When do consumers prefer partitioned prices? The role of mood and pricing tactic persuasion knowledge

Das, Gopal; Roy, Rajat; Naidoo, Vik

Published in:
Journal of Business Research

DOI:
10.1016/j.jbusres.2020.05.013

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Abstract

Through three laboratory experiments and a study conducted in a natural setting, this research investigates the unexplored area of the role of mood (positive versus negative), pricing frame (partitioned versus combined), and pricing tactic persuasion knowledge (PTPK = low versus high) on product attractiveness and purchase intention. Study 1 explores a mood × frame interaction, with results showing that subjects in the positive mood report higher attractiveness and purchase intention for a product framed in partitioned (versus combined) pricing. Studies 2A and 2B find a pricing frame × PTPK interaction, and the results reveal that low PTPK subjects prefer the partitioned (versus combined) pricing offer. This effect is found to be mediated by ease-of-processing. Finally, a study conducted in a natural setting enhances the external validity of the mood based findings. The observed results advance pricing theory and provide much-needed insights for managers.

Keywords: Partitioned pricing, Combined pricing, Mood, Pricing tactic persuasion knowledge

1.0 Introduction

Retailers regularly frame equivalent price options in different ways, such as by breaking them up into a base price and surcharges, or offering a single total price (Lee *et al.*, 2014; Morwitz *et al.,* 1998). The first option is referred as the partitioned price, while the latter as a combined price. For example, an online retailer may advertise a T-Shirt with a base price of $22 plus $5.99 for shipping and handling fee (i.e., a partitioned price). On the other hand, another retailer may post a total price of $27.99 for a similar shirt (i.e., a combined price). Online retailers such as Amazon and eBay often frame their offers using partitioned prices (Sheng *et al.,* 2007). In recent times, there has been a proliferation in partitioned pricing techniques, with evidence showing that several industries like hotels and airlines benefitting from it (Lee *et al.,* 2014). The practice of partitioned pricing is also gaining prominence as technological advancement allows for varied ways of displaying pricing information to customers (Lee *et al.,* 2014).

A recent study by Greenleaf et al. (2016) highlights the theoretical importance of partitioned pricing in the literature. Reviewing a wide range of downstream empirical research, Greenleaf et al. (2016) outline several moderators that influence the choice of partitioned prices. For example, extant research has identified consumer motivations like regulatory focus and need for cognition as moderators to the preference for a partitioned price (Burman and Biswas, 2007; Cheema, 2008; Lee *et al.,* 2014). However, Greenleaf et al. (2016) recommend more inquiry, especially to understand when consumers prefer partitioned over combined prices. Greenleaf et al. (2016) also draw attention to the construct of pricing tactic persuasion knowledge (PTPK) (Hardesty *et al.,* 2007), as a possible moderator to the preference for partitioned (vs. combined) pricing.

Similarly, Lee et al. (2014) urge researchers to investigate the role of mood in influencing susceptibility to partitioned prices. Although several studies have demonstrated

that mood states can influence motivated information processing and influence consumer judgment and choice (e.g., Han *et al.*, 2007; Kramer and Yoon, 2007), no prior research has examined how mood motivates processing of partitioned versus combined price information in decision making (Das and Roy, 2019; Lee *et al.*, 2014). Similarly, despite previous studies showing that consumer ability (such as PTPK, defined as the level of consumer knowledge about pricing tactics engaged by marketers) can influence pricing decisions (e.g., Pillai and Kumar, 2012), no prior work has specifically examined the role of PTPK and its influence on partitioned pricing. Several scholars (e.g., Pillai and Kumar, 2012; Kachersky, 2011; Carlson *et al.*, 2007) recommend causal research to understand the influence of PTPK on price adoption. Investigating these research gaps advances existing pricing, persuasion knowledge and consumer mood literatures (e.g., Greenleaf *et al.*, 2016; Burman and Biswas, 2007; Kachersky, 2011; Carlson *et al.*, 2007; Lee *et al.*, 2014), and have significant implications for managers.

In the current work, we propose and empirically test a framework, in which consumers' mood state (motivation) and ability (PTPK) can influence pricing decisions. We test the proposition that motivation to process information based on one's mood state leads to differential preferences for a pricing frame (e.g., partitioned vs. combined). Further, we advocate that preference for a pricing frame can also be influenced by one's PTPK. Building on the research of PTPK (e.g., Friestad and Wright, 1994; Pillai and Kumar, 2012), mood (e.g., Han *et al.*, 2007; Kramer and Yoon, 2007), and pricing (e.g., Lee *et al.*, 2014; Greenleaf *et al.*, 2016), the present work proposes this novel framework which has not been tested before, despite growing calls from scholars to conduct more pricing research. Across four studies, this research shows that: (i) subjects in the positive mood report higher attractiveness and purchase intention for a product offering that engaged a partitioned (versus combined) pricing frame; (ii) low PTPK subjects prefer a product offering under the partitioned (versus

combined) pricing frame, and (iii) the effect of pricing frame and PTPK on consumer decision is mediated by ease-of- processing of price information.

