

Cognitive Biases and Pilgrim Spending Behaviour: A Behavioural Economics Perspective on Religious Tourism

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OPEN ACCESS

Article Citation:

Dr. Manesh N. A¹, Dr. Keerthy T R²,
"Cognitive Biases and Pilgrim Spending
Behaviour: A Behavioural Economics
Perspective on Religious Tourism",
International Journal of Recent Trends in
Multidisciplinary Research, July-August 2026, Vol 6(04),
80-87.



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Abstract: Pilgrimage tourism represents a significant and rapidly growing segment of the global travel industry, contributing substantially to local economies while simultaneously shaping pilgrims' consumption and spending behaviours. While substantial research has examined the religious, cultural, and motivational dimensions of pilgrimage, limited attention has been devoted to the psychological mechanisms underlying pilgrims' financial decision-making. Drawing upon behavioural economics and consumer behaviour theory, this article investigates how cognitive biases specifically over-optimism bias, social pressure, anchoring, loss aversion, present bias, and the sunk-cost fallacy influence pilgrims' spending behaviour. The planning fallacy leads pilgrims to set unrealistically optimistic budgets, while social pressure and status-signalling motivations encourage expenditure on donations, religious offerings, souvenirs, accommodation, and other pilgrimage-related purchases to conform to perceived social or religious expectations. Empirical evidence from tourism contexts demonstrates that high loss aversion and present bias significantly increase overspending, while anchoring effects powerfully skew willingness-to-pay for accommodation and services. This article proposes a comprehensive mixed-methods research design to empirically examine these relationships, integrating questionnaire surveys with experimental approaches and field observations. By integrating behavioural economics with pilgrimage tourism research, the study addresses a significant gap in the literature concerning the psychological determinants of pilgrimage expenditure. The anticipated findings are expected to contribute to consumer behaviour theory, pilgrimage tourism literature, and behavioural finance by providing insights into how cognitive biases shape financial decisions in religious contexts.

Key Words: Cognitive biases, Pilgrimage tourism, Behavioural economics, Spending behaviour, Religious tourism, Consumer behaviour

1. Introduction

Religious tourism, encompassing pilgrimage to sacred sites, represents a major and growing sector of global travel that intertwines spiritual devotion with economic activity. The religious tourism market is projected to experience substantial growth between 2025 and 2032, with an expected market value of USD 1,378.22 billion in 2025 and a forecasted rise to USD 2,260.43 billion by 2032, reflecting a compound annual growth rate of 6.5% (Bhatt & Dwivedi, 2025). This expansion is being fuelled by rising disposable incomes globally, increased interest in cultural and spiritual experiences, and technological advancements that enhance accessibility for religious travellers. Pilgrims allocate significant resources to visits encompassing travel, lodging,

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offerings, and donations, yet the cognitive mechanisms underlying their spending decisions remain under-examined in the academic literature. Financial well-being in tourism is also increasingly influenced by information and communication technologies (ICT), which can improve financial planning, access to information, and decision-making among travellers (Anoop & Biju, 2022).

In general tourism contexts, numerous studies demonstrate that travellers often make suboptimal decisions due to cognitive biases at every stage of their journey. Consumers routinely set unrealistic budgets, with research showing that budget compliance is generally weak because budgets are wildly optimistic. Lukas and Howard (2022) demonstrated that even though optimistic budgets do somewhat curb spending, individuals still overshoot them over the long term. This reflects the classic planning fallacy: when planning, individuals focus on ideal outcomes and neglect extra costs, failing to incorporate lessons from past experiences (Kahneman & Tversky, 1979). In travel specifically, studies of vacationers show that most exceed their budget by substantial margins, with some research indicating overspending rates as high as 87% (Nguyen, 2016).

Pilgrims may be especially susceptible to cognitive biases for several reasons. Their journey often carries deep personal meaning, social visibility, and peer-group dynamics that intensify emotional engagement with spending decisions. Unlike conventional tourists, pilgrims navigate a complex intersection of spiritual obligation, social expectation, and personal financial constraint. The theological dimension of pilgrimage may paradoxically increase susceptibility to certain biases, as faith may encourage reliance on providence rather than careful financial planning, while social pressure to demonstrate devotion through visible spending can override individual frugality. Anoop and Biju (2025a) argued that sustainable financial behaviour requires an understanding of individual psychological predispositions, suggesting that religious contexts may amplify these predispositions in unique ways.

