{ Customer Insights }

WHEN 2+2 IS NOT THE SAME AS 1+3: UNDERSTANDING CUSTOMER REACTIONS TO PARTITIONED PRICES

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Firms often use a pricing strategy in which they partition the total price of a product and/or service into two or more mandatory components, such as parts and shipping. In this research, we examine how dividing the same total price differently across the components affects customers' reactions. In a series of studies, we show that customers systematically prefer partitions of the same total price in which the price of low benefit components (e.g., shipping) is lower and the price of high benefit components (e.g., parts) is higher. Thus, for effective pricing, markups on components that consumers believe provide a high degree of benefit should be higher than markups on components that consumers believe provide less benefit.

One of the things that customers say they hate most about buying products online is paying shipping charges. Granted, shipping is a legitimate cost for online retailers, because they must move the product from their warehouse to the customer's door to complete the transaction, but shipping and handling charges are one of the most frequently cited reasons for shoppers abandoning their shopping carts and discontinuing their purchases. One reason for this may be that customers compare shopping online with shopping offline, where they are usually not asked explicitly to pay shipping charges. Both online retailers and their brick and mortar peers incur shipping charges, because both types of retailers

must move their inventory from a warehouse to their customers. Brick and mortar stores generally incur the shipping cost prior to the purchase and incorporate this cost in the price quoted to customers without making these costs explicit. In contrast, online stores incur the shipping cost after the purchase and make these costs explicit in the price quoted to customers.

Empirical research suggests that customers buying books online are almost two times more sensitive to changes in the price of shipping than to changes in the price of the product they are purchasing. This suggests that in the case of shipping charges, customers will be happier when a lower proportion of the total price is allocated to shipping and more is allocated to the product itself. Some online retailers, like Zappos.com and Amazon.com, address customer resistance to shipping charges by offering free shipping on some or all purchases (i.e., allocating the total price to the product and none to shipping). As enlightened customers, we know that these online retailers are incurring shipping charges to send their goods to us, so they must be recouping their costs by charging higher prices, but we still love it that they are not charging us explicitly for shipping.

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price between two components such as the product being purchased and charges to ship the product to the customer. Price partitioning is defined as the strategy of dividing a total price into two or more mandatory components, even though the customer is required to pay for all of the components. In the case of online shopping, shipping is a mandatory component of the purchase. Other examples of partitioned pricing include airline ticket prices that include the price of the flight as well as taxes and fees, auto repair invoices that charge customers for parts and labor, and promotions of consumer packaged goods for which the manufacturer promises to donate a specified amount of the purchase price to charity.

» A pricing manager has to decide carefully his partitioned pricing strategy in terms of how to allocate the total price between two components such as the product being purchased and charges to ship the product to the customer. «

Standard economic theory predicts that there should be no difference in demand based on how a price is partitioned because the total price to be paid by the customer is identical. However, recent research shows that customers react differently to partitioned and non-partitioned prices. Earlier research documents two different ways in which partitioned pricing affects customer price perceptions. First, when prices are partitioned and the total price is not explicitly provided, customers may process one component more thoroughly than another component, thereby underestimating the total price relative to when prices are not partitioned. For example, when evaluating the price of a book purchased online, a customer might focus more on the price of the book than on the price of shipping, thus underestimating the total price

being paid. Second, partitioned pricing may draw more attention to the partitioned components than when these components are not partitioned. For example, quoting a separate price for an included warranty when selling a refrigerator might raise concerns about the refrigerator's reliability more than partitioning the price of another component, such as an icemaker.

Although research has contrasted customers' evaluations of partitioned and non-partitioned prices, variations in how a total price is partitioned across components and how these variations may affect customer preferences have been relatively ignored. Our research examines whether customers systematically prefer certain price partitions relative to others when the same total price is partitioned in different ways.

