Reason-based judgments: Using reasons to decouple perceived price–quality correlation

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\begin{abstract}
Many models of consumer behaviour assume that people evaluate price and quality independently. However, evidence shows that consumers perceive price and quality as positively related even when they are weakly correlated in the real markets. This paper explores whether this perceived relationship can be cognitively de-coupled by providing explicit reasons why low price and high quality may be compatible. The participants were asked to rate existing stores and fictitious stores in a two-dimensional price–quality space. When the participants were given plausible reasons why the seemingly high quality fictitious stores could have lower than average prices, their judgement of the price–quality relationship was significantly less correlated than when these stores were judged without such reasons. Therefore, the demonstrated phenomenon of reason-based judgments can be used to attenuate the typical price–quality overestimation, or heuristic, which has important implications for decision making research and marketing practice.
\end{abstract}

\section{1. Introduction}

Consumers frequently expect that price and quality are positively correlated, and they often use price to infer quality (Baumgartner, 1995; Bettman, John, & Scott, 1986; Broniarczyk & Alba, 1994; Monroe, 1973; Monroe & Petroshius, 1980; Olson, 1977; Pechmann & Ratneshwar, 1992; Rao & Monroe, 1988, 1989). Ordóñez (1998) shows that people also predict price from quality and the price–quality correlation, because ‘expectations about a product’s attributes, including its appropriate reference price, are influenced by the subjective correlation among those attributes’ (p. 259). In general, these studies demonstrate that expectations about a product’s attributes are affected by the subjective correlation among those attributes, which in turn affect consumer choices.
However, in reality, price is a poor indicator of quality within many product categories. Thus, measures of the real price–quality correlations based on quality ratings show that the mean value is .27 and the correlations vary across product categories (Gerstner, 1985; Oxenfeldt, 1950; Tellis & Wernerfelt, 1987). Lichtenstein and Burton (1989) even show negative correlations for laundry detergent, orange drink, and frozen French fries. Several studies indicate that subjective price–quality correlations are influenced by prior beliefs and may differ from objective correlations (Birnbaum, Kobernick, & Veit, 1974; John, Scott, & Bettman, 1986; Pechmann & Ratneshwar, 1992). Note, however, that the picture is not unmittingly bleak, in terms of human rationality, because there is evidence that consumers can also be very accurate in their judgments of actual correlations (Bettman et al., 1986; Lichtenstein & Burton, 1989). Thus, the results on consumers’ perceptions of price–quality relationships are rather mixed and the issue is far from settled.

This article reports a study aiming to test additional factors that might affect people’s judgments of price and quality, apart from the already tested ones (e.g., that price and quality are used as proxies for each other). The new factor is the reasons why and how price and quality are related. Reasons are known to have an effect on choices that require trade-offs. As an alternative to the models assuming directly trading off costs and benefits, researchers have suggested reason-based choice models that assume people add up (pro and con) reasons for each alternative and choose the option with highest support (Shafir, Simonson, & Tversky, 1993; Simonson 1989; Tversky, Sattath, & Slovic, 1988).

The effects of reasons on judgments have not been studied before. We conjecture that reason-based judgments could be an alternative way to estimate the relationship between price and quality, instead of judging them directly. For example, number of reasons a store has high quality could be pitted against the reasons that the store has high or low prices. Thus, reason can be used to prompt people to try to infer a price or quality estimate. Note that this idea goes against the usual assumptions in economics that consumers independently sample price and quality (of a product or a service) and then trade them off to determine the overall value (utility) of the objects in question. Thus, there are two main ways in which price–quality correlation could be inferred – by independent judgment or using cues like reasons. People may use the latter route because they may try avoiding trade-offs. For example, decision makers could try to reframe a decision problem in an attempt to find a dominant option and, only if they cannot find such option, they may engage in trade-offs (Slovic, 1975). Making trade-offs is a more difficult decision process because it typically requires cognitive effort (Payne, Bettman, & Johnson, 1993). People are likely to avoid trade-offs also when they are emotionally difficult (Luce, Bettman, & Payne, 1997; Luce, Payne, & Bettman, 1999).

