

## Attribute framing effects on the timing of booking intentions

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### Abstract

Based on experimental evidence, this paper intended to shed some light on whether the negative and positive framing (wording) manipulation of a tourism offer affects the travellers' judgment of the decisions involved in booking a holiday element (i.e., mountains tour) with regard to timing (well before the trip, at the last minute). We employ Levin et al's attribute framing paradigm to manipulate a key attribute of a holiday offer (good/bad weather conditions on the day of a mountains tour), and ask consumers to evaluate the offer and make a mountains tour reservation decision. As hypothesized, positive presentation of the attribute information elicited more responses in favour of early booking and negative presentation of the same attribute elicited fewer responses in favour of early booking; and therefore this could form a useful basis for marketing communication strategies related to the timing and presentation of booking information to the advantage of the tourism industry.

**Key words:** Prospect theory, attribute framing, weather conditions, experiment, timing of booking intentions

### 1. Introduction

Tourism experiences are generally dissimilar to routine life experiences; rather, they can contain elements of the unknown since travel takes people outside their normal familiar environment. This issue of 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 (advantages) and losses (disadvantages) of whether to make decisions early or leave them till later. Based on Kahneman and Tversky's (K&T) (1979) Prospect Theory (PT) and applying the attribute framing paradigms of Levin et al (1998), this paper explores how tourists' booking choices could be potentially influenced through the way the information is presented.

The very term framing refers to all of the different ways of presenting a decision situation that lead the decision maker to produce/make markedly different responses (Freling, Vincent, & Henard, 2014; Kühberger, 1995). Framing effect refers to "different but otherwise equivalent descriptions of a choice problem lead to different preference orders" (Kühberger & Tanner, 2010 p,314). Based on early work of Kahneman and Tversky (1979), the framing postulates have been researched and continue to be 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 done in the domain of tourism decision-making. As the temporal travel decisions (accommodation, flight reservations etc) often involve the risks, losses and gains, and travellers tend to weigh the costs and benefits of alternatives prior to arrive at a decision. Marketers can bias the evaluation and judgment tourism consumers' decisions in their favour by effectively framing their promotional messages.

Thirty of years of research on framing produced a mixed body of evidence, where some studies reported choices based on positively framed messages and others on negatively framed messages (Putrevu, 2014). To resolve this, Levin, Schneider, & Gaeth (1998) distinguished between three types of framing: risky choice framing, attribute framing and goal framing. In risky choice framing, an outcome is manipulated such that one frame highlights a sure gain/loss and the other a risky alternative with numeric probability (like the Asian disease problem). The most common finding of the risky choice framing effect is that people tend to take more risks when the option highlights the avoidance of loss than when the option highlights an equal gain (Levin, Schneider, & Gaeth, 1998; Putrevu, 2014). Attribute framing involves the manipulation of a single attribute of a given decision situation. Levin et al found that the majority of respondents preferred meat that was "80% lean" (positive frame) to meat that was "20% fat" (negative frame). The findings of attribute framing studies has found that positive framing tends to evoke more favourable evaluations than negative framing. Levin et al describe and explain this finding using an associative model (for details see Levin et al., 1998). Goal framing involves the manipulation of the consequences of performing and not performing a desired action: e.g. (a) stressing the positive consequences for women if they perform breast self-examination (BSE) and the negative consequences if they do not (an example of disease detection); and (b) stressing the positive consequences of inoculating children against whooping

cough and the negative consequences of not inoculating children against the disease (an example of disease prevention). The findings seem to suggest that a positive frame leads to more compliance for detection and a negative frame for prevention, but this conclusion is open to discussion. A fourth category, message framing, was suggested by Gamliel and Herstein (2007; 2012). In this type of frame, the choice involves a trade-off, such as a choice between higher quality or lower price. This paper concentrates only on attribute framing intending to shed some on whether framing of a key attribute of a tourism offer affects the timing of booking decisions of the tourism consumers.