The present work contributes to the existing literature of pricing, persuasion knowledge and mood in several ways. First, it builds on extant works (e.g., Roy *et al.*, 2016; Pillai and Kumar, 2012) to extend research on PTPK and provide a unique ability-based explanation of consumers' price adoption. Second, it builds upon the extant work of Greenleaf et al. (2016) and Lee et al. (2014) and highlights PTPK and mood as moderators to the influence of pricing frame on consumer price-related decisions. Finally, it contributes to the mood literature and shows that mood state can influence the processing of price information, thereby, answering the recent call from Das and Roy (2019), to explore the role of mood in partitioned pricing. From a managerial perspective, the observed findings can help managers design retail atmospherics to target customers with effective pricing strategies.

The rest of the paper is organized as follows. First, we report the theoretical background leading to the key hypotheses. This is followed by methods and results for the three laboratory experiments conducted to test the key hypotheses. We also conducted a study in a natural setting (e.g., university computer shop) to test the managerial implications of our findings. Next, we discuss the theoretical contributions and managerial implications of the results, and then finally, we outline the limitations and directions for future research.

2.0. Conceptual background and hypothesis development

2.1. Partitioned versus combined price framing

Partitioned pricing is conceptualized as "a strategy that divides a product's price into a base price, charged for the product itself, and a mandatory surcharge(s) for products, services, fees, or taxes associated with purchasing or using the product" (Lee *et al.*, 2014, p. 356). It has been generally divided into two parts – base price and surcharge. The base price is

normally the larger part, while the smaller component is referred to as a surcharge (Morwitz *et al.,* 1998; Ferguson, Brown, and Johnston, 2017). On the other hand, a combined price charges a single price including all fees. Examples of combined prices in real life may include books ordered online delivered for free (Hamilton, Abraham, and Srivastava, 2010), resorts like Club Med offering all-inclusive prices, or policy adopted by Southwest Airlines such as "freedom from fees" to distinguish itself from other airlines that add surcharges like fuel and baggage fees (Hamilton *et al*., 2010).

Past pieces of evidence show that the underlying technique of breaking a price into its components can trigger higher demand, especially when compared to a single price (Hossain and Morgan, 2007; Dickson and Sawyer, 1990). This is because when exposed to a partitioned price, consumers tend to underestimate the surcharges or even ignore them, thereby resulting in a lower perception of the total price (Hossain and Morgan, 2007; Kim, 2006; Xia and Monroe, 2004). This psychological perception of low price, in turn, influences the level of demand (Dickson and Sawyer, 1990).

While calculating partitioned prices, consumers normally make a trade-off between the levels of cognitive effort to be applied versus the precision of information processing (Morwitz *et al.,* 1998). Explained differently, buyers are less likely to expend cognitive effort or even apply heuristics to estimate total costs, and subsequently ignore surcharges if they place a higher demand on cognitive processing (Das and Roy, 2019; Chetty *et al.*, 2009). An alternative explanation has been offered based on the anchoring and adjustment paradigms (Clark and Ward, 2008; Morwitz *et al.,* 1998). While processing partitioned pricing, consumers tend to anchor on the base price and do not make sufficient adjustment in response to surcharges, thereby underestimating the total price (Clark and Ward, 2008; Morwitz *et al.,* 1998).

Past research has studied several moderators that influence preference for partitioned pricing. For example, consumers prefer partitioned prices when surcharges are used to justify well-demanded product features (Chakravarti *et al.,* 2002). Similarly, consumers prefer partitioned pricing when the surcharges are packaged in a way to sound like a good pricing deal (Bertini and Wathieu, 2008). Further, consumers may prefer partitioned prices when they lack the motivation to expend cognitive resources, such as people with a low need for cognition (Burman and Biswas, 2007). Despite this progress, scholars (e.g., Das and Roy, 2019; Greenleaf *et al.,* 2016; Lee *et al.,* 2014) recommend that future research should study mood and consumer's PTPK as potential moderators.

2.2. Mood as a moderator to preference for partitioned versus combined pricing

Mood is conceptualized as "a type of affective state which is transient and particular to a specific time and situation" (Jeon, 1990, p. 24). Several studies provide evidence as to how mood can influence cognitive processing (Schwarz and Clore, 2003). According to the mood-as-information hypothesis (Schwarz and Clore, 2003; Braun-LaTour, Puccinelli, and Mast, 2007), mood states provide information about the nature of the immediate situation. For example, a positive mood can signal the absence of threat and suggest that everything is well, while a negative mood alerts an individual to a problem in the immediate situation. Consequently, people in a positive mood are not motivated to spend cognitive resources, whereas, people in negative mood, are motivated to carry out a more detail-oriented and careful information processing in decision making (Gasper, 1999).

