

# Pricing Fairness in a Pandemic: Navigating Unintended Changes to Value or Cost

---

ELIZABETH M. S. FRIEDMAN AND OLIVIER TOUBIA

**ABSTRACT** The recent pandemic has caused many businesses to alter their offerings, at times providing inferior value to their customers or incurring higher costs. Many classes moved online, leading to a lower-value offering without significant cost reductions, and many firms adopted costly hygiene measures, such as stringent cleaning or reducing capacity to maintain social distancing. This article explores consumers' fairness perceptions regarding pricing decisions made in response to unique scenarios caused by the pandemic. We present three key findings: (i) maintaining prices following a product downgrade is viewed as less fair than maintaining prices following an equivalent decrease in costs; (ii) price decreases following a product downgrade are viewed as more fair when positioned as passing on cost savings rather than making up for decreased value; and (iii) price increases due to hygiene measures are perceived as more fair when they result from direct (compared with indirect) cost changes.

The COVID-19 pandemic has caused many products and services to change quickly, along with the associated costs to firms and value to customers. For instance, many universities, schools, and exercise studios transitioned to offering classes online when the pandemic made in-person lessons infeasible. The online product is generally less desirable, yet the primary costs of salaries and rent remain relatively unchanged. On the flip side, many hotels and airlines have adopted hygiene measures that significantly increase costs but do not provide additional value compared to the pre-pandemic offering. As firms decide whether and how to adjust prices in response to such changes in value or costs, as well as how to communicate these changes to their customers, consideration of consumers' perceptions of fairness is paramount (Guo and Jiang 2016; Shaddy and Shah 2018). Recently, many students have filed class-action lawsuits against universities demanding tuition refunds as compensation for switching to remote learning, highlighting the power of customers to take action against organizations who behave in a perceived unfair manner (Kamanetz 2020). In this research, we explore consumer fairness perceptions in response to pricing decisions that businesses

have made to navigate these unusual circumstances of the pandemic.

One change to the marketplace that COVID-19 has caused is the downgrading of product and service quality. Many in-person university and exercise classes moved online, and hotels and recreational spaces closed their high-touch amenities (such as gyms), resulting in a less valuable product for consumers at no fault of the seller and without a comparable decrease in costs. These circumstances pose a unique challenge for firms as they decide how to adjust prices in a way that reflects value, covers their costs, and that consumers find "fair." Prior research has demonstrated that perceived fair prices are in part a function of the seller's production costs, as consumers generally find it fair for sellers to charge higher prices to cover higher costs (Urbany, Madden, and Dickson 1989; Bolton, Warlop, and Alba 2003; Vaidyanathan and Aggarwal 2003; Xia, Monroe, and Cox 2004; Bechwati, Sisodia, and Sheth 2009). For instance, the seminal dual entitlement (DE) theory proposes that, "transactors have an entitlement to the terms of the reference transaction, and firms are entitled to their reference profit" (Kahneman, Knetsch, and Thaler 1986, 729), suggesting

---

Elizabeth M. S. Friedman (corresponding author: [e.friedman@columbia.edu](mailto:e.friedman@columbia.edu)) is an assistant professor of marketing at Columbia Business School, 3022 Broadway, New York, NY 10027, USA. Olivier Toubia ([ot2107@gsb.columbia.edu](mailto:ot2107@gsb.columbia.edu)) is the Glaubinger Professor of Marketing at Columbia Business School, 3022 Broadway, New York, NY 10027, USA. The authors thank Vicki Morwitz and Franklin Shaddy for their valuable feedback on an earlier draft, and the review team and editors for their helpful comments. Supplementary materials are included in the appendix, available online.

**Issue Editors:** Angela Y. Lee and Kelly Goldsmith

Published online December 14, 2021.

*Journal of the Association for Consumer Research*, volume 7, number 1, January 2022. © 2021 Association for Consumer Research. All rights reserved. Published by The University of Chicago Press for the Association for Consumer Research. <https://doi.org/10.1086/711850>

that firms may be entitled to maintain prices if their costs do not change in order to maintain their previous profit level. However, while DE compares fairness perceptions to changes in costs versus changes in demand, it does not examine instances when the product quality or value changes.