## 2. Literature

Attribute framing: a valence shift

Attribute framing, the second of Levin et al's (1998) framing typology, focuses on a single attribute or characteristic of an object or event. The typical example is Levin and Gaeth's (1988) much-cited lean beef/fat beef option, where people prefer their beef to be 75% lean (positive) rather than 25% fat (negative). Other studies have used satisfaction/dissatisfaction with product advertising (Putrevu, 2014), the likelihood of undergoing medical treatment (Krishnamurthy, Carter, & Blair, 2001), judging the fairness of allocation criteria (Gamliel, Zohar, & Kreiner, 2013), and many more.

With attribute framing, information about the object or event is framed in either a positive or a negative light, and evaluated—from good to bad, from favourable to unfavourable, from acceptable to unacceptable, and so forth. Results of the many attribute framing studies over the past thirty years (as shown in reviews and meta-analyses by Levin et al, 1998; Krishnamurthy et al, 2001; Freling et al, 2014; and others) show that an object or event is judged more favourably when presented in a positive frame than in a negative frame—a choice shift as described in the previous section, contrary to the principles of PT and unlike the results of research into other types of framing:

...we know of no case in which a negative attribute frame produces more favourable evaluations than a positive attribute frame" (Levin et al 1998, p 160).

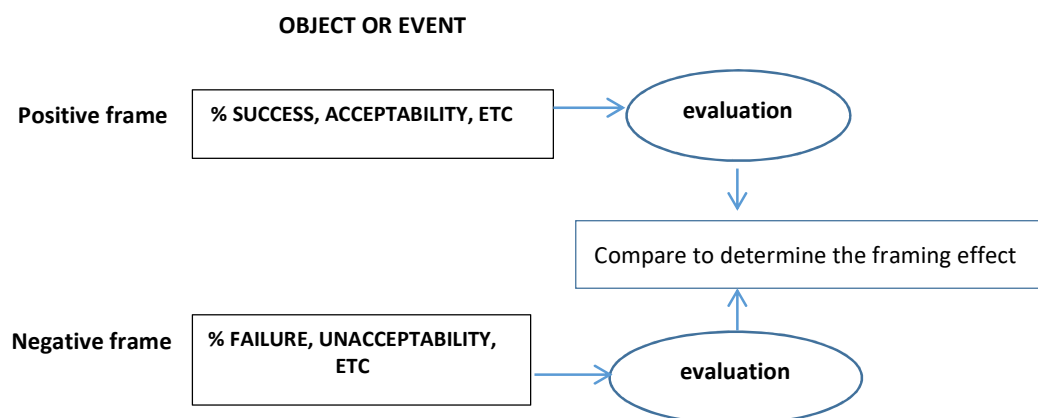
A feature of attribute framing is that, whereas risky choice framing offers independent options—that is, the evaluation of one choice offers no information about the evaluation of the other(s)—the evaluation of the attribute determines the choice:

... the favourability of accepting an object or event completely determines the (un)favourability of rejecting the same object or event...Hence, the choice does not provide anything but evaluation information. (Levin et al., 1998, pp 158–9)

For this reason, say Levin et al, attribute framing allows the most straightforward test of the influence of negative and positive framing. Importantly, the notions of loss and gain have little relevance in attribute of framing. It seems that losses do not loom larger in these cases, and because no risk is involved, a direct PT explanation of these results is 'not feasible' (Levin et al.1998, p. 166). Instead, Levin et al. (1998) suggest that a 'valence-consistent shift' (p. 164) occurs whereby a positive frame evokes pleasant or favourable associations in memory, and a negative frame evokes unpleasant, unfavourable associations.

Figure 1 illustrates the attribute framing paradigm.

**Figure 1. Attribute framing paradigm (from Levin et al., 1998, p 158)**



Levin et al (1998) argue that one important conclusion drawn from this associative evaluation process is that 'the valence of a description often has a substantial influence on the processing of that information' (p 164). However, research suggests that something more than 'simple' valence is involved in attribute framing effects, as shown in the following section.