People in a positive mood try to take cognitive shortcuts and process information in a more heuristic manner (Schwarz *et al.*, 1991). Further, positive mood tends to focus on global features (e.g., notice the overall shape of a triangle that is made up of many small triangles) in information processing task (Gasper and Clore, 2002). Whereas, people in negative mood tend to take up more cognitively taxing and analytical style of processing, thereby relying

less on heuristics (Bless *et al.*, 1996). Further, negative mood focusses more on local features of a stimulus (e.g., notice the small triangles that make up an overall triangle) in decision making (Gasper and Clore, 2002). To sum up, mood can influence the underlying motivation to process information in decision making.

Based on the above mood literature, it seems that people in positive versus negative mood are driven by the differing motivation to process information and may further pay attention to different features of a stimulus. In the case of partitioned pricing, consumers tend to use heuristics rather than expend cognitive resources to integrate different pieces of information, resulting in a lower price perception (Burman and Biswas, 2007). These authors argue that when people lack the motivation (such as the low need for cognition) to process information, they use simplifying heuristics and consequently anchor on the base price, thereby making an insufficient adjustment for additional information like surcharges (Burman and Biswas, 2007). Based on the mood literature, people in a positive mood are more likely to undertake such heuristic-based and effortless processing, while their counterpart should engage more systematic and deliberative processing. As a result, they are more likely to pay attention to all relevant information for decision making. People in a negative mood are, therefore, more likely to compare both types of pricing (i.e. combined and partitioned), and comprehend that they are equivalent options, but framed differently. Accordingly, we posit:

> **H1:** Consumers in a positive mood will perceive (a) greater attractiveness; and express (b) higher purchase intention when the product is offered under a partitioned versus combined price.

2.3. PTPK as a moderator to the preference for partitioned versus combined pricing

Persuasion knowledge refers to the fact that consumers are aware of a firm's motive, and the ensuing tactics engaged in convincing them to buy a product or service (Friestad and Wright, 1994). Persuasion knowledge enables customers to respond to the marketer's influences,

adaptively. Persuasion knowledge model, therefore, involves an agent of persuasion, the target and the perception of the target regarding the agent's attempt to influence behaviour (Hardesty *et al.*, 2007; Friestad and Wright, 1994; Holmes *et al.*, 2017).

The persuasion knowledge concept has been extended to the domain of pricing as well (Pillai and Kumar, 2012; Hardesty *et al.*, 2007). The pricing tactic persuasion knowledge framework argues that people have different knowledge levels regarding the intent underlying marketer's pricing tactics. Hardesty *et al*. (2007) developed a seventeen item PTPK scale to measure consumer responses to a variety of pricing tactics such as everyday low pricing, price bundling amongst others. PTPK essentially taps into pricing related knowledge of consumers gained through marketplace experience. Consumers' PTPK, therefore, represents their ability to react to pricing influence tactics engaged by companies in the marketplace. Several shreds of evidence from the pricing literature support this premise (Pillai and Kumar, 2012; Kachersky, 2011; Carlson *et al.*, 2007).

In the event of a price increase, high PTPK consumers could deliberate on inferred motives leading to the price increase while their counterparts do not make such inferences (Kachersky, 2011). Previous findings also show that high PTPK consumers are resistant to persuasive intent like tensile price discounts and quantity surcharges (Hardesty *et al.*, 2007). Similarly, Pillai and Kumar (2012) argue that low PTPK consumers may be prone to coupon redemption as they lack the ability to discern the persuasive intent of the marketers. In the case of partitioned prices, we believe that low PTPK consumers are more likely to be susceptible to this tactic since they lack the requisite knowledge structure and hence the ability to understand the persuasive tactic engaged by the company. On the other hand, high PTPK consumers have the ability to elaborate and are, therefore, less susceptible to this tactic. Based on this, we posit:

H2: Low PTPK consumers will perceive (a) greater attractiveness; and express (b) higher purchase intention when the product is offered under a partitioned versus combined price.

We further argue that the interactive effect of PTPK and pricing frame on decisions would be mediated by ease-of-processing of price information (Briñol, Petty, and Tormala, 2006). In other words, lack of ability would motivate low PTPK subjects to engage effortless processing in response to partitioned prices. We draw on extant literature to argue this point. For example, evidence from previous studies posits that when people lack cognitive ability (limited executive resources, low aptitude score), they tend to rely on effortless processing (Reinhard and Sporer 2008; De Neys, 2006).

In the context of partitioned prices, the past work of Chetty et al. (2009) argues that focusing on base price is an effortless or easy way to process price information, as processing surcharges involves expending cognitive effort. Supporting this line of argument, recent work of Das and Roy (2019) shows that subjects with independent self-construal tend to process the base price and ignore surcharge information. Focusing on the base price and overlooking surcharges can further lead to lower price perception (Hossain and Morgan, 2007; Kim, 2006; Xia and Monroe, 2004). This, in turn, may encourage a favourable attitude towards partitioned vs. combined pricing offer. We, therefore, propose that:

H3: Low-PTPK subjects' preference for the product offering (in terms of attractiveness and purchase intention) under partitioned (vs. combined) pricing is mediated by "ease-of-processing" of price information.