This dual route to infer the price–quality correlation (trade-off vs. reasons) could be responsible for the complex and mixed picture of this relationship discussed at the beginning. If people do indeed use a dual route to infer the price–quality correlation, namely using both (or mixture between) trade-off and reasons, then the typical price–quality overestimation can be attenuated with the addition of an explicit reason. This article presents a test of this scenario when both reasons and price–quality cues are available, which would also confirm the existence of such a dual route judgment process.

2. Using reasons to infer the price–quality relationship

The study reported here, tested whether giving people plausible reasons why a high quality store could still be a cheap one could make people perceive this store differently. The emphasis on giving only good reasons was motivated by the fact that when people cannot construct or find a good reason to make a particular choice, they may delay until a good reason becomes available or try to find new choice alternatives (Luce, 1998; Tversky & Shafir, 1992). This reason-based choice paradigm suggests that under uncertainty, people make choices that they can readily justify (thus this paradigm also explores the types of choices people make when they seek an explicit rationale to support their selections). Note, however, that the approach in our study is a departure from the traditional reason-based choice framework (Shafir et al., 1993), because store choices were not studied. Our approach draws on a different idea – that reasons affect consumer judgments of price and quality and their correlation, which are assumed to affect subsequent choices.

This study also aimed to test a new domain in which the price–quality relationship is observed. Most previous research investigated the perceived relationship between price and quality of individual products. For example, a consumer might rate the quality of a particular brand of shampoo as high if the price is high. In this case, a single observation is a brand. However, here we investigated a different correlation – the perceived correlation between price and quality in a particular store, which has not been tested before. Note that while clearly price–quality correlations for stores and products do have a connection, these correlations are not the same. The store level analysis is also a very current issue for retailers. Supermarkets track their success by tracking their price and quality ‘images’ (we know that as a result of ‘personal communication’ with marketing executives and after consulting a major supermarket retailer). The supermarket industry tries to optimize their price and quality images, because often price images are very similar across competitors (e.g., as between Tesco and Asda). Our experience also proves that it is very hard to eradicate price image gaps, which is a major strategic objective for the senior management.

Consumers are also likely to make their decisions at a store level for various reasons. First, many products are not branded, like fruit and vegetables (and other fresh produce) and the choices are made purely on the basis of the average price and quality (e.g., freshness, taste) of these products in the store. Supermarkets also offer their own branded products (meats, milk, clothes), which tend not to differ across stores in terms of price (usually the lowest possible), but do tend to vary in quality. Second, most supermarkets sell, more or less, the same brands of goods (beverages, ready meals, snacks, etc.), so a consumer is often faced with a dilemma not about the product, but about the retail outlet (e.g., several stores may sell the same brand of bread, but in some stores the product may be close to use-by date; or the store may offer easy to navigate environment, offer more discounts, etc.). Third, the cognitive cost is higher at brand level decisions. The variety and complex-
ity of the brands (e.g., for wine) prevent the average consumer to remember the quality of particular brands, but she can recall that a particular store offers good wine at lower prices (which can also result from consumers avoiding to keep track of which brands are a ‘good value’ at which stores).

