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Pay-What-You-Want – A New Participative Pricing Mechanism

Ju-Young Kim is a research assistant and doctoral candidate, University of Frankfurt, Germany

Martin Natter is the Hans-Strothoff Chair of Retailing, University of Frankfurt, Germany

Martin Spann is Professor of Marketing and Innovation, University of Passau, Germany

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Contact Information:

University of Frankfurt, Hans-Strothoff Chair of Retailing, Mertonstrasse 17-25,
60054 Frankfurt am Main, Germany, fax: +49 (0) 69 798 23167,
E-mail: {jukim,natter}@wiwi.uni-frankfurt.de

University of Passau, Chair of Marketing and Innovation, P.O. Box 2540, Innstrasse 27,
94032 Passau, Germany, tel.: +49 (0) 851 509 2421, fax: +49 (0) 851 509 2422,
E-mail: spann@spann.de

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Abstract

Pay-What-You-Want (PWYW) is a new participative pricing mechanism whereby consumers have maximum control over the price they pay. Previous research suggests that participative pricing increases consumers' intent to purchase. Sellers using PWYW face the risk, however, that consumers exploit their control and pay nothing at all or a price below the seller's costs. The authors find in three field studies that prices paid are significantly greater than zero. They analyze factors influencing prices paid and show that PWYW can even lead to an increase in seller revenues.

Keywords: Pay-What-You-Want, Pay-As-You-Wish, Participative Pricing, Service Pricing, Voluntary Contributions

Introduction

Companies can attempt to differentiate themselves from competitors through their products and services or their marketing strategy. One key element of the marketing strategy is companies' pricing strategy. Tellis (1986) discusses various pricing strategies which companies may pursue. The key objective of pricing strategies is maximizing sellers' profits by capturing consumers' heterogeneous product valuations and accounting for competition and cannibalization. Further, consumers' reactions to different pricing strategies may not be purely rational but driven by behavioral aspects such as perceptions and preferences. Consumers' perceptions of different pricing models may therefore be an additional opportunity for companies to differentiate themselves from competition – e.g. by applying a preferred or innovative pricing mechanism.

Participative pricing mechanisms, such as auctions and Name-Your-Own-Price, can be seen as innovative, here in the sense of unconventional, by involving consumers in the price-setting process. Hence, innovative pricing models can be anything that is different from the usual way of setting the price for a specific product. With the advent of the worldwide web, auction-based pricing mechanisms have been perceived as innovative in selling small-value items such as collectibles (Lucking-Reiley 2000). Similarly, the Name-Your-Own-Price (NYOP) mechanism, where consumers bid for a product against an undisclosed threshold price set by the seller, can be considered innovative (Chernev 2003; Spann and Tellis 2006; Amaldoss and Jain 2008). These mechanisms have in common that they allow for differentiated prices accounting for consumer heterogeneity and that consumers (buyers) can exert some control over the final price for the transaction – i.e. participate in the price-setting process (Spann and Tellis 2006). Chandran and Morwitz (2005) found that participative pricing, and therefore higher perceived control of the buyers, led to a greater

intent to purchase. Moreover, they show that consumers who have experience of participative pricing mechanisms prefer them to predetermined (i.e. posted) prices. In this case, the participative pricing model may attract consumers' attention, potentially leading to (new) customers. Furthermore, the mechanism may increase a seller's popularity by word-of-mouth. We conjecture that participative pricing models can be perceived as (i) innovative and (ii) preferable, owing to their inherent delegation of some control over the price-setting process to consumers.

Pay-What-You-Want (PWYW) is such a participative pricing model, with buyer's control over the price-setting being at a maximum level: the buyer can set any price above or equal to zero which the seller cannot reject. The most prominent recent example of an application of PWYW is that of the rock band Radiohead. For two months the band offered their fans the chance to download their new album on their own website and to pay as much as they wanted. The album was downloaded over two million times and the band said afterwards that this price format was profitable for them.¹ Among other online downloads (e.g. www.sheeba.ca or open-source software), PWYW is also applied in areas such as gastronomy and hotel industries. For instance, the Pakistani restaurant Wiener Deewan, in Vienna, has been allowing its clients to self-determine the prices for their meals since its opening in April 2005. Prices for drinks are fixed, but customers decide how much they would like to pay for the food. According to press reports and direct interviews with the owner, the business model has been successfully established, and the restaurant was even expanded just two months after the opening. Similar concepts can be found worldwide, such as in Berlin (www.weinerei.com), Seattle (www.terrabyte.org) and Melbourne

¹ Radiohead made the offer between 10 October and 10 December, 2007: fans could even pay nothing if they wanted to. Only the credit card handling fee of forty-five pence was mandatory. In total, the album was downloaded about two million times, and prices ranged from forty-five pence (the transaction fee) to £99.99. According to the lead singer Thom Yorke, Radiohead had profited from the PWYW format, making more money from digital downloads of 'In Rainbows' than from digital downloads of all their other studio albums combined. (http://www.wired.com/entertainment/music/magazine/16-01/ff_yorke?currentPage=all).

(www.lentilasanything.com). Thus, PWYW appears to be an interesting pricing mechanism that should be taken into consideration by marketers and researchers.

Given higher purchase intentions and the preference of customers for participative pricing mechanisms (Chandran and Morwitz 2005), PWYW may be preferred by consumers for the level of control offered and the novelty of the mechanism. The obvious risk, of course, is that customers exploit their control and pay nothing at all or a price well below seller's cost. In such a situation, the seller would not survive for very long. In contrast to NYOP and auctions, no minimum price is implemented that could protect the seller against such low prices. We have, however, observed several sellers who use PWYW successfully and have even expanded their business. Thus, it is interesting to study customer usage behavior and acceptance of PWYW as well as the effect of its application on the seller's performance. To the best of our knowledge, no previous research has studied PWYW.

The goal of our study is to explain buyer's pricing behavior in PWYW and to analyze the impact of PWYW on sellers' revenues and unit sales. The remainder of the paper is structured as follows. In the next section, we outline the functionality and classification of PWYW and summarize previous research on participative pricing mechanisms to draw important insights and conclusions from similar pricing mechanisms such as NYOP and auctions. From related literature we discuss motives underlying payment and derive hypotheses for buyer behavior in PWYW. This discussion leads us to our proposed model, which will be tested empirically with data from three field studies. The three studies test our model of buyer behavior for different products in service industries: a restaurant lunch buffet, movie screenings in a cinema and hot beverages at a deli. We also analyze the effects of PWYW on sellers' revenues, comparing prices and sales obtained under PWYW conditions with baseline sales at posted prices. Finally, we discuss the implications of our findings.

Pay-What-You-Want

Definition and Classification

We define PWYW as a participative pricing mechanism that delegates the whole price determination to the buyer. The seller simply offers one or more products under PWYW conditions whereas the buyer decides on the price. After the buyer has set the price, the transaction automatically proceeds. Thus, the seller must accept the buyer's price and cannot withdraw the product offer.

PWYW is classified as a participative pricing mechanism characterized by the fact that buyers participate in the price determination. Our classification (see Figure 1) of alternative participative pricing mechanisms builds on the market making mechanisms of Dolan and Moon (2000). We distinguish different participative pricing mechanisms in Figure 1 according to the type of interaction: one seller and one buyer (*'one-to-one'*) or several buyers and/or several sellers (*'horizontal interaction'*). We include the non-participative posted price (*'set price'*) set by a seller as a reference.

Insert Figure 1

The most prominent examples of participative pricing mechanisms with horizontal interaction are (1) classic auctions, where multiple buyers compete with their (increasing) bids to buy a product from a seller, (2) reverse auctions, where multiple sellers compete with their (decreasing) bids to sell a product to a buyer, and (3) exchanges where multiple sellers and buyers compete on both sides of the market.

Participative pricing mechanisms characterized by the interaction between one seller and one buyer are (4) negotiations, where buyer and seller haggle over the price for the product, as well as (5) Pay-What-You-Want (PWYW) and (6) Name-Your-Own-Price

(NYOP), which are both characterized by the buyer setting the final price. The most important difference between PWYW and NYOP, however, is that in NYOP the seller can reject a buyer's bid if it is below an undisclosed threshold price set by the seller in advance.

NYOP sellers can therefore influence the final price by setting this (minimum) threshold price, protecting themselves from having to accept bids which are too low. Current examples of sellers using NYOP are priceline.com (which specializes in selling flights, rental cars, hotel accommodation, vacations and cruises), eBay with its 'Best Offer' feature, discount airlines LTU.com and Germanwings.com and the software seller ashampoo.com. Because Priceline combines the NYOP mechanism with opaque products where the actual seller (airline) will be revealed to buyers only after the purchase, it adds horizontal interaction among sellers to its mechanism.

In contrast to NYOP, no minimum threshold price exists in PWYW that could protect the seller against low prices. The seller has to accept any price set by the buyer, including a price of zero. PWYW does not entail competition among the buyers, unless the seller offers a product of limited availability. In that case, consumers who buy first are served first.

Previous Research on Participative Pricing

Research on participative pricing mechanisms such as NYOP, auctions and price negotiations has recently gained popularity (Chernev 2003; Ding et al. 2005; Kamins et al. 2004; Spann and Tellis 2006) (although the literature on NYOP is still limited). Participative pricing has become more popular since the Internet provides a direct link to consumers and has made it easier to implement pricing mechanisms such as auctions and NYOP (Kannan and Kopalle 2001). In the following, we will limit our discussion to a brief summary of some key findings in this area. Although auctions and NYOP are mostly implemented by online

retailers, the following findings on participative pricing mechanisms refer to both online and offline applications.