More specifically, we examine whether it matters which components in a partitioned price are large and which components are small in terms of their proportion of the total price. Earlier research suggests that the relative size of the components is the most important factor, but we propose that customers often have strong feelings about the nature of the components as well as their size. If the advantage of partitioned pricing is that customers process the largest component, often the base price, more thoroughly than smaller components, such as surcharges, it should not matter how the base price and surcharge are described. That is, if an online seller chose to partition the total price of a product such that shipping made up the majority of the price and the price of the product was relatively small, like a surcharge, existing theory suggests that customers would focus on the base price and ignore the surcharge, remembering a lower total price. However, the strong negative reaction many customers have toward paying for shipping suggests that customers do care how the total price is allocated across components.

The goal of this research is to answer questions such as the following:

- 1) When an auto repair shop writes their invoices, they often partition the price of labor from the price of the parts used to perform the repair. Keeping the total price charged to the customer constant, should their markup on labor be higher than the markup on parts

(or vice versa), or should the percentage markup be the same across components? As we will discuss in the next section, participants in our studies systematically preferred a lower markup on labor and a higher markup on parts.

- 2) In a restaurant that serves both pizza and wings, will customers respond more favorably to a discount on wings or to the same size discount on pizza? As we discuss in the paper, our research suggests that the effectiveness of the same monetary discount differs depending on whether customers come into the restaurant with a goal of buying wings or with a goal of buying pizza.

Are customers more concerned about the relative prices of the components or about the nature of the components?

Suppose that a customer needs to repair her car, and she is considering estimates from two different repair shops. Shop A is offering a new front car bumper for \$89.95 and charging \$32.50 for the labor to install it, while shop B is offering the identical bumper for \$69.95 and charging \$52.50 for labor. Thus, both shop A and shop B are charging the same total price of \$122.45. Which of the two offers is more attractive?

If customers focus more on the base price than on smaller surcharges, as suggested by earlier research on price partitioning, they should prefer to see a discount on the larger price component. This suggests that most customers would prefer shop B because a price discount on the larger component (the front bumper) should have a stronger effect on preferences than an identical price discount on the smaller component (labor).

On the other hand, research on human perception (Weber's law) suggests that customers may be more sensitive to a change in the price of a less expensive component than to an equivalent change in the price of a more expensive component because a higher percentage change is more noticeable. If this is the case, most customers should prefer shop A because the identical price discount is more noticeable when it is applied to the smaller price component (labor) than to the larger price component (the front bumper).

In contrast to both of these predictions based solely on the relative prices of the partitioned components, we argue that it is important to consider the nature of the components being partitioned. Our basic premise is that partitioned pricing allows customers to unambiguously link each component to its respective price, thereby encouraging customers to compare the perceived benefits of each component against its price rather than assessing the benefits of the components jointly.

Customers may perceive the benefits of a good or a service in several ways, including functional, social or emotional benefits. For example, functional benefit comes from a product's capacity for delivering functional, utilitarian or physical performance. Social benefit comes from a product's association with positively or negatively regarded social groups, and emotional benefit is acquired based on a product's association with specific feelings.

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If partitioned pricing encourages customers to compare each component's benefits with its price, we predict that they will be less sensitive to the price of components perceived to provide relatively high benefits – whether these are functional, social or emotional benefits – and more sensitive to the price of components perceived to provide relatively low benefits. Thus, when evaluating different partitions of the same total price, we predict that customers will prefer partitions in which they pay a lower price for the low benefit component and a higher price for the high benefit component. Specifically, customers will prefer partitions where \$X is charged for the high benefit component and \$Y is charged for the low benefit component to partitions where \$X+Z is charged for the high benefit component and \$Y+Z is charged for the low benefit component.

In the case of the auto repair shops we introduced earlier, if our customer believes that labor is a low benefit component relative to parts, she should prefer shop A, which charges \$32.50 for labor, over shop B, which charges the same total price but charges \$52.50 for labor. The reverse should be true if our customer believes that the auto part is a low benefit component relative to labor. We ran a study in which we asked 43 participants to compare shops A and B, and the majority of the participants (67 %) preferred shop A.