3. The experiment

Our first objective was to measure the degree to which consumers cognitively associate price and quality in the UK retail (store) sector. We used an experimental paradigm, in which consumers first rated existing stores in price and quality. Then the participants were asked to judge the expected price and quality of fictitious stores, from brief descriptions. Thus, the participants could anchor their judgements of the fictitious stores by reference to their ratings for the known stores. The strategy used here was to give people hypothetical store descriptions in terms of various cues that the stores are of high quality, which was expected (in line with the evidence discussed before) to prompt the respondents to infer that these stores also have high prices. In this respect, there is convincing evidence that the causal source of the price–quality relationship can start with establishing a level of quality. In particular, Erickson and Johansson (1985) found that judgments of price are influenced by beliefs about a brand’s quality. Also, in a study assessing a consumer’s perceptual link between product quality and price, Noel and Hanna (1996) demonstrated that consumer judgments about product quality influence the price they are willing to pay. Our results demonstrated that, as expected, there is a strong relationship between ratings of price and quality. That is, factors that make people think that a store is high (low) quality also make them think that a store has high (low) prices.

The second objective was to consider how it may be possible to de-couple price from quality, so that learning new information about the quality of a store might have less impact on consumer’s judgements of its prices; and vice versa. As indicated already, this is a crucial practical question for retailers—otherwise, any efforts to improve consumer perceptions on price will tend to work against consumers’ perceptions of quality, and the converse. This study used an experimental method that involves giving people reasons why a store could be cheaper but still offer high quality products. Thus, we tested whether the price image of the high quality stores would change in the downward direction, by measuring whether the price and quality ratings of the hypothetical stores would be different from the ratings of these stores when paired with various reasons. Two different groups of participants were asked to rate the hypothetical stores: one group rated the stores without reasons while another group rated the stores with reasons.

There was not a separate condition that offered reasons why a store might be able to charge higher prices for lower quality merchandise, because this is not practically interesting question in applied settings. It would sound very awkward and unnatural to state that a store claims that it offers lower quality at higher prices because of some reason (e.g., not having the financial power to buy large quantities from quality producers). No retailer in the real-world would ever consider such a marketing strategy.

3.1. Method

3.1.1. Materials

Two preliminary tests elicited the quality cues (used as hypothetical store proxies) and possible reasons from consumers. Protocol interviews with twenty respondents were conducted in order to derive the most plausible high quality cues, which used to compose hypothetical store descriptions. The interviews were structured around two main questions: (a) “How do you choose where to shop?” and (b) “What factors determine your perception of prices?” The interviews were open-ended discussions structured around various stages: pre-interview survey asking about demographics, shopping habits, store selection, store price judgements, in-depth discussion of price perceptions, and relative importance of factors. The factors (cues) had a score as a function of how often the factor is mentioned by interviewees and how important they rated the factor. The protocol interviews derived the four most popular factors affecting price perception: Costly extras, High product quality, Target audience, and In-store presentation. Appendix A presents the four hypothetical store descriptions that incorporate these four separate cues. These four stores were used in the control condition, in which there were no reasons accompanying the stores descriptions.

The interviews showed that respondents felt that price information seems to play secondary role in the process of forming a price image, which is contrary studies showing that various forms of price reductions have primary effect on how consumers form an overall store price image (e.g., Desai & Talukdar, 2003). Thus, the interviews confirmed that price knowledge is a component of a rich product knowledge structure, in which price is inferred from domain specific relations among product features (see Lawson & Bhagat, 2002). Our study shows similar results at a store level too. Note also that apart from the “high product quality” cue, none of the other cues were intrinsic product attributes (usually used by consumers to infer more abstract constructs, such as perceived quality, Zeithaml, 1988). These cues are extrinsic attributes, which are not part of the physical product and have no direct impact on functional performance. However, there is evidence that various extrinsic cues (e.g., product warranty, brand and store name, country of origin) are used by consumers in quality and price judgments (see Chang & Wildt, 1996). The rationale behind using such cues is that in many instances, extrinsic and intrinsic attributes are correlated. For example, many consumers associate certain brand names with positive intrinsic attributes. Therefore, these associations may lead consumers to believe that certain extrinsic attribute cues are efficient and accurate indicators of product quality (Rao & Monroe, 1989). Our study showed that such extrinsic attributes are perceived as indicators of a store’s quality and price levels.