We use four studies to test the above three hypotheses empirically. Study 1 tests how mood influences attractiveness and purchase intention for a product offering made under partitioned versus combined pricing (H1). Studies 2A and 2B examine how PTPK influences

attractiveness and purchase intention for a product offer made under these different pricing frames along with the underlying mechanism (H2 and H3). Finally, a study conducted in a natural setting (a university computer shop) provides external validity for our mood-based results.

3.0. Study 1: consumer mood and pricing frame interaction

In Study 1, we examined how consumer mood influences the attractiveness and purchase intention for a product offer made under partitioned versus combined pricing (H1). In this study, we manipulated consumer mood (positive vs. negative) and pricing (partitioned vs. combined) following well-established procedures (Gasper and Clore, 2002; Lee *et al*., 2014).

3.1. Participants and design

A total of 160 students (females = 48%, M_{age} = 23.2) from a large university participated in study 1 in lieu of partial course credit. Study 1 was a 2 (mood: positive vs. negative) × 2 (pricing frame: partitioned vs. combined) between-subjects design. Following Gasper and Clore's (2002) procedure of mood manipulation, participants were asked to write one of their life events that made them feel either "positive" (positive mood) or "negative" (negative mood). Participants were given 10 minutes to write the story. After this, participants were asked to report on a 7-point bipolar scales (negative-positive) about how they felt at that moment.

After the mood priming task, the students participated in another unrelated study about pricing. Following Lee *et al. 's* (2014) pricing manipulation procedure, the participants were requested to imagine that they wanted to travel to Mumbai City, the largest commercial city of India. Participants were represented with pricing information for a round-trip air ticket from the nearest airport to Mumbai city. In partitioned pricing frame, the total air ticket cost was shown as $90 for the base fare plus an additional surcharge of $22 for tax and other

charges (see Appendix). On the other hand, in a combined pricing frame, the air ticket cost was shown as $112 including all surcharges.

Next, participants reported how they perceived the attractiveness of these two pricing offers. Offer attractiveness was measured with two items on a 7-point scale [i.e., overall, the ticket's price was "*very unattractive"* (1) to "*very attractive"* (7); "*very undesirable"* (1) to "*very desirable"* (7)]. Participants also reported their purchase likelihood of the air ticket using three items measured with a 7-point scale [i.e., my purchase likelihood of the air ticket is; the probability of buying the ticket for the visit is; and my readiness to book the ticket is; "*very low"* (1) to "*very high"* (7)].

3.2. Results

3.2.1 Manipulation check.

The manipulation check revealed that consumer mood was primed successfully. Subjects who wrote about a positive event (vs. negative event) felt more positive than negative ($M_{positive}$ = 5.13, *SD* = .97, $M_{negative}$ = 2.12, *SD* = .69, *t*(138) = 20.10, $p < .001$).

3.2.2 Attractiveness of offer

The main effects of framing (*F* (1, 156) = 22.60, $p < .05$, partial $\eta 2$ = .13) and mood (*F* (1, 156) = 4.21, $p < .05$, partial $\eta 2$ = .03) on attractiveness were significant. The interaction effect of mood and pricing frame on attractiveness was also significant, (*F* (1, 156) = 33.12, $p < .05$, partial $\eta 2$ = .18). Results of contrast analyses showed that participants primed with positive mood perceived partitioned pricing as more attractive compared to combined pricing ($M_{partitioned}$ = 5.58, *SD* = .61, $M_{combined}$ = 4.26, *SD* = .58, *t* (78) = 9.93, $p <$ .05). However, participants perceived no difference in attractiveness of partitioned versus

combined pricing when they were exposed to negative mood ($M_{partitioned}$ = 4.60, *SD* = .92, $M_{combined}$ = 4.73, *SD* = .96, *t* (78) = .59, *p* > .05). These results support H1a.

3.2.3. Purchase likelihood

The main effects of framing (*F* (1, 156) = 4.72, *p* < .05, partial *η2* = .03) and mood (*F* (1, 156) = 21.54, *p* < .05, partial *η2* = .12) on purchase intention were again significant. The interaction effect of framing and mood on purchase intention was also significant (*F* (1, 156) = 10.90, *p* < .05, partial *η2* = .07). Comparisons of means showed that participants in positive mood showed higher purchase intention when the ticket was offered under partitioned pricing than combined pricing ($M_{partitioned}$ = 5.42, *SD* = .73, $M_{combined}$ = 4.57, SD = 1.00, *t* (78) = 4.21, *p* < .05). However, under negative mood, participants' intention to purchase the ticket across the pricing frames was found to be similar ($M_{partitioned}$ = 4.18, *SD* = .96, $M_{combined}$ = 4.36, *SD* = 1.14, *t* (78) = .74, *p* > .05). Thus, the findings support H1b. Table 1 reports the cell means for both attractiveness and purchase intention.