#### Explaining the valence shift

Levin et al (1988) introduce Tversky and Kahneman's (1974) notions of anchoring and adjustment to account for the associative evaluation. They divide the framed message into two components, the qualitative (the attribute or label) and the quantitative (the probability). The label serves as an anchor, and the quantifier adjusts it. The adjustment from the anchor, however, is generally assumed to be insufficient. As Furnham and Boo (2011, p. 35) explain:

...the [anchoring-and-adjustment] heuristic maintains that an anchoring bias is caused by insufficient adjustment by and asymmetric influence on a decision maker, since a final judgement is adjusted toward the first part of the information presented.

Studies have discovered various moderating demographic and personality traits. In earlier papers, Levin (1987) and Levin and Gaeth (1988), as well as Levin et al. (1998), conclude that attribute framing effects can be mitigated by personal involvement and strongly held beliefs. More recently, Gamliel et al. (2013) found that the personal traits of agreeableness and conscientiousness moderated the effect of attribute framing in a distributive justice vignette. Jasper, Fournier, and Christman (2014) discovered that handedness (consistent left- or right-handedness and inconsistent handedness) made a difference when the framing condition was a medicine-related risk. Putrevu (2014) explored the influence of a previously induced mood, and found that participants who had been put into a positive mood reacted more favourably to a positively framed advertisement than did those who had been put into a negative mood. Levin et al (1988) noticed that ethical values played a large part in a study on the possibility of cheating, and Hardisty, Johnson, & Weber (2010) found that political party self-identification (republican versus democrats in manipulating the attribute of carbon tax/carbon off-set) influenced attitudes toward carbon tax.

A further argument that the influence of attribute framing may not be simple or straightforward is suggested by Freling, Vincent and Henard (2014) in their meta-analysis of more than 600 attribute framing effects. Using construal level theory (CLT), they argue that any influence is the result of an interaction between a message and its audience. CLT (Trope & Liberman, 2010) can explain how, even though we can only directly experience our own immediate present, we can make predictions about the future, remember the past, empathise with others, speculate, and form other mental constructions distinct from the experience of one's personal here and now.

Freling et al's explanation is based on an individual's psychological distance from an object or event: the closer an individual perceives him- or herself to an event, whether spatially, socially, temporally, and so on, the more concrete the construal, and the further from the event, the more abstract the construal. Attribute framing is most effective when there is congruence between the level at which the evaluator construes the framing event and the level of the evaluator's perceived distance from that event—it is not simply a matter of the valence.

Freling et al's argument can be seen as an extension of Levin's (1987) and Levin et al's (1988) argument that the positive-negative shift is a result of pleasant or unpleasant associations evoked in the memory plus the anchoring effect of the framed attribute and its adjustment.

### 3. Attribute framing effects on booking decisions

This paper focused on the effects of attribute framing where the object of the frame was a mountains tour, and the attribute in question was the weather on the day of the mountains tour.