» Partitioning clearly links each component to its respective price, encouraging customers to evaluate the perceived benefit of each component. «

We asked an additional 42 participants to compare offers from auto service shops C and D. Both C and D charged a total price of \$167.45, but C charged \$127.50 for labor and \$39.95 for headlamps, while D charged \$107.50 for labor and \$59.95 for the same manufacturer-authorized headlamps. This version of the study was a helpful check on the results of the first study, because the price of the part was always lower than the price of labor. Thus, labor could be interpreted as the “base price” and the part could be interpreted as the “surcharge”. Again, the majority of our participants (60 %) preferred shop B. Thus, whether the auto part was a new bumper or new headlamps, a significant majority of our participants chose the auto repair shop that charged a lower price for labor. One takeaway from this study is that an auto repair shop is likely to fare better with a high markup on parts rather than a high markup on labor. A more general takeaway, though, is that when participants choose between two partitions of the same total price, the nature of the components (labor vs. parts) matters more to participants than the relative size of the components.

To further test the generality of this effect, we conducted a second, more elaborate study. In this study, we asked participants to compare two different low perceived benefit components, shipping and labor, with an automobile front bumper. We also varied the sizes of the partitions, even including a partition in which the low benefit component was free. One hundred fifty-six participants imagined that they were either evaluating offers from two auto repair shops to provide a front bumper and the labor to install it, or they were evaluating offers from two online auto parts suppliers to provide a front bumper and shipping.

As in the first study, participants consistently preferred partitions in which they paid less for labor and more for the auto part (\$32.50 for labor and \$89.95 for the bumper, chosen by 69 % of participants) to partitions in which they paid more for labor and less for the auto part (\$52.50 for labor and \$69.95 for the bumper; chosen by 31 % of participants). Similarly, they preferred partitions in which they paid less for shipping and more for the auto part (\$32.50 for shipping and \$89.95 for the bumper, chosen by 71 % of participants) to partitions in which they paid more for shipping and less for the auto part (\$52.50 for shipping and \$69.95 for the bumper, chosen by 29 % of participants).

The story changed a bit, though, when the low benefit component was free. Participants preferred partitions in which shipping was free (\$122.45 for the bumper and \$0 for shipping, chosen by 66 % of participants) to partitions in which they paid more for shipping and less for the auto part (\$52.50 for shipping and \$69.95 for the bumper, chosen by 34 % of participants). However, the opposite was true for labor: in this case, participants preferred partitions in which they paid more for labor and less for the auto part (\$52.50 for labor and \$69.95 for the bumper, chosen by 57 % of participants) to partitions in which labor was free (\$122.45 for the bumper and \$0 for labor, chosen by 43 % of participants).

To explain this reversal, we examined participants' attitudes towards free shipping and free labor. Participants believed that it was significantly more common for suppliers to offer free shipping than to offer free labor in the marketplace. In fact, the more the participants believed it was uncommon for auto service shops to offer free labor, the more likely they were to choose the shop charging more for labor over the shop offering "free" labor. Thus, participants' beliefs about typical marketplace behavior seem to influence their reactions to partitioned prices.

What about customers' goals? Do goals influence customers' reactions to partitioned prices?

Earlier, we posed a question about a restaurant serving both pizza and wings. Will customers respond more favorably to a discount on wings or to the same sized discount on pizza? To find out, we asked 115 undergraduate business students to imagine that they were hungry, and that they would be stopping at a take-out restaurant on their way home from class to pick up some food. We told one third of our participants that they were hungry for pizza and one third that they were hungry for wings; the other third of the participants was simply asked to imagine that they were hungry. We predicted that customers would place greater value on pizza if they were hungry for pizza, but greater value on wings if they were hungry for wings.