<Insert Table 1 about here>

3.3. Discussion

Study 1 derived from the mood literature to posit how mood may moderate the effect of price framing on consumer decisions. To the best of our knowledge, no previous study has proposed and empirically studied the relationship between mood and price framing. The findings from Study 1 supported the consumer mood and pricing frame interaction hypothesis and showed that participants in positive mood preferred a product offering in terms of attractiveness and purchase intentions under the partitioned (versus combined) pricing. The findings support the well-established heuristic related mechanism in the context of positive mood and decision making (e.g., Schwarz *et al.*, 1991). Such heuristic related mechanisms have also been reported earlier in the context of regulatory focus and partitioned pricing (Lee

et al., 2014), and similarly for the need for cogntion and partitioned pricing (Burman and Biswas, 2007). We extend this line of research further by showing that positive mood's heuristic driven decision-making style inclines them towards partitioned (vs. combined) prices. Studies 2Aand 2B were further designed to test our second and third hypotheses related to PTPK and pricing frame interaction along with the underlying process.

4.0. Study 2A: PTPK and pricing frame interaction

We carried out Study 2A to test H2 in the context of online mobile phone purchase. Pricing was presented in two different frames – partitioned and combined pricing. Following the literature (Hardesty *et al*., 2007), PTPK was measured.

4.1. Participants and design

114 students (females = 47%, M_{age} = 21.10) of a large university participated in this study in exchange for a pen worth US$ 1. This study was a 2 (pricing frame: partitioned vs. combined) x PTPK (low vs. high) between subjects. Pricing frame was manipulated while PTPK was measured. The pricing manipulation was done following the same procedure as in study 1, albeit for the online purchase of a mobile phone (see Appendix). In partitioned pricing condition, the price was shown as $220, for the handset and $7 as a surcharge. In combined pricing condition, participants were shown $227 as the total price of the mobile phone including surcharge. Subsequently, participants reported the attractiveness and purchase intention of the mobile phone and completed the 17-item PTPK scale adopted from the Hardesty et al. (2007) study. Following Hardesty et al. (2007), we scored each correct answer to pricing tactic question as one, and incorrect answers were assigned zero. The total score for a participant was calculated by summing individual scores for all the 17 items.

4.2. Results

4.2.1. Hypothesis testing

To test our H2, we used Hayes (2013) PROCESS Model 1. The results are reported in Tables 2A and 2B. In our analyses we mean centred PTPK so that PTPK = 0 has a meaning, i.e. represent people with average PTPK.

From the top panel of Table 2A, the conditional coefficient of pricing frame was positive and significant, meaning partitioned (compared to combined) prices increase the attractiveness of the offer, especially for people with low PTPK ($\beta = 0.40$, $t = 3.05$, $p = 0.00$). However, the positive effect is reversed for people with high PTPK (a negative interaction $\beta = -.11$, $t = -1.94$, $p = 0.05$). The Johnson-Neyman point for the moderator is 1.03. Consumers with low PTPK ranging from -5.08 till the cut-off point 1.03 found the offer attractive when it was presented under partitioned (vs. combined) pricing frame. This effect was not significant for people with PTPK score of 1.03 and above. These results support H2a.

A similar pattern of results can be noted for purchase intention (Table 2B). Once again from the top panel, partitioned (versus combined) pricing frame increases purchase intention for low PTPK people ($\beta = 0.89$, $t = 3.69$, $p = 0.00$). However, partitioned price reduced purchase intention amongst high PTPK consumers (a negative interaction $\beta = -.23$, $t = -2.25$, $p = 0.03$), with the Johnson-Neyman point being 1.38. Like attractiveness, we found that people with PTPK ranging from -5.08 till 1.38 expressed higher purchase intention under partitioned (vs. combined) pricing frame. This effect did not hold for people with PTPK score beyond 1.38. These results are in line with our expectation of H2b.

<Insert Tables 2A and 2B about here>

5.0. Study 2B: PTPK and processing strategy

5.1. *Participants and design*

225 students (females = 47.6%, M_{age} = 23.2) of a large university participated in this study in exchange for course credit. The study followed a similar (pricing frame: partitioned vs. combined) between subjects' design, while PTPK was measured. The same dependent variable measures from Study 2A were engaged along with the mobile phone purchase scenario. Study 2B was designed to replicate the findings from Study 2A, and especially to test our moderated mediation hypothesis H3. To do this, a three-item measure of 'ease-of-processing' with endpoints 1 = strongly disagree, and 7 = strongly agree, were engaged. Sample items included "I think processing the price information was easy", "I think processing the price information was effortless" and, "I think processing the price information was quick" (Cronbach alpha = 0.70).