Research on pilgrimage economics has begun to document the significant economic contributions of pilgrimage sites. Studies have shown that expenditure patterns at sacred sites include accommodation, food services, transportation, retail trade, and ritual consumption through offerings and puja services (Bhatt, Subedi, & Dwivedi, 2025). Understanding the determinants of these expenditures including the role of cognitive biases is essential for pilgrimage destination managers, religious organisations, and policymakers seeking to promote sustainable and financially informed pilgrimage experiences.

This article addresses a significant gap in the literature by synthesising behavioural economics with pilgrimage tourism research to examine how cognitive biases influence pilgrims' expenditure. We review how over-optimism bias, social conformity, anchoring, loss aversion, present bias, the sunk-cost fallacy, and status-signalling can systematically shape pilgrims' financial decisions. We propose a comprehensive mixed-methods research design to empirically examine these relationships, and offer policy recommendations and practical guidance for stakeholders to help pilgrims make better-informed spending decisions while maintaining the spiritual integrity of the pilgrimage experience.

2. Literature Review

2.1 Over-Optimism and the Planning Fallacy

The planning fallacy, a well-documented cognitive bias in behavioural economics, describes the tendency for individuals to underestimate the time, costs, and risks of future actions while overestimating their benefits (Kahneman & Tversky, 1979). This bias stems from what Kahneman and Tversky termed the "inside view" a focus on the specific details of the planned task rather than the statistical distribution of outcomes from similar past experiences. Decision makers take an inside view of a project rather than considering the outcomes of previous projects, anchoring future outcomes on plans and available scenarios of success rather than past results.

Several psychological mechanisms underpin the planning fallacy:

- Self-serving biases give people inflated perceptions of themselves, including "illusory superiority" the belief that one is better than average in various domains
- Managers have been shown to be prone to "self-serving reinterpretations of reality," misperceiving facts important for assessing performance and taking credit for good outcomes while blaming circumstance for failures (attribution error)
- The illusion of control leads planners to underestimate the risk of unforeseeable or unavoidable setbacks, failing to account for "unknown unknowns"

In consumer contexts, research demonstrates that budgets are generally optimistic. Lukas and Howard (2022) used field data from finance apps and diary studies to confirm that consumers commonly overshoot their self-set budgets, with overspenders remaining over-budget even six months later. In tourism specifically, Brida and Tokarchuk (2015) introduced the concept of mental budgeting, finding that visitors to a Christmas market often set a mental spending limit but then exceed it. Nguyen's (2016) study of 314 Singaporean tourists found that high levels of loss aversion and present bias were associated with significantly more overspending.

Research on pilgrimage cost perceptions has revealed that the perceived difficulty of pilgrimage is significantly associated with the costliness of the undertaking. Chvaja (2023) found that respondents perceive high-cost pilgrimages as more demanding than low-cost pilgrimages. This suggests that pilgrims' cost-forecasts are likely over-optimistic, leading them to spend more than intended. For pilgrims, this manifests in allocating only essential expenses in advance, expecting no extras, and then encountering unplanned purchases such as souvenirs, special experiences, or spontaneous donations that cause actual expenditure to substantially exceed plans.

Abraham, Anoop, Johnson, Saseendran, and Biju (2025a) examined determinants of health-related quality of life in elderly populations, noting that financial decision-making capacity often declines with age, a factor that may interact with over-

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optimism bias among older pilgrims. Similarly, Abraham, Anoop, Johnson, Saseendran, and Biju (2025b) explored midlife crisis dynamics, suggesting that individuals in midlife may exhibit heightened susceptibility to status-signalling motivations during significant life events such as pilgrimage.

2.2 Loss Aversion and Present Bias

Prospect theory, developed by Kahneman and Tversky (1979), predicts that individuals are loss averse: they feel losses much more acutely than equivalent gains. In holiday contexts, overspending involves forgoing other uses of money, which feels like a loss. Nguyen's (2016) lab-in-field experiment with 314 tourists found that those high in loss aversion were significantly more likely to overspend on their trip. Similarly, present bias (hyperbolic discounting) causes travellers to overweight immediate enjoyment over future budgetary health, prioritising instant gratification over long-term financial consequences.

