Exploring the Differences in Pay-What-You-Want Pricing between Products and Services: Interactive Effects of Product Knowledge, Social Visibility and Tangibility

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INTRODUCTION
Pay-what-you-want (PWYW) is a unique participative pricing mechanism in which the buyers can pay nothing or pay any price they want and the seller has to accept it without being able to withdraw the offer (Kim et al., 2009, 2014). Prior research on PWYW pricing, focuses on the direct and interactive effects of several individual and situational variables, such as altruism, price consciousness and fairness perceptions (Kim et al., 2009), involvement level (Roy 2015), internal reference prices (Roy et al. 2016a), external reference prices, social visibility and purchase motivation (Roy et al. 2016b). However, most of these studies were conducted in popular service contexts such as restaurant, cinema and delicatessen (Kim et al., 2009, 2014; Roy et al. 2016a,b). Hence, it is not clear if and to what extent the mechanism by which consumers decide how much to pay in a PWYW setting, is similar or different between the products and services contexts. Similarly, recent studies examine the role of product involvement and social visibility in PWYW decision-making process but ignore other variables such as consumer knowledge and product/service characteristics. We address both these gaps with a new conceptual model that incorporates direct and interactive effects of consumer knowledge, social visibility and tangibility as the independent variables and the allocation of internal reference prices into the prices that the consumers are willing to pay as the dependent variable, while controlling for involvement level. We use a lab experiment with undergraduate students to test our hypotheses and report our findings in this paper.

CONCEPTUAL FRAMEWORK AND HYPOTHESES
PWYW is an innovative strategy that shifts the control over pricing decisions from the seller to the buyer (Santana and Morwitz, 2011). Consumers perceive greater control and purchase intentions (Kim et al., 2009) as well as fairness and satisfaction (Haws and Bearden 2006) in PWYW settings because of their active participation in the price-setting process. PWYW also allows consumers to evaluate their consumption experiences individually and this leads to price differentiation and heterogeneous evaluations (Spann and Tellis, 2006). Finally, PWYW may la benefit the sellers by helping them attract more buyers (especially those who may be more price-conscious) who may not otherwise think about buying from them (Kim et al., 2009).

Buyers in PWYW setting often rely on memory-based cues, such as internal reference price (Kim et al., 2009). For example, Kim et al. (2009) show that buyers are willing to discharge a certain proportion of their internal reference price (IRP) to the seller in a PWYW setting, across a diverse range of product categories, including restaurants, cinema, and hot beverages. The proportions of internal reference price discharged to the seller were influenced by variables such as fairness, altruism, price consciousness, income, satisfaction, and reference price.

More recently, Roy et al. (2016a) extend this line of research to show that altruism and social desirability have positive effects on IRP and price consciousness affects IRP negatively. IRP also mediates the effects of altruism, social desirability and price consciousness on WTP (price...
consumers are willing to pay in PWYW setting), future purchase intention and attitude towards the seller. Roy (2015) further investigates the relationship between IRP and WTP to show that product involvement and price-consciousness negatively moderate this relationship. Similarly, Roy et al. (2016b) show that consumers allocate a higher share (RATIO) of their internal reference prices (IRPs) to the prices to be paid (PTP) in PWYW context, in private under intrinsic purchase motivation and in public under extrinsic or altruistic motivation and this effect is more pronounced in the absence of ERP.

Notwithstanding the useful contribution of all these studies, it is still not clear why consumers with higher involvement level would be willing to pay less under PWYW setting and if there are any other factors besides purchase motivation and involvement that may influence consumers’ PWYW pricing decisions. Moreover, most of these studies focus on services and hence it is not clear if the underlying mechanism for consumers’ pricing decisions would be similar or different for products versus services. To address these gaps we explore the interactive effects of social visibility with two new variables (consumer knowledge and tangibility) on RATIO (proportion of internal references prices that consumers are willing to allocate to the prices to be paid in PWYW context). Specifically, in this paper we put forth and test the following hypotheses:

H1: Consumer knowledge has a negative effect on RATIO, such that consumers with higher (lower) knowledge about a product/service pay lower (higher) prices.

H2: Social visibility has a positive effect on RATIO, such that consumers pay lower (higher) prices under lower (higher) social visibility.

H3: Tangibility has a positive effect on RATIO, such that consumers pay lower (higher) prices for a product/service with higher (lower) tangibility.