**Figure 2. Conceptual framework**

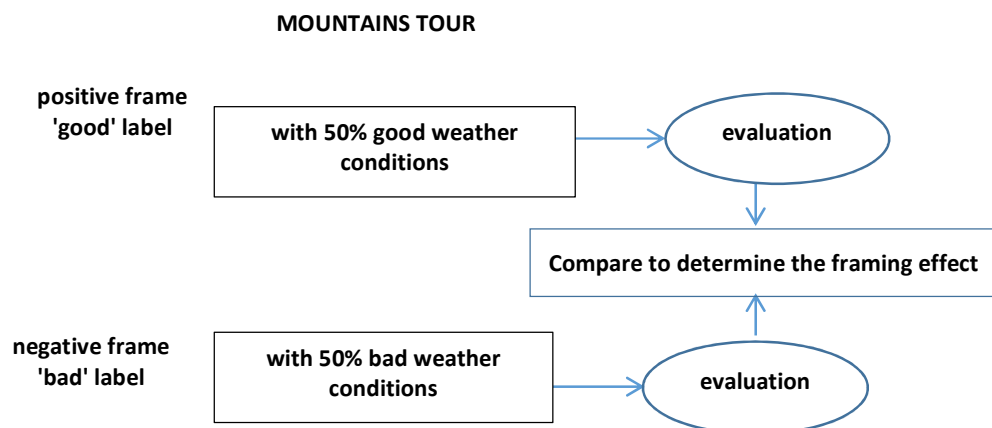


Figure 1, is an adaptation of Levin et al's (1998) attribute framing paradigm (Figure 2 above) to illustrate the attribute framing scenario used in this paper (Levin et al., 1987 often use the term 'label' for the framed attribute). The current study focused on the effects of attribute framing where the object of the frame was a mountains tour, and the attribute in question was the weather on the day of the mountains tour. Participants were asked to indicate/rate their likelihood of booking the mountains tour based on their evaluation of the weather conditions. A detailed rationale for this attribute is given in Section 6.

#### 4. Proposition and hypothesis (H1)

Given Levin et al's valence-consistent shift produced by an association (the anchor) and a probability rate (the adjustment), and Freling et al's perceived psychological congruence, the primary concern would be the tourist's idea of what would be good or bad weather conditions for the planned event. For a mountains tour to be fully enjoyed, fine weather is essential: visibility has to be excellent to see and enjoy waterfalls, flora and fauna clearly at any distance and to take successful colour photographs and videos. A misty, cloudy, or rainy day would ruin the experience.

Thus presenting a weather dependent tourism activity in terms of bad weather should produce unfavourable associations that would consequently lead to an unfavourable impression towards booking in advance without full knowledge of the weather on the day. On the other hand, presenting the same offer in terms of good weather should produce a favourable association (even without full knowledge) and bring about a favourable impression towards early booking. This leads to the following Hypothesis 1:

*H1. Positive presentation of attribute information of a tourism product (namely, the weather conditions on the day of a mountains tour) will elicit more responses in favour of early booking, and negative presentation of the same information will elicit fewer responses in favour of early booking.*

This is modified by the probability rate (50%) whereby the initial judgements are adjusted.

#### 5. Method

*Participants, design and procedure:* The survey was done online. Statistical power analysis revealed 128 as a desired sample size for the study (Jacob Cohen, 1992). However, the ultimate sample size exceeds the desired number. A total of 206 panel members (59% male and 41% female) participated in the survey. They were randomly assigned to one of two conditions, either the positive or the negative attribute framing of a mountains tour. The quality of the data was checked following a minimum survey completion time criterion of 3.30 minutes. Unnecessarily short responses were eliminated from the analysis.

The hypothesis was tested using a typical between-subject design. As mentioned above, 206 panel members participated in the experiment, with an incentive paid by the selected commercial panel. The independent variable was the framing of a single attribute (weather condition) of a mountains tour booking choice problem. The dependent variable was the participants' evaluations of their likelihood of booking in advance or later.

Following Levin et al's (1998) basic pattern of the attribute framing paradigm, a hypothetical mountains tour booking vignette was developed with the manipulation of the weather conditions. The weather was chosen as the attribute of the mountains tour most likely to affect the pleasure of the tour, and consequently to affect the timing

of the booking (early or late). Section 6 below provides a justification for this choice. In the vignette, the attribute was manipulated such that in the positive frame condition it was presented as “50% chance of good weather” and in the negative frame condition it was presented as “50% chance of bad weather”. The participants were told the following:

#### Positively-framed vignette

*Imagine that you are planning a holiday in Gold Coast, Queensland and as part of the holiday you would like to see some of Gold Coast's natural wilderness areas by joining a two-day group mountains tour including Springbrook National Park and Mt Tamborine. The price of the mountains tour is \$500 per person, which includes overnight accommodation and meals.*