Importantly, Nguyen's (2016) study also found that tourists high in both present bias and loss aversion overshot their budgets most of all. However, decision-making in groups reduced these biases: individuals were more likely to behave rationally when making decisions in groups. This suggests that group budgeting (family or pilgrimage group plans) can temper personal impulsivity, a finding with significant implications for understanding pilgrimage spending dynamics.

Saseendran, Johnson, Anoop, Abraham, and Biju (2025) examined the impact of workplace flexibility on financial well-being and employee productivity, noting that flexible work arrangements can reduce financial stress and improve decision-making capacity. This finding has implications for understanding how pre-pilgrimage financial planning and workplace support may influence spending behaviour during religious travel.

These biases combine to push individuals toward immediate indulgence, increasing expenditures beyond initial plans. For pilgrims, this manifests in prioritising immediate ritual purchases, upgraded accommodations, or spontaneous offerings over saving, driving spending upward. The combination of loss aversion (reluctance to forgo the experience) and present bias (preference for immediate gratification) creates a powerful force toward budget overruns.

2.3 Anchoring and Pricing Effects

Anchoring occurs when an initial price or number serves as a cognitive reference point that influences subsequent judgments. In tourism, anchors appear in advertising, comparison prices, and initial offers. Tanford, Choi, and Joe (2019) conducted experiments where subjects considered accommodation prices under different anchor conditions, finding that high price anchors significantly raised consumers' willingness-to-pay (WTP), while low anchors lowered it.

Framing effects and metric mismatches (e.g., comparing daily versus trip budgets) also influenced budget interpretation. Anchoring directly affects pilgrims' perceptions of reasonable spending and can result in expenditure above or below intended budgets depending on initial cues. If pilgrims encounter expensive package options first whether through travel agents, social media, or promotional material they may internalise a higher "normal" cost and spend accordingly. Conversely, overly low advertised prices can anchor downward, leading to tighter budgets.

Anoop and Biju (2025b) developed multi-model fusion techniques for price prediction, demonstrating how reference points and anchoring effects significantly influence economic decision-making. Their work on cardamom price prediction in Kerala employed XGBoost and other machine learning methods to identify price determinants, highlighting how initial price anchors can shape subsequent valuation and spending decisions across diverse economic contexts.

2.4 Sunk-Cost Fallacy

The sunk-cost fallacy leads people to remain committed after investing time or money, even if continuing is suboptimal. In travel, sunk costs accumulate through non-refundable tickets, visas, or saved vacation days. Park and Jang (2014) found that both temporal and monetary sunk costs decrease travellers' likelihood of cancelling a trip. By extension, once pilgrims have invested heavily (e.g., paid for tours, airfare), they will feel compelled to continue spending on-site (offerings, accommodations, etc.) to justify earlier costs.

Research on costly signalling theory in pilgrimage contexts has demonstrated that the effort invested in pilgrimage measured as kilometres walked is a critical element of pilgrim identity (Chvaja, 2023). This suggests that sunk costs, whether monetary or temporal, may bind pilgrims to continued expenditure, consistent with travellers who stayed on trips despite high costs.

2.5 Social Pressure and Conformity

Pilgrimages often involve groups family, friends, organised tours and shared norms that strongly shape spending. Social norms and peer influence can substantially influence consumption decisions. Research on Hajj traditions, for example, demonstrates the social pressures faced by prospective pilgrims from economically disadvantaged backgrounds due to prevailing expectations to observe traditional practices in full, including specific spending obligations (Bhatt & Dwivedi, 2025). The social and economic impacts of these practices reinforce social ties but also create obligations that may strain financial resources.

Social proof and "bandwagon" effects imply that individuals often conform to group spending patterns. Research on subjective norms in pilgrimage financial planning finds that both subjective norms and perceived behavioural control significantly influence positive attitudes toward planning for pilgrimage expenses, with attitudes mediating the relationship between social norms and saving intentions (Bhatt, Subedi, & Dwivedi, 2025). This suggests that social expectations powerfully shape financial behaviours related to pilgrimage.

However, the effect of social influence is not unidirectional. Nguyen (2016) noted that group decisions tended to align

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better with budget goals than solo decisions, suggesting that peer discussion can reduce personal overconfidence and impulsivity. The flip side is that peer pressure may also encourage unnecessary spending: pilgrims might match the extravagant purchases of wealthier peers to fit in or avoid seeming less pious. Thus, when pilgrims travel in groups, their spending may converge either upward or downward with group norms, depending on group composition, leadership, and the prevailing social expectations.