Fairness perceptions when product quality differs without a corresponding difference in cost has been less studied, raising an interesting question about whether consumers would find it more fair to maintain prices following a decrease in value or following an equivalent decrease in the seller's costs. Past work has shown that perceived fair prices do often reflect value, with fair prices being higher for higher-quality goods and lower for lower-quality goods, but this judgment was driven by the perceived cost-of-goods-sold (CGS) mapping on to product quality (Bolton et al. 2003; Guo and Jiang 2016). To the best of our knowledge, the closest papers to address the question of fairness perceptions when product quality changes without a change in costs look at instances where retailers intentionally worsen product quality as a way to price discriminate (Gershoff, Kivetz, and Keinan 2012) or downsize a product to compensate for increased input costs without customers noticing (Wilkins, Beckenuyte, and Butt 2016). However, fairness perceptions in such situations are driven by firms violating perceived norms or behaving deceptively, which does not apply to scenarios where changes to the product are driven by external circumstances, such as a pandemic.

We propose that consumers find it less fair if a firm maintains their prices following a decrease in value compared to an equivalent decrease in costs. DE argues that firms do not have “an unequivocal duty” to pass on cost savings to consumers (Kahneman et al. 1986, 734), with participants split roughly 50/50 on whether they believed it was fair for a company to maintain prices following a cost decrease. This suggests that at least some consumers will find that it is fair for a company to maintain prices following a decrease in cost. To evaluate fairness perceptions following a decrease in value, we extend the logic of DE beyond reference prices and profits to also encompass consumer surplus. If the product quality decreases without a corresponding decrease in price, consumers will experience a loss of surplus relative to their previous surplus reference point, which we predict will feel unfair. Thus, given that fairness perceptions do not dictate that firms share a cost decrease, and that consumers likely care more about their own surplus than the firm's profit, we predict the following:

**H1:** Consumers will view maintaining price levels as less fair when the value of the product has decreased,

compared to when the costs to the retailer decrease by an equivalent amount.

Furthermore, we explore fairness perceptions if a firm does lower prices in response to a product downgrade. We find that consumers' perceptions of fairness may vary depending on whether they consider the price reduction as compensation for lower quality, or as the firm sharing cost savings. Past work has found that consumers are sensitive to the way price changes are justified, holding all else constant (Campbell 1999). Thus, firms may benefit from merely describing the reasons for a price change differently, even when the underlying facts have not changed. Although work on procedural fairness suggests that support for favorable decisions, such as a price decrease, may be relatively insensitive to procedural variables (Brockner 2002), we instead predict that consumers will perceive the decrease differently depending on how it is framed.

We propose that customers will respond more favorably when pricing decisions are linked to concrete cost changes. Although past work has not explored this question directly, an extensive body of work has underscored the importance of retailers' costs in fairness judgments (Kahneman et al. 1986; Bolton et al. 2003; Bolton and Alba 2006), indicating that costs may provide a more justifiable reason for a price change. Relatedly, consumers tend to prefer explanations where the cause and effect are commensurate (LeBoeuf and Norton 2012); a cost-based justification (exchange of money between firms and suppliers) may therefore be seen as more commensurate to the price change (exchange of money between firm and customer) than a value-based justification. Furthermore, because firms are not necessarily expected to share their cost savings (Kahneman et al. 1986), doing so may be viewed favorably by consumers. Therefore, we predict that costs provide a better justification for any action the firm does take.

**H2:** Consumers will perceive price reductions resulting from a product being degraded to be more fair when framed as passing a cost saving to customers rather than compensating customers for decreased value.

Finally, we examine how the nature of a price increase—in particular due to new hygiene measures taken in response to the pandemic—affects fairness perceptions. For example, if a hotel increases its rates to compensate for the increased costs caused by the pandemic, does it matter whether these costs are direct (e.g., hiring additional staff to clean rooms thoroughly between guests) or less direct (e.g., reducing capacity

to maintain social distancing, which indirectly increases the cost per guest)? We propose the former will be perceived as more fair.