5.2. Results

5.2.1. Hypothesis testing

To test our H2 and H3, we ran PROCESS Model 8 (Hayes, 2013) with 5000 bootstrap analyses. Pricing frame served as the independent variable while mean centred PTPK was the moderator. Like study 2, we once again find support for our H2. For "attractiveness", partitioned (versus combined) increased attractiveness for low PTPK people (β = 0.91, t = 5.31, p = 0.00) and this effect is reversed for high PTPK (a negative interaction β = -.20, t = -6.38, p = 0.00). Similarly, for "purchase intention", partitioned (versus combined) increased purchase intention for low PTPK (β = 1.09, t = 7.30, p = 0.00), while this effect reversed for high PTPK (a negative interaction β = -.17, t = -6.14, p = 0.00). The Johnson-Neyman point for attractiveness was at PTPK = 3.06, meaning people with PTPK ranging from -7.46 till 3.06 preferred the partitioned over combined prices. The effect for low and high PTPK was further confirmed by PROCESS values at -1 SD (β = 1.99, t = 6.73, p = 0.00) and +1 SD (β =

-.19, t = -1.10, p = 0.27). For purchase intention, consumers with PTPK ranging from -7.46 to 4.82 expressed higher intention when the product was offered under partitioned (vs. combined) pricing. The effect for low and high PTPK was again confirmed from the PROCESS output at -1 SD (β = 2.0, t = 7.73, p = 0.00) and +1 SD (β = 0.17, t = 1.16, p = 0.25). H2a and b are, therefore, supported.

More importantly we find support for H3. First, with the mediator "ease-of-processing" we find partitioned (versus combined pricing) facilitated effortless processing for low PTPK (β = 1.43, t = 15.24, p = 0.00) which diminished for high PTPK subjects (a negative interaction β = -.26, t = -15.22, p = 0.00). Further, effortless processing had a positive effect on "attractiveness" (β = .23, t = 2.75, p = 0.00). The indirect effect of pricing frame on attractiveness was significant for consumers with low PTPK (effect = 0.67, LLCI = 0.14 ULCI=1.16) while it was not significant for high PTPK (effect = -0.00, LLCI = -0.08 ULCI= 0.08).

We find similar effects for purchase intention. First, partitioned (versus combined) pricing facilitated easy processing for low PTPK (β = 1.43, t = 15.24, p = 0.00) which diminished for high PTPK (a negative interaction β = -.26, t = -15.22, p = 0.00); with ease of processing influencing purchase intention positively (β = .21, t = 2.87, p = 0.00). The indirect effect of pricing frame on purchase intention was significant at low PTPK (effect = 0.61, LLCI = 0.21 ULCI=1.03) but not for high PTPK (effect = -.00, LLCI = -.06 ULCI=0.08). Given these findings, H3 was supported.

5.2.2 Additional analysis

To supplement PROCESS Model 8 analysis for our mediator, we further conducted a two-way ANOVA with median split PTPK (0 = low and 1 = high) and pricing frame (0 = combined, 1 = partitioned) as the independent variables. 'Ease-of-processing' was used as the dependent variable. Findings show a significant two-way interaction between PTPK and

pricing frame (F (1,281) = 286.53, $p < 0.001$). Low PTPK people reported significantly higher ease-of-processing for the partitioned, compared to the combined price (Ms of 5.84 vs. 2.89, $p < 0.001$). No such difference was observed for high PTPK people ($p > 0.05$). In other words, since low PTPK lacked the cognitive ability, they seem to engage effortless processing of price information concerning partitioned (vs. combined) pricing. Easy processing of partitioned prices means focusing on the base price only, and this, in turn, led to lower price perception and favourable attitude towards the partitioned (vs. combined) pricing.

5.3. Discussion

The results of studies 2A and 2B showed that participants with low PTPK perceived greater attractiveness and expressed higher purchase intention when the product was offered under a partitioned versus combined price. However, participants with high PTPK did not show this effect. The attractiveness and purchase intention for the product was reduced amongst high PTPK people, when a partitioned pricing frame was used. Further, in terms of the underlying process, it was found that low PTPK adopted an effortless processing of information when exposed to partitioned prices. Low PTPK's preference for the offer made under partitioned (vs. combined) pricing was thus mediated by ease-of processing of price-related information. Through studies 1, 2A and 2B, we tested the impacts of mood (H1) and PTPK (H2, H3) on preference for partitioned versus combined pricing.

6.0. General discussion

Across three experimental studies (i.e. studies 1, 2A, 2B), we showed that mood, PTPK and pricing frame could influence the preference for a product offering made under partitioned versus combined prices. To improve generalizability, two different product categories, mobile phone and airline tickets were used to test the key hypotheses. Our first

study shows that positive mood influences preference for pricing frame. This is the case when people have low motivation to process information. This effect disappears when people have high motivation, i.e. under the influence of negative mood (a null effect). Studies 2A and 2B similarly show that pricing frame has an influence on low PTPK people, i.e. when people have a low ability (e.g., expertise) to process price information. The effect disappears for high PTPK people. We now discuss the contributions and implications of the current research.