2.6 Status-Signalling and Conspicuous Consumption

Religious pilgrimages often have a conspicuous element: followers may display devotion by donating or purchasing costly religious items. In consumer theory, this is known as conspicuous consumption or status-signalling. Research on costly signalling theory of pilgrimage has shown that undertaking a costly pilgrimage is associated with higher perceived trustworthiness, suggesting that visible investment in pilgrimage serves as an honest signal of commitment to cooperative norms (Chvaja, 2023).

The conspicuous consumption literature shows that visible spending signals social or religious status. For pilgrims, buying expensive offerings, staying in luxury accommodations, or making large donations can serve as a public sign of devotion, reinforcing social standing within the faith community. Evidence from consumer behaviour research in religious contexts indicates that women tend to buy more souvenirs and make more donations when visiting religious places compared to men (Lukas & Howard, 2022). This suggests that gender may moderate status-signalling motivations.

Research on souvenir purchases has revealed that tourists' attachment to souvenirs is shaped by religion, type, and place of purchase, with the endowment effect being higher for religious groups than for their non-religious counterparts (The Value of Souvenirs, 2019). This demonstrates that tourists' perceptions of souvenirs are shaped not only by their utility, but also by their meaningfulness, suggesting that status-signalling motivations may be particularly potent in religious pilgrimage contexts. Anoop, Abraham, Saseendran, Johnson, and Biju (2025) examined the impact of artificial intelligence on job displacement and skill requirements in the manufacturing sector, noting that financial decision-making increasingly requires digital literacy. This finding has relevance for understanding how technological access and digital financial tools may influence pilgrims' ability to resist status-signalling pressures and make informed spending decisions.

2.7 The Endowment Effect and Religious Souvenirs

The endowment effect is the tendency for individuals to value items more highly simply because they own them. This has been identified as particularly relevant to pilgrimage spending. Research investigating tourists' attachment to souvenirs based on religion, type, and place of purchase found an endowment effect toward most souvenirs, with the effect being higher for Jewish tourists than for their non-Jewish counterparts (The Value of Souvenirs, 2019). This suggests that the meaningfulness of religious souvenirs may amplify the endowment effect, potentially leading pilgrims to overvalue and overspend on religious items.

Analysing pilgrim spending at Kykkos Monastery in Cyprus revealed distinct patterns in the volume and character of products purchased, with donations playing a significant role in the monastic economy (The Tourist-Pilgrim Continuum, 2021). The research utilized both quantitative and qualitative methods to comprehend the consumer behaviour patterns of international visitors, observing secularism and religious consumerism, souvenir value, and the volume and structure of purchased products.

3. Theoretical Framework

We frame pilgrims' spending decisions using the dual-system behavioural economics perspective and prospect theory. Pilgrims form reference budgets often optimistically low and compare actual prices to these anchors. Loss aversion makes them reluctant to cancel purchases, preferring small immediate gains (morale, worship experience) to future savings. Present-biased "System 1" desires (instant gratification) often override "System 2" deliberation (planned budgets). Social identity and norms add a social dimension: group identity modulates decision framing, and desire for status adds extra utility to conspicuous spending.

The theoretical framework integrates several key components:

Individual Cognitive Biases: Over-optimism (planning fallacy), loss aversion, present bias, anchoring, and sunk-cost fallacy directly influence pilgrims' financial decisions. These biases operate at the individual level, shaping budget formation, on-site spending, and willingness to adjust plans.

Social and Normative Factors: Social pressure, conformity, and status-signalling operate through group dynamics and social expectations. These factors may either amplify or mitigate individual biases depending on group characteristics and leadership.

Financial Literacy as Moderator: Financial literacy may moderate the relationship between cognitive biases and spending behaviour. Pilgrims with higher financial literacy may be better equipped to recognise and counteract biases, while those with lower literacy may be more vulnerable. Anoop and Biju (2025a) emphasised that sustainable financial behaviour is shaped by multiple determinants including financial knowledge, attitudes, and social influences.

Demographic and Pilgrimage-Related Factors: Age, income, gender, religiosity, and trip characteristics may moderate bias effects. Evidence suggests that women tend to buy more souvenirs and make more donations when visiting religious places

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compared to men (Lukas & Howard, 2022). Similarly, pilgrims from different socioeconomic backgrounds may experience social pressure differently, with economically disadvantaged pilgrims facing particular challenges meeting spending expectations. Abraham et al. (2025a) found that age-related declines in cognitive function may affect financial decision-making capacity, suggesting that older pilgrims may be particularly susceptible to certain biases.