Previous research has shown that different types of cost increases have a different effect on fairness perceptions (Bolton et al. 2003; Vaidyanathan and Aggarwal 2003). For instance, consumers find it fair for a price to account for CGS but less so for labor-related costs (Bolton et al. 2003). Additionally, Bolton and Alba (2006) have found that consumers perceive price increases to be more fair when the type of cost increase (goods vs. service) aligns with the price increase; that is, increased material costs justify higher prices for goods, while increased salaries justify higher prices for services. While it is unclear whether cleaning is an alignable or nonalignable expense for a hotel room, especially given that labor tends to be less justified than other costs, this finding nevertheless suggests that expenses like cleaning, which more directly feed into the offering, provide a better justification than reduced capacity. Similarly, Kahneman et al. (1986) argue that “a firm is only allowed to protect itself at the transactor’s expense against losses that pertain directly to the transaction at hand” (733), although they do not directly support that claim empirically. Taken together, this literature suggests that more (vs. less) direct cost changes will provide a more fair reason for a price change.

**H3:** Consumers will perceive price increases linked to hygiene measures to be more fair when they are framed as resulting from a more direct cost increase rather than an indirect cost increase due to reduced capacity.

We test our hypotheses in 10 studies. Study 1 tests hypothesis 1 using a scenario of a yoga studio that, as a result of the pandemic, faced either a decrease in the value of its product due to moving classes online, or a decrease in costs due to reduced rental demand. Studies 2A–2E test hypothesis 2 in two contexts: a university moving classes online (studies 2A–2D), and a hotel that closed some facilities due to the pandemic (study 2E). Studies 3A–3D focus on hypothesis 3, in both a hotel and an airline context. All of our scenarios directly relate to the COVID-19 pandemic, and all of our studies were conducted on Amazon Mechanical Turk (MTurk) in May–September 2020, amid the pandemic. Full study details can be found in the appendix (available online).

#### **STUDY 1: MAINTAINING PRICES FOLLOWING A PRODUCT DOWNGRADE VERSUS DECREASE IN COSTS**

To test hypothesis 1, we present participants with a scenario in which a yoga studio, due to circumstances of the pandemic,

is forced to either move classes online (a decrease in value) with no corresponding decrease in costs, or move classes outside (no change in value) with a decrease in costs. In both cases, the firm decides to maintain prices. We measure whether consumers find it less fair to maintain prices following a change in value versus an equivalent change in costs.

#### **Method**

Three hundred forty-four participants (49% male, median age = 36, ages 18–73 years) on Amazon MTurk were randomly assigned to either a value-decrease or cost-decrease condition in a between-subjects design. All participants read the following scenario, then responded to our main DV of interest: “Please rate this pricing decision,” on a 9-point Likert scale, from “completely unfair” to “completely fair.” We used this DV for all studies.

A yoga studio offers classes that customers can pay for on a class-by-class basis. Due to the recent pandemic, the studio could no longer offer indoor in-person classes. They contemplated offering classes outdoors or online instead. Given local weather conditions, they decided to offer classes (online/outdoors on a covered patio). Feedback from customers shows they are generally satisfied with the classes . . .

**Value decrease:** . . . but they value the online classes \$5 less than the pre-pandemic classes.

The studio’s expenses (rent, salaries, etc.) have not changed . . .

**Cost decrease:** . . . and they value the outdoor classes about the same as the pre-pandemic classes.

The studio’s expenses (rent, salaries, etc.) have decreased by an amount equal to \$5 per customer per class (e.g., rent prices dropped due to decreased demand in the area caused by the pandemic) . . .

. . . The studio has decided to maintain its regular class price.

#### **Results**

In line with hypothesis 1, participants rated the decision to maintain the regular price to be less fair when the value of the offering decreased ( $M = 5.95$ ,  $SD = 2.26$ ) compared to when the costs to the seller decreased ( $M = 6.57$ ,

$SD = 2.20$ ,  $t(343) = 2.58$ ,  $p = .010$ ,  $d = .28$ ). While past work underscores the importance of retailers' costs in perceptions of price fairness, the circumstances of the pandemic created situations like the one studied here in which value may outweigh costs in driving fairness perceptions. Although firms are typically entitled to protect their reference profit, this may not be the case when the product itself changes and thus consumers experience a loss in surplus, as has happened during the COVID-19 pandemic.

Given that consumers view the decision to maintain prices following a product downgrade as less fair, the question of how firms should respond in such a situation becomes important. If organizations do decide to address these fairness concerns by lowering prices, should they frame their decision as compensating for the lower value, or as passing on any modest cost savings to consumers? We test this question next.

