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PWYW Pricing ex post Consumption: A Sales Strategy for Experience Goods

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Abstract: Pay What You Want (PWYW) pricing has received considerable attention recently. Empirical studies show that a PWYW pricing mechanism is able to increase a seller's turnover and profit. This paper addresses PWYW pricing for bundles of experience goods. The paper shows that a PWYW pricing mechanism, if applied *ex post* consumption, separates the decision to buy from the decision how much to pay. Information asymmetries about the quality of the good are reduced during the act of consumption so that buyers are informed about the product's quality when they decide how much to pay. As a consequence, risk-averse buyers who would otherwise refrain from purchasing under a fixed price mechanism, can be attracted to purchase under a PWYW pricing ex post consumption (PWYW-EPC) mechanism. In this case, the pricing mechanism itself constitutes a signal. The paper concludes that a PWYW pricing mechanism, applied ex post consumption, can be a profitable strategy for a seller if she sells bundles of experience goods and if she wants to attract risk-averse buyers for realizing economies of scale in production.

Keywords: PWYW pricing, PWYW-EPC, asymmetric information, economies of scale, experience good, bundling, ex post consumption

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1. Introduction

Pay What You Want (PWYW) pricing is a participative pricing mechanism. On the one hand, it gives a buyer¹ the option to determine the price of a good. In contrast to other participative pricing mechanisms, such as reverse auctions, PWYW pricing allows a buyer to do monetary harm to a seller by paying nothing. On the other hand, a seller may apply a PWYW pricing mechanism as a marketing strategy, which brings a new product to the attention of potential buyers, or which can increase the demand for a good. In some cases PWYW pricing has also led to an increase in revenues and profits in contrast to traditional pricing mechanisms.

For an experience good, a buyer faces information asymmetries concerning its quality *ex ante* the decision to buy. If the quality of a good can only be observed after consumption, a buyer is at risk of falling victim by paying an inadequately high price. In extreme cases of information asymmetries market failure in the form of adverse selection may occur (Akerlof 1970). As a consequence of information asymmetries, only risk-loving buyers remain on the market. In other words, a buyer who is willing to pay for a good but who is risk-averse abstains from the purchase *because* the seller may exploit information asymmetries (Farrell 1986). Many signaling strategies to overcoming problems of *ex ante* opportunism in a purchase are discussed in the literature, such as warranties, certificates, brand image, prices, among others (cf. Milgrom and Roberts 1986; Lutz 1989; Kirmani and Rao 2000). In this paper we add another institution, namely a pricing mechanism to this list.

We address the question why PWYW pricing may yield positive effects for a seller. Our argument is that in contrast to a fixed price mechanism, where the decision to buy and the decision to pay are in most cases *ex ante* consumption, in a specific PWYW pricing mechanism the decision to buy is *ex ante* consumption and the decision to pay is *ex post* consumption. Thus, between the two decisions buyers can consume the good and are allowed to reduce information asymmetries with respect to the quality of the good. We term this specific type of a PWYW pricing mechanism ‘PWYW pricing *ex post* consumption’ (PWYW-EPC).

Implementing such a pricing mechanism can turn out to be a successful strategy for sellers of experience goods, which are often sold as a bundle. For bundles, a PWYW pricing mechanism can result in higher turnover rates – compared to bundles sold at fixed prices –

¹ In the PWYW literature the terms buyer and seller are commonly used. We follow this terminology and consider customers and producers as suitable synonyms. The same applies to the term good that is used as a synonym for product and includes in its general meaning storable and non-storable goods as well as rights.

and PWYW can be a feasible pricing strategy for a seller who wants to attract risk-averse buyers. Furthermore, with respect to bundles of experience goods, a PWYW pricing mechanisms can be used to realize economies of scale. By drawing the attention to the pricing mechanism, we expand the extensive literature on pricing strategies for experience goods (Shapiro 1983).

We regard this argumentation and its consequence as important for sellers who are considering the implementation of a PWYW pricing mechanism for experience goods. With the non-formal model provided in the paper we go beyond the existing description of case studies and experimental research in the fast growing literature on PWYW pricing. The economic idea provided in this paper can be seen as complementary to other studies of PWYW pricing which mostly focus on buyers' social preferences, reference prices, or psychological effects of consumption.