H4: Social visibility negatively moderates the effect of consumer knowledge on RATIO, such that the negative effect of consumer knowledge is weaker (stronger) under higher (lower) social visibility.

H5: Tangibility negatively moderates the effect of consumer knowledge on RATIO, such that the negative effect of consumer knowledge is weaker (stronger) under higher (lower) tangibility.

H6: Tangibility positively moderates the effect of social visibility on RATIO, such that the positive effect of social visibility is stronger (weaker) under higher (lower) tangibility.

H7: Tangibility negatively moderates the two-way interaction between consumer knowledge and social visibility, such that the negative effect of consumer knowledge is weaker (stronger) with higher (lower) social visibility for product/service with low tangibility; and vice versa for those with high tangibility.

**METHODOLOGY**

We used a 2 X 2 X 2 lab experiment using imaginary scenarios at a large Australian University with 200 participants (102 females) with movies as the research setting. We chose university students for this study, as they are a primary target segment for movies. 65% of the respondents are aged 25 years or below and 72% watch movies regularly (at least once a week). Most
respondents (90%) have monthly expenditure of AU$2000 or less. Participation in this study was voluntary and the participants did not receive any credit or compensation. We manipulated consumer knowledge (low vs. high), social visibility (alone vs. with friends) and tangibility (watching movie in cinema vs. watching movie DVD at home) using eight versions of a basic scenario, as follows: “You are at the movie theatre (DVD rental store) alone (with your friends) on a weekend and thinking about which movie to watch. You see a poster for a new movie about which you have read many (not read any) reviews and are quite (not at all) familiar with its storyline, the main characters and the cast. As you think about (discuss with your friends) about this movie, you notice a special offer which allows you can pay whatever price you want for a movie ticket (including a price of zero)”. After reading this scenario, the participants recorded the amount of money they would be willing to pay (WTP) followed by well-established scales for study realism, price consciousness, internal reference price, social desirability, future intention. Finally, we recorded their gender, age, monthly expenses and movie watching habits.

DATA ANALYSIS AND RESULTS

We tested all the scale items for their reliability, and validity using confirmatory factor analysis with AMOS 22.0. Measurement model shows a good fit ($\chi^2 = 232.26, df = 168, \chi^2/df = 1.41$, RMSEA = .045, CFI = .95, NFI = .90, SRMR = .051) with all the fit-indices are better than the recommended cut-off values (RMSEA < .06, SRMR < .08, CFI > .95, NFI > .90). All factor loadings are large and load significantly (at .01 level) on their expected latent constructs, showing convergent validity. All the scales are reliable with high composite reliabilities (.76 – .93) and show discriminant validity with the average variance extracted (AVE) for each construct higher than the square of its correlations with all the other constructs.

Next, we used Univariate Analysis of Variance (UNIANOVA) with SPSS 22.0 to test all the hypotheses, with the three manipulated variables as fixed factors, all demographics as covariates and RATIO as the dependent variable. Consumer knowledge has a significant effect on RATIO with a higher (53% vs. 48%) allocation of IRP into WTP under low (vs. high) knowledge (H1); whereas the effects of social visibility (H2) and tangibility (H3) are in expected direction but not significant. The two-way interactions among visibility and knowledge (H4), tangibility and knowledge (H5) and tangibility and visibility (H6) are also not significant; however, the three-way interaction among these variables (H7) is significant (F = 10.16, p < .01).

DISCUSSION

We found mix support for our hypotheses with most of the effects in the expected direction but some are not significant (possibly due to our relatively small sample size). One of our key findings is that consumers with lower knowledge about a movie are willing to allocate a higher proportion of their IRP for higher tangibility product (DVD) in private and lower tangibility (Cinema) in public. In contrast, consumers with higher knowledge are willing to allocate greater proportion of their IRP for the Movie in private and DVD in public. We argue that low consumer knowledge could be like a default or baseline condition where consumers behave simply based on the congruence of tangibility and context, paying more for a DVD (high tangibility) in private and Movie (low tangibility) in public. In contrast, for high product knowledge, watching movie in theatre may be more satisfactory when alone because of the bigger screen and better viewing experience whereas watching a DVD will be more satisfactory when with friends because it may allow them to show off their knowledge.
REFERENCES