7.1. Contributions and implications

Our findings make several contributions to the pricing literature. First, as discussed in the introduction, the current research answers call from marketing and pricing researchers (e.g., Das and Roy, 2019; Lee *et al*., 2014; Greenleaf *et al*., 2016) to understand the role of PTPK in influencing responses to partitioned versus combined pricing. Based on our findings, PTPK can be a moderator to price framing. To the best of our knowledge, no such finding has been reported in the literature before. Our findings regarding the influence of low PTPK on product decision through ease-of-processing for partitioned prices has not been established in the literature before. The causal nature of findings from the current work, therefore, extends the PTPK literature (Carlson *et al*., 2007; Pillai and Kumar, 2012) by showing that consumer knowledge can influence the decision for price adoption. Our findings contribute to the mood literature as well. We show that positive mood's heuristic-based processing is at play when people are deciding between different price framing. Prior work shows that positive mood can encourage heuristic processing in general (Schwarz *et al.*, 1991). Heuristics can also influence the preference for partitioned pricing, albeit for consumers with different regulatory foci and need for cognition (Lee *et al*., 2014; Burman and Biswas, 2007). No previous work has, however, shown that positive mood can drive preference for partitioned prices, and this is a unique contribution of the present research.

7.1.1 Managerial implications

The findings have implications for managers as well. First, it would be helpful for managers to understand the level of PTPK to frame pricing decisions. Extant findings show that for newly launched products, consumers have a low level of PTPK (Hardesty *et al*., 2007; Kachersky, 2011). Managers in these markets should, therefore, engage partitioned over combined pricing. Further, certain industries like hotel and airlines have long benefitted from partitioned prices (Lee *et al.*, 2014). Given our findings, people such as holidaymakers who are more likely to be in a positive affective state should prefer such pricing frame. Similarly, coupon prone consumers are more likely to have less confidence in their persuasion knowledge of pricing tactics (Pillai and Kumar, 2012), or in other words, demonstrate low PTPK. Past research shows that certain product or service (e.g., beauty salon) are more likely to use coupons (Swaminathan and Bawa, 2005). Based on our findings, a partitioned price would be more effective for products that engage coupons. Finally, our mood-based findings have important implications as well. Retail atmospherics such as ambient music has been long known to influence consumer decisions (Kumar, Anand and Song, 2017). Mood states can be induced in shoppers, to influence consumer's attitude towards partitioned pricing.

7.1.2 Study conducted in a natural setting

To test how our mood-based results could be implemented from a managerial perspective, we conducted an experiment over 5 weeks, using an IT (information technology) campus store at a large University. We used the natural store setting and a laptop display to study the purchase intention of students as consumers. The independent variables in this study (e.g., pricing and product display, ambient music) simulated the actual shopping experience, and participants were unaware of these manipulations. This study was therefore high on experimental realism with regards to the independent variables, while behavioural

measures were recorded (Morales, Amir, and Lee, 2017; Gneezy, 2017). Students were randomly exposed to the shopping task of a MacBook laptop under four experimental conditions: pricing frame (partitioned versus combined pricing) and mood (happy vs. sad).

To operationalise pricing frame, the MacBook price was displayed as partitioned price (MacBook price + sales tax) or combined price (MacBook price inclusive of sales tax). Mood was manipulated through ambient store music. We exposed participants to 'Coppelia' by Delibes, played at normal speed to induce a happy mood. Similarly, for sad mood, 'Russia under the Mongolian Yoke' played at half speed. These manipulations have been successfully used by previous studies (Standage, Ashwin, and Fox, 2010; Clark and Teasdale,1985).

Students shopped inside the store at their own pace. The MacBook laptop was displayed prominently so that students could see and evaluate it. Two researchers, both blind to the study hypothesis, were engaged for this experiment. The first confederate posed as a sales assistant, while the second confederate intercepted the student, once he or she left the store. The second confederate further requested subjects to complete a short survey. The survey consisted of measures used in our lab experiments, i.e. "attractiveness", "purchase intention" and included checks for mood manipulation. Students also reported their demographics.

170 (females = 52 %, M_{age} = 22.6 years) students participated in this experiment. Results of manipulation check showed that people exposed to 'Coppelia' reported being happier in comparison to their counterparts (Ms of 5.08 vs. 2.41, p<0.001). Similarly, people who were exposed to 'Russia under the Mongolian Yoke' reported being sadder, compared to their counterparts (Ms of 4.82 vs. 2.27, p<0.001). More importantly, we found a significant two-way interaction for "attractiveness" (F (1, 166) = 36.9, p < .001) and "purchase intention" (F (1, 166) = 40.1, p < .001). Subjects in the happy mood preferred the partitioned

pricing in terms of "attractiveness" ($M_{partitioned}$ = 5.14 vs. $M_{combined}$ = 3.24, t (166) = 9.0, p<0.001) and "purchase intention" ($M_{partitioned}$ = 4.84 vs. $M_{combined}$ = 3.06, t (166) = 8.3, p<0.001). This effect disappeared for subjects under negative mood. The means are reported in Table 3. Thus, based on our findings, it is possible that ambient music can put subjects into different mood states, which can then influence the preference for a specific pricing frame.