Next, we presented participants with a choice between two specials that the restaurant was offering. Special A offered participants the opportunity to "Buy a large one-item pizza for \$7.99 and get 20 wings for \$3.99!" while Special B offered them an opportunity to "Buy 20 wings for \$7.99 and get a large one-item pizza for

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\$3.99!” Consistent with our predictions, participants who imagined they were hungry for pizza perceived greater benefit in pizza, and systematically favored Special A, preferring to pay a lower price for the wings. In contrast, participants who imagined they were hungry for wings perceived greater benefit in wings and systematically favored Special B, preferring to pay a lower price for pizza. Those who were simply asked to imagine that they were hungry also perceived more benefit in pizza and favored Special A, suggesting that when thinking about the restaurant in the scenario, more people thought about pizza than wings. We also used this study to rule out several alternative explanations for our results. For example, although participants believed that the pizza and wings were of lower quality when they were priced at \$3.99 than when they were priced at \$7.99, these perceptions did not statistically explain their different preferences for the specials in the different goal conditions. Similarly, participants’ beliefs about the fairness of the two specials and the prices they thought were reasonable to pay for a pizza or for wings were not related to their preferences for the two specials.

Summary and Managerial Implications

Unlike much of the previous research on price partitioning, which focuses on contrasting partitioned and non-partitioned pricing, the objective of our research was to examine whether different partitions of the same total

price affect customer preferences. The basic premise of our framework is that partitioning clearly links each component to its respective price, encouraging customers to evaluate the perceived benefit of each component. Separate lines on an invoice listing the price of labor and the price of the part installed encourage customers to independently consider whether the benefit of the labor exceeds its listed price and whether the benefit of the part exceeds its listed price.

In a series of laboratory studies, we demonstrated that customers systematically prefer partitions allocating a larger proportion of the total price to components they perceive to provide high benefits relative to components they perceive to provide low benefits. For example, when evaluating competing estimates from auto repair shops, participants consistently preferred the partition in which they paid less for labor (and more for an auto part), regardless of whether labor was a larger or smaller proportion of the total price than the auto part. Thus, when an auto repair shop is deciding on its markups for labor and parts, our data suggests that customers will react more favorably to the total price when markups are larger for parts than for labor.

In addition to this key insight, our research provides two additional insights. First, preferences for partitions are influenced by the customer’s prior experiences and the market environment. Although shipping and labor were both perceived to provide less benefit than auto parts, participants preferred partitions in which shipping was free but not partitions in which labor was free. Notably, participants believed that free shipping was more commonly offered in the marketplace than free labor, and participants’ preferences for the partition in which labor was free were related to their beliefs about the prevalence of free labor in the marketplace.

Second, the perceived benefit of a component is not constant, but can be influenced by the customer’s goals for the purchase. In the first two studies we reported here, labor was perceived to provide less benefit than the parts being installed. However, in one of our studies that we do not discuss in this paper, we demonstrate that the value of labor can be varied depending on its perceived importance. Participants who were told they were buying a handcrafted wood gift for a friend who valued fine craftsmanship liked partitions in which labor was a greater proportion of the total price than participants

who were not told their friend valued fine craftsmanship. Similarly, in our pizza and wings study, participants who were hungry for pizza preferred offers in which the price of pizza was a larger proportion of the total price, while participants who were hungry for wings preferred offers in which the price of wings were a larger proportion of the total price. These subtleties suggest that in order to develop effective price partitioning strategies, it is incumbent upon managers to understand the market environment and the goals of their customers.

Another implication of our results is that when specific components are perceived to provide relatively high benefit, such as parts, customers may be more tolerant of price differences across competitive offers and willing to pay a higher price. In contrast, when components are low in perceived benefit, such as labor or shipping, they should be priced more competitively. The inverse of this is also true: when using partitioned pricing, firms may be able to increase the attractiveness of their pricing by enhancing the benefits of a particular component or by emphasizing a particular goal, as in our pizza and wings study. For example, marketing communications designed to enhance the perceived benefits of fine craftsmanship may increase customers' willingness to pay for labor relative to other components. Similarly, advertisements designed to invoke a particular consumption goal (e.g., Are you hungry for pizza?) may be more successful when they promote offers discounting products other than the product that is part of the consumption goal (e.g., wings rather than pizza). •

KEYWORDS:

Pricing Systems, Price Partitioning, Price Perception, Price Sensitivity

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