A separate survey was conducted with different respondents in order to generate the reasons that were used to decouple the perceived price–quality correlation of the hypothetical stores. Twenty respondents were asked the following open-ended
question: “A leading supermarket is able to sell products with higher-than-average quality at lower-than-average prices. How do you think they are able to do this? Give as many reasons as you can, but try to give at least three reasons.” The top five most frequently mentioned reasons were selected. These reasons were related to quantity, contract, turnover, efficiency, and simplicity. The four reasons are described in Appendix B.

3.2. Participants

Twenty participants took part in each condition of the experiment, making 40 participants in total (24 female, 16 male, Average Age = 36.8) recruited from the University of Warwick staff population via the decision research group mailing list of people (who have asked to be contacted) participated in this experiment. None of these people took part in the preliminary tests described earlier. All participants were paid £10 for their participation.

3.2.1. Design

The main test investigated whether the five reasons can decouple the perceived price–quality correlation related to the four store descriptions. There were two stages of this test. In the first stage, participants were asked to judge existing stores, while in the second stage they had to judge unknown (hypothetical) stores. The real supermarket brands were used to impose an independent standard for quality and price according to standards existing in the real world. In this way, the participants could relate the hypothetical store features to their experiences with real supermarkets and thus they could ‘anchor’ their price and quality judgments. The existing stores were thirteen well-known major supermarket brands in the UK (Aldi, Asda, Co-op, Kwiksave, Lidl, Marks & Spencer, Morrison, Netto, Safeway, Sainsbury, Somerfield, Tesco and Waitrose). Participants were informed that the test aimed to investigate in more detail how they see the prices and quality of different supermarkets. On the second page of the questionnaire, the participants were presented with two lines making up a two-dimensional map. The horizontal line represented price. The vertical line represented quality. They were also provided with the list of thirteen real supermarkets and the first task was to place each store on this map according to the prices and quality the participants perceive that store to have. This task is presented in Appendix C.

In the second stage of the test, 20 hypothetical supermarkets were described. The participants were instructed after reading the information about each store to place the store on the same map where they wrote the existing stores. The instruction was to write down the number of the new store (1–20) in the location that seems most appropriate. The participants were allowed to put more than one store in each square on the map.

The study had a between-subject design with two conditions—experimental and control condition respectively. In the experimental condition, each store was described as a combination of one of the four store descriptions (presented in Appendix A) and one of the reasons (presented in Appendix B). Thus for example one hypothetical store description combining 'Target audience' cue with a reason related to 'Simplicity' was the following:

<table>
<thead>
<tr>
<th>Store 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>This store is often used by smartly-dressed professionals and older couples. It stocks a premium version of its own-brand products. The packaging of its own-brand products is colourful and well designed. The store is located near an area with very high house prices.</td>
</tr>
<tr>
<td>This store claims to sell products with higher-than-average quality at lower-than-average prices because it does not have fancy bells and whistles. It says that money saved by reducing unnecessary extras is used to reduce prices. This store says that it relies on simplicity and functionality rather than expensive extras.</td>
</tr>
</tbody>
</table>

In the control condition, the participants saw only the control stores without being combined with a reason. This condition allowed a direct test of whether reasons can make a hypothetical store to be perceived as cheaper, or with a better quality, than the same store description without a reason. Note also that the consumers are told that a “store claims to sell higher-than-average quality at lower-than-average prices” (Appendix B). We used such statements for two reasons. First, because such claims are used by most retailers and therefore represent a realistic scenario. A second and more important argument in favour of using such statements was that all five reasons can also be used to support the opposite inference – that stores offer high prices and high quality, but they do whatever the five reasons represent (i.e., quantity, contract, turnover, efficiency, and simplicity) in order to cut costs and thus increase their profits. For example, stores could buy high quantity of goods, or secure contracts with suppliers, in order to buy these (high quality) products at a cheaper price, while at the same time still keep their prices high (e.g., Marks & Spencer’s and Waitrose may be seen as employing such strategies). Thus, none of the five reasons, in isolation, are leading people to infer that prices should be low and quality high. These five reasons can support both arguments – for high and low price-quality correlation respectively. Only when these reasons are provided with justification why stores are using such practices (quantity, contract, etc.), namely to be able to provide high quality products at low prices, consumers’ inferences can go in the desired direction. And namely this was our purpose here—to test whether such reasons can indeed be used to support such arguments. Negative result here would imply that people naturally assume that these five practices may be employed solely for the purpose of profit maximisation.
3.3. Procedure