*Please note that the pleasure you get from the tour will be largely dependent on weather conditions. You may either book and pay in advance or turn up on the morning of the mountains tour. If you book in advance to secure a place, you'll know less about what the weather will be like later at the time of the tour. If you delay until the morning of the tour, you'll know more about the weather but the tour may be booked out. From past experience, it has been predicted that the chance of good weather conditions on the day of your tour is 50%.*

#### Negatively-framed vignette

*Imagine that you are planning a holiday in Gold Coast, Queensland and as part of the holiday you would like to see some of Gold Coast's natural wilderness areas by joining a two-day group mountains tour including Springbrook National Park and Mt Tamborine. The price of the mountains tour is \$500 per person, which includes overnight accommodation and meals.*

*Please note that the pleasure you get from the tour will be largely dependent on weather conditions. You may either book and pay in advance or turn up on the morning of the mountains tour. If you book in advance to secure a place, you'll not know more about what the weather will be like at the time of the tour. If you delay until the morning of the tour, you'll know more about the weather but the tour may be booked out. From past experience, it has been predicted that the chance of bad weather conditions on the day of your tour is 50%*

To explain further, the vignettes provided information about the importance of weather conditions in order to get the full pleasure from the tour. The extent of knowledge of likely weather conditions was tied to the timing of the tour booking; however, it was presented and manipulated differently (know less about/not know more about) in the vignette. The positive and negative consequences of booking in advance or delaying the booking were stressed in both conditions but framed differently. The positive condition presented the weather favourably (“50% good weather conditions”) and the negative condition presented the weather unfavourably (“50% chance of bad weather conditions”), but in both conditions the vignette stressed the possibility of missing the tour if the booking was delayed until the morning of the tour. Following Levin et al., (1988, 1998), the label “good weather” was expected to produce favourable associations, in contrast to the label “bad weather”; the researcher was curious about whether the participants would take on board the framing of the weather conditions in making their mountains tour booking decisions.

At the end of the vignette, participants were asked to rate the likelihood of their booking of the tour. Participants' demographics were collected at the end of the survey.

## 6. Measures

Independent variable: Weather as an attribute in tourism

The i.v. is attribute framing: in this case, the weather conditions on the day of the mountains tour.

Independent variable: Weather as a tourism attribute

Weather is an essential component of tourism, and has been the subject of a good deal of research (Becken & Wilson, 2013; Førlund et al., 2013; Gössling & Hall, 2006; Hamilton & Lau, 2005; Jeuring & Becken, 2013; Scott & Lemieux, 2010). Weather has a salient influence on tourists' holiday planning, and is a key element in holiday satisfaction. However, the weather is not always as expected, even in a destination that has a stable climate. Many tourist destinations take account of their prevailing climate—for instance, Tarifa, a particularly windy Spanish resort town, in the past a disappointing destination for sun seekers, now promotes its coastline as an ideal windsurfing resort (Becken, 2010); many skiing resorts provide summer attractions, for example Thredbo in the Australian Alps advertises "Summer fun on the snowfields" (TripAdvisor.com, 2014); and many

resorts are making plans for possible climate change conditions (Agnew & Viner, 2001 review the potential impacts of climate change on international tourism)

The actual weather conditions on a particular day, however, can prevent tourists from participating in an anticipated activity, and their overall satisfaction with the holiday destination can be adversely affected. Thus it is in the interests of tourism providers to understand how holidaymakers behave when they encounter disappointing weather conditions, in order to provide appropriate alternative attractions and flexible timetables to allow would-be visitors to plan for such a contingency. Generally, the tourists themselves are expected to adapt to unfavourable weather by adopting different on-site behaviours. Five such behaviours have been categorised by De Freitas (2003) : avoid areas of unfavourable weather (e.g. move from shade to sun), change activity (e.g. swim less), use mechanical aids (e.g. umbrella), adjust personal insulation (e.g. wear warmer clothes), or do nothing and simply accept the bad weather.