#### STUDIES 2A–2E: TYING PRICE REDUCTIONS DUE TO PRODUCT DOWNGRADES TO COST VERSUS VALUE

Study 2A presents participants with a university scenario in which classes moved online due to the pandemic, leading to a less desirable offering for the students. We vary between subjects whether the university decides to maintain or decrease tuition and cross that with a manipulation about whether a modest cost reduction is mentioned or not. When tuition is maintained, we predict that participants will find the decision more fair when costs have not changed compared to when they decrease. However, in line with hypothesis 2 and consistent with study 1, we predict that when tuition is decreased, participants will view the decision as more fair if it is framed as passing on a modest cost saving rather than when costs have not changed and the decision instead is positioned as making up for the move online.

#### Method

Five hundred forty-five participants (56% male, median age = 35, ages 18–77 years) on Amazon MTurk were randomly assigned to one of four conditions in a 2 (tuition decrease: yes vs. no)  $\times$  2 (cost reduction mentioned: yes vs. no) between-subjects design. All participants read the following scenario, then responded to the same fairness measure as in study 1.

A university had to move its classes online because of the pandemic. The university understands that online classes are less desirable for its students, compared to regular classes.

**Cost-reduction conditions:** Many of the university's expenses (maintenance, salaries, etc.) have not changed, but some of its costs (e.g., cafeteria food, outside vendors) have been reduced due to the closure.

**No-cost-reduction conditions:** The university's expenses (maintenance, salaries, etc.) have not changed.

**Cost reduction and no-tuition decrease:** Because its main costs have not changed, the university has decided to maintain its regular tuition.

**No-cost reduction and no-tuition decrease:** Because its costs have not changed, the university has decided to maintain its regular tuition.

**Cost reduction and tuition decrease:** In order to pass its cost savings to the students, the university has decided to decrease tuition during this time. This translated to a 5% decrease in tuition for each student.

**No-cost reduction and tuition decrease:** In order to make up for the move to online classes, the university has decided to decrease tuition during this time. This translated to a 5% decrease in tuition for each student.

#### Results

To test the effect of the tuition decrease and mention of cost decrease on fairness perceptions, we conducted a two-way ANOVA, which unsurprisingly revealed a significant main effect of reducing tuition on fairness perceptions ( $F(1, 541) = 59.7$ ,  $p < .001$ ; see fig. 1). The main effect of a cost decrease to the university was not significant ( $F(1, 541) = .03$ ,  $p > .8$ ). More importantly, we found a significant tuition-decrease by cost-reduction interaction ( $F(1, 541) = 18.4$ ,  $p < .001$ ) and conducted pairwise comparisons with Bonferroni correction to explore it further. As should be expected, we find that maintaining tuition is perceived as less fair when costs have decreased ( $M = 4.46$ ,  $SD = 2.43$ ) compared to when they have not ( $M = 5.30$ ,  $SD = 2.52$ ,  $p = .003$ ,  $d = .33$ ).

More surprisingly, and consistent with hypothesis 2, this pattern reverses in the scenarios where the university decides to decrease tuition. When tuition is reduced, perceptions of fairness are more favorable when a cost reduction is mentioned and the decrease is positioned as passing on those cost savings ( $M = 6.91$ ,  $SD = 2.17$ ) than when no cost reduction



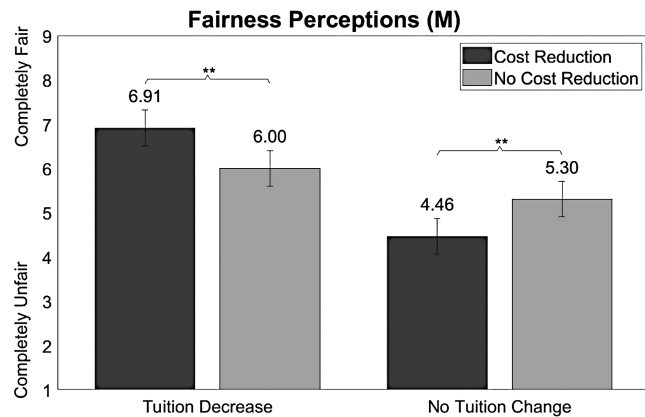


Figure 1. Study 2A. When tuition is maintained, fairness perceptions are lower when a cost reduction is mentioned than when it is not. However, when tuition is decreased, fairness perceptions are higher when a cost reduction is mentioned and the decrease is justified by it, than when no reduction is mentioned and the decrease is instead justified as making up for the move online.  $*p < .05$ ;  $**p < .01$ .