<Insert Table 3 about here>

7.2. Limitations and future research

The current work has a few limitations, which provide avenues for future research. Future work may look at different ways of manipulating mood (e.g., watching happy vs. sad movies) to validate and extend some of the current experimental findings. Future research can also inquire into how individual characteristics like price maven, price consciousness, or people's numerical ability to compute prices may impact preferences for partitioned prices (Greenleaf *et al.*, 2016; Lee *et al.*, 2014). As summarized in their excellent research review, Greenleaf et al. (2016) methodically list a wide range of research possibilities (e.g., antecedents, moderators to partitioned pricing) that await future inquiries from marketing and pricing researchers. Finally, we did not capture actual purchase data in our last study conducted in a natural setting. Therefore, we invite future scholars to examine the mood and price framing interaction on actual purchase.

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List of tables

Table 1: Attractiveness and purchase intention as a function of mood and price framing

Mood	DV = Attractiveness		DV = Purchase Intention	
	Partitioned	Combined	Partitioned	Combined
Positive	5.58 (0.61) N = 40	4.26 (0.58) N = 40	5.42 (0.73) N = 40	4.57 (1.0) N = 40
Negative	4.60 (0.92) N = 40	4.73 (0.96) N = 40	4.18 (0.96) N = 40	4.36 (1.14) N = 40

Figures in parentheses represent standard deviation

Table 2A: PROCESS model results for study 2A

Dependent Variable: Attractiveness

	Coeff.	SE	t	p
Constant	4.03	0.33	12.04	0.00
Frame (Partitioned = 1, Combined = 0)	0.40	.13	3.05	0.00
PTPK	-.06	.04	-1.22	.23
PTPK x Frame	-.11	.06	-1.94	.05
Income	.00	.004	.21	.83

Conditional effect of Frame on attractiveness at values of PTPK

PTPK	Effect	SE	t	p
1 SD Below Mean	.67	.19	3.53	.00
Mean	.40	.13	3.05	.00
1 SD Above Mean	.13	.19	.69	.48

Table 2B: PROCESS model results for study 2A

Dependent Variable: Purchase Intention

	Coeff.	SE	t	p
Constant	6.1	.61	9.97	.00
Frame (Partitioned = 1, Combined = 0)	.89	.24	3.69	.00
PTPK	.05	.08	.57	.57
PTPK x Frame	-.23	.11	-2.25	.03
Income	.003	.008	.49	.62

Conditional effect of Frame on attractiveness at values of PTPK

PTPK	Effect	SE	t	p
1 SD Below Mean	1.46	.35	4.19	.00
Mean	.89	.24	3.69	.00
1 SD Above Mean	.32	.35	.91	.36

Table 3: Attractiveness and purchase intention as a function of mood and price framing

Mood	DV = Attractiveness		DV = Purchase Intention	
	Partitioned	Combined	Partitioned	Combined
Positive	5.14 (0.94) N = 47	3.24 (1.0) N = 41	4.84 (1.01) N = 47	3.06 (.95) N = 41
Negative	3.87 (1.02) N = 42	3.81 (0.97) N = 40	3.77 (0.97) N = 42	3.94 (1.06) N = 40

Figures in parentheses represent standard deviation

Appendix

Study 1 stimuli: Air ticket pricing manipulation – partitioned pricing versus combined pricing

FLIGHT ***Delhi-Mumbai***

- Same Airline
- Same Timings
- Same Services

Air Fare details

Base Fare	*$ 90*
Tax and other charges	
Passenger service fee	*$ 6*
User Development fee	*$ 9*
Airline Service Tax	*$ 2*
Other Surcharge	*$ 5*
Total Fare	*$ 112*

FLIGHT ***Delhi-Mumbai***

- Same Airline
- Same Timings
- Same Services

Air Fare *$ 112 (inclusive of Tax and other charges)*

Studies 2 and 3 stimuli: mobile pricing manipulation – partitioned pricing versus combined pricing

Online Mobile Shopping Invoice

- Same online shopping website
- Same Mobile
- Same destination of delivery
- Same Services

Price details

Quantity	1
Price of handset	$220
Tax and other charges	
Tax	*$5*
Shipping charges	*$2*
Total Fare	*$ 227*

Online Mobile Shopping Invoice

- Same online shopping website
- Same Mobile
- Same destination of delivery
- Same Services

Price details

Quantity	1
Total Price of handset *(Inclusive of Tax and other charges)*	$227