However, apart from studies finding out what people do when they are at their destinations, there has been little research on how weather (as opposed to climate) can affect tourists' planning and decision-making before their holidays. Studies have examined the effect of extreme weather conditions, such as devastating bushfires, on visitor numbers. Other studies in Switzerland (Bürki, Elsasser, & Abegg, 2003), Finland (Tervo, 2008) and North America (Shih, Nicholls, & Holecek, 2008) —all cited in Becken (2010)—have confirmed that particular weather conditions in ski resorts substantially affect bookings. (Suppose that Amanda and Scott want to go skiing on Mt. Buller next winter. Venessa knows of an early-bird deal that is a lot cheaper if booked in the previous autumn: she argues that there's *always* snow in winter on Mt Buller. Scott points out that there can be snow-poor seasons, and wants to wait until they are sure there are going to be good snowfalls.)

Thus more research needs to be undertaken to find out how people plan a holiday activity when they are unsure about the short-term weather prospects, since perception of weather conditions are likely to affect timing-of-booking preferences. Using negative (bad weather) and positive (good weather) attribute framing, with the weather as the attribute and gender as a moderator, this study is aimed at filling some gaps in the literature.

Moderator (M): gender

In this study, gender was used as a moderator of the attribute framing effect in order to see whether the framing effect varies across genders. Gender has long been identified as an important factor influencing the strength of framing effects (Cullis, Jones, & Lewis, 2006; N. Fagley & Miller, 1990; N. S. Fagley & Miller, 1997; Lewis, Carrera, Cullis, & Jones, 2009). Fagley & Miller (1997) even claimed that framing studies that did not consider the gender effects might not be comprehensively interpretable. However, in studies that have reported gender differences, researchers disagree on whether men or women show higher susceptibility to framing effects (Huang & Wang, 2010). Some research has found that women compared to men are more receptive to framing effects: for example, Fagley and Miller (1997), using risky choice framing in life-death and monetary domains, found that women, but not men, make riskier choices when outcomes are framed negatively than when framed positively; and Braun, Gaeth and Levin (1996) found that women evaluate and choose a positively framed message about chocolate (80% fat free) significantly more than the negatively framed one (20% fat), whereas men do not. Huang and Wang (2010) documented the moderating effects of sex differences on framing in three different domains: life-death, monetary, and time. Their study concluded that women were more responsive to negative frames in the life-death domain, men were more responsive to negative frames in the monetary domain, and gender differences were inconsistent in the time domain frame.

In line with the past research, this study predicts that men would be more responsive to negative framing than to positive framing, and would therefore be more willing to make risky choices (i.e., opt to wait and book their mountains tour in the morning of the tour in order to minimize losses). The gender of the participants was obtained from the personal information section of the survey, where they selected the relevant M/F box.

Dependent variable (DV): Timing of mountains tour booking intentions:

Participants were asked to rate their likelihood of booking the mountains tour in advance. A typical 1-7 bipolar measure was taken where “1” represented “Very likely to book the tour in advance” and “7” represented “Very unlikely to book the tour in advance” .

## 7. Results

*Manipulation check:* To ensure whether participants correctly perceived the intended levels of valence, the framing manipulation was first checked. Participants responded to a 1-7 bipolar question where it was asked to rate to what extent they felt that the mountains tour booking scenario presented to them was more about the



negative consequences or the positive consequences of their decision. The framing manipulation was effective (positive framing  $M = 3.31$ ,  $SD = 2.09$ , negative framing,  $M = 2.69$ ,  $SD = 1.71$ ). The result indicates a statistically significant difference between negatively versus positively-framed conditions:  $t$ -values = 2.30;  $p < .05$ .