Participative pricing mechanisms allow for (individually) differentiated prices as an outcome of the interaction, which accounts for heterogeneous valuations of consumers and thus increased efficiency (Spann and Tellis 2006). In addition, the seller is enabled to serve buyers who would otherwise be priced out of the market (Bakos 1998). This also implies a benefit to the buyer arising from the pricing mechanism. Sellers can attract new customers' attention owing to the mechanisms' high level of innovativeness by permitting the consumers to participate in the price-setting process. Chandran and Morwitz (2005) showed that consumers prefer to participate actively in setting the final price than to accept posted prices. Moreover, their results indicate that a higher perceived control of the buyers led to a greater intent to purchase. Consumers have higher fairness perceptions and satisfaction when they play a role in the price-setting process than when the prices are set by the retailer (Haws and Bearden 2006). Haws and Bearden (2006) found that prices set through bidding were perceived as fairer than posted prices when the subject paid prices that were (equal to or) higher than their reference price. Finally, participative pricing mechanisms can provide useful information about consumers, such as their willingness-to-pay (WTP) (Spann et al. 2004). Power-sellers on eBay, for instance, who repeatedly sell similar products in auctions, can use the individual prices paid for sales forecasts. PWYW sellers can also use the individual prices for internal forecasting as well as for adapting the cost structure to the actual prices paid.

Buyer Behavior at PWYW

In a PWYW setting, consumers can determine any price for the product they buy. Theoretically, the range of possible prices is unlimited starting from zero, since no threshold price exists. An economically rational customer, who maximizes her single purchase utility,

may exploit the mechanism to pay a price of zero, but we observe from successful implementations of PWYW, both online and offline applications, that this is predominantly *not* the case. An example of typical behavior is shown at the Viennese restaurant Wiener Deewan, which offers meals under PWYW conditions. According to its owner, prices paid range from €0 to €20 with a mean price of €7.49. Obviously, consumers' motives differ from the assumption in neoclassical economic theory that consumers purely maximize their utility. Hence, other factors must play a role when the PWYW price is determined. Below, we first discuss motives why we expect consumers to pay positive prices at PWYW, and second develop a model to explain prices paid to PWYW sellers.

Motives underlying payment

Based on Fiske's theory of social relations (Fiske 1992), Heyman and Ariely (2004) define two general categories to describe exchange relationships: money-market relationships and social-market relationships. In money-market relationships, exchange between at least two parties is regulated by the use of a value or utility metric, e.g., the price for a product. In contrast, social-market relationships are characterized by non-payment and exchange partners act according to social exchange norms (i.e., norms of reciprocity, norms of cooperation or norms of distribution) whereas money-market relationships invoke market exchange norms (Shampanier et al. 2007). PWYW dissolves the usual money-market relationship between seller and buyer by leaving the complete price determination to the buyer. Since a buyer can pay any price including zero, the relationship is less governed by market exchange norms but rather by social exchange norms which in turn influence the buyer's behavior (Osterhus 1997). This involves norms of distribution which imply that people seek an equal allocation of resources and which are particular strong in democratic societies (Elster 1989). Violating these social exchange norms, in case of PWYW by paying nothing at all, may result in distress and social disapproval by other people (Ariely et al. 2007; Elster 1989; Venkatesan

1966). The benefit of non-payment must therefore be higher than the anticipated distress and fear of disapproval associated with the violation of social norms. Related, Kahneman et al. (1986) found that people are rather willing to incur a loss than to accept an unequal distribution. An additional explanation why consumers may pay more than zero is provided by Lynn (1990). He found that customers of a restaurant chose to pay more than they had to for entrees which they had already consumed. Lynn concluded that some people might use the price as an impression management tool based on a desire to avoid appearing poor or cheap.

Since our empirical study is embedded in a democratic society, we expect that most consumers will conform to social norms and may not like to appear cheap in face-to-face interactions. Thus, we hypothesize:

H1: Prices paid at PWYW in face-to-face interactions are greater than zero.

Model of prices paid

Our model of prices p_{ij}^{PWYW} paid at PWYW consists of two principal components, buyers' reference price RP_{ij} for the product (the amount of money they think it normally costs) and the proportion a_{ij} of consumer i 's RP_{ij} s/he is willing to discharge to the seller for a specific product j . Hence, the remaining $(1-a_{ij})$ proportion of RP_{ij} is the customer's deal profit. Equation (1) states our basic model:

$$(1) \quad p_{ij}^{PWYW} = a_{ij} \cdot RP_{ij} \quad a_{ij} \geq 0$$

Neoclassical economic theory would suggest that consumers pursue a strategy to maximize their utility, resulting in $a_{ij} = 0$. Mostly, however, we can observe successful applications of PWYW, where buyers pay positive prices, i.e. $a_{ij} > 0$. This leads to a question about the relevant factors that motivate buyers to discharge part of their reference price to the

seller, thus reducing their deal profit. In the following, we derive hypotheses concerning the determinants of the final price paid. We therefore differentiate between drivers affecting a_{ij} and the consumer's reference price.

Drivers of proportion of buyer's reference price discharged to seller

Recently, several studies in experimental economics have provided evidence that consumers are strongly motivated by concerns of fairness and reciprocity (Andreoni and Miller 2002; Bolton and Ockenfels 2000; Fehr and Schmidt 2003; Fehr and Schmidt 1999; Rabin 1993). Rabin (1993) developed the concept of the fairness equilibrium, which is based on the assumption that people help those who are kind to them and punish those who are unkind. Microeconomic experiments, such as the Ultimatum Game (Bolton 1991; Fehr and Schmidt 2003; Henrich 2000; Roth 1995) also weaken the hypothesis that consumers mostly act in a selfish and rational manner. Instead, the results indicate that many consumers are willing to cooperate and that their behavior is strongly driven by fairness concerns. In the Ultimatum Game, two subjects (consumers) interact in the allocation of an endowment. The proposer determines the allocation of the endowment such as a fixed sum of money between him/herself and the responder. The responder can either accept or reject the proposal. If the responder decides to reject, neither of them receives anything. Neoclassical economic theory, assuming that individuals maximize utility, would suggest that the proposer offers the responder the smallest amount possible and that the responder always accepts because even a small amount of money is better than no money at all. Empirical results show, however, that a 50:50 split is common and that proposals of less than 20% are often rejected by responders. This behavior is explained by individual preferences for a balance of equity and a fair split (Roth 1995). The practice of voluntary contributions and tipping also provides empirical evidence that consumers pay for a service even if they do not have to. According to Equity Theory, fairness in social exchange implies proportional allocation of resources (Adams

1965; Carrell and Dittrich 1978). Equity Theory acknowledges that subtle and variable individual factors affect each consumer's assessment and perception of their relationship with their relational partners (Guerrero et al. 2007). If a consumer perceives the ratio of his/her inputs to outcomes to be equivalent to his/her relational partner, s/he will consider that s/he has been treated fairly. On the other hand, when consumers find themselves participating in inequitable relationships, they will become distressed. In return for the received product or service, we expect that the buyer will reward the seller in appropriate monetary units to keep the balance of fairness. If a buyer chooses a very high deal profit (low a_{ij}), s/he will have to anticipate the distress of the incurred inequity. Hence, we make the following proposition:

H2: Fairness has a positive influence on the proportion (i.e. a_{ij}) of buyers' reference price discharged to the seller.

Beyond the concern of fairness, we believe that buyers also pay higher prices because of altruism (Maner and Gailliot 2007; Piliavin and Charng 1990). Altruism is defined as a 'behavior carried out to benefit another without anticipation of rewards from external sources' (Macaulay and Berkowitz 1970). The existence of such pure altruism, i.e., where the individual does not care for any reward per se (Andreoni 1990), is evident when people donate to children's villages or AIDS funds or when they tip waiters for *bad* service. Experimental results, derived from the Dictator Game, also emphasize the importance of altruism to explain economic behavior (Andreoni and Miller 2002; Bolton et al. 1998; Forsythe et al. 1994). In the Dictator Game, the proposer determines a split of money between him/herself and the responder. But in contrast to the Ultimatum Game, the responder has no option to reject the offer and must accept any proposal. The responder's role is entirely passive. Several researchers have shown that proposers did on average allocate money to the responders and thus reduce their deal profit, which implies pure altruistic behavior. On the basis that consumers donate or allocate money to others without expecting a reward, we can

conclude that pure altruistic behavior actually exists. We therefore assume that buyers with altruistic characteristics set a higher a_{ij} .

H3: Altruism has a positive influence on the proportion (i.e. a_{ij}) of buyers' reference price discharged to the seller.

Previous literature distinguishes two different types of satisfaction: transaction-specific and cumulative satisfaction. Transaction-specific satisfaction refers to consumers' post-choice evaluations of a particular product transaction or service encounter (Jones and Suh 2000; Olsen and Johnson 2003). In contrast, cumulative consumer satisfaction is defined as an overall evaluation of a product or service based on the consumer's total purchase and consumption experience to date (Anderson et al. 2004; Fornell 1992). In our study, satisfaction refers to the consumer's post-consumption evaluation of the perceived quality and/or service. If the seller offers a product with high quality, consumers' satisfaction and utility increase (Anderson et al. 1994; Anderson and Sullivan 1993; Bolton 1998; Fornell 1992; Fornell et al. 1996). Satisfaction may therefore lead to a higher a_{ij} .

H4: Satisfaction has a positive influence on the proportion (i.e. a_{ij}) of buyers' reference price discharged to the seller.

Repeated purchases at the same store or a long-term relationship with the seller may also have an impact on the decision-making of the buyer. The purpose of a repeated purchase or, even stronger, the loyalty to a store, may increase the price paid owing to strategic behavior. Paying a price which does not even cover the expenses might harm the seller so much that the seller won't be able to survive. In the context of tipping, several researchers examined the relationship of tip size and patronage frequency. Lynn and McCall (2000) and Conlin et al. (2003) found a significant positive correlation between those two variables. Bodvarsson and Gibson (1997) observed that regular buyers in seven restaurants tipped on average 1.05% more of the bill than others. A possible explanation of such behavior is

provided by Azar (2007). He assumes that customers fear uncomfortable feelings or embarrassment in the future when they tip less. We therefore expect that buyers pay higher prices because (1) they want the seller to survive and (2) they fear the feeling of embarrassment in the future when they pay a low price.

H5: Loyalty has a positive influence on the proportion (i.e. a_{ij}) of buyers' reference price discharged to the seller.