Participants were given a booklet containing all stores descriptions and the price-quality map presented in Appendix C. The hypothetical stores in each condition were presented in four different random orders (i.e. five participants per condition were allocated to one particular order of stores in the booklet), thus eliminating any possibility for order effects. In all cases, the first task was always to place the real supermarket on the price–quality map (as letters), while the second task was always to place the hypothetical stores on the map (as numbers). A separate study (not reported here) showed that there was no difference between such simultaneous judgments and separate judgments one dimension at a time (price and quality were very highly correlated in both conditions), which reassured us that the two dimensional price–quality grid was not forcing the participants to correlate price and quality, by biasing them to place stores on the diagonal.

The participants received written instruction explaining that the purpose of the experiment is to understand how shoppers make judgments about the price and quality of supermarkets; and that the aim was to know how they see the prices and quality of different real and hypothetical supermarkets. Thus, clear instructions and examples were provided at each stage. For instance, participants saw a diagram with three hypothetical stores (Store A had average prices and quality, Store B is a little cheaper and has the same quality as Store A, Store C is a lot more expensive and has slightly higher quality than Store A). Each store in the list was associated with a letter (see Appendix A). Participants were instructed to write the letter of each store at the appropriate place on the map. Thus, participants were instructed to place stores with low prices/quality toward the left/bottom side of the map, while stores with high prices/quality toward the right/upper corner of the map.

The instruction also explained that some of the hypothetical stores will seem particularly high or low in price and/or quality, so the participants should place these at the extremes of the map. The participants were also instructed that if in other cases they are not very sure, then they should place the store somewhere in the middle of the map. The instruction clearly pointed out that there are no right or wrong answers, and that to the aim was to know what impression the participant has of each store after reading the description. The instructions also stated that if the store description was not meaningful to the participant, to leave out that store from the grid. Finally, the participants were instructed that if they are unfamiliar with a real store, then they should not place it on the map, and that they can put more than one store in each square on the map.

3.4. Results

Participants took approximately 30 min to rate all stores. Fig. 1 presents the averaged price and quality ratings for each store (real and hypothetical) plotted on the two-dimensional price–quality space. The regression line is fitted only through the real supermarkets, thus defining the dimensionality of the psychological space in which the participants defined the price–quality relationship of the hypothetical stores. The real supermarkets were plotted because they indicate the reference points used by the participants to judge the hypothetical stores. Thus every hypothetical store is positioned somewhere on a mental map defined by the experience with the real stores. The existing supermarkets are positioned close to the regression line, which indicates that people perceive price and quality to be highly correlated in relation to these stores (i.e., stores perceived to have high prices, like Waitrose for example, are also judged to have high quality and vice versa). The four control stores (without reasons) are all positioned among the existing stores, which indicates that these four store descriptions were all anchored in existing real stores. When these store descriptions were accompanied with (the reasons condition), then
these stores (all triangular markers representing reason-accompanied stores) were clearly positioned above the regression line and above the other real and control stores. Having higher rating on the quality dimension, while keeping the prices similar to the control stores (or alternatively, having similar quality ratings but lower price ratings), indicates that the hypothetical stores, for which a reason for price–quality decoupling was given, moved above the regression line.