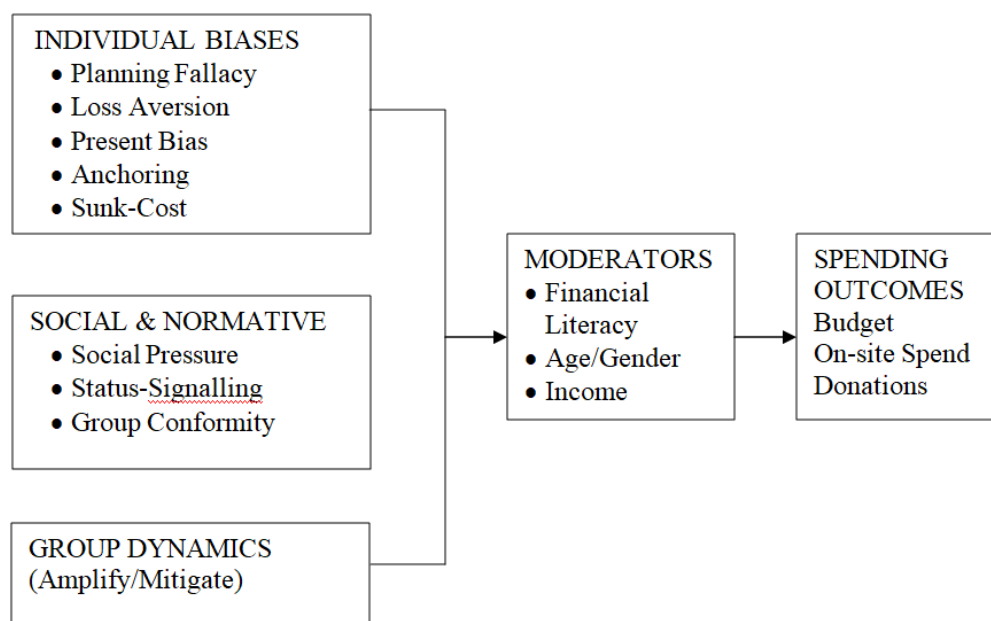


Figure 1: Conceptual Framework of Cognitive Biases in Pilgrimage Spending Behaviour

Conceptual Framework Illustrating the Relationships Between Cognitive Biases, Social Factors, Moderators, and Pilgrimage Spending Outcomes

4. Proposed Empirical Approaches

To test the hypothesised relationships between cognitive biases and pilgrimage spending behaviour, we propose a comprehensive mixed-methods research design incorporating multiple methodological approaches. This multi-method strategy enables triangulation of findings and addresses the inherent challenges in measuring psychological biases in real-world pilgrimage contexts.

4.1 Survey-Based Approach with Bias Scales

A large-scale survey approach is recommended as the primary empirical method, given its ability to collect data from substantial samples across diverse pilgrimage contexts. This approach builds on established methodologies used in pilgrimage tourism research.

Sample and Context: Surveys should be conducted at major pilgrimage sites, drawing on the methodology employed at the Shrine of Fátima in Portugal, where a database comprising over 400 respondents was constructed (Pilgrims of Fátima, 2025). Similarly, studies at Kykkos Monastery in Cyprus surveyed 184 international visitors to comprehend consumer behaviour patterns (The Tourist-Pilgrim Continuum, 2021). We recommend a minimum sample size of 400-500 respondents to ensure adequate statistical power for structural equation modelling (SEM) and regression analyses.

Survey Instrument: The survey should incorporate validated scales to measure individual bias tendencies, including:

- Optimism bias and planning fallacy scales
- Social norm conformity measures
- Present bias and time-preference questionnaires
- Status-signalling motivation items
- Endowment effect measures adapted from souvenir research

The questionnaire should also capture:

- Planned versus actual spending across categories (accommodation, food, offerings, souvenirs, transport)
- Demographic information (age, income, gender, education)
- Religiosity measures
- Trip characteristics (length, group composition, motivation)

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Analysis: Data can be analysed using structural equation modelling (SEM) to link bias constructs to spending deviations, controlling for demographic and pilgrimage-related characteristics. Multiple regression analysis can identify the relative contribution of each cognitive bias to overspending.