Additionally, price consciousness (consumer who exclusively focuses on paying low prices) (Lichtenstein et al. 1993) and income may also affect the proportion of consumer's reference price discharged to the seller. Price-conscious consumers are likely to shop for special offers and to react to price savings. From this behavior, we expect that buyers will try to make savings and increase their deal profit when PWYW is implemented.

Both neoclassical economic theory and theories on fairness predict that consumers with a higher income contribute more to a public good, all things being equal (Borck et al. 2006). Most empirical studies of voluntary contributions prove such a positive correlation. Numerous research articles (Hamilton et al. 2003) also find evidence for a positive income effect on their willingness-to-pay (WTP).

Thus, we control for price consciousness and income in our analyses.

Buyer's internal reference price

In the marketing literature, reference prices are held to have a strong impact on consumer behavior (Mayhew and Winer 1992; Rajendran and Tellis 1994). Empirical studies on consumers' price evaluations have shown that consumers use past prices to create a reference level that affects their perceptions of current prices (Adaval and Monroe 2002; Della Bitta and Monroe 1974; Kalwani and Yim 1992; Lattin and Bucklin 1989; Winer 1986). These internal reference prices are created in different ways: consumers derive their

reference price from the previous period's price (Winer 1989) or from a weighted or smoothed average of past prices (Greenleaf 1995; Kalyanaram and Little 1994). They have also been defined as the price of the last brand purchased (Hardie et al. 1993; Kalwani et al. 1990).

If consumers perceive, for instance, that a specific product is often on sale, their internal reference price decreases, leading to a decreasing WTP (Krishna 1991). This finding is related to the notion of constructed preferences, i.e. that consumers are often uncertain about their valuation of a product and use cues to determine their WTP (Bettman et al. 1998). Such cues can be consumers' internal reference price or an external reference price for the same or a competing product. We use the internal reference price in our model since external reference prices are often not available in instances where products are offered under PWYW conditions. In addition, consumers form the internal reference price based on externally provided prices such as advertised prices (Grewal et al. 1998). Another reason why we include the internal instead of the external reference price in our model is due to the pricing mechanism itself. Applying PWYW, sellers can benefit from (individually) differentiated prices. With a given external reference price, the seller will probably reduce high variances of prices paid. In our studies, we operationalize the reference price as the memorized price of past purchases of the same (or comparable) products or services.

Integration of the drivers that affect the proportion a_{ij} of customer i 's RP_{ij} for product j s/he is willing to discharge to the seller into the model of Equation (1) yields the following estimation model to explain prices set by consumers under PWYW conditions. We will test this model in our empirical studies:

(2)

$$p_{ij}^{PWYW} = \beta_0 + (\beta_1 \cdot \text{Fair}_{ij} + \beta_2 \cdot \text{Altru}_i + \beta_3 \cdot \text{Satis}_{ij} + \beta_4 \cdot \text{Loy}_{ij} + \beta_5 \cdot \text{PriceConsc}_i + \beta_6 \cdot \text{Income}_i) \cdot RP_{ij} + \varepsilon_{ij}$$

Empirical Studies

To test our model (Equation 2), we conducted three field studies with products in service industries. We therefore observed three different product categories: (1) a lunch buffet meal at a restaurant, (2) movie screenings at a cinema, and (3) hot beverages at a delicatessen. In addition, we analyzed the impact of PWYW on revenues and sales. In the following, we will first describe the experimental design of the different field studies and then evaluate our proposed model for each field study. Third, we analyze the impact of the implementation of PWYW on the sellers' revenues and sales.

Study Design

Study 1. Our first field experiment was conducted at a Persian restaurant in downtown Frankfurt (Germany) in November and December 2007. For a period of two weeks, the seller offered the buffet lunch, which originally cost €7.99, under PWYW conditions. This restaurant can be classified as a middle-priced restaurant and it can accommodate approximately sixty guests. The study lasted eight weeks, including three observation weeks before and after the two experimental weeks. During that time we collected daily sales data.

The product appeared to be an appropriate product for this experiment, since the buffet lunch has high fixed costs but low variable costs. In addition, the opening of the restaurant took place only nine months earlier. Thus, the implementation of PWYW as a short-term promotion tool appeared to be particularly interesting to win new customers to fully utilize the existent free capacity. The PWYW offer was advertised by flyers which were distributed in different areas of the city centre. In addition, two posters on an A-board (which used to advertise the buffet lunch and its price before we started our experiment) helped to publicize the promotion.

During the experiment, the regular price of the buffet lunch was removed. The buffet was ordered by 253 customers during the two experimental weeks. After asking for the bill, the restaurant guests received a receipt which simply contained the prices for the drinks. Then the waiter asked the customers to pay what they wanted for the buffet. During the two weeks, 172 restaurant guests were surveyed after they had paid for their lunch meal (68% response rate of the survey). Here, they had to declare the explicit price paid for the buffet lunch per person, i.e. the price paid for one buffet without tips and drinks. To test our model of buyer behavior in PWYW, the surveyed guests were asked a series of questions to measure their evaluation of fairness, altruism, loyalty, price consciousness and satisfaction. Responses to all questions were measured on a 5-point Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree. A further question referred to their internal reference price. We operationalized the internal reference price as the memorized price of the past purchases of the same (or comparable) products or services. The constructs measured by this series of questions and their Cronbach's coefficient alphas of reliability are reported in Table 1. These questions have been used previously in other studies and have high reliability. In addition, buyers were asked to estimate the seller's cost for one additional product or customer and to state a fair price for the product they had consumed.

Insert Table 1

Study 2. The second field experiment took place in a multiplex cinema in a medium-sized town near the Frankfurt metropolitan area in November 2007. For three days (Monday to Wednesday), the management decided to offer the cinema tickets, usually ranging from €4.00 to €9.50, under PWYW conditions. A regular price of €4.00 or €4.50 is only charged on the cinema's discount day, which is Tuesday. The multiplex cinema consists of eight different movie theaters which provide seats for 99 to 355 guests, with a maximum total

capacity of 1428 guests. The experimental study lasted three days. For calculation of baseline sales, fifty-three weeks of daily data were provided by the management.

Movie screenings at a cinema appeared to be an appropriate product for an application of PWYW, since movie theaters are capacity-constrained services. In the past few years, the capacity of the motion picture industry has not been fully utilized. According to an interview with Stefan Arndt, chief of the German movie academy, consumers perceive an increase in prices although the prices of cinema tickets only rise marginally. According to recent consumer surveys, current prices of cinema tickets are even perceived as unfair. Hence, PWYW appeared to be a good alternative to other price promotions like a discount day: since the consumers can self-determine the prices, or in other words have full control over the price, PWYW is expected to be a preferable pricing mechanism. At the same time, we were curious as to whether PWYW generates higher prices per customer compared with the discount day.

Unlike study 1 the price experiment was not advertised. Only posters, which described the functioning of PWYW, were hung up inside the movie theater. As usual, buyers were asked to pay before seeing the movie. At the ticket-office people were asked by the cashier to pay what they wanted for the respective movies. In contrast with the previous study, regular prices weren't hidden but accessible on each price list attached next to the ticket boxes. After the customers had named the price, the transaction took place and they were handed a questionnaire. Note that prices paid per person were collected and 247 ticket buyers participated in the survey (64% response rate of the survey), which contained the same items as in study 1. Buyers had to state the prices paid for the specific product separately, subtracting any tips or other purchases like gift vouchers. In contrast with study 1, we asked them to answer how satisfied they were with the cinema itself (friendliness of cashiers, atmosphere and cleanliness of cinema) instead of asking them questions referring to

the specific product to be consumed, i.e. the movie. This was necessary since the buyers had paid before watching the movie.

Study 3. We conducted the third field experiment at a delicatessen located close to the main shopping street of a medium-sized city, Wiesbaden, which is part of the Frankfurt metropolitan area, in June and July of 2006. The delicatessen's stock includes a variety of products, such as wine, chocolate, antipasti, sandwiches and beverages (hot and cold). The shop also has seats for approximately fifteen to twenty customers to eat inside.

Our study lasted for six weeks, with observation periods two weeks before and after the two experimental weeks. During the first experimental week, regular prices of all products were hidden, whereas external reference prices of some of the observed products (five of the ten products randomly chosen) were provided in experimental week two. We wanted to test whether the existence of external reference prices has an impact on the final price paid.

A poster in the shop window, an A-board outside the shop and flyers on the tables indicated that there was a special promotion where the customers could pay what they wanted for the hot beverages. During the experimental weeks, 813 hot beverages like coffee, tea and hot chocolate were sold under PWYW conditions. We limited the experiment to the products which could be consumed at the delicatessen; beverages which were offered to go were excluded. A total of ten products were analyzed.² The regular unit prices of these products were hidden from buyers by removal of the price board and pasting over the prices in the list of beverages. After consuming the products, specifically at the time of payment, buyers were asked by the waiter to determine the price of the PWYW product. As in the previous studies, they were asked to deduct potential tips and prices of products consumed contemporaneously

² The ten products were: regular coffee, tea, cappuccino, latte macchiato, café latte, espresso, espresso doppio, espresso macchiato, ice coffee and hot chocolate.

from the price paid. Additionally, a random sample of 271 delicatessen guests was surveyed after they had consumed and paid for the analyzed products (33% response rate of the survey), which contained the same items as in study 1.

We chose beverages as experimental products because variable costs were low, narrowing the risk for the seller. Thus, the seller can still achieve a positive profit margin even if the buyer's proportion of his/her reference price s/he is willing to discharge to the seller is low.

Results

Distribution of Prices Paid

Descriptive statistics from the three experiments are summarized in Table 2, including all collected data, i.e. survey data of prices paid plus the price information from customers who did not fill out the questionnaire. Table 2 also shows regular unit prices and unit sales. Consistent with our first hypothesis (H1) prices paid were significantly different from zero ($p < .01$) in all three studies. However, we were surprised to find that average PWYW prices paid in study 3 were even significantly higher ($p < .01$) than average regular prices. Overall, customers paid 10.62% ($p < .01$) higher prices for hot beverages, 28.72% less ($p < .01$) for the cinema tickets and 19.37% less ($p < .01$) for the restaurant buffet lunch (see Table 2) compared to regular prices.

