## PRICE COMPLEXITY AND PERCEPTIONS OF PRICE FAIRNESS: THE MODERATING EFFECT OF NEED FOR COGNITION

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## SUMMARY

Research has shown that excessive information load in today's complex multi-brand, multi-attribute choice tasks can lead to negative consumption experiences and dysfunctional decision making with possible adverse consequences for firms (e.g., Gourville and Soman 2005; Iyengar and Lepper 2000). So far, research investigating such dysfunctional decision making attaches only little attention to the notion that the complexity of the choice task may not only be product-related but may be ascribed to the complexity of prices. Prices can be inherently complex depending on the degree of cognitive effort necessary to process the price information. The extent to which customers are capable of handling such cognitive effort and processing information is subject of the information load paradigm (Miller 1956, Malhotra 1982) stating that individuals' processing capabilities are generally limited and that excessive information load can lead to poor decision making and dysfunctional performance (Malhotra 1982; Suri, Long, and Monroe 2003).

While information load has been studied in a product context, (e.g., Gourville and Soman 2005; Huffman and Kahn 1998; Iyengar and Lepper 2000), its role in pricing research is still scarce. Scholars have addressed widespread pricing practices that imply splitting up all-inclusive prices in different price components, hereby creating complexity: partitioned pricing (e.g., Burman and Biswas 2007; Hamilton and Srivastava 2008; Xia and Monroe 2004), multi-dimensional pricing (e.g., Estelami 1997, 1999) and multipart pricing (e.g., Iyengar, Jedidi, and Kohli 2008). Such price complexity research in behavioral pricing literature demonstrates that customers have difficulties to evaluate complex prices (Estelami 1997). The general view is, however, that dividing a price can in fact have a positive impact on consumer perceptions of value and purchase intention (Burman and Biswas 2007), but this research has mainly studied partitioning into a very small number of components (Carlson and Weathers 2008). Indeed, Xia and Monroe (2004) acknowledge that the extent of price partitioning has an inverted U-shape effect on purchase intentions (see also Carlson and Weathers 2008). However, to our knowledge, none of the studies investigating negative effects of price partitioning tactics explicitly call on information load to explain effects on customers' reactions.

Based on previous studies using information load to explain price evaluations (e.g., Maxwell 2005) we use price fairness as a dependent variable. Thus, we investigate the effect of price complexity on customers' price fairness perceptions. The more complex it is to calculate the final price for an offer, the higher will customers be loaded with information. Hence, we expect the customers' information load to increase with increasing price complexity. Based on an equity-theoretical approach we assume, furthermore, that this experience of price complexity and its induced information load is linked to perceptions of price fairness. With the use of information load as a conceptual foundation of our research, we have to acknowledge findings that there are specific customers who are seeking for information load and enjoy dealing with complex situations (e.g., Levin, Huneke, and Jasper 2000): customers high in need for cognition (NFC) (e.g., Kim and Kramer 2006; Suri and Monroe 2001). Hence, we integrate NFC as a moderating effect on the relationship between price complexity and perceived price fairness. Finally, based on the hierarchy-of-effects model (Lavidge and Steiner 1961), we examine the effect of price fairness on the overall customer attitude toward the offer (e.g., Bobinski, Cox, and Cox 1996; Lichtenstein and Bearden 1989). In addition, to test the importance of price fairness in this pricing context a mediation of the perceived price fairness between price complexity and attitude toward the offer is examined. This Study is of major interest for pricing managers, especially of service providers, as it provides avenues for optimizing pricing strategies by trading off firms' benefits of multi-component prices with possible negative effects resulting from customers' perceived price fairness and attitude toward the offer.

Our Study used a simple one-factorial betweensubjects design with three conditions of price complexity (low vs. medium vs. high). Price fairness, attitude toward the offer as well as NFC were included as latent constructs. Respondents were randomly assigned to one of the treatment conditions. The data was collected in an online experiment. Participants were told to evaluate a special mobile phone deal in order to help a friend asking for advice. We presented an artificial (i.e., "the friend's") consumption pattern that was designed such that the total price per month always added up to 50 € in all three treatment conditions. In the low price complexity condition, the tariff basically constituted a flat rate offer in which internet access, calls and messages as well as the handset were included in a monthly payment of  $50 \in$ . In the medium price complexity condition, the tariff consisted of a monthly payment plus consumption-dependent price elements for calls and messages. In the high price complexity condition, the tariff consisted of a monthly payment, some consumption-dependent price elements for calls and messages, a special discount and a onetime payment for the handset. Overall, the effective sample consists of 309 participants (112 in the low, 99 in the medium and 98 in the high complexity condition.

First, we found evidence that information load can serve as a theoretical underpinning to account for adverse effects of price complexity. Second, we showed the importance of perceived price fairness in the context of complex prices. Price complexity negatively influences customers' price fairness perceptions in a service context. This result is in contrast to the general view that partitioned prices lead to more favorable customer evaluations (e.g., Morwitz, Greenleaf, and Johnson 1998). Third, we identified NFC to be an important personality variable in cognitively effortful tasks. Other than Burman and Biswas (2007) who show that individuals low in NFC do not evaluate partitioned and combined prices differently due to heuristic processing, we found that for customers low in NFC the degree of price complexity significantly influences the perceived price fairness. In contrast, customers with a high NFC do not seem to be influenced by price complexity in their perception of price fairness. In fact, we observe that for extremely high NFC the effect of price complexity on price fairness is even reversed. Customers high in NFC actually perceive value in a cognitively demanding tariff. Last, we found a negative effect of price complexity on attitude toward the offer, and we found this relationship to be complementarily mediated by price fairness. References are available upon request.

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