of study.

Economic Impact Analysis (EIA)

Economic Impact Analysis is widely practiced method for assessing the economic contributions of tourism sites including pilgrimage tourism. It includes measuring direct effect, indirect effect, and induced effects of tourism on the economy of any country (Stynes, 1997). This can be presented in functional form as follows:

$$TEI= f(Di, Xi, Yi) \quad \text{...(6)}$$

In the equation (6), TEI, Di, Xi, and Yi denotes total economic impact, direct impact(immediate expenditures by tourists, such as spending on accommodation, food, transportation, and entry fees) indirect impact (secondary economic activities, such as the supply chain effects where businesses that provide goods and services to the tourism industry benefit), and induced impact (further economic activities generated when employees of businesses benefiting from direct and indirect impacts spend their earnings within the local economy) respectively. Thus, the total economic impact is a function of the direct, indirect, and induced effects, where each factor contributes to the overall economic contribution of the tourism site.

Input-Output Models

These models are also used to measure the economic impact of tourism by analyzing the interdependencies between different sectors of an economy. They help to quantify the

effects of tourist expenditure within the local economy, identifying sectors most affected by pilgrimage tourism (Dwyer et al., 2000). This concept can be expressed in functional form as follows:

$$Y= f(X_{1i}, X_{2i} \ ...X_{ni}) \quad ...(7)$$

In the equation (7), Y denotes total economic output by tourist visits, and X_{1i}, X_{2i} and X_{ni} denote different sectors of the economy (e.g., hospitality, transportation, retail, etc.) that are linked with Y. It quantifies the effects of tourist expenditure within the local economy, identifying which sectors are most affected by pilgrimage tourism.

Multiplier Effect Theory

This theory postulates that expenditure by pilgrims on food and beverage, accommodations, transportation, and religious services circulates within the local economy. This creates several economic benefits to local businesses and they reinvest earnings, create more jobs, and expand operations, further fueling economic growth (Domański & Gwosdz, 2010).

Spillover Effect Theory

This theory argues that the economic benefits of pilgrimage tourism spill over into other sectors, such as agriculture, retail, and local handicrafts, as local suppliers and businesses adjust to meet the demands of pilgrims of the sites. This also puts pressures on infrastructure improvements (roads, hospitals) provides benefit the wider population. Therefore, pilgrimage tourism promotes overall development the region by improving infrastructure that benefits both tourists and residents (Yang & Wong, 2012).

Cultural Capital Theory

This theory states that pilgrimage sites are cultural assets that generate economic value to the society through tourism. They attract visitors who contribute to the local economy by engaging with the region's traditions and practices. Therefore, this preservation of religious heritage sustains economic benefits while promoting cultural preservation (Clarke & Eastgate, 2011).

Butler's Destination Life Cycle Theory

This theory postulates the five stages of growth in pilgrimage destinations, from exploration to development, consolidation, and stagnation. This theory argues that

proper management ensures long-term economic sustainability by avoiding over-tourism and environmental degradation, benefiting the local economy through increased visit frequencies, investment, and infrastructure development (Lundtop & Wanhill, 2001).

Sustainable Development Theory

This theory suggests that pilgrimage tourism can boost economic growth. Hence, it must be managed sustainably to preserve environmental, cultural, and social assets. It also warns that over-tourism can harm local resources and diminish the pilgrimage experience. Therefore, it is essential to implement sustainable tourism practices to ensures long-term economic benefits to a society as a whole (Hole et al., 2019).

Cost-Benefit Analysis (CBA)

This approach compares the benefits of a tourism site to the costs incurred in maintaining it. In the context of pilgrimage tourism, it involves evaluating both tangible benefits of pilgrimage site (revenue generated, employment) and intangible benefits (cultural preservation). To measure the cost and benefit, contingent valuation method is widely used. The contingent valuation method estimates declared preferences for goods or services that are not traded on the market. It involves individuals estimating their willingness to pay (WTP) or willingness to accept (WTA) compensation for changes in the supply of a good or service. Despite having some limitations about their ability to accurately reflect cultural value, contingent valuation methods are consistent in estimating individual and social preferences. Therefore, public authorities caring for cultural heritage prefer CBA tool to rationalize a guideline for funding allocation or cultural assessment (Dwyer, 2012).

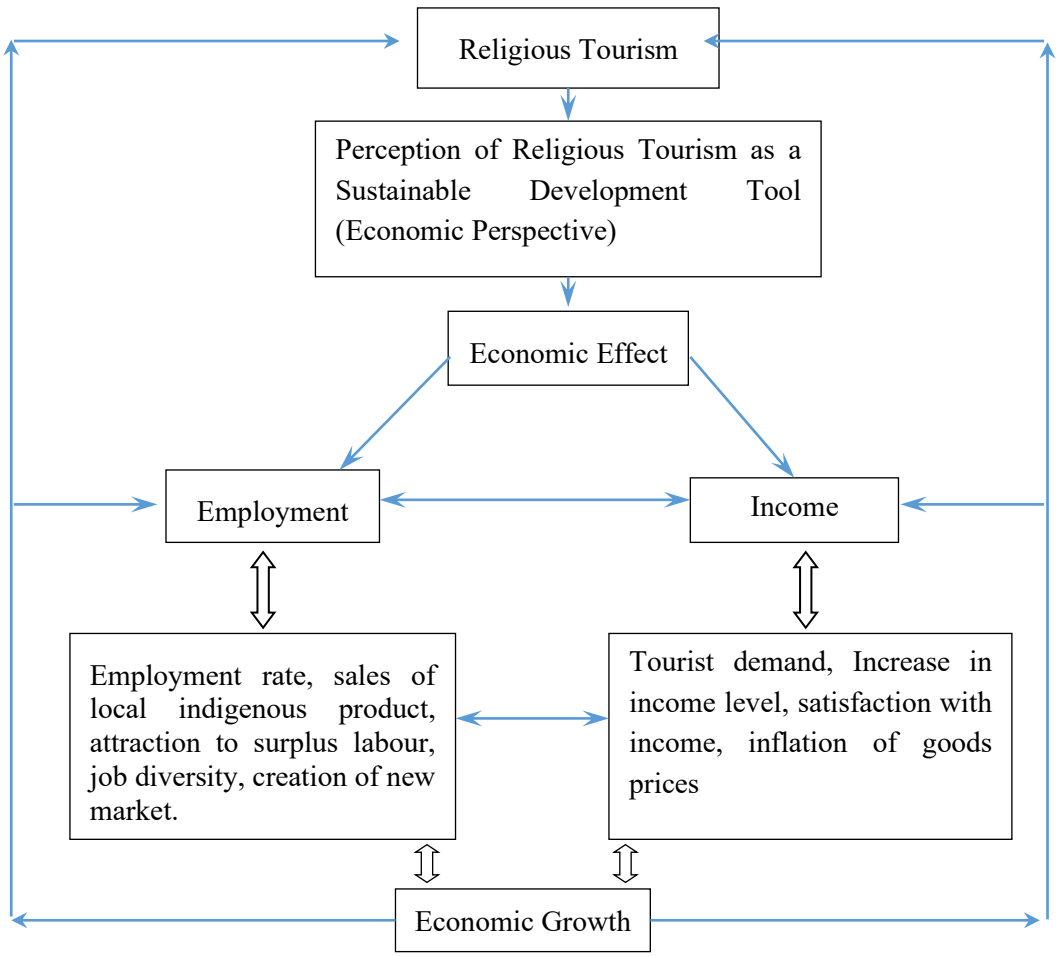
To sum up, in the absence of an accurate estimation of the spiritual value of pilgrimage site, decision-making relating to the budget allocation and management of the religious sites may be incomplete. However, estimating the economic value of spiritual and religious services is not straightforward as these services are subjective, intangible and beyond the normal valuation techniques. Moreover, there is a dearth of literature on the valuation of pilgrimage sites having immense spiritual and religious values. Therefore, this study attempted to fill this methodological gap. In this regard, this proposed methodological framework is expected to provide better insight for examining how the benefits pilgrimage tourism can be assessed and measured to harness for overall economic development by addressing challenges such as over-tourism, environmental degradation, and local community concerns and so on.

Conceptual Framework

The construction of a theoretical framework for the above mentioned topic involves integration of various themes such as tourist flow, economic activities, and sustainability theories to explain how pilgrimage tourism drives economic development, what factors influence its outcomes, and what aspects must be addressed to maximize positive impacts and control adverse effect. The semantic chart of Figure 1 below visualizes potential conceptual framework for the assessment of economic contribution of popular pilgrimage sites on national economy (Budovich, 2023).Therefore, as a synthesis of above review, conceptual framework of this types study can be proposed as follows:

Figure 1

Economic Effect of Religious Tourism



Empirical Literatures on Economic Contribution of Pilgrimage Site

Pilgrimage tourism has emerged as an important driver of economic growth in many countries, particularly the counties with rich religious and cultural heritage. In any economy religious tourism plays a critical role in supporting the national economy attracting millions of visitors annually from the world. This empirical review is intended to identify the appropriate method to measure the economic contributions of the pilgrimage sites of any country. This endeavor is made to seeks to fill a critical gap in the literature. Therefore, the findings are expected to provide valuable insights for the policymakers and tourism stakeholders to measure economic benefits of the site, enabling them to develop targeted strategies that promote sustainable tourism and enhance the economic benefits for local communities. In this regard, this empirical review tries to summarize the empirical literatures. They are summarized hereunder:

Khan and Phukan (2013) explored the economic assessment of cultural tourism in India using the travel cost method. They used a technique that estimates economic value based on the expenses incurred by visitors to visit the cultural sites. The study underscored that the approach is particularly relevant in the context of India's rich cultural heritage, which attracts multi-million tourists seeking immersive cultural experiences in various cultural sites. The study emphasized the economic significance of cultural tourism and its potential to contribute to regional development. They concluded that the approach aligns with the broader trends in cultural tourism, which is increasingly recognized for its role in economic growth and cultural preservation.

Gautam and Adhikari (2016) examined Pashupatinath Temple site's direct and indirect economic contributions that included employment and local business growth, providing a foundational empirical study specific to the research topic. They highlighted the need for improved infrastructure to support growing tourism demand.

Nepal et al. (2018) estimated annual average use value of cultural services in the Kailash Sacred Landscape area, over 22.6 million US dollar, accounting for over 7 percent and 15 percent of the per capita income of Nepalese and Indian households, respectively.

Dwyer et al.(2019) used input-output (I-O) models to measure tourism's economic impact and demonstrated how external economic shocks, like the financial crisis, influence tourism-dependent economies. The study serves as a foundation for measuring direct, indirect, and induced effects of tourism expenditures.

Ghimire and Bhattarai (2020) used primary survey data as empirical evidence to assess impact of pilgrimage tourism on local employment and revenue generation in rural areas of Nepal. The study underscored the importance of sustainable tourism practices to maximize long-term economic benefits.

Bhattarai et al.(2021) investigated the impact of tourism on employment generation and foreign exchange earnings in Nepal. The findings indicated that tourism significantly contributes to job creation in general and hospitality and services in particular. In addition, tourism serves as a crucial source of foreign exchange, thereby supporting favorable balance of payment Nepal's economy by providing essential foreign currency inflows. The study also emphasized the potential of further developing the tourism sector to enhance economic growth and stability.

Rana and Poudel (2021) examined the economic contributions of religious tourism in Lumbini using a combination of expenditure analysis and multiplier effect theory. Their findings showed the strong economic linkages generated by tourist expenditure on local goods and services.

Kunwar and Thapaliya (2021) conducted a preliminary assessment of the socio-economic impacts of Barahachhetra pilgrimage site on the local community, focusing on aspects like employment generation, local business development, and infrastructure growth. The study also highlights the challenges faced by the residents of the area, including inadequate infrastructure, environmental degradation, and lack of proper management hampering hinder its potential for sustainable tourism development.

Gautam (2023) explored the relationship between religious tourism and entrepreneurship, selecting the study sit the Manakamana Temple in Nepal. It examined how the religious site can drive local economic development by enhancing entrepreneurial activities. The study highlighted the challenges and opportunities provided by the site and suggested to optimize the socio-economic benefits of religious tourism.

Merciu et al. (2021) used the zonal travel cost and the individual travel cost methods to account the economic contribution of religious sites. The study concluded that the demand for a cultural heritage site is inversely correlated to the travel costs and distance. Moreover, the results reflected that the demand also depends on other factors, such as the satisfaction level of the tourist experience and tourists' income and motivations. The study emphasized the robustness of the travel cost method to gauze the

value of cultural sites and the asserted significance of conservation process in the current context.

To sum up, this theoretical framework provides a complete understanding of religious tourism by integrating existing theories relating from tourism studies. It explores both the significance of pilgrimage tourism and its contribution on the local economy, culture, and environment. The empirical literature review provided insight on how pilgrimage tourism is found to be contributing to the economy. Likewise, it also highlights the role of direct, indirect, and induced economic impacts while emphasizing the importance of cultural preservation, sustainability, and the relationships between various stakeholders. Better understanding of these aspect has provided researcher to capture all maximum aspects of the economic benefits of pilgrimage tourism through this proposed study.

Empirical Model Specification

Based on the discussion of above theoretical, the researcher has come made empirical model for the study. In other words, to apply the TCM to religious tourism, such as a pilgrimage site in Nepal, we can express the relationship between the number of visits and travel costs in both functional and econometric forms. The functional form of the model reflects the general relationship between the number of visits in sacred site which is regarded demand of sacred site and travel costs, along with control variables that determines the frequency of visits.

Empirical Model Specification

Nepal et al. (2018) has specified a functional form for the estimation of economic benefits derived from pilgrimage site based on travel cost method, to estimate the relationship between the visit frequency at spiritual site and the travel costs associated with visit. The functional form the above analogy is given in equation (8) below. Therefore, a simple linear econometric model could be specified as:

$$Vi = \alpha + \beta_1 TCi + \beta_2 ATCi + \beta_3 HHi_{1i} + \beta_4 Ed_{2i} + \beta_5 Ag_i + \beta_6 FS_i + \beta_7 UR_i + \varepsilon_i \quad ...(8)$$

Where, α = Intercept term.

$\beta_1, \beta_2, \ldots, \beta_7$ = Coefficients to be estimated.

V_i= Number of visits made by i th individual Pilgrims (dependent variable).

TC_i = Travel costs incurred by i th individual Pilgrims.

ATC_i = Potential Travel costs for alternate sacred site for i th individual Pilgrims.

HH_i= Income of i th individual Pilgrims

Ed_i= Education level of i th individual Pilgrims.

Ag_i = Age of i th individual Pilgrims.

FS_i= Family size f i th individual Pilgrims.

UR_i= Urban /Rural Residence of i th individual Pilgrims.

ε_i = Error term capturing unobserved factors affecting the number of visits.

The model given as equation (8) assumes that the number of visits decreases as travel costs increase, i.e., $\beta_1<0$, implying a negative relationship between travel costs and the number of visits.

Log-Linear Model

Log-linear model given in equation (9) can be used to handle potential non-linear relationships between the number of visits and travel costs (Nepalet al., 2018). The log of the number of visits can be taken to estimate a percentage change:

$$\ln(Vi) = \alpha+\beta_1 \ln TCi+\beta_2 \ln ATCi+\beta_3 \ln HHi_{1i}+\beta_4 \ln Ed_{2i}+\beta_5 \ln Ag_i+\beta_6 \ln FS_i+\beta_7 \ln UR_i+ \varepsilon i \quad ...(9)$$

Where, ln= Log transformation

α = Intercept term.

$\beta_1,\beta_2,\ldots,\beta_7$ = Coefficients to be estimated.

V_i = Number of visits made by ith individual Pilgrims (dependent variable).

TC_i = Travel costs incurred by ith individual Pilgrims.

ATC_i = Potential Travel costs for alternate sacred site for i th individual Pilgrims.

HH_i = Income of ith individual Pilgrims

Ed_i = Education level of ith individual Pilgrims.

Ag_i = Age of ith individual Pilgrims.

FS_i = Family size f i^{th} individual Pilgrims.

UR_i = Urban /Rural Residence of i^{th} individual Pilgrims.

ε_i = Error term capturing unobserved factors affecting the number of visits.

This log-linear form helps when the impact of travel costs on visits is expected to be non-linear (small increases in costs may lead to larger percentage decreases in visits).

Estimating the Consumer Surplus

Garrod and Willis (1999) proposed the analogy of estimating consumer surplus as the consumer satisfaction derived from non-marketable public goods. In this regard, the coefficient of travel cost given in equation (9) above is crucial for assessing social welfare gain (Nepalet al., 2018) from non-marketable public goods. It is worth noting that estimation of consumer surplus is crucial for assessment of social welfare gain in economic valuation technique. which is given by:

$$CS=\frac{-1}{\beta_{TC}}\times \text{Total Number annual Pilgrim visitors} \quad \ldots(10)$$

In equation (10), β_{TC} coefficient of travel cost which bears negative sign and quotient of negative one dive by negative β_{TC} will be positive. The quotient is regarded as mean consumers surplus. Finally, this consumer surplus to be multiplied by total annul pilgrims to estimated social welfare gain. Hence, this calculation provides an estimate of the economic value (benefit) that visitors derive from visiting the religious site beyond their actual expenditure.

Discussion on the Appropriateness of the Individual Travel Cost Method

Pilgrimage sites, by their nature, attract a diverse range of visitors with varying motivations, economic backgrounds, and travel preferences. In this context, ITCM's ability to model the relationship between individual travel costs and visitation frequency makes it ideal for understanding the economic contributions of these sites (Nepal et al., 2018). Essentially, the travel costs, which include transportation, accommodation, and entry fees, serve as an approximation of what visitors are willing to pay for the pilgrimage experience (Merciu et al., 2021). Thus, ITCM enables the estimation of the demand for pilgrimage sites, providing a valuable measure of their economic significance (Khan & Phukan, 2013).This aligns well with the economic theory of

Marshallian demand functions, which suggests that consumers maximize utility subject to budget and time constraint of pilgrims.

The ITCM is comparatively highly appropriate for the assessing the economic contribution of pilgrimage sites as it allows for a detailed understanding of individual visitor preferences and behaviors. Similarly, this method is deeply rooted in microeconomic theory, specifically the theory of consumer behavior, which assumes that individuals make decisions to maximize their utility given a set of constraints. In this context, by examining the amount of money and time visitors are willing to spend to visit pilgrimage sites, ITCM provides valuable insights into the economic value placed on these sites. Similarly, ITCM is based on the fundamental principles of consumer behavior, where individuals allocate their income and time between private goods such as transportation, accommodation and non-market goods such as pilgrimage sites. These all economic activities are definitely make contribution for employment generation and GDP growth through various types of multiplier effect on macroeconomic perspectives. Thus, the method builds on these principles to estimate the demand for visits to pilgrimage sites, using ITCM as a proxy for valuation of tour the sacred site eventually contributing national economic growth via multiplier effects.

Conclusion

ITCM is highly appropriate for the economic valuation of pilgrimage sites due to its ability to analyze individual visitor behavior in great detail. Based on the literature survey, its application is at infancy stage to the valuation of the contribution of pilgrimage sites. Nevertheless, its application can be traced widespread for the economic valuation of several other types of recreational sites. In fact, by incorporating various socioeconomic factors and estimating consumer surplus, ITCM provides a comprehensive framework for assessing the economic contributions of pilgrimage tourism. This method offers valuable insights for policymakers, local businesses, and tourism stakeholders seeking to understand and harness the economic potential of pilgrimage sites. The ITCM is also highly relevant for policy-making and decision-making regarding pilgrimage sites. In other words, by estimating the economic value of these sites, ITCM can inform resource allocation, investment decisions, and the development of sustainable tourism strategies. This is particularly important in the context of pilgrimage tourism, where the economic contributions of religious sites often

go beyond direct revenues to include broader societal impacts, such as job creation, local business growth, and regional development. Therefore, comprehensive ITCM study can be useful than other methods to account for spiritual utility and other externalities of this site.

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