Insert Table 2

The survey data indicates that consumers paid on average approximately 86% of their RP_{ij} to the sellers, i.e. a_{ij} is on average .86. A one-way ANOVA additionally reveals that the average values of the proportion a_{ij} of how much the consumer is willing to discharge of his/her RP_{ij} to the seller differ significantly ($p < .01$) across the three studies, whereas the average a_{ij} is highest for hot beverages (mean: 1.01, std. deviation: .34) and lowest for the

cinema (mean: .66, std. deviation: .30). At the restaurant, the guests paid on average 82% of their RP_{ij} for the lunch buffet, with a_{ij} ranging from .07 to 1.67 and a standard deviation of .26.

The distribution of prices paid (Figure 2) shows that only a few customers paid very low prices and that none of them decided to pay zero in the three studies (Panel A, Panel B and Panel C of Figure 2).

Insert Figure 2

Estimation of Model for Prices Paid

In total, we collected 690 questionnaires during the experimental treatment periods. After elimination of observations with missing price information, 167 observations remain from the restaurant, 171 from the cinema and 270 from the delicatessen store.

Responses to multiple-item scales were averaged for all constructs in all our studies. These constructs have been previously used in other studies where they showed high reliability. The constructs and their Cronbach's alpha levels are depicted in Table 1. The results indicate that the reliabilities of the constructs are high. Cronbach's alpha for price consciousness is satisfactory for study 1 but it falls below the cut-off criteria of 0.70 (Nunnally 1978) in studies 2 and 3.

According to our estimation model (Equation 2), we account for comparability across products by multiplying each driver of a_{ij} with the internal reference price RP_{ij} . The internal reference prices counterbalance different levels of prices paid due to category disparities. Table 3 depicts the results of our model estimation over all field studies and separately for each study.

Insert Table 3

We estimated the parameters of our proposed model using OLS estimation. Testing the assumptions of the linear regression, we can justify the use of this model. For all of our estimations, the condition index is below the cut off criterion of 30, indicating that multicollinearity is not a problem. The assumptions of linearity, homoscedasticity, independence of errors and normality of the error distribution are met. The value of R^2 indicates that our proposed model explains 62% of the variation of buyer behavior across all field studies and 15% to 30% in the separate estimations. In the following, we first discuss the results for our overall model and then have a more detailed look at the estimation results of each study separately.

As we can see from Table 3, fairness positively affects the final price paid p_{ij}^{PWYW} . This finding is in line with our hypothesis (H2): people, who stated to have paid a fair price offered higher prices to the seller. However, hypothesis 3 cannot be supported, as the influence of altruism is not significant. Overall, altruism does not seem to play a considerable role when prices are determined within the PWYW context. Consistent with hypothesis 4, satisfaction significantly increases the buyer's price she/he is willing to pay to the seller. The more satisfied the buyer, the more of his/her deal profit is s/he willing to give up in favor of the seller. The effect of loyalty is not significant, thus yielding no support for H5. We discuss this result in more detail when we analyze the studies separately. Consistent with our expectations both control variables, price consciousness and income, significantly affect prices paid.

Overall, fairness has a significant impact on prices paid, but this result does not hold for the separate studies as Table 3 suggests. The guests of the restaurant did not pay a higher price to the seller because of concerns for fairness or altruism. Instead, prices paid were solely driven by the buyer's level of loyalty, price consciousness and income. In contrast to

the results from the overall estimation, loyalty is a significant driver of prices paid for the lunch buffet. This might be due to the setting: the face-to-face interaction between customer and waiter is much more distinctive than in the other studies. Furthermore, approximately 70% of the surveyed guests expressed strong desire (scale points 4 and 5) to come again. The fear of embarrassment in the future could have been exceptionally high at the restaurant. At first look, it is rather striking that satisfaction has no significant effect on prices paid at the restaurant. Research on tipping behavior also reported controversial findings when analyzing the correlation of tip size and service quality. For instance, Lynn and Simons (2000) found a positive correlation of service quality and tip size in the evening, but not at lunchtime. Our results from the restaurant (buffet lunch) support the finding that a higher price paid is not associated with a higher service or product quality. Examining the distribution of the responses regarding satisfaction, we can observe that most of the respondents admitted to having a *medium* to *high* satisfaction with the service. Only a marginal percentage of surveyed buyers (study 1: 4.8%; study 2: 8.8%; study 3: 2.9%) were displeased with either the product or the service.

Analyzing the estimation results of the potential determinants of prices paid for cinema tickets, we can read from Table 3 that the results differ from what we discussed previously. At the cinema fairness seems to be an important factor when determining the prices. The level of fairness significantly and positively influences prices paid. Even though the consumers had paid only 66% of their reference price to the seller, they thought to have behaved in a fair manner: the survey data shows that nearly 90% of the consumers considered a price $\leq 6\text{€}$ to be fair. Similar to the results from the overall model, altruism does not significantly influence prices paid. The reasons can be twofold: first, the survey data indicates that only a marginal proportion (8.2%) of surveyed buyers evaluated themselves to be rather selfish (averaged construct rating < 3). Perhaps buyers were ashamed to admit that they were

selfish rather than altruistic. Second, as we had already mentioned movie goers in general perceive a recent increase in ticket prices and even evaluate them as unfair. We additionally believe that altruism does not play a role when consumers pay to a large theater chain instead of small businesses that need to get paid adequately to survive. Satisfaction with the cinema itself and the friendliness of the cashiers positively affects the prices paid and supports our hypothesis (H4). Both control variables price consciousness and income do not have a significant effect on prices paid by consumers.

At the delicatessen, we find a significant impact of altruism. This finding corresponds to our expectation (H3), but is not generalizable since the effect is not significant in our overall model. Especially at the delicatessen, face-to-face interaction was particularly high. The owner of the delicatessen used to chat with his guests, so that almost every consumer knew to whom they were paying. This might be an explanation why altruism significantly influenced the final price. In contrast, fairness is not a significant driver of a_{ij} . Perhaps fairness does not play such a great role when consumers have to determine the price for convenience products like hot beverages. In addition, satisfaction and loyalty do not influence prices paid. One possible explanation for the lacking effect of satisfaction is that only a marginal percentage of surveyed buyers (2.9%) were displeased with either the product or the service. Reinartz and Kumar (2002) showed no existing correlation between loyalty and customers' willingness to pay more within their empirical studies. Instead they provided evidence that particularly long-term customers believed they deserved lower prices. Finally, no significant relationship between price consciousness and prices paid can be found for hot beverages. That strengthens our assumption that some consumer characteristics, such as fairness and price consciousness aren't relevant when it comes to small convenience products. The effect of income is significant.

In study 3, we experimentally provided external reference prices for the second week of the PWYW offering for five products (Latte Macchiato, Espresso doppio, Espresso Macchiato, Coffee and Tea). Therefore, we can test the robustness of our estimation results by including a dummy variable for observations from week 2 with reference price information present. We find that the existence of reference price information is significant (coefficient = .131, $p < .01$) without substantial changes to the parameter estimates of the other variables as reported in Table 3. Obviously, higher prices were paid when the guests of the delicatessen consumed one of the five products whose reference prices were provided. On average, guests provided with a reference price, paid 104% ($a_{ij} = 1.04$) of the regular prices to the seller.

According to our estimation results we can conclude that final prices paid are mainly driven by what consumers believe is fair, by their satisfaction with the product or service, their price consciousness and their net income. Additionally, an external reference price provided by the seller can have a positive impact on final prices paid. In contrast, altruism and loyalty only partially influence the product prices when consumers have the chance to pay for them whatever they want.

Impact on Revenues and Unit Sales

To analyze the impact of the PWYW application on sellers' unit sales and revenues, we compared the revenues and sales during the experimental period with an appropriate baseline. Baseline revenues are defined as the measure of average revenues per day derived from the pre-experimental observation periods (at the restaurant: 3 weeks of daily data; at the cinema: 53 weeks of daily data; at the deli: 2 weeks of daily data). Figure 3 illustrates the percentage deviation of revenues in the PWYW treatment periods to baseline revenues.

Insert Figure 3

Study 1. On average, revenues (sales value) rose significantly by 32.35% across the experimental days for the restaurant owner ($p < .05$; see Table 2). Except for one day, PWYW sales are higher than baseline sales, increasing by up to 61.21%. Although the average price paid is significantly smaller than its regular price (€6.44 vs. €7.99; $p < .01$), the seller could realize more revenues owing to an increasing number of unit sales (see Figure 3). Overall, we find an increase in unit sales of 61.14% ($p < .01$). The sales increase is mainly driven by new customers: compared to the average number of new customers at fixed prices (approx. eleven new customers per day), the number of new customers rose to approximately 17 per day for the restaurant. Conducting an independent sample t-test, we see that the increase in the number of new customers is significant ($p < .01$). In addition, approximately 70% of new customers stated that they would most likely visit the restaurant again. Most of the buyers (87.3%) also stated that their preference for PWYW over a fixed price was medium to high. Hence, we can conclude that the use of PWYW was beneficial for the seller. The seller therefore decided to retain PWYW as a pricing mechanism for the buffet lunch.

Study 2. On average, customers paid 28.49% lower prices on regular days (not a discount day) compared to regular prices ($p < .01$) and 29.80% lower prices at the discount day ($p < .01$; see Table 2). As Figure 3 shows, revenues mostly decreased when PWYW was applied. Except for two screenings, the revenues of the cinema suffered strongly both on a regular day or the discount day (which was Tuesday). Due to only a few observations (i.e., number of screenings), this finding is not significant. However, in this case, PWYW does not seem to be a profitable pricing mechanism. The large decrease in sales units compared to baseline sales cannot be explained by the application of PWYW, because it was not advertised and consumers became aware of it only after entering the cinema. Therefore, we can only explain this sales decrease by chance.

Study 3. PWYW sales values are higher in nine out of twelve days (the store was closed on Sundays) at the delicatessen store. On average, revenues across the experimental days were approximately 3.14% higher than baseline revenues (n.s.) during the promotion period, although the beverages were not sold more frequently (see Table 2). Except for one day the average prices paid for all ten products were significantly higher (10.62%, $p < .01$) than the average of regular prices, explaining the increase in revenues. Possible reasons why PWYW did not lead to a significant rise in unit sales (but a decrease of 6.74%, n.s.) could be due to the fact that the delicatessen had existed for a few years and the shop was already established and had a low level of free seats/capacity. As the survey data reveals, 12.9% of new customers visited the deli due to the PWYW promotion. Unfortunately, no historical data of new customers is available to analyze potential differences in the rate of new customers generated by the pricing mechanism. Since the implementation of PWYW did not cause additional costs, however, the owner of the store infers that PWYW had a positive effect on his profit.

Discussion

This paper provides a first classification and analysis of the innovative pricing mechanism Pay-What-You-Want (PWYW). We discuss how PWYW, classified as a participative pricing mechanism such as auctions and Name-Your-Own-Price (NYOP), can realize price differentiation and generate additional sales and revenues as well as useful information for the adoption of marketing instruments.

We analyze buyer behavior and revenue effects of PWYW for different sellers. Conducting three field studies, we experimentally test PWYW and find that consumers do not behave as rational as traditional economic theory suggests. In contrast, our findings show that final prices paid are significantly ($p < 0.01$) above zero for all three cases; none of the buyers

chose to pay a price of zero during the experimental period. Our results also indicate that the final price paid depends on buyer's internal reference price and the proportion of how much the buyer is willing to share of his/her (potential) deal profit with the seller. We found that this proportion is mainly driven by the consumer's fairness, satisfaction, price consciousness and income. Contrary to our expectations altruism and loyalty are insignificant factors in our overall model. But a more detailed look at each study separately revealed that altruism and loyalty aren't negligible influences. Instead loyalty is a significant driver of a_{ij} in study 1 (lunch buffet), whereas altruism had a strong significant impact on prices paid for hot beverages (study 3).

When examining the effects of PWYW on the sellers' revenues, the analysis reveals that revenues in two out of the three observed product categories were higher at PWYW prices as compared to baseline revenues. At the restaurant buffet lunch, the difference was significant. After the success of the experimental weeks, and after receiving positive feedback from his guests, the owner of the restaurant decided to keep the price format in the long run. Seven months after introducing PWYW permanently for the buffet lunch, the owner still reports positive results and even plans to open up another restaurant with the same pricing mechanism. The case of the restaurant illustrates the potential of PWYW as marketing instrument for new businesses. By implementing PWYW the restaurant owner could attract more customers and increase revenues.

It was surprising that average prices paid were higher than their regular prices at the delicatessen. These higher prices at PWYW imply an opportunity to raise product prices in the future. Overall, the results of the experiments suggest that PWYW might be suitable as a price promotion tool even though it did not lead to a revenue increase for cinema tickets. Our study showed that buyers had a high variance for the estimated variable costs of a ticket at the cinema. This could explain why some buyers think that ticket prices are unfair.

PWYW may also help to improve the seller's credibility by letting the consumers decide about the prices of products. Pricing policies such as Hi-Lo pricing are losing consumers' confidence in the retailer's credibility (Hoch et al. 1994; Ortmeier et al. 1991). With PWYW, the seller gives buyers the chance to self-determine the prices that may lead to an increase of the perceived fairness (Haws and Bearden 2006). Implementing PWYW, the seller can demonstrate to consumers that s/he believes in the quality of the products, since lower prices can compensate for lower quality without signaling low quality by lower posted prices. The application is also simple and easy to communicate to consumers. This may increase the chance of word-of-mouth and build up a positive pricing image among consumers.

From the seller's point of view, however, PWYW poses a risk that the price paid by buyers is much lower than the seller's cost or is even equal to zero. Especially for high-priced products, PWYW does not seem to be an appropriate pricing mechanism, because the incentives to realize a large deal profit may outweigh aspects of fairness and loyalty. In such a situation revenues will probably suffer if the seller cannot set a minimum price threshold. Further, products with high fixed but rather low variable costs are more appropriate for the application of PWYW, because low variable costs limit the risk of prices below costs for the seller. In our field studies, a personal interaction between seller and buyer existed and we believe that such an interaction supports the applicability of PWYW. However, the recent success of Radiohead's digital album-selling indicates that PWYW may even be applied to the anonymous interactions on the internet.

Our study has several limitations. According to the owner of the restaurant, revenues almost doubled in the evening (where he still charges posted prices) after we had conducted the field experiment. Obviously, PWYW also had an impact on evening sales, but due to concerns of the owner that evening customers could feel disturbed by another survey, we

could not collect the data to analyze this effect. A similar effect might have occurred at the delicatessen (e.g. sandwich) and the cinema (e.g. popcorn), where (promotion-triggered) customers might also purchase other products. Thus, the reported sales effects are a conservative estimation of the 'benefits' of PWYW. Our findings from the model estimation reveal that other factors depending on the product category or specific setting may have an impact on final prices paid. At last, hot beverages are convenience products where the involvement in determining the 'right' price is probably not as high as when consumers deal with choosing a place to eat.

We conducted three studies in different industries, but these were all part of the service sector. Although the service sector is already the dominant contributor to industrialized countries' GDP, we cannot generalize our findings to other industries.

Since PWYW is a new pricing mechanism, several directions for further research can be identified. One important research aspect is the analysis and comparison of various designs of this pricing mechanism with respect to the objectives of the seller in experimental studies. Further, the mental mechanisms underlying payment in PWYW could be further delineated in laboratory studies. In addition, a more detailed analysis of consumers' preferences regarding different designs of PWYW or related participative pricing mechanisms, and to what extent they may influence the consumers' decision process, would be worth studying. Future research should also be done in the field of sales promotion activities for products, e.g. whether PWYW is an alternative to free samples. If buyers pay a price above zero, PWYW might be less costly than giving away free samples. It may also be of interest whether a seller can achieve an effect such as a money-back guarantee when PWYW is implemented. Similarly to the money-back guarantee the buyer can compensate for lower perceived quality by reducing the price paid. Furthermore, the dynamic effects of PWYW on consumers (e.g. learning and long-term viability of the seller) are an interesting

avenue for future research. Another research aspect could be a test of suitable products or suitable categories for an application of PWYW to identify favorable product attributes, e.g. what product quality is necessary to be profitable with PWYW. Furthermore, the analysis of intercultural differences in buyer behavior is a promising extension. Cultural differences and the level of democracy in a society are likely to influence the proportion of their (potential) deal profit consumers discharge to the seller. Finally, an application of PWYW does not seem suitable for all distribution channels. A comparison of the suitability of different distribution channels is also an interesting aspect for future research.

TABLES

Table 1
Overview of Items and Constructs Measured

Construct	Items	Relevant Literature for Scale Items	Cronbach's Alpha		
			Study 1	Study 2	Study 3
Fairness	My price paid was fair towards the seller.	Bolton et al. (2003) and Campbell (2007)	n/a	n/a	n/a
Altruism	I love to help others. I have a good word for everyone. I am concerned about others. I make people feel welcome. I anticipate the needs of others	International Personality Item Pool	0.849	0.837	0.870
Loyalty	I'm a regular customer. I say positive things about this store to others. I encourage friends and relatives to shop at this store. I make an effort to use this store for covering a large part of my shopping	Bettencourt (1997)	0.749	0.822	0.810
Price Consciousness	Before I buy a product, I often check the prices of different retailers to obtain the best benefit. I usually purchase items on sale only. I usually purchase the cheapest item.	Donthu and Gililand (1996)	0.730	0.684	0.479
Income	Please state your monthly net income.	Coleman (1983)	n/a	n/a	n/a
Satisfaction	I'm satisfied with the buffet/cinema/hot beverage I liked the ambience. The waiter/waitress/cashier was friendly. The waiter/waitress/cashier was attentive. Customers are treated well in this store. ^{a)} Employees of this store are not too busy to respond to customers' requests promptly. ^{a)}	Baker et al. (1994)	0.809	0.748	0.845
Reference Price	What did you pay for the same or similar product on your last shopping trip?	Bearden et al. (1992)	n/a	n/a	n/a

^{a)} Not applicable at cinema (field study 2).

Table 2
Price, Unit Sales and Revenues

	Study 1	Study 2 (Cinema Ticket)		Study 3
Products	<i>Buffet Lunch</i>	<i>Regular Ticket</i>	<i>Discount Day Ticket</i>	<i>Hot Beverages</i>
∅ price PWYW in € (sig. ^{a)})	6.44 (**)	4.87 (**)	3.11 (**)	1.94 (**)
∅ regular unit price in €	7.99	6.81	4.43	1.75
% Price increase (sig. ^{b)})	-19.37 (**)	-28.49 (**)	-29.80 (**)	10.62 (**)
Number of units sold PWYW	253.00	273.00	113.00	813.00
Number of units sold regular	157.00	394.00	139.00	872.00
% Sales volume increase (sig. ^{b)})	61.14 (**)	-30.67 (n.s.)	-18.71 (n.s.)	-6.74 (n.s.)
Revenues PWYW in €	1660.26	1329.97	351.89	1577.14
Revenues regular in €	1254.43	2681.74	615.68	1529.20
% Sales value increase (sig. ^{b)})	32.35 (*)	-50.41 (n.s.)	-42.85 (n.s.)	3.14 (n.s.)

*p<.05; **p<.01.

^{a)} Test of deviation of prices paid from zero (one sample t-test).

^{b)} Test of different means PWYW and regular (independent sample t-test).

Table 3
Estimation Results

<i>Variables</i> ^{a)}	Overall Studies		Study 1: Restaurant Buffet		Study 2: Cinema Ticket		Study 3: Hot Beverages	
	<i>Coefficient</i>	<i>SE</i>	<i>Coefficient</i>	<i>SE</i>	<i>Coefficient</i>	<i>SE</i>	<i>Coefficient</i>	<i>SE</i>
Intercept	.808**	.118	2.892**	.676	2.982**	.432	1.222**	.161
Fairness	.049**	.011	.031	.020	.046**	.015	-.015	.017
Altruism	.016	.015	.020	.027	-.037	.021	.062**	.022
Satisfaction	.073**	.016	.016	.031	.056**	.021	.014	.026
Loyalty	.018	.014	.072*	.034	-.018	.017	.027	.020
Price Consciousness	-.032**	.012	-.055*	.024	-.014	.015	-.029	.018
Income	.000**	.000	.000**	.000	.000	.000	.000**	.000
R²	0.619		0.299		0.163		0.154	
adj. R²	0.615		0.271		0.132		0.133	
N	608		167		171		270	

*p<.05; **p<.01.

^{a)} All variables (except the constant) are multiplied with the internal reference price RP_{ij} .
Dependent variable: prices paid at PWYW.

FIGURES

Figure 1

Classification of Participative Pricing Mechanisms

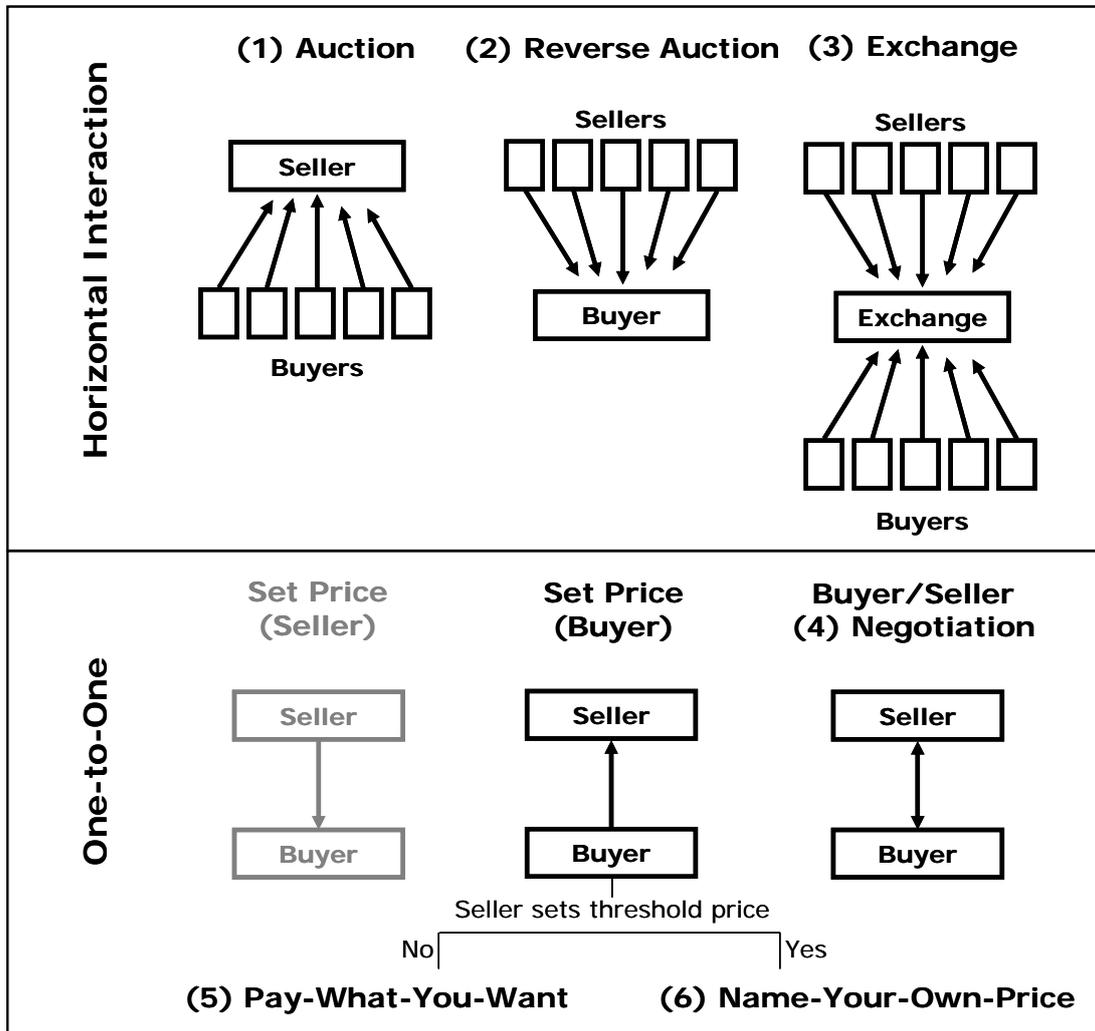
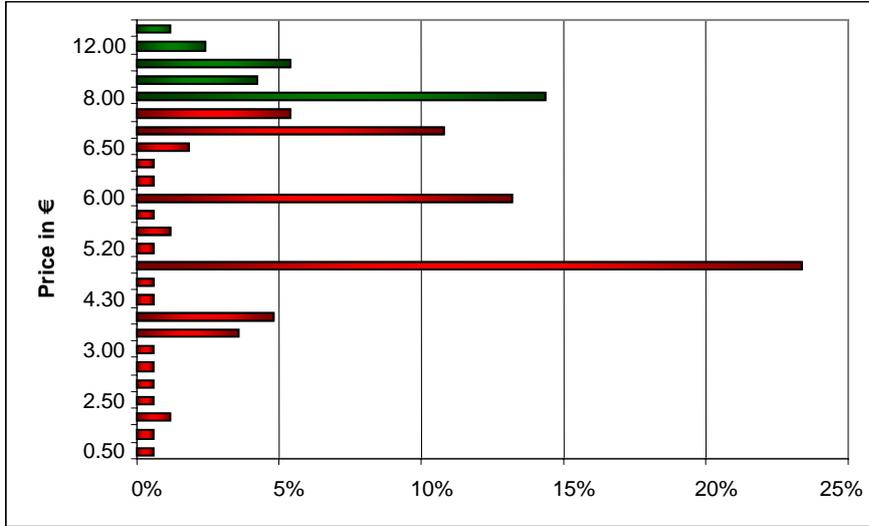
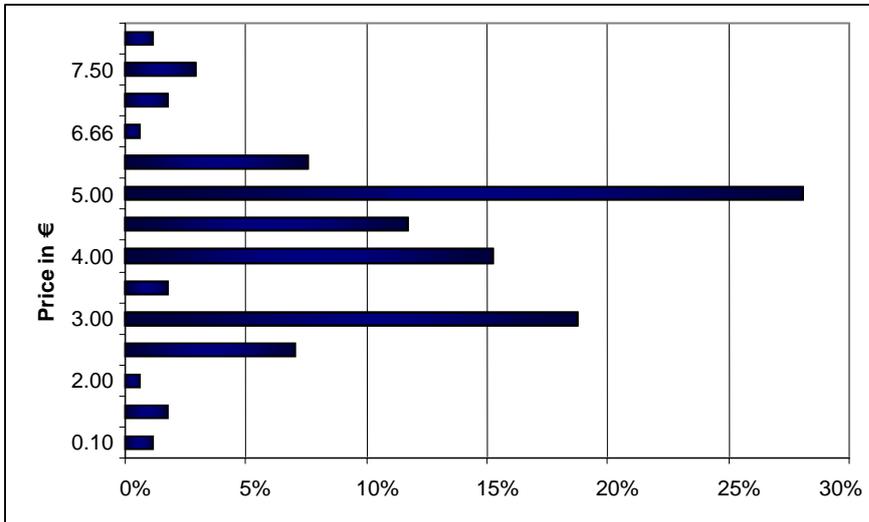


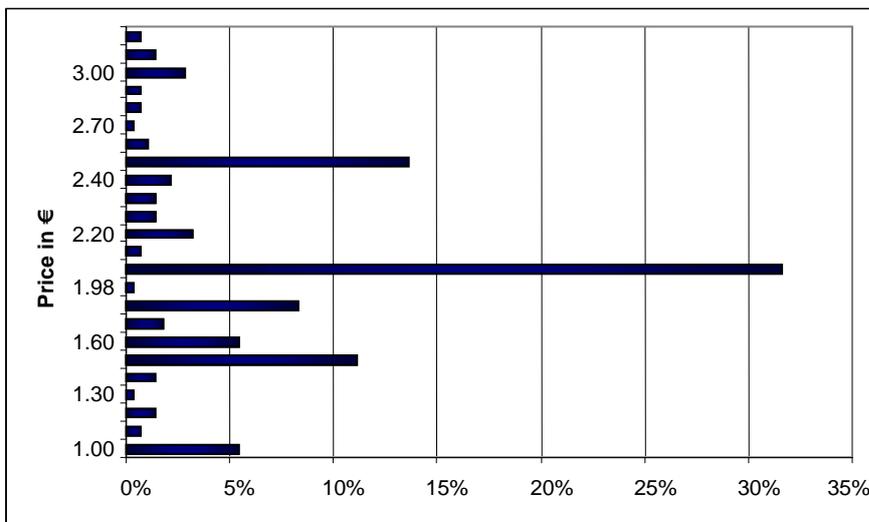
Figure 2
Distribution of Prices Paid in Percent



Panel A:
Restaurant buffet lunch
(study 1)
∅ reg. unit price: €7.99

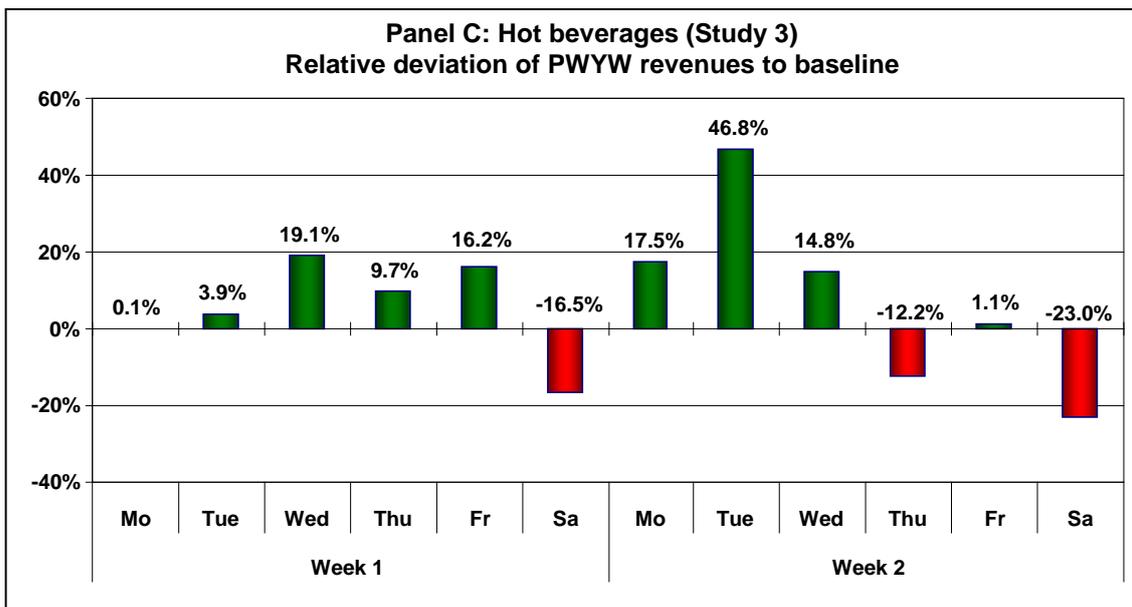
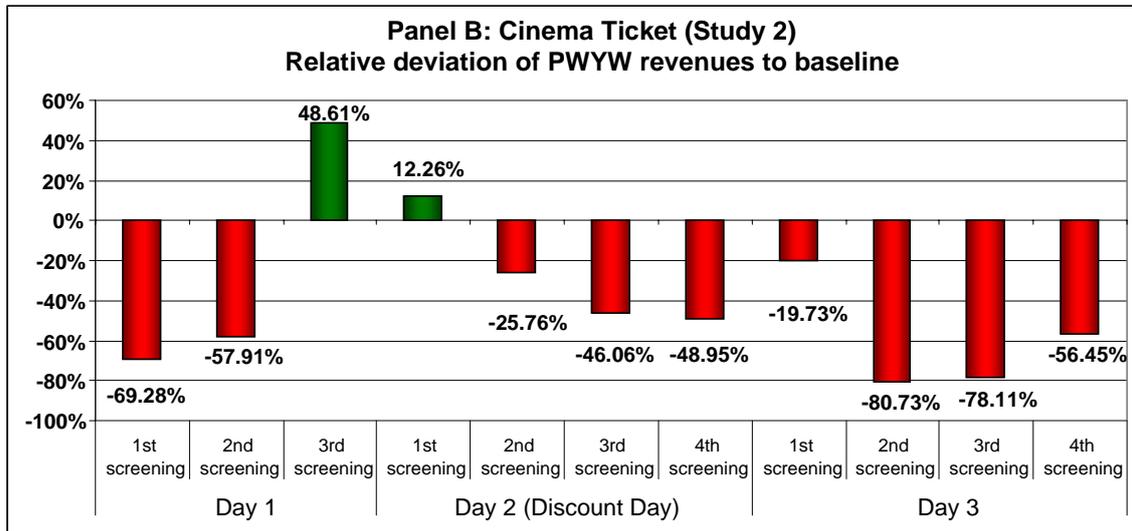
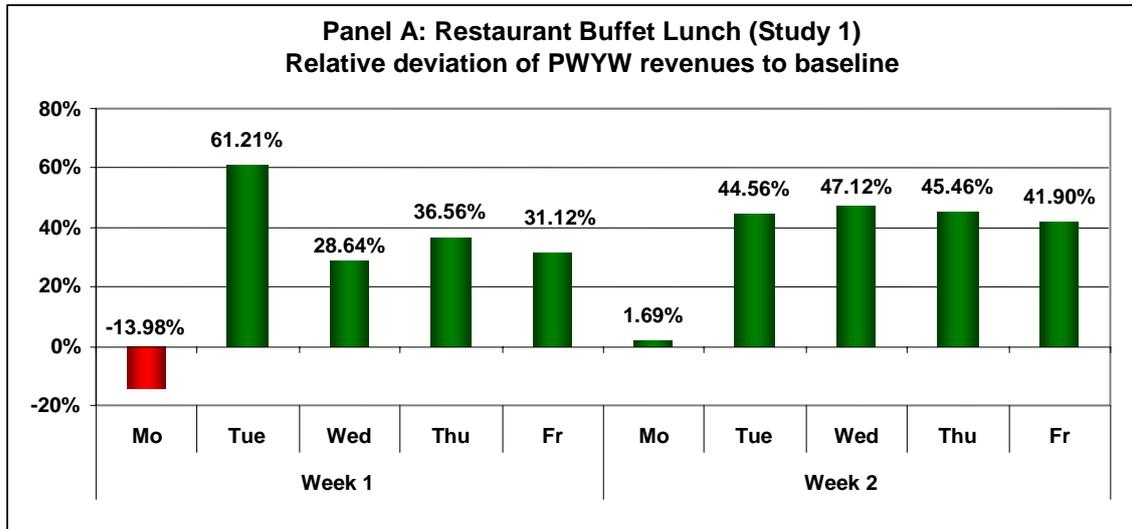


Panel B:
Cinema tickets
(study 2)
∅ reg. unit price: €6.81
∅ reg. unit price at
discount day: €4.43



Panel C:
Hot beverages
(study 3)
∅ reg. unit price: €1.75

Figure 3
Comparison of PWYW Revenues to Baseline



References

- Adams, John S. (1965), "Inequity in Social Exchange," in *Advances in Experimental Social Psychology*, Leonard Berkowitz, ed., Vol. 2, New York, London: Academic Press, 267-99.
- Adaval, Rashmi and Kent B. Monroe (2002), "Automatic Construction and Use of Contextual Information for Product and Price Evaluations," *Journal of Consumer Research*, 28 (4), 572-88.
- Amaldoss, Wilfred and Sanjay Jain (2008), "Name Your Own Price: An Analysis of Multi-Item Bidding," *Management Science*, forthcoming.
- Anderson, Eugene W., Claes Fornell, and Donald R. Lehmann (1994), "Customer Satisfaction, Market Share, and Profitability: Findings from Sweden," *Journal of Marketing*, 58 (3), 53-66.
- Anderson, Eugene W., Claes Fornell, and Sanal K. Mazvancheryl (2004), "Customer Satisfaction and Shareholder Value," *Journal of Marketing*, 68 (4), 172-85.
- Anderson, Eugene W. and Mary W. Sullivan (1993), "The Antecedents and Consequences of Customer Satisfaction for Firms," *Marketing Science*, 12 (2), 125-43.
- Andreoni, James (1990), "Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving?," *Economic Journal*, 100 (401), 464-77.
- Andreoni, James and John Miller (2002), "Giving According to GARP: An Experimental Test of the Consistency of Preferences for Altruism," *Econometrica*, 70 (2), 737-53.
- Ariely, Dan, Anat Bracha, and Stephan Meier (2007), "Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially," in Working Paper: Federal Reserve Bank of Boston.
- Azar, Ofer H. (2007), "The Social Norm of Tipping: A Review," *Journal of Applied Social Psychology*, 37 (2), 380-402.
- Baker, Julie, Dhruv Grewal, and A. Parasuraman (1994), "The Influence of Store Environment on Quality Inferences and Store Image," *Journal of the Academy of Marketing Science*, 22 (4), 328-39.
- Bakos, Yannis (1998), "The Emerging Role of Electronic Marketplaces on the Internet, in: Communications of the ACM," *Communications of the ACM*, 41 (8), 35-42.
- Bearden, William O., Ajit Kaicker, Melinda Smith de Borrero, and Joel E. Urbany (1992), "Examining Alternative Operational Measures of Internal Reference Prices," *Advances in Consumer Research*, 19 (1), 629-35.
- Bettencourt, Lance A. (1997), "Customer Voluntary Performance: Customers As Partners In Service Delivery," *Journal of Retailing*, 73 (3), 383-406.

Bettman, James R., Mary Frances Luce, and John W. Payne (1998), "Constructive Consumer Choice Processes," *Journal of Consumer Research*, 25 (3), 187-217.

Bodvarsson, Örn and William A. Gibson (1997), "Economics and Restaurant Gratuities: Determining the Tip Rates," *American Journal of Economics and Sociology*, 56 (2), 187-204.

Bolton, Gary E. (1991), "A Comparative Model of Bargaining: Theory and Evidence," *American Economic Review*, 81 (5), 1096-136.

Bolton, Gary E., Elena Katok, and Rami Zwick (1998), "Dictator Game Giving: Rules of Fairness versus Acts of Kindness," *International Journal of Game Theory*, 27 (2), 269-99.

Bolton, Gary E. and Axel Ockenfels (2000), "ERC: A Theory of Equity, Reciprocity, and Competition," *American Economic Review*, 90 (1), 166-93.

Bolton, Lisa E., Luk Warlop, and Joseph W. Alba (2003), "Consumer Perceptions of Price (Un)Fairness," *Journal of Consumer Research*, 29 (4), 474-91.

Bolton, Ruth N. (1998), "A Dynamic Model of the Duration of the Customer's Relationship with a Continuous Service Provider: The Role of Satisfaction," *Marketing Science*, 17 (1), 45-65.

Borck, Rainald, Bjorn Frank, and Julio R. Robledo (2006), "An Empirical Analysis of Voluntary Payments for Information Goods on the Internet," *Information Economics and Policy*, 18 (2), 229-39.

Campbell, Margaret C. (2007), ""Says Who?!" How the Source of Price Information and Affect Influence Perceived Price (Un)fairness," *Journal of Marketing Research*, 44 (2), 261-71.

Carrell, Michael R. and John E. Dittrich (1978), "Equity Theory: The Recent Literature, Methodological Considerations, and New Directions," *Academy of Management Review*, 3 (2), 202-10.

Chandran, Sucharita and Vicki G. Morwitz (2005), "Effects of Participative Pricing on Consumers' Cognitions and Actions: A Goal Theoretic Perspective," *Journal of Consumer Research*, 32 (2), 249-59.

Chernev, Alexander (2003), "Reverse Pricing and Online Price Elicitation Strategies in Consumer Choice," *Journal of Consumer Psychology*, 13 (1&2), 51-62.

Coleman, Richard P. (1983), "The Continuing Significance of Social Class to Marketing," *Journal of Consumer Research*, 10 (3), 265-80.

Conlin, Michael, Michael Lynn, and Ted O'Donoghue (2003), "The Norm of Restaurant Tipping," *Journal of Economic Behavior and Organization*, 52 (3), 297-321.

Della Bitta, Albert J. and Kent B. Monroe (1974), "The Influence of Adaptation Levels on Subjective Price Perceptions," *Advances in Consumer Research*, 1 (1), 359-69.

Ding, Min, Jehoshua Eliashberg, Joel Huber, and Ritesh Saini (2005), "Emotional Bidders – An Analytical and Experimental Examination of Consumers' Behavior in a Priceline-like Reverse Auction," *Management Science*, 51 (3), 352-64.

Dolan, Robert J. and Youngme E. Moon (2000), "Pricing and Market Making on the Internet," *Journal of Interactive Marketing*, 14 (2), 56-73.

Donthu, Naveen and David Gilliland (1996), "Observations: The Infomercial Shopper," *Journal of Advertising Research*, 36 (2), 69-76.

Elster, Jon (1989), "Social Norms and Economic Theory," *Journal of Economic Perspectives*, 3 (4), 99-117.

Fehr, Ernst and Klaus Schmidt (2003), *Theories of Fairness and Reciprocity-Evidence and Economic Applications*. Cambridge: Cambridge University Press.

Fehr, Ernst and Klaus M. Schmidt (1999), "A Theory of Fairness, Competition, and Cooperation," *Quarterly Journal of Economics*, 114 (3), 817-68.

Fiske, Alan Page (1992), "The Four Elementary Forms of Sociality: Framework for a Unified Theory of Social Relations," *Psychological Review*, 99 (4), 689-723.

Fornell, Claes (1992), "A National Customer Satisfaction Barometer: The Swedish Experience," *Journal of Marketing*, 56 (1), 6-21.

Fornell, Claes, Michael D. Johnson, Eugene W. Anderson, Jaesung Cha, and Barbara Everitt Bryant (1996), "The American Customer Satisfaction Index: Nature, Purpose, and Findings," *Journal of Marketing*, 60 (4), 7-18.

Forsythe, Robert, Joel L. Horowitz, N. E. Savin, and Martin Sefton (1994), "Fairness in Simple Bargaining Experiments," *Games and Economic Behavior*, 6 (3), 347-69.

Greenleaf, Eric A. (1995), "The Impact of Reference Price Effects on the Profitability of Price Promotions," *Marketing Science*, 14 (1), 82-104.

Grewal, Dhruv, Kent B. Monroe, and R. Krishnan (1998), "The Effects of Price-Comparison Advertising on Buyers' Perceptions of Acquisition Value, Transaction Value, and Behavioral Intentions," *Journal of Marketing*, 62 (2), 46-59.

Guerrero, Laura K., Peter A. Andersen, and Walid A. Afifi (2007), *Close Encounters: Communication in Relationships*. Thousand Oaks: Sage Publications.

Hamilton, Stephen F., David L. Sunding, and David Zilberman (2003), "Public Goods and the Value of Product Quality Regulations: The Case of Food Safety," *Journal of Public Economics*, 87 (3-4), 799-817.

Hardie, Bruce G. S., Eric J. Johnson, and Peter S. Fader (1993), "Modeling Loss Aversion and Reference Dependence Effects on Brand Choice," *Marketing Science*, 12 (4), 378-94.

- Haws, Kelly L. and William O. Bearden (2006), "Dynamic Pricing and Consumer Fairness Perceptions," *Journal of Consumer Research*, 33 (3), 304-11.
- Henrich, Joseph (2000), "Does Culture Matter in Economic Behavior? Ultimatum Game Bargaining among the Machiguenga of the Peruvian Amazon," *American Economic Review*, 90 (4), 973-79.
- Heyman, James and Dan Ariely (2004), "Effort for Payment: A Tale of Two Markets," *Psychological Science*, 15 (11), 787-93.
- Hoch, Stephan J., Xavier Dreze, and Mary E. Purk (1994), "EDLP, Hi-Lo, and Margin Arithmetic," *Journal of Marketing*, 58 (4), 16-27.
- Jones, Michael A. and Jaebeom Suh (2000), "Transaction-Specific Satisfaction and Overall Satisfaction: An Empirical Analysis," *Journal of Services Marketing*, 14 (2), 147-59.
- Kahneman, Daniel, Jack L. Knetsch, and Richard H. Thaler (1986), "Fairness and the Assumptions of Economics," *Journal of Business*, 59 (4), S285-S300.
- Kalwani, Manohar U. and Chi Kin Yim (1992), "Consumer Price and Promotion Expectations: An Experimental Study," *Journal of Marketing Research*, 29 (1), 90-100.
- Kalwani, Manohar U., Chi Kin Yim, Heikki J. Rinne, and Yoshi Sugita (1990), "A Price Expectations Model of Customer Brand Choice " *Journal of Marketing Research*, 27 (3), 251-62.
- Kalyanaram, Gurumurthy and John D. C. Little (1994), "An Empirical Analysis of Latitude of Price Acceptance in Consumer Package Goods," *Journal of Consumer Research*, 21 (3), 408-18.
- Kamins, Michael A., Xavier Dreze, and Valerie S. Folkes (2004), "Effects of Seller-Supplied Prices on Buyers' Product Evaluations: Reference Prices in an Internet Auction Context," *Journal of Consumer Research*, 30 (4), 622-28.
- Kannan, P. K. and Praveen K. Kopalle (2001), "Dynamic Pricing on the Internet: Importance and Implications for Consumer Behavior," *International Journal of Electronic Commerce*, 5 (3), 63-83.
- Lattin, James M. and Randolph E. Bucklin (1989), "Reference Effects of Price and Promotion on Brand Choice Behavior," *Journal of Marketing Research*, 26 (3), 299-310.
- Lichtenstein, Donald R., Nancy M. Ridgway, and Richard G. Netemeyer (1993), "Price Perceptions and Consumer Shopping Behavior: A Field Study," *Journal of Marketing Research*, 30 (2), 234-45.
- Lucking-Reiley, David (2000), "Auctions on the Internet: What's Being Auctioned, and How?," *Journal of Industrial Economics*, 48 (3), 227-52.
- Lynn, Michael (1990), "Choose Your Own Price: An Exploratory Study Requiring an Expanded View of Price's Functions," *Advances in Consumer Research*, 17 (1), 710-14.

Lynn, Michael and Michael McCall (2000), "Gratitude and Gratitude: A Meta-analysis of Research on the Service-Tipping Relationship," *Journal of Socio-Economics*, 29 (2), 203-14.

Macaulay, Jaqueline and Leonard Berkowitz (1970), *Altruism and Helping Behavior*. New York: Academic Press.

Maner, Jon K. and Matthew T. Gailliot (2007), "Altruism and Egoism: Prosocial Motivations for Helping Depend on Relationship Context," *European Journal of Social Psychology*, 37 (2), 347-58.

Mayhew, Glenn E. and Russell S. Winer (1992), "An Empirical Analysis of Internal and External Reference Prices Using Scanner Data," *Journal of Consumer Research*, 19 (1), 62-70.

Nunnally, Jum C. (1978), *Psychometric Theory* (2nd Edition ed.). New York: McGraw-Hill Publishers.

Olsen, Line L. and Michael D. Johnson (2003), "Service Equity, Satisfaction, and Loyalty: From Transaction-Specific to Cumulative Evaluations " *Journal of Service Research*, 5 (3), 184-95.

Ortmeyer, Gwen, John A. Quelch, and Walter Salmon (1991), "Restoring Credibility to Retail Pricing," *Sloan Management Review*, 33 (1), 55-66.

Osterhus, Thomas L. (1997), "Pro-Social Consumer Influence Strategies: When And How Do They Work?," *Journal of Marketing*, 61 (4), 16-29.

Piliavin, Jane A. and Hong-Wen Charng (1990), "Altruism: A Review of Recent Theory and Research," *Annual Review of Sociology*, 16, 27-65.

Rabin, Matthew (1993), "Incorporating Fairness into Game Theory and Economics," *American Economic Review*, 83 (5), 1281-302.

Rajendran, K. N. and Gerard J. Tellis (1994), "Contextual and Temporal Components of Reference Price," *Journal of Marketing*, 58 (1), 22-34.

Reinartz, Werner and V. Kumar (2002), "The Mismanagement of Customer Loyalty," *Harvard Business Review*, 8 (7), 86-94.

Roth, Alvin E. (1995), *Bargaining Experiments*. Princeton: Princeton University Press.

Shampanier, Kristina, Nina Mazar, and Dan Ariely (2007), "Zero as a Special Price: The True Value of Free Products," *Marketing Science*, 26 (6), 742-57.

Spann, Martin, Bernd Skiera, and Bjoern Schaefers (2004), "Measuring Individual Frictional Costs and Willingness-to-Pay via Name-Your-Own-Price Mechanisms," *Journal of Interactive Marketing*, 18 (4), 22-36.

Spann, Martin and Gerard J. Tellis (2006), "Does the Internet Promote Better Consumer Decisions? The Case of Name-Your-Own-Price Auctions," *Journal of Marketing*, 70 (1), 65-78.

Tellis, Gerard J. (1986), "Beyond the Many Faces of Price: An Integration of Pricing Strategies," *Journal of Marketing*, 50 (4), 146-60.

Venkatesan, M. (1966), "Experimental Study of Consumer Behavior Conformity and Independence," *Journal of Marketing Research*, 3 (4), 384-87.

Winer, Russell S. (1989), "A Multi-Stage Model of Choice Incorporating Reference Prices," *Marketing Letters*, 1 (1), 27-36.

---- (1986), "A Reference Price Model of Brand Choice for Frequently Purchased Products," *Journal of Consumer Research*, 13 (2), 250-56.