#### Attribute framing effects

$T$ -test was conducted (Table 1) to compare the timing of booking intentions between positively and negatively framed groups of participants. The mean of the negatively framed group was significantly higher from the mean of positively framed group: positive framing ( $M = 3.69$ ,  $SD = 1.79$ ), negative framing ( $M = 4.45$ ,  $SD = 1.89$ );  $t(213) = -2.36$ ,  $p = 0.014$ , where lower value indicates more advance booking intentions. The result suggests that participants in the positively framed conditions were more likely to book the mountains tour in advance than participants in the negatively framed conditions. The statistically significant small effect size (Cohen's  $d = .33$ ) does not necessarily mean that the result was due to chance (J. W. Cohen, 1988, p.22).

In order to investigate whether this study replicates the Levin et al's (1998) 'valence consistent shift of preferences', a further chi-square test followed by participants choice frequency analyses were appropriated. These analyses can be regarded as a secondary to the  $t$  test analysis presented above. The chi-square result indicates a significant relationship between framing conditions (positive vs. negative) and participants' booking intentions (early vs. late) variables,  $\chi^2(1, N = 192) = 6.52$ ,  $p = .010$ . As shown in table 1, the frequency analysis of choice responses revealed that about 51% of the participants preferred to book early in the positively framed condition compared to that of 39% in the negatively framed conditions. In contrast, almost 60% of the participants preferred to delay their booking until morning of the mountains tour in the negatively framed condition compared to 36% in the positively framed condition. Therefore, the result indicates that there is a significantly large difference ( $51.7\% - 38.8\% = 12.6\%$ ) in advance booking intentions between positive versus negative frame participants.

Table 1. Frequencies of choice in negative-frame and positive-frame condition

	Negative frame condition	Positive frame condition
<b>Early booking (1-3)</b>	37 (35.9%)	53 (51.4%)
<b>Indifferent (4)</b>	5 (4.9%)	10 (9.7%)
<b>Late booking (5-7)</b>	61 (59.2%)	40 (38.8%)
<b>Total</b>	103	103

Consistent with many past attribute framing studies (Highhouse & Yüce, 1996; Levin, 1987; Levin, Johnson, Russo, & Deldin, 1985; Levin, Schnittjer, & Thee, 1988), this result replicates a valence consistent choice shift because calling attention to the possibility of negative weather made participants more wary of booking in advance.

#### Therefore H1 is supported.

Effect of gender: Gender has been used as a moderator of the attribute framing effect. The 2-way (framing X gender) ANOVA analysis revealed no significant moderating effect of gender. Also, there was no significant main effect for gender. However, there emerged a small (partial eta squared 0.026, (J Cohen, 1988, pp.284-7) but significant main effect for framing ( $F(1, 204) = 5.81$ ,  $p < .05$ ) which shows that, while attribute framing has an independent main effect on consumers' timing of mountains tour booking intentions, it does not vary significantly across gender.

## 8. Discussion

Attribute framing is one of the frames introduced by Levin et al (1998) to account for the inconsistent results of many Prospect Theory experiments, especially those that do not produce the predicted choice reversal but instead give indefinite preferences or the complete opposite of choice reversal, a choice shift. The objective of

the study was to examine: a) the influence of attribute framing on consumers' timing-of-booking behaviour, and b) whether the attribute framing effect varied across gender.

In line with past attribute framing research, this paper was interested in investigating the evaluation effects of labelling a salient attribute (weather conditions on the days of a mountains tour) in positive and negative terms in the context of tourist timing-of-booking behaviour. The results revealed that the positive labelling of the key attribute (weather conditions) led more participants to book the mountains tour in advance. In contrast, the negative labelling of the same attribute had the opposite effect; the size of this effect was small, but statistically significant, which means that the result was not due to chance. As with most framing experiments, these participants interpreted and responded to negatively and positively framed information in systematically different ways (Chatterjee, Heath, Milberg, & France, 2000; Dunegan, 1994; Kuvaas & Selart, 2004).