The next step was to assess the degree to which the manipulations in this study impact the price–quality correlation. This was done by considering the degree to which people’s perceptions of the retailers move off the price–quality regression line – i.e., move in a direction that is orthogonal to the standard price–quality relationship. To assess this, the ‘basis’ in which the results were described in terms of the price and quality dimensions was changed to a new basis defined by two new dimensions. One dimension was orthogonal to the price–quality regression line in the control condition. This was called the ‘value-for-money’ dimension, because it measured the degree to which a retailer provides good quality, in relation to price (if the value on this dimension is positive), or poor quality, in relation to price (if the value is negative). The other dimension was parallel with the price–quality regression line. This was called the ‘basic-to-luxury’ dimension, because moving along this line indicates that quality and price are increasing or decreasing in unison, and that value-for-money is unchanged. Thus, giving a customer the message that a retailer is high quality is likely to encourage a participant to assume that the retailer is expensive, which will cause a shift along the ‘basic-to-luxury’ dimension only. By contrast, price–quality decoupling is, of course, to cause a shift in the ‘value’ dimension – to improve the perception of the quality of the goods sold by that retailer in relation to their price. In summary, the data was transformed into the two new dimensions, where the regression line from the data was one axis, and the orthogonal direction was the other axis. Zero points on these axes were set at the intersection of the regression line and the ‘quality’ axis; but the location of these zero points is arbitrary, of course, from the point of view of statistical analysis.

Fig. 2 presents the averaged results along the two new dimensions for the control stores and for each of the reason based stores. As pointed out before, the regression line is calculated over the results in the control condition (the set of points through which the regression line was fitted were the twenty averaged scores – one per participant in this condition). In other words, the regression line in the following analyses is derived from the hypothetical control stores. The arrows indicate the orientation of the new basis: one arrow along the regression line, and one arrow at right angles going upwards indicating movement in the perpendicular direction. The aggregated results allowed us to measure to what degree each reason decouples the price–quality correlation relative to the control condition. Thus, in the framework presented in Fig. 2, one can directly observe and measure the effect of each reason separately, and estimate whether some reasons have stronger (or weaker) decoupling effect on the perceived price–quality relationship. The location of the dots for the five reasons clearly indicates that the reasons have shifted the evaluations of the stores in a direction orthogonal to the regression line (which basically replicates the result shown in Fig. 1) – i.e., in the positive direction of the value-for-money dimension, indicating good quality, in relation to price; but most importantly, demonstrating that the reasons have successfully decoupled the association between price and quality.

To measure the distance between the stores with reasons and the stores in the control condition, a price–quality shift index was derived, which is a single measure of how much an item is moved orthogonal to the price–quality regression line in the control ‘no reason’ condition. This shift index is a single measure of the distance between the points in Fig. 2, which also permits the use of a statistical test of the significance of this distance. The derivation of the shift index involved the
The results presented in this article suggest that reasons provide an effective means of de-coupling price and quality, a phenomenon that we call reason-based judgment. The participants had to make price–quality inference, without direct information about price. It seems sensible to estimate price based on quality from the price–quality correlation observed in real stores; and other things being equal, this is what the participants did. The participants were first asked to rate existing stores in price and quality and then to estimate the expected price and quality of fictitious stores. When the participants were given plausible reasons why the seemingly high quality fictitious stores could have lower than average prices, their judgement of the price–quality relationship was significantly less correlated than when these stores were judged without such reasons. In particular, the stores with reasons were judged to have lower prices and higher quality in the two-dimensional price–quality space than the control stores (without reasons). Thus, this result shows that reason-based judgments
offer a potential method to decouple price and quality perceptions. Therefore, the typical price/quality overestimation (or heuristic) can be attenuated with the addition of a reason.