is mentioned and the decrease is instead positioned as making up for the move to online classes ( $M = 6.00$ ,  $SD = 2.36$ ,  $p = .002$ ,  $d = .36$ ). Together with study 1, these findings suggest that firms appear better off both in the eyes of the consumer, and in their bottom line, when cost decreases justify pricing decisions.

### Follow-Up Studies

We ran four additional preregistered tests of hypothesis 2, which all replicate the effect. Study 2B ( $N = 319$ ) used the two tuition decrease scenarios from study 2A ( $M_{\text{cost}} = 6.94$ ,  $SD = 1.87$  vs.  $M_{\text{value}} = 6.53$ ,  $SD = 2.06$ ,  $t(318) = 1.86$ ,  $d = .21$ ,  $p = .065$ ). Study 2C ( $N = 369$ ) used the same context but the cost savings were instead directly tied to teaching (i.e., savings from keeping classrooms clean and air-conditioned, rather than food and outside vendors;  $M_{\text{cost}} = 6.68$ ,  $SD = 2.26$  vs.  $M_{\text{value}} = 6.16$ ,  $SD = 2.17$ ,  $t(368) = 2.23$ ,  $d = .23$ ,  $p = .026$ ).

One potential concern about the scenarios in studies 2A–2C, however, is that in addition to manipulating how the university justifies the tuition reduction, participants may have also inferred a difference in the quality of the classes, which could have caused the differences in fairness perceptions. That is, justifying the tuition decrease as making up for the move to online classes may have drawn extra attention to the decreased value, even though all scenarios specified that the move to online classes was less desirable.

Study 2D ( $N = 611$ ) sought to address this concern in three ways. First, in addition to the two scenarios from study 2C, we

added a third condition in which the university justifies the tuition decrease as both making up for the move to online classes and passing its cost savings onto the students. If drawing attention to the move to online decreased fairness perceptions, we would expect participants in the value-and-cost condition to rate the decision as less fair than in the cost condition. However, if our account is correct, that positioning a price change as passing on cost savings increases fairness perceptions, we would expect ratings in this condition to resemble the cost condition. Second, we mentioned that some of the university's costs had been reduced in all three conditions, which allows us to test the effect of tying the price decrease to a cost saving versus reduced value, holding everything else constant. The scenarios read:

A university had to move its classes online because of the pandemic. The university understands that online classes are less desirable for its students, compared to regular classes. Many of the university's expenses (maintenance, salaries, etc.) have not changed, but some of its costs (e.g., keeping the classrooms clean and air conditioned) have been reduced due to the closure.

**Value:** In order to make up for the move to online classes . . .

**Cost:** In order to pass its cost savings to the students . . .

**Value and cost:** In order to make up for the move to online classes and pass its cost savings to the students . . .

. . . the university has decided to decrease tuition during this time by an amount equal to the cost savings. This translated to a 5% decrease in tuition for each student.

Third, we measured participants' perceptions of the value of the classes. On the page following the DV, we asked: "In this scenario, how much less desirable do you believe the online classes are compared to in-person classes?" on a scale labeled 1 = "equally desirable to in-person classes" to 9 = "a lot less desirable than in-person classes."

An ANOVA revealed a significant effect of condition on fairness perceptions ( $F(2, 608) = 4.57$ ,  $p = .011$ ). Pairwise comparisons with Bonferroni correction revealed that justifying the tuition decrease as both making up for the move online and passing along a cost savings ( $M = 7.10$ ,

SD = 2.15) was viewed as more fair than just making up for the move online ( $M = 6.46$ ,  $SD = 2.23$ ,  $p = .010$ ,  $d = .29$ ) but not significantly different than just passing on a cost savings ( $M = 6.91$ ,  $SD = 2.11$ ,  $p > .9$ ,  $d = .09$ ).<sup>1</sup> This supports the account that the results are driven by a positive effect of the cost-saving justification, rather than a negative effect of highlighting lower value.