The structure of the paper is as follows: Section 2 reviews the literature on PWYW pricing. The focus is on the characteristics of the goods sold via a PWYW pricing mechanism. In Section 3 we argue that the best way to analyze the effect of asymmetric information is to consider it as a bundle (or a good with different characteristics). This allows us to analyze the ways in which sellers can manipulate the bundle's components in order to increase the success of a PWYW pricing mechanism. In Section 4 we use the insights gained in the previous section to derive propositions about the advantages and disadvantages of PWYW-EPC. Finally, Section 5 draws conclusions.

2. Goods that are sold via PWYW

In this section we point out that goods sold via PWYW are often similar to experience goods and that these goods are often sold in bundles. Hence, we deal with bundled experience goods. Information asymmetries with respect to the quality of these bundles are generally high (Park and Seo 2008).

The goods sold via PWYW pricing may include movie tickets, hot beverages at a delicatessen (Kim, Natter, and Spann 2009; 2010a), restaurant meals (Kim, Natter, and Spann 2010b; Riener and Traxler 2012), souvenir photos (Gneezy *et al.* 2010), holiday packages (León, Noguera, and Tena-Sánchez 2012) and music downloads (Regner and Barria 2009; Regner 2010; Regner and Riener 2012). Most of these goods share an important characteristic of experience goods: for buyers, the quality of the good is unknown *ex ante* consumption (cf.

Nelson 1970) but can be verified after consumption. Music downloads are an exception because buyers have pre-purchasing access to the music (Regner and Barria 2009: 396).

Information asymmetries related to costs are addressed by Greiff, Egbert, and Xhangolli (2013). However, they do not discuss information asymmetries as regards the quality of the good. The same applies to the majority of the literature, which does not address the role of a PWYW pricing mechanism as a signaling strategy to overcome information asymmetries. In this relation we elaborate on the determinants of the utility that a buyer has when consuming a good bought from a seller who employs a PWYW pricing strategy. To some extent we follow Thaler (1985: 204-205) who distinguishes between “acquisition utility” and “transaction utility” but we transfer these concepts to the context of PWYW pricing mechanisms.

In a typical PWYW transaction the buyer derives utility from three sources: First, from the consumption of a good of a specific quality, second, from the atmosphere in which purchase and consumption take place, and, third, from the image associated with buying the good at a specific price. Hence, when a buyer decides to purchase a bundle, these three aspects play a role. The first and the second concept correspond to Thaler’s “acquisition utility”, and the third concept can be related to what Thaler calls “transaction utility” (Thaler 1985: 204-205). Next we discuss these three concepts in the context of a PWYW pricing mechanism.

First, a buyer derives utility from the consumption of the good, e.g., the consumption of a meal or watching a movie. The utility from consumption depends on the quality of the good. Assuming non-saturation with respect to quality, utility increases with the quality of the good.

Second, as purchase and consumption do not happen in isolation, the “atmosphere” (Kotler 1973) in which purchase and consumption take place influences the buyer’s utility. Here, we distinguish between the atmosphere in the buying process and the atmosphere in the consumption process. The *atmosphere in the buying process* includes store environment, sales personnel friendliness and assistance. The seller controls the atmosphere in the buying process. This holds for all goods, storable and non-storable alike.

However, differences exist with respect to the person who can influence the *atmosphere in the consumption process*. For storable goods, the atmosphere of consumption can only be partially influenced by a seller but not often. For instance, a souvenir photo that is purchased or a song that is downloaded can be consumed at any place. For non-storable goods, a seller has more and a buyer has less control over the atmosphere in which

consumption takes place. For example, a meal has to be consumed at a restaurant and the purchase of a movie ticket has a fixed time and venue. For some non-storable goods, the atmosphere of consumption is not completely determined by the seller but can be partly chosen by the buyer. An example is a cup of coffee or a burger, which can be consumed in a shop *or* at a later point of time. It is important to note that the atmosphere in which purchase and consumption take place can be an element in a buyer's utility function. Thus a seller can – at least partly – control a buyer's utility derived from the atmosphere.

Third, there are buyers who follow image motivations. In this case a buyer derives utility from non-material aspects related to consumption of a good, such as social status. The existence of non-material incentives is not new (Becker 1957, 1974; Geanakoplos, Pearce, and Stacchetti 1989), but has recently received considerable attention in the behavioral economics literature. Of particular importance for our argument are self image concerns and social image concerns (e.g., Andreoni 1990; Andreoni and Bernheim 2009; Ariely, Bracha, and Meier 2009). In the PWYW literature, these motivations are commonly used to explain why a buyer pays something at all even if she could pay nothing (e.g., Gneezy *et al.* 2010; Gneezy *et al.* 2012; Regner and Riener 2012). We argue that a seller can partly control the decision to buy and the decision how much to pay through the influence of these non-material incentives.²

It is worth noting that such image motivations are also relevant in traditional pricing. However, with traditional pricing, image motivations only affect the decision whether to buy or not, but under a PWYW pricing mechanism, image motivations can affect both, the decision whether to buy or not *and* the decision how much to pay. Hence, we conjecture that compared to a fixed price mechanism image motivations are more salient in a PWYW pricing mechanism.³ Nevertheless, since image motivations are not directly related to information asymmetries, which are the focus of this paper, we refrain from a more detailed discussion on image motivations. In the following section we discuss how the first and second concepts – quality and atmosphere – relate to information asymmetries.

² This relates to the marketing literature on store images and brand images.

³ Besides the choice of the payment mechanism, anonymity and social distance affect the salience of image motivations. The degree of anonymity is likely to matter because with lower anonymity, social distance will be reduced and fairness considerations will be more salient. For the influence of social distance see, e.g. Hoffman *et al.* (1994; 1996) and Charness and Gneezy (2008). Regner and Riener (2012) provide evidence that social pressure has a positive effect on prices. Evidence for self image concerns can be found in Jang and Chu (2012, experiments 2b, 3 and 4) and Gneezy *et al.* (2012).

3. Information Asymmetries in Traditional and PWYW Pricing

In the previous section we outlined that goods sold via a PWYW pricing mechanism share important characteristics of experience goods. For such goods, information asymmetries are high because buyers have only limited information about the quality of the good before consumption. It follows that risk-averse buyers refrain from making the purchase. However, this is not what we observe in a real-world context because there are different ways of reducing information asymmetries through a signaling mechanism.

Convincing buyers of the quality of a good is a signaling problem (Milgrom and Roberts 1986; Kirmani and Rao 2000). Sellers can employ different signals (e.g., price, advertising expenditure, brand name, warranty, spending on corporate social responsibility⁴) to reveal information about the quality of the good in order to attract potential buyers. While with traditional pricing the price set by sellers can be a signal for the quality of the good, within a PWYW pricing mechanism this is not possible. However, the *choice of the pricing mechanism* is a signal in itself.

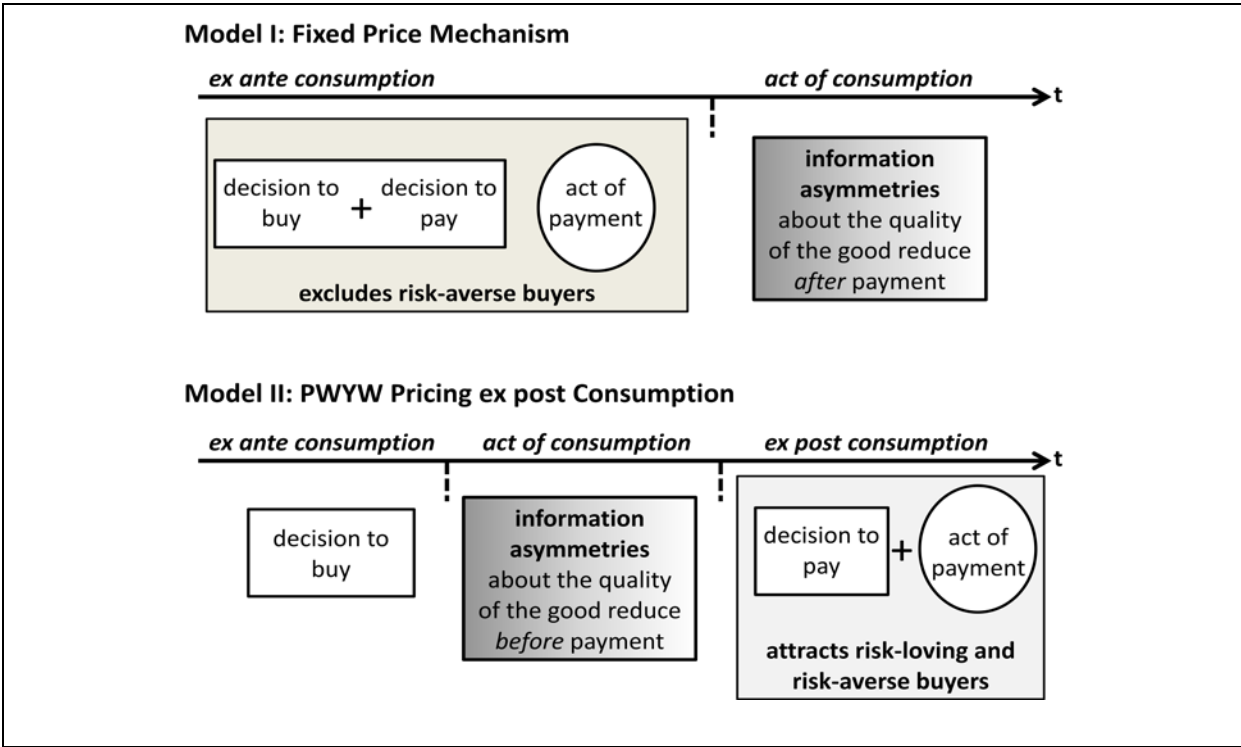
In a fixed price mechanism, trust between seller and buyer can only be established after the buyer has bought and consumed the good because the quality of the good cannot be observed ex ante. Indeed, repeated purchases are a feasible mechanism for solving the problem of asymmetric information if goods are homogenous, like a bar of chocolate. Buyers will make repeated purchases with the same seller if they are satisfied with the quality of the good. However, for goods that are bought infrequently or are heterogeneous, repeated purchases are not a solution to the problem of asymmetric information. Especially for heterogeneous goods, which are sold in bundles, such as meals and holiday packages, it is important to build trust before the decision to buy. If a seller uses a PWYW pricing mechanism, she signals the willingness to build trust because she risks making a loss if the buyer is not satisfied with the good and thus pays a comparatively low price.

Furthermore, by implementing a PWYW-EPC mechanism, the buyer's decision whether to buy or not is separated from the decision how much to pay. In a fixed price mechanism, the decision of a buyer is a binary decision: to buy or not to buy the good at the specified price. Since the buyer cannot influence the price, the decision to buy automatically determines the buyer's payment. Within a PWYW pricing mechanism, a buyer makes two decisions: First, there is the decision to buy, and second, there is the decision how much to

⁴ Empirical data shows that sellers of experience goods and credence goods are more likely to spend money on corporate social responsibility than sellers of search goods (Siegel and Votaliano 2007).

pay. This is outlined in Figure 1.

Figure 1: Models of Fixed Price Mechanism and PWYW-EPC



The separation of the decision whether to buy or not from the decision on how much to pay has implications with respect to the problems resulting from information asymmetries. When making their first decision – the decision to buy – buyers do not have to fix an exact price. This reduces the risk for the buyer of falling victim to asymmetric information and paying a high price for a low quality product. During consumption, buyers learn about the quality of the good, and, since payments are made only after consumption, buyers can make their payments contingent on the quality of the good. The risk of suffering from moral hazard, i.e., opportunistic behavior of the seller, is greatly reduced because the information asymmetry declines during consumption. As a consequence, risk-averse buyers who are not willing to buy the good if they were to pay before consumption are now willing to buy the good.⁵

Assuming that buyers are fair in the sense that the average price is not too far below the price that the seller would charge with traditional pricing, sellers’ revenues will increase. Those sellers who operate under economies of scale benefit from the increased number of buyers attracted by PWYW-EPC. Economies of scale exist when capacity is underutilized

⁵ However, the risk of falling victim to moral hazard is then on the side of the seller, who may suffer from ex post consumption non-payment on the side of the buyer.

(e.g., a restaurant operating below capacity), for digital goods, or more generally, when fixed costs are high and marginal costs are not increasing.

Another way to increase a seller's revenue is to influence the atmosphere in which purchase and consumption take place. Two effects can be expected. First, the atmosphere provides informational cues and, hence, influences buyers' expectations about the quality of the good (Baker, Grewal, and Parasuraman 1994: 329). Second, the atmosphere influences consumers' affective state (Kotler 1973: 54). The first point holds for both traditional pricing and PWYW pricing. The second, however, is of importance in a PWYW-EPC mechanism. Here, it is possible that the atmosphere affects buyers' moods, which in turn influences the price that buyers are willing to pay.

If the act of consumption increases a buyer's utility she may be willing to pay a higher price *ex post* consumption as compared to *ex ante* consumption.⁶ The question for sellers is: Does the atmosphere affect buyers' moods, and how do buyers' moods affect prices that buyers pay? Answers are offered in Capra (2004), Kirchsteiger, Rigotti, and Rustichini (2006) and Riener and Traxler (2012). Capra (2004) finds that in dictator games, altruistic behavior is stronger if participants are in a positive mood. In a gift-exchange game, Kirchsteiger, Rigotti, and Rustichini (2006) find that positive moods are correlated with more generosity but less reciprocity. From these two experiments it becomes clear that mood influences behavior, but it is not clear, how exactly mood is related to prices paid under a PWYW pricing mechanism. In their field study on PWYW pricing at a restaurant, Riener and Traxler (2012) use sunshine as a proxy for induced moods and analyze the effect of mood on prices. They find that in the summer, more sunshine leads to lower prices but in the autumn, more sunshine leads to higher prices.

The above mentioned empirical studies suggest that under a PWYW pricing mechanism, the atmosphere in which the good is purchased and the atmosphere in which consumption takes place affects buyers' moods, which in turn influences buyers' willingness to pay. However, the exact relationship between moods and prices paid under a PWYW pricing mechanism remain a subject for further research.

⁶ We think that an optimal time span exists between consumption and *ex post* payment. This time span may be specific for every bundle. A too long time span between consumption and PWYW may yield negative effects on the willingness to pay. However, in this paper we do not tackle the optimal time span.

4. Recommendations for Sellers of Experience Goods

In this section we outline under what conditions it seems recommendable for a seller to implement a PWYW-EPC mechanism. In order to do so, we distinguish two channels. The first channel is the possibility to realize economies of scale by implementing a PWYW pricing system. The second channel depends on the possibility of a seller to influence the utility a buyer derives during the act of consumption. While the first channel may be applicable to different type of goods, the second channel is especially relevant for bundles of experience goods.

The first channel assumes that risk-averse buyers refrain from buying a good if the good's quality is unknown and a fixed price mechanism is employed. Particularly, for heterogeneous experience goods, only risk-loving buyers will purchase. This is not problematic for a seller if her capacity utilization is high. However, if capacity utilization is low and economies of scale can be realized by attracting additional buyers, it makes sense for sellers to reduce the information asymmetry by signaling the quality of the good. While it may be costly to provide warranties or to offer quality certificates, it may be easy and cheap to use a pricing mechanism as a signal: a PWYW-EPC signals a buyer that the seller is convinced about the quality of the product and is even willing to take the risk of low payment. Indeed, sending such a signal may be the beginning of a relational contract initiated by the seller's choice to implement a PWYW pricing mechanism.

Risk-averse buyers are attracted because they are offered the option to reduce information asymmetries. This is achieved by separating the decision whether to buy or not from the decision how much to pay. Due to the possibility to reduce the information asymmetry before the decision how much to pay, additional consumers are attracted, even if a buyer's willingness to pay is not affected by the choice of the PWYW pricing mechanism. Note firstly that this strategy does not need to increase profits but reduces average costs in case of scale effects in production, which are likely to be present if fixed costs are high and capacity utilization is low. Note secondly that the quality of the product does not have to be changed and no extra efforts on the seller's side are needed, except the implementation of the pricing mechanism.

The second channel relates to additional gains received from the effect of the PWYW pricing mechanism on the buyer's willingness to pay. Using PWYW pricing and allowing the buyer to decide about the price she pays, pricing is unlikely to be perceived as unfair. Hence, the choice of the PWYW pricing mechanism affects the buyer's fairness perceptions. If

fairness perceptions influence the buyer's willingness to pay, then the choice of a PWYW pricing mechanism can increase prices paid (cf. Ashworth and McShane 2012: 146). Furthermore, the atmosphere of purchase respectively consumption affects the buyer's mood and these may have a positive impact on the buyer's willingness to pay. Although the relationship between the buyer's mood and prices buyers pay under a PWYW pricing mechanism is not entirely clear, sellers should be aware that moods matter. This seems particularly important for non-storable goods.

Besides positive effects a seller may derive from PWYW-EPC, she should be aware of possible problems. For instance, Léon *et al.* (2012: 398) speak of cannibalization effects in a PWYW-EPC payment. In their case, buyers have the possibility of spending money on related goods instead of spending money on the bundle of a tourist package itself. The low payment rate ex post consumption may be due to mental accounting and the fact that buyers have spent on complements to the tourist package thus leaving less money left for the bundle itself. Indeed, this is a case in which choosing the price ex post consumption is disadvantageous for the seller.

5. Conclusion

Pricing as a signal for product quality under information asymmetries is not a new topic. In this paper we contributed to it by arguing that the choice of the pricing mechanism is a signal, which has not been discussed in the literature. In particular, we focus on 'PWYW ex post consumption' (PWYW-EPC) pricing. Our argument is that this mechanism yields positive effects because it separates the decision whether to buy or not from the decision how much to pay. Thus, typical problems of information asymmetries, such as adverse selection and moral hazard, can be solved. Risk-averse buyers can be attracted and unexploited economies of scale can be realized. Additionally, sellers can also realize higher profits by influencing the atmosphere of purchase and consumption. Our arguments are related to bundles of experience goods, which show specific features and for which a PWYW pricing mechanism has been applied most often.

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References

- Akerlof, G. (1970), The market for 'lemons': Quality uncertainty and the market mechanism, *Quarterly Journal of Economics*, 84(3), 488–500.
- Andreoni, J. (1990), Impure altruism and donations to public goods: A theory of warm-glow giving, *Economic Journal*, 100(401), 464–477.
- Andreoni, J.; Bernheim, B. (2009), Social image and the 50–50 norm: A theoretical and experimental analysis of audience effects, *Econometrica* 77(5), 1607–1636.
- Ariely, D.; Bracha, A.; Meier S. (2009), Doing good, doing good or doing well? Image motivation and monetary incentives in behaving prosocially, *American Economic Review*, 99(1), 544–555.
- Ashworth, L.; McShane, L. (2012), Why do we care what others pay? The effect of consumers' prices on inferences of seller (dis)respect and perceptions of deservingness violation, *Journal of Retailing*, 88(1), 145–155.
- Baker, J.; Grewal, D.; Parasuraman, A. (1994), The influence of store environment on quality inferences and store Image, *Journal of the Academy of Marketing Science*, 22(4), 328–339.
- Becker, G. S. (1957), *The Economics of Discrimination*, Chicago University Press.
- Becker, G. S. (1974), A theory of social interactions, *Journal of Political Economy*, 82(6), 1063–1093.
- Capra, M. (2004), Mood-driven behavior in strategic interactions, *American Economic Review*, 94(2), 367–372.
- Charness, G.; Gneezy, U. (2008), What's in a name? Anonymity and social distance in dictator and ultimatum games, *Journal of Economic Behavior & Organization*, 68(1) 29–35.
- Farrell, J. (1986), Moral hazard as an entry barrier, *RAND Journal of Economics*, 17(3), 440–449.
- Geanakoplos, J.; Pearce, D.; Stacchetti, E. (1989), Psychological games and sequential rationality, *Games and Economic Behavior*, 1(1), 60–79.

- Gneezy, A.; Gneezy, U.; Nelson, L. D.; Brown, A. (2010), Shared social responsibility: A field experiment in pay-what-you-want pricing and charitable giving, *Science*, 329(5989), 325–327.
- Gneezy, A.; Gneezy, U.; Riener, G.; Nelson, L. D. (2012), Pay-what-you-want, identity, and self-signaling in markets, *Proceedings of the National Academy of Sciences*, 109(19), 7236–7240.
- Greiff, M.; Egbert, H.; Xhangolli, K. (2013), Pay what you want – but pay enough, Munich Personal RePEc Archive, MPRA 52766.
- Hoffman, E.; McCabe, K. A.; Smith, V. L. (1996), On expectations and monetary stakes in ultimatum games, *International Journal of Game Theory*, 25(3), 289–301.
- Hoffman, E.; McCabe, K. A.; Shachat, K.; Smith, V. L. (1994), Preferences, property rights, and anonymity in bargaining games, *Games and Economic Behavior*, 7(3), 346–380.
- Jang, H.; Chu, W. (2012), Are consumers acting fairly toward companies? An examination of pay-what-you-want pricing, *Journal of Macromarketing*, 32(4), 348–360.
- Kim, J.-Y.; Natter, M.; Spann, M. (2009), Pay what you want: A new participative pricing mechanism, *Journal of Marketing*, 73(1), 44–58.
- Kim, J.-Y.; Natter, M.; Spann, M. (2010a), Pay-What-You-Want: Praxisrelevanz und Konsumentenverhalten, *Zeitschrift für Betriebswirtschaft*, 80(2), 147–169.
- Kim, J.-Y.; Natter, M.; Spann, M. (2010b), Kish: Where consumers pay as they wish, *Review of Marketing Science*, 8, article 3.
- Kirchsteiger, G.; Rigotti, L.; Rustichini, A. (2006), Your morals might be your moods, *Journal of Economic Behavior & Organization*, 59(2), 155–172.
- Kirmani, A.; Rao, A. R. (2000), No pain, no gain: A critical review of the literature on signaling unobservable product quality, *Journal of Marketing*, 64(2), 66–79.
- Kotler, P. (1973), Atmospherics as a marketing tool, *Journal of Retailing*, 49(4), 48–64.
- León, F. J.; Noguera, J. A.; Tena-Sánchez, J. (2012), How much would you like to pay? Trust, reciprocity and prosocial motivations in El trato, *Social Science Information*, 51(3), 389–417.
- Lutz, N. A. (1989), Warranties as signals under consumer moral hazard, *RAND Journal of Economics*, 20(2), 239–255.
- Milgrom, P.; Roberts, J. (1986), Price and advertising signals of product quality, *Journal of Political Economy*, 94(4), 796–821.
- Park, J.; Seo, K. (2008), Bundling, information aggregation and entry deterrence, *Economic Letters*, 101(2), 100–102.
- Nelson, P. (1970), Information and consumer behavior, *Journal of Political Economy*, 78(2),

311–329.

- Riener, G.; Traxler, C. (2012), Norms, moods, and free lunch: Longitudinal evidence on payments from a pay-what-you-want restaurant, *Journal of Socio-Economics*, 41(4), 476–483.
- Regner, T. (2010), Why consumers pay voluntarily: evidence from online music, *Jena Economic Research Papers*, No. 2010-081.
- Regner, T.; Barria, J. (2009), Do consumers pay voluntarily? The case of online music, *Journal of Economic Behavior & Organization*, 71(2), 395–406.
- Regner, T.; Riener, G. (2012), Voluntary payments, privacy and social pressure on the internet: A natural field experiment, *DICE Discussion Paper*, No. 82.
- Shapiro, C. (1983), Optimal pricing of experience goods, *Bell Journal of Economics*, 14(2), 497–507.
- Siegel, D.; Vitaliano, D. (2007), An empirical analysis of the strategic use of corporate social responsibility, *Journal of Economics & Management Strategy*, 16(3), 773–792.
- Thaler, R. (1985), Mental accounting and consumer choice, *Marketing Science*, 4(3), 199–214.