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Anchors and norms in anonymous pay-what-you-want pricing contexts

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ABSTRACT

In this paper, we examine whether firm-supplied numbers influence reported payments in anonymous pay-what-you-want (PWYW) exchanges. PWYW allows consumers to select any level of voluntary payment. Using two experiments, we find that consumers voluntarily report payments greater than zero on average in the absence of social pressure. Further, reported voluntary payments are influenced by numbers in the exchange context. When higher numbers are present, consumers respond by reporting they would make higher payments. However, the meaning of the number is also important. When the number represents a descriptive norm (what others are doing), it is more predictive of reported payments compared to a number that represents an injunctive norm (what is the "correct" thing to do) in some cases. Our results indicate that PWYW may indeed be feasible for products that are purchased anonymously and that firms can strategically provide information that affects payments.

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1. Introduction

It's up to you. pay-what-you-want (PWYW) refers to a voluntary market pricing strategy that allows buyers to select any payment at or above zero for a product which the seller must then accept (Kim, Natter and Spann, 2009). Rather than a traditional purchase context where a consumer encounters a price and then decides whether or not to consummate the purchase (Monroe, 1979), consumer decision making in PWYW is more nuanced. Researchers have recently begun to explore why and how much consumers will voluntarily pay under this pricing strategy. The current research explores the effects of firm-supplied numeric information on voluntary payments in anonymous exchanges. The use of anonymous exchanges in a PWYW context represents a unique contribution that has to date received very little empirical study. Prior research has considered only contexts in which PWYW exchanges are subject to influences attributable to social norms. Two studies are reported that provide insights into consumer decision making when interpersonal social pressure is removed from the exchange setting. Although price constraints are removed by the firm in true PWYW settings, consumers may nevertheless be influenced by normative information available to them in the purchase situation. The first study tests whether reported voluntary payments are influenced by numeric information provided by a firm. Do consumers anchor on the nominal value of the numeric information by paying more when provided with a larger value? If so, does the type of normative information (descriptive or injunctive norm) supplied by that information further influence payments? Study 2 extends findings by testing numeric information that represents low, expected and high prices using a different population.

Although it has been demonstrated that consumers pay more than zero on average in PWYW contexts (e.g., Kim, Natter and Spann, 2009; Gneezy et al., 2010, 2012), most studies have used settings where social pressure exists at the point of purchase or the product is consumed in the presence of others. Despite numerous business examples of successful anonymous PWYW exchanges (e.g., Radiohead's online release of *In Rainbows*), previous academic research suggests that social pressure is a necessary condition for voluntary payment. This perspective ignores a variety of products that are well-suited for PWYW from a cost-structure perspective, but do not involve interpersonal interactions (e.g., mp3 downloads, applications, software, streaming video and a variety of entertainment media). Firms that provide these types of products have negligible marginal costs and an unhampered ability to meet increased demand. The current research explores PWYW decision making in an anonymous online context, testing the feasibility of the strategy for online transactions.

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Beyond the expectation that payments will be above zero in anonymous PWYW exchanges, we explore a factor under the control of the firm that may influence payment levels. When a consumer makes a voluntary payment, it is a decision fraught with uncertainty. Therefore, PWYW payments are likely to be affected by heuristics and biases (Tversky and Kahneman, 1974). Anchoring is a decision making bias where judgments are unduly influenced by numeric information that serves as a starting value for estimations (Slovic and Lichenstein, 1971). Further, numeric information means little or nothing without context. It is important to test for differential effects on reported payment amounts based on the type of normative information provided by the numeric information in a PWYW exchange context. In two studies, we test whether consumers anchor on a number supplied by a firm during the PWYW exchange, thereby influencing voluntary payments.

The paper is organized as follows. The next section summarizes findings from previous research in PWYW. Next, we present our hypotheses and outline the experimental procedures. Section 5 presents results from the two studies and the final section provides the discussion and concludes the paper.

2. Background

2.1. Anonymity and PWYW

Published research in PWYW pricing has found that, on average, consumers pay more than nothing in both hypothetical and experimental scenarios (Jang and Chu, 2012; Johnson and Cui, 2013; Mak, Zwick, and Rao, 2010; Schmidt, Spann, and Zeithammer, 2012), as well as in field studies where actual payments are made (Borck, Frank, and Robledo, 2006; Gautier and Klaauw, 2012; Gneezy et al., 2010, 2012; Kim, Kaufmann, and Stegemann, 2013; Kim, Natter and Spann, 2009; León, Noguera, and Tena-Sánchez, 2012 ; Lynn, 1990; Regner and Barria, 2009; Regner and Riener, 2012; Riener and Traxler, 2012). The majority of PWYW research has included face-to-face interaction contexts. Kim, Natter and Spann (2009) claim that personal interaction is important for the business feasibility of a PWYW model, in spite of numerous successful real-world impersonal business examples. Products and services where transactions are not "face-to-face" often represent contexts where PWYW pricing may be less risky to a firm and more profitable. Although Kim, Natter and Spann (2009) purposefully selected products where the financial exchange is person to person, they also explain that the selected contexts used in their studies (buffet lunches, hot beverages and movie tickets) are appropriate given the products' "high fixed costs but low variable costs" (p. 49). Further, Kim et al. (2013) explain mixed findings related to social distance by acknowledging that high distance conditions took place in social contexts (restaurants).

Similarly, Johnson and Cui (2013) asked participants to imagine speaking with a box office employee and then verbally report the price they would like to pay. The hypothetical personal interaction imposes a social element even though most consumers would be just as likely to purchase the ticket online. Thus, it might be assumed based on past research that PWYW contexts must naturally involve some level of social influence resulting from personal interaction. However, this may not be the case in all instances where PWYW pricing is used. Specifically, the present research seeks to replicate the basic PWYW finding that consumers will pay more than zero, but we generalize this effect to settings that do not involve a personal interaction between buyer and seller during the purchase exchange.

It may seem safe to assume that buyers pay more when they are observed or think they are being observed. For example, even a set of photocopied eyes on the wall has been shown to significantly increase payments into an honesty box (Bateson, Nettle, and Roberts, 2006). Regner and Riener (2012) find that revealing the consumer's name in an online PWYW exchange slightly increases payment amounts, but it suppresses purchase frequency in general and therefore leads to lower overall profit for the firm. The assumption that a buyer will not act fairly when acting anonymously is somewhat surprising. Many studies have demonstrated that people will act fairly in anonymous situations even when they have little or no rational reason to do so (e.g., Frey and Meier, 2004). Public good dilemmas, ultimatum and dictator games suggest that *homo economicus*, the mythical man that seeks to maximize utility, is a product of theory rather than an exemplar of real world behavior (Ariely, 2009). Instead of free riding and zero contributions, people frequently make contributions to shared public goods and anonymous partners. In such situations, the buyer is nevertheless sending a signal to the self regardless of whether or not the seller is physically collecting the payment (Gneezy et al., 2012). The desire to appear to the self as a good and fair person can be a strong motivator to act commensurately (Dunning, 2007).

2.2. Anchoring and PWYW

To predict that there will be some level of payment in anonymous PWYW contexts is only a first step. Factors such as fairness, reciprocity, loyalty, guilt, altruism, frames, reference prices, personal income, nationality, gender, satisfaction, price consciousness, charitable giving/prosocial motives, self-signaling, social pressures, internal and external reference prices have all been identified and/or investigated as predictors of PWYW payment magnitudes (see León, Noguera, and Tena-Sánchez, 2012, p. 400 for an overview). However, between product contexts within studies and across researchers, findings on the influences of different factors on PWYW payments have been mixed. Other researchers speculate on influences without testing them empirically or they simply rely on anecdotal evidence. The current research borrows from the willingness-to-pay (WTP) literature in traditional pricing contexts to investigate how numeric information in an anonymous purchase context affects purchase judgments.

Numeric information in a PWYW context is expected to influence payments via a phenomenon known as anchoring. Anchoring is a form of heuristic decision making that biases judgments in a systematic and predictable fashion based on available numbers (Tversky and Kahneman, 1974). In order to reach a decision, consumers "anchor on," or begin with, a piece of available information and then progress up or down until a plausible or acceptable value is reached (Slovic and Lichenstein, 1971). These adjustments to the "correct" level are normally insufficient because the decision maker typically stops as soon as the value is within an acceptable range rather than continuing to adjust to the correct value (Epley and Gilovich, 2001).

In a pricing context, anchoring is an important heuristic because prices are by nature numeric information, thus enhancing the likelihood that they will be used as a basis for determining WTP and product quality. Also, external reference price (ERP) information is prevalent in purchase contexts. ERPs are defined as any price information that is presented during the purchase occasion, such as the original price for an item that has been marked down or an advertised competitor's price (Mayhew and Winer, 1992). Given that determining a product's value and making a decision about WTP is a challenging task involving a numeric estimation, it is not surprising that anchoring effects are present in a purchasing context. Rather than having stable price information about how much a product is worth, consumers construct preferences spontaneously in the purchase setting (Bettman, Luce, and Payne, 1998). Consumers do