Furthermore, consistent with the scenario stating that online classes are less desirable to students in all conditions, the effect of condition on value perceptions was not significant, and went directionally against the alternative explanation (i.e., classes were rated as directionally less valuable in the cost-condition;  $F(2, 608) = 1.36$ ,  $p = .257$ ;  $M_{\text{cost}} = 6.57$ ,  $SD = 2.01$  vs.  $M_{\text{value}} = 6.21$ ,  $SD = 2.33$  vs.  $M_{\text{cost+value}} = 6.38$ ,  $SD = 2.24$ , with higher numbers representing lower value), providing additional support that differences in value perceptions between the conditions were not driving the differences in fairness perceptions.

Finally, given the unique factors surrounding a university scenario (e.g., somewhat niche population, inelasticity of demand, expensive tuition), study 2E ( $N = 353$ ) sought to conceptually extend these findings to a different context: a hotel that closed its pool and gym in response to the pandemic. Participants were randomly assigned to either a cost condition or a value condition for the following scenario:

In response to the recent pandemic, a hotel had to close its swimming pool and its gym.

**Cost:** The hotel has been able to save some costs due to the closure of these facilities (e.g., maintenance). The other costs incurred by the hotel have remained constant.

In order to pass its cost savings to the guests, the hotel has decided to decrease its rates by an amount equal to the cost savings. This translated to a 5% decrease in the hotel's rates.

**Value:** The costs incurred by the hotel have remained constant.

To compensate the guests for the closing of these amenities, the hotel has decided to decrease its rates by 5%.

1. Comparing the cost condition to the value condition, the effect size ( $d = .21$ ) replicates the previous studies, but with Bonferroni correction, the difference is not significant ( $p = .115$ ). With LSD correction, the difference is significant ( $p = .038$ ).

Consistent with hypothesis 2 and studies 2A–2D, participants viewed the price decrease as more fair in the cost condition ( $M = 7.73$ ,  $SD = 1.53$ ) than in the value condition ( $M = 6.91$ ,  $SD = 1.94$ ,  $t(352) = 4.42$ ,  $d = .46$ ,  $p < .001$ ). Taken together, these results suggest that fairness perceptions can be improved by linking price changes to a clear, tangible cause-and-effect change in costs. Interestingly, the firm's sacrifice may be higher in the value-justification case, without a profit-preserving cost decrease to offset the reduced price, yet fairness perceptions are lower.

### STUDIES 3A–3D: TYING PRICE INCREASES TO DIRECT VERSUS INDIRECT INCREASES IN COSTS

Finally, we explore fairness perceptions in situations where necessary hygiene measures led to an increase in costs, and the firm increases prices to compensate. In hypothesis 3, we predict that customers will view price increases resulting from more direct cost increases, such as cleaning, to be more fair than those resulting from less direct cost increases, such as decreasing capacity to maintain social distancing.

#### Method

Eight hundred twenty-five participants (51% male, median age = 34, ages 18–77 years) completed study 3A on Amazon MTurk. We randomly assigned participants to one of six conditions in a 2 (context: hotel vs. airline)  $\times$  3 (reason-for-cost increase: direct vs. indirect vs. indirect framed as direct) between-subjects design. In addition to the two basic reasons for the cost increase (direct vs. indirect), we included a scenario where we described the reduced capacity as an increased cost per customer.

**Direct costs:** In response to the recent pandemic, an airline [a hotel] has hired additional cleaning staff in order to clean and disinfect aircrafts [rooms] thoroughly between flights [guests]. All other costs incurred by the airline [hotel] have remained constant.

To compensate for the increased cleaning costs, the airline [hotel] has decided to increase the price of its tickets by 5%.

**Indirect cost conditions:** In response to the recent pandemic and in an effort to maintain social distancing, an airline is flying its airplanes [a hotel is operating] at a reduced capacity. That is, the airplanes have a lower number of seats available than usual [hotel is leaving some rooms

empty on purpose]. It costs almost the same for the airline to fly an airplane with empty seats [hotel to run with empty rooms] compared to a full airplane [capacity].

**Indirect:** To compensate for selling fewer tickets [filling fewer rooms], the airline [hotel] has decided to increase the price of its tickