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Risky choice framing effects on travellers' time-of-booking decisions

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Tourism experiences contain elements of the unknown, since travel takes people outside their normal, familiar environment. This uncertainty can create anxiety among travellers (Reisinger & Mavondo, 2005), and may consequently affect their planning and booking behaviour as they contemplate the risks and weigh up the gains and losses of whether to make booking decisions early, or leave them until later. Based on Kahneman and Tversky's (1979) Prospect Theory (PT), this paper explores how tourists' booking choices could be potentially influenced through the way information regarding such uncertainty and risks is framed and presented.

Framing involves the presentation of information to produce a different consumer effect (Kahneman and Tversky, 1979). Frame theory has been researched in many different fields including social psychology, health promotion, clinical psychology, finance and marketing (Kühberger, 1998). However, little research on framing effects has been undertaken in the domain of tourism decision-making. Tourists tend to weigh the costs and benefits of alternatives before deciding. Marketers can influence decisions in their favour, and potentially encourage more early booking, by effectively framing promotional messages.

Four basic types of framing have been identified: risky choice, attribute, goal, and message framing (Levin et al., 1998; Gamliel & Herstein 2007). This paper presents two studies on risky choice framing. In risky choice framing, two choice options are manipulated so that one option represents a sure gain or loss and the other represents a risky alternative with numeric probability. The most common finding of the risky choice framing effect is that people tend to take more risks when options highlight the avoidance of losses than when they highlight comparable gains (Levin, Schneider, & Gaeth, 1998; Putrevu, 2014).

Figure 1 is our conceptualisation of risky choice effects for this paper.

Figure 1. Risky choice framing effects (adapted from Levin et al. (1998, p. 152)

	Sure thing (riskless) option	Risky option	Framing effect
Gain framing	Certainty of some savings if you book in advance	Chance of maximum savings / chance of saving nothing if you delay booking until last minute	Maximum likelihood of advanced booking**
Loss framing	Certainty of some loss from maximum savings if you book in advance	Chance of losing nothing / chance of losing all potential savings if you delay booking until last minute	Maximum likelihood of late booking**

(**The framing effect is measured by comparing the proportions of riskless choices and risky choices.)

Study 1

Hypotheses

The aim of this research is to begin to fill the gap brought about by the lack of research on the timing of booking decisions, and the framing postulate of PT was used to investigate this aim.

To this end, two hypotheses, H1_a and H1_b, were formulated.

H1_a. A gain-framed presentation of price deal information for advance bookings leads more consumers to make the riskless choice of a sure gain by purchasing in advance.

H1_b. A loss-framed presentation of price deal information for advance bookings leads more consumers to make the risky choice of later bookings.

Method

Study 1 employed a between-subject experimental design conducted online, with data collected from 179 paid commercial panel members (60.3% male). The majority were in the age bracket of 20-50 years having international travel experience.

Participants were randomly divided into gain-framed and loss-framed conditions and given a pre-tested hypothetical holiday booking scenario as follows. A package holiday normally costs \$3,000, with a possible maximum discount of \$600. There are two payment options. In the gain-framed condition, the options were expressed as: (A) book and pay two months in advance and save \$300 off the normal price; and (B) book and pay one week in advance, with a 50% chance of saving nothing off the normal price, or if demand is low, a 50% chance of saving \$600. In the loss-framed conditions, options were expressed as: (A) book two months in advance and lose \$300 off the maximum discount; and (B) pay one week in advance, with a 50% chance of losing the whole maximum discount, or if demand is low, a 50% chance of losing \$0.00 of the \$600 maximum discount.

In both frames, (A) was a riskless, sure gain /sure loss option, while (B) was a two-outcome all-or-nothing risky option with probabilities. Participants rated on a 7-point bi-polar scale their likelihood of booking (A) two months in advance versus (B) one week prior to departure.

Gender was used as a moderator of framing effect. Research suggests that gender differences in framing effects depend on the task domain. Huang and Wang (2010) found that men were more responsive than women to negative framing in the monetary domain. Since Study 1 was placed in the monetary task domain, it was assumed that men would be more responsive to negative framing and would probably make risky choices (book their holiday at a later time to minimize losses).

Results and Discussion

Manipulation was checked: participants in the gain-framed condition saw the scenario as positive and those in the loss-framed condition saw it as negative. On the 7 point scale, responses 1–3 were classified and analysed as preference for the riskless option (book early)

and 5–7 as the risky (late booking) option (responses indicating indifference (4) were excluded from the analysis) and a χ^2 test was conducted.

Results were mixed. In the gain-framed condition 73% of the participants preferred the riskless (advanced booking) option while only 22% chose the risky option. This result was as predicted. On the other hand, in the loss-framed condition, the figures were almost equal, 44% preferring the riskless option and 46% preferring the risky option. However, the risky option to book later was chosen by more than double the number of participants exposed to the loss-framed condition (46%) than was chosen by those exposed to the gain-framed condition (22.3%). This supports Tversky and Kahneman's (1981) conclusions.

A two-way ANOVA (framing x gender) revealed no significant interaction between framing and gender. However, a statistically significant independent framing effect was revealed such that participants were more inclined to prefer risky options (book one week before arrival) in the loss-framed condition than in the gain-framed condition and this did not vary across genders.

Study 2

Study 2 was designed to test the robustness of the findings of Study 1 in a flight reservation context. This domain was chosen owing to its greater relevance and familiarity to many people facing the dilemma of whether to book a flight well in advance to secure a seat or to wait until the last minute for a good price deal. The same hypotheses, H1_a and H1_b, were proposed.

Method

Data were collected from 163 online panel members (67% male). Of these, more than 75% were in the 25-55 age brackets. Sixty three percent of total participants had international flying experience. Apart from the choice scenario, the procedure was identical to Study 1.

Gender and past flying experience were moderators, as previous research has documented contradictory findings of these variables.

Participants were given a different scenario: a regular airfare is \$2,000, and a maximum discount of \$1,000 is sometimes available. On offer is a \$1,800 fare if booked within three days. The gain frame expressed this as a sure \$200 saving off the regular fare, the loss frame as a sure \$800 loss from the maximum discount. Probabilities: if the offer is not accepted you have a 50% chance of saving / losing nothing, a 25% chance of an increase in the regular fare, and a 25% chance of saving \$1,000 / losing \$0.00 off the maximum possible discount.

Results and Discussion

Results again showed that the loss-frame group preferred the risky late booking option (70% compared to 27%), while gain-frame participants chose the early option (58% compared to 35%).

ANOVA results revealed no significant interaction between framing and gender, framing and flying frequency, gender and flying frequency, or framing, gender, and flying frequency.

However, the framing effect remained significant.

Therefore H1a and H1b were supported.

General Discussion

The studies differed in (a) tourism context: Study 1 was a package tour, Study 2 was a flight reservation; (b) risk: Study 1 was a standard two-outcome all-or-none risky prospect with two numerical probabilities (50%/50%), Study 2 was an innovative two-outcome all-or-none risky option with three numerical probabilities (50%/25%/25%); (c) moderating variables: both used gender, but Study 2 also used flying experience.

Both studies used the risky choice frame type, adapted from Kahneman and Tversky's Prospect Theory principles and Tversky and Kahneman's 'Asian disease' experiments, and both supported their predictions. That is, when the prospect is a sure gain or loss, decision-makers are risk averse, but when there is a risk involved, they take risks to minimise losses. Neither moderator made a difference to the framing effects, suggesting that the main effects were generated by the framing alone.

The most important contribution of this paper is extending the study of framing effects to a new area of application, namely tourist temporal booking decisions. Additional contribution is Study 2's incorporation of a 3-part risky choice prospect, as opposed to the convention of using 2-tier risky choice prospect, which found a significantly larger effect for the loss frame than Study 1. It appears that this modification made the problem scenario more realistic (as suggested by Tunnell 1977), which made it easier for respondents to make their flight reservation decisions.

This finding is noteworthy and could have important marketing implications, in that to promote in-advance booking, travel and airline marketers should stress positive framing in developing their promotional offers. The findings suggest that preferably they can develop and positively frame a single promotional message equally applicable to all, irrespective of gender and flying experience.

Some limitations of the study include: a) data were collected from a paid online commercial panel with no opportunity for face-to-face interaction between respondents and experimenter; b) scenarios, no matter how realistic, cannot replace real-life predicaments with inexact probabilities and options; and c) participants' involvement would probably be lower in hypothetical than in real situations.

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