The study was particularly concerned with how the framing of 50% possibility of good versus 50% possibility of bad weather conditions affected the timing of participants' booking intentions. The additional analysis of the response data revealed that the negative labelling ('50% chance of bad weather') made participants think more carefully about the tour; more than half (59.2%) of the total participants who were exposed to the emphasised negative framing conditions delayed booking until the morning of the tour; the possibility of bad weather made them cautious of booking in advance. On the other hand, more than half (51.4%) of the participants who were exposed to the positive labelling of weather conditions ('50% chance of good weather') in the accentuated positive framing conditions tended to book in advance. This result is consistent with the explanation/suggestion of Levin et al.'s (1998) associative model: that the labelling of an attribute leads to information encoding such that positive labelling of a key attribute leads to favourable associations while the negative labelling of the same attribute leads to unfavourable associations and consequently affects the judgement and evaluation of the relevant objects or events (Gamliel et al., 2013, p.591). These findings replicate the valence-consistent choice shifts of other attribute framing experiments, explained by the valence-based associative processing of information evaluation of the mountains tour.

The current results also support Levin et al.'s (1988) explanation based on Kahneman and Tversky's anchoring and adjustment heuristic. According to this heuristic, people generally make an initial judgement (having been primed with an anchor), and then make an adjustment according to circumstances and knowledge, or in Levin et al.'s (1988) words, "to accommodate the implications of additional information" (Levin et al., 1988, p.528). Levin et al found that the degree to which adjustments are made depends on the "extremeness" (p. 258) of the labels. Perhaps having 50% good weather and 50% bad weather as the labels was not extreme enough to provide a large framing effect.

Climatic conditions are often used as a selling proposition for destination marketing organizations (DMOs), but certain weather aspects might act as demotion for some travellers (e.g. Braun et al., 1999). This raises the question of the capacity of tourism marketers to encourage early booking behaviour through promotional programs focusing solely on the weather conditions at the destinations. This research shows that although positive framing of the weather at a destination or tourism activity might increase advanced booking, the study also suggests that it would be advisable for tourism marketers to think carefully before stressing any aspect of the weather as a key attribute of a tour and similar outdoor tourism activities.

Regarding the results that emerged from incorporating gender as a moderating variable, previous attribute framing reported significant interaction effects. As noted earlier, women preferred the 80% fat free chocolate over the chocolate that contained 20% fat, whereas the message had no effect on men (Braun, Gach, & Levin, 1997). However, the current study did not find a statistically significant moderation effect of gender on framing: the framing effect was similar for both male and female participants. Clearly, fat is a gender issue, but a mountains tour is not.

## **9. Limitations and scope of future research**

Some limitations of the study should be kept in mind when interpreting its results.

Firstly, an experimental design limits the generalization of the findings to more natural holiday booking situations. In this case, the holiday context of a mountains tour may not have appealed to, or been appropriate



for, all the participants. Many will not have had prior experience of a mountains tour; some may not have been interested in a mountains tour; some may not have heard of the Springbrook National Park or Mt Tamborine. The context thus may have affected their booking choices, and may explain their responses in the positive framing where 10% of the total respondents exposed to positive framing remained indifferent in making their booking decision.

Secondly, only a single attribute of the holiday offer, the weather, was manipulated; but many other features such as price deals would naturally come into play when making booking decisions.

Thirdly, Also, had the magnitude of the risk been presented with greater extremities (such as an 80/20 chance of good/bad weather prospects), the study may have produced different results.

Fourthly, the moderator was gender, where no significant interaction was reported. However, attribute framing research has shown the moderating effects of other variables of personal involvement such as mood, ethical and political considerations, and personality traits. The presence of such variables can affect the findings:

[In our study] the effect of the information frame depended on the nature of the task...the disappearance of framing effects with increased levels of personal involvement was apparently due to a discounting of the information passage containing the framing manipulation (Levin et al, 1988, p. 524)

Future framing research in the domain of tourism can incorporate other variables as moderators in order to see how they interact with the framing and travellers' timing-of-booking intentions.

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