4.2 Experimental Approaches

4.2.1 Online Experimental Studies with Fake Social Media Posts

Following the methodology developed by Chvaja (2023) in their costly signalling studies, researchers can employ online experimental designs using manipulated Facebook posts to test how perceived costs and social cues influence spending intentions. This methodology has proven effective in examining how costly signals affect perceptions of trustworthiness, and can be adapted to study spending behaviour.

Design: A mixed-subjects design can be implemented where participants rate multiple scenarios in counterbalanced order. For example:

- Post factor (within-subjects): Content of posts varying in spending cues (costly pilgrimage spending, subtle spending, baseline)
- Cost factor (between-subjects): Manipulation of cost levels (low vs. high cost pilgrimage)
- Context factor (between-subjects): Framing of pilgrimage in religious vs. secular terms

Sample: Following the sample size calculations in Chvaja (2023), a total sample of approximately 350-500 participants would provide adequate power to detect medium effect sizes ($f = 0.15$).

Measures: Perceived trustworthiness ($\alpha = 0.86$ using 5 items from Hall et al., 2015), perceived commitment to god and prosocial norms, perceived difficulty, and willingness-to-pay for pilgrimage-related items.

4.2.2 Lab/Field Experiments at Pilgrimage Sites

Randomised experiments can be conducted at pilgrimage sites to examine how different informational treatments affect spending choices.

Design: Participants can be randomised into different budgeting treatments, building on the "lab-in-the-field" methodology employed by Nguyen (2016). Example treatments:

- High anchor vs. low anchor: Manipulate suggested donation or reference prices
- Sunk cost reminder: Inform participants of already prepaid costs
- Group decision: Randomise pilgrims to make spending decisions alone or after group discussion
- Financial literacy intervention: Provide budgeting tips or bias awareness information

Sample: 200-300 participants per condition can yield sufficient statistical power for ANOVA and regression analyses.

Outcome Measures: Spending choices, budget adherence, willingness-to-pay, and self-reported susceptibility to social pressure.

4.3 Field Observational Study with Commitment Devices

The Individual Travel Cost Method (ITCM) under revealed preference techniques has been identified as a promising methodology for assessing economic contribution of pilgrimage sites (Bhatt, Subedi, & Dwivedi, 2025). This approach can be adapted to study pilgrimage spending behaviour.

Methodology: Partner with travel agencies or pilgrimage organisations to:

- Offer an app-based budgeting tool (commitment device) to some pilgrims
- Compare those who commit to budgets beforehand versus control group
- Track actual expenditures (self-reported or via app receipts) with follow-up surveys

Sample: Following the methodology of Silva's study on the Santiago route, which surveyed 225 pilgrims to characterise their profile and consumption patterns, we recommend $n=200$ per group for robust comparisons.

Data Collection: Expenditure patterns can be collected across categories: accommodation, food, shopping, transport, and attractions. The average expenditure patterns observed at Fátima (€28 on accommodation, €28 on food, €20 on shopping, €38 on transport) provide benchmark data for comparison (Pilgrims of Fátima, 2025).

4.4 Mixed-Methods Integration

The research design should integrate quantitative and qualitative approaches, following the methodology employed at Kykkos Monastery where both methods were used to understand consumer behaviour patterns (The Tourist-Pilgrim Continuum, 2021). Qualitative components can include:

- Semi-structured interviews with pilgrims exploring spending rationales
- Focus groups with pilgrimage group leaders
- Vendor and stakeholder interviews to contextualise spending patterns
- Participant observation at pilgrimage sites

Analysis: Qualitative data can be analysed thematically to identify emergent patterns in spending decision-making, while quantitative data can be analysed using:

- Regression analysis of spending on bias measures and experimental conditions
- ANOVA for treatment effects in experimental studies
- Mediation analysis to examine mechanisms (e.g., perceived commitment to god as mediator)

4.5 Economic Valuation Techniques

For comprehensive assessment of pilgrimage economic contribution, contingent valuation and travel cost methods can be employed, building on studies at pilgrimage sites such as the Santuario de Nuestra Señora de Las Lajas in Colombia (Hidalgo Villota, Enríquez Narváez, & Valenzuela Erazo, 2024). These studies have used Poisson, logit, and probit regression models to estimate the probability of visiting and willingness-to-pay.

Key Variables: Willingness-to-pay (WTP), number of visits, expenditure patterns, income, education, and religiosity. The probability of visiting has been found to be explained by WTP and postgraduate education, while WTP is determined by consumption expenditure, number of visits, and employment status (Hidalgo Villota et al., 2024).

5. Policy and Stakeholder Implications

The identification of cognitive biases in pilgrimage spending has significant implications for various stakeholders:

5.1 For Pilgrims

Awareness of biases can help individuals plan better. Pilgrims should be encouraged to set realistic budgets and anticipate psychological pitfalls. Travel organisers could provide "budget coaching" or interactive apps reminding pilgrims of common biases. Group leaders might facilitate collective budgeting meetings before the trip to leverage the de-biasing effect of group decision-making documented by Nguyen (2016). Anoop and Biju (2025a) emphasised that sustainable financial behaviour requires both awareness and practical tools, suggesting that digital financial literacy interventions could be particularly effective for pilgrimage contexts.

5.2 For Tour Operators and Agencies

Agencies can design pricing transparently to reduce over-anchoring. Instead of showing only high-priced packages as "original price," they can display multiple anchors or use average rather than extreme prices to avoid artificially raising spending expectations. They can also bundle offerings with recommitment savings to exploit loss aversion in a helpful way. Saseendran et al. (2025) noted that workplace flexibility and financial well-being are interconnected, suggesting that travel agencies offering flexible payment options may reduce financial stress and improve pilgrim satisfaction.

5.3 For Pilgrimage Site Managers and Religious Authorities

Recognising that excessive spending may hurt satisfaction and the spiritual quality of the experience, authorities can promote affordable options. Offering officially-sanctioned "budget-friendly" accommodations or free communal meals can counter social pressure to overspend. Signage at sacred sites could nudge pilgrims with reminders about reasonable spending ranges, reducing impulsive giving due to present bias.

Research at pilgrimage destinations like Fátima shows that average expenditures across categories can inform appropriate pricing and service provision (Pilgrims of Fátima, 2025). Understanding these patterns can help site managers design appropriate offerings.

5.4 For Policymakers

Given the economic scale of religious tourism projected to reach trillions of dollars globally even small changes in pilgrims' spending patterns can have large effects. Policymakers might fund education campaigns on mindful spending or regulate pricing transparency at pilgrimage destinations. Supporting research into pilgrims' financial behaviour (surveys, field labs) would provide data to refine interventions. Anoop, Abraham, Saseendran, Johnson, and Biju (2025) highlighted the importance of understanding how technological change affects skill requirements, suggesting that policymakers should consider digital financial literacy as a component of pilgrimage preparation programmes.

6. Conclusion

Cognitive biases undoubtedly affect pilgrims' spending behaviour. Over-optimism, present bias, loss aversion, anchoring, sunk costs, social conformity, and status motives each push pilgrims toward higher or more impulsive expenditures. The planning fallacy leads to budgets that are optimistically low, while on-site, loss aversion and present bias prioritise immediate experiences over saving. Anchoring shifts perceptions of reasonable costs, and sunk costs deter mid-course corrections. Socially, group dynamics can either mitigate or amplify overspending depending on norms and leadership.

The integration of behavioural economics into pilgrimage tourism offers rich insights for both theory and practice. By understanding how pilgrims make spending decisions, stakeholders can design better experiences and financial outcomes for all. Awareness of biases and leveraging group decision mechanisms may help pilgrims stay within budget and enjoy their

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spiritual journeys more fully. Policy interventions (transparent pricing, budgeting tools, nudges) can harness behavioural insights to balance pilgrimage affordability with destination economy sustainability.

The challenge lies in implementing these insights with cultural sensitivity and respect for the spiritual dimension that makes pilgrimage unique. Future research should empirically test the proposed framework across diverse pilgrimage contexts, examining how religious tradition, cultural background, and individual differences moderate the influence of cognitive biases on spending behaviour. Longitudinal studies tracking pilgrims from pre-trip planning through post-trip reflection would provide valuable insights into how spending decisions evolve over time and how interventions might be most effectively timed.

As Anoop and Biju (2025a) argued, sustainable financial behaviour is shaped by multiple interconnected determinants, and understanding these relationships requires interdisciplinary approaches that integrate behavioural economics, psychology, and cultural studies. By advancing this research agenda, scholars can contribute both to theoretical understanding of consumer behaviour in religious contexts and to practical improvements in pilgrimage experiences worldwide.

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