4.1. Implications for theory

Reason-based judgments have important implications for the empirical work on descriptive theories of consumer choice. For example, the price-expectancy model proposed by Ordóñez (1998) defines the expected (or reference) price as a function of the subjective value of quality weighted by the subjective correlation between price and quality. According to the model, reference prices affect consumer choices, because the utility of a product is the weighted sum of its actual price, quality, and the difference between its actual and reference price (and utility in turn determines preference/choices). The results presented here imply that reasons can affect the reference prices, because reasons can decouple the subjective price–quality correlation (or, reasons could play a role in the reference price construction process). In this respect, by definition, reasons can be integrated in the price-expectancy model by assuming that the subjective price–quality correlation is a function of reasons (and surely other cues too).

4.2. Implications for practice

The fact that judgment of price and quality are used as proxies for each other is related to the discussion in economics of the possible existence of Veblen goods, and related concepts (Leibenstein, 1950) – goods which people find more attractive to buy as their price goes up. One rationale for Veblen goods is that, in contexts in which quality is extremely difficult to assess directly, price may be used as a signal for quality. Veblen goods are a potentially interesting from the point of view of economic theory, but the general question of the relationship between judgements of price and quality is of great practical interest to the retail sector. This implies, for example, that given two stores selling goods of the same quality, the store with higher prices will be judged to have higher quality; and vice versa. Effects of this kind create serious practical problems for retailers: when a retailer cuts prices, there is a danger of damaging its reputation for quality; and conversely, when a retailer improves quality, there is a danger of damaging its price image. The same issue can arise in relation to retail decisions about many other features of a store. The decision to improve the attractiveness of a store, or to add additional services, may also have a detrimental effect on price perception, because store attractiveness, or types of services, may also potentially be viewed as indicators of price, by consumers. Our study shows that retailers can use reasons to avoid such unfavourable outcomes.

In general, our results imply that reasons could be used to encourage people to consider and judge any two dimensions (including price and quality) independently. Then people might be more inclined to trade-off such attributes and infer a less biased perception of the value of a store (and, presumably, the same effect would be observed more generally, concerning any product, service, or any other tradable object).

Another possible application of our research is when it might be useful rather to strengthen the price–quality relationship. For example, if consumers doubt that high prices in a store are warranted by the quality of its products, then reasons could work in a more coupling direction (e.g., stating that high prices in a store are due to the more expensive/rare ingredients included in the products, or because quality products take longer to produce).

4.3. Avenues for future research

4.3.1. Number of reasons

A further test of reason-based judgments could be to vary the number of good vs. bad reasons for price and quality, respectively. For example, future research could test whether people’s judgments of price–quality correlation could be reversed from, say, positive to negative, or vice versa, depending on how many reasons are given for low (high) price vs. high (low) quality, even if a store’s basic attributes (i.e., cues for price and quality) are not changed.

4.3.2. Unreasonable reasons

Shafir et al. (1993) demonstrate also that people will choose to go on a trip whether they failed or passed an exam, but nevertheless want to know how they did on the exam before making the decision to take the trip. In other words, they want a “reason” even though in fact the reason does not predict the decision. Thus, some might argue, for reason-based decision making to be interesting, the reason has to be a bad driver of the decision, or at least a nondiagnostic one. In the study presented here, this is not the case, but it would be interesting to address this issue in future tests of reason-based judgments, in which strange (counterintuitive) reasons (e.g., that the store management is just being less profit oriented) are given to justify the price–quality discrepancy.

4.3.3. Self-generated reasons

In future research, it would also be interesting to consider this phenomenon, using slightly different paradigms. For example, the participants could be asked to pause after presenting them with the store description and ask them to generate reasons (perhaps varying the number of reasons across experimental conditions) for why the store might be able to offer higher quality merchandise at lower prices and offer lower quality merchandise at higher prices. Thus, the price–quality schema (heuristic) can be eliminated through self-generated reasons. This paradigm would be attractive, because participants would
not be directly cued that they should take account of externally provided reasons (which might explain the price–quality decoupling in our experiment).

4.3.4. Cross-cultural reasons
Note also that the reasons elicited from consumers in our preliminary study were all related to ‘rational’ factors (e.g., because the store has especially large buying power; or it is unusually efficient). None of the reasons related to more ‘emotional’ factors like, for example, the store being loyal to its customers, or the store being ‘nice’ and ‘fair’. This focus on rational reasons might be caused by cultural influences in western societies. Briley, Morris, and Simonson (2000) show that culture influences decisions through different reasons (rules or principles) that individuals recruit when required to explain their choices. This was investigated in studies of consumer decisions that involve a trade-off between diverging attributes, such as low price and high quality. In particular, Hong Kong decision makers were more likely to select compromise products (in terms of price vs. quality) than North American participants, because compromise is more salient in East Asian cultures than in North American culture. This result implies that price–quality relationship might be easier to decouple in East Asian cultures by reasons such as “the store is compromising/reducing its profits in order to win consumers’ loyalty” or “the store’s suppliers compromise higher profits to win secure long-term relationship.” This is another potential question for further research.

Appendix A. Store descriptions used in the experiment

<table>
<thead>
<tr>
<th>Store 1: Costly extras</th>
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<tbody>
<tr>
<td>This store provides lots of facilities for its customers. It has toilets, a restaurant, a dry cleaners and a photo developing facility. The staffs in this store are always well presented in smart and tidy uniforms. They are always very helpful and polite.</td>
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<th>Store 2: High product quality</th>
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</thead>
<tbody>
<tr>
<td>This store sells products that are of a high quality. The fruit and vegetables are always fresh and clean. Only well-known brands are sold in this store. Its own-brand products score consistently highly in independent tests of taste and quality.</td>
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</table>

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<tr>
<th>Store 3: Target audience</th>
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<tbody>
<tr>
<td>This store is often used by smartly-dressed professionals and older couples. It stocks a premium version of its own-brand products. The packaging of its own-brand products is colourful and well designed. The store is located near an area with very high house prices.</td>
</tr>
</tbody>
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<table>
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<tr>
<th>Store 4: In-store presentation</th>
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<tbody>
<tr>
<td>This store is very clean and well presented. It has wide uncluttered aisles and the products are displayed neatly. The shelf displays look attractive and products look carefully arranged.</td>
</tr>
</tbody>
</table>

Appendix B. Reasons used in the experiment

<table>
<thead>
<tr>
<th>Reason 1: Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>This store claims to sells products of higher-than-average quality at lower-than-average prices because it is a very big chain of stores and so buys more than other stores. It says that buying larger quantities makes prices cheaper because the store pays less to suppliers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason 2: Simplicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>This store claims to sell products with higher-than-average quality at lower-than-average prices because it does not have fancy bells and whistles. It says that money saved by reducing unnecessary extras is used to reduce prices. This store says that it relies on simplicity and functionality rather than expensive extras.</td>
</tr>
</tbody>
</table>
Reason 3: Efficiency
This store claims to sell products with higher-than-average quality at lower-than-average prices because it has very efficient management. It says that high quality goods can be produced with lower costs with an efficient supply chain: by having a good distribution network with many warehouses around the country, keeping low amounts in stock, and buying locally so the cost of the transport is lower. It also says that many processes are computerized, minimizing the number of employers needed and increasing productivity.

Reason 4: Contract
This store claims to sell products with higher-than-average quality at lower-than-average prices because the company has secured contracts from product distributors. Thus, through agreements with producers and suppliers the supermarket says that it can buy high quality products at special reduced prices.

Reason 5: Turnover
This store claims to sell products with higher-than-average quality at lower-than-average prices in order to attract more customers into the supermarket. They say that more customers result in bigger turnover and greater overall profit even if the profit on each product is smaller. They also say that they sell many products and do not need to make big profit on each one, and can even afford to make no profit on some products.

Appendix C. Answer sheet in the main experiment
C.1. Please use this page to answer (1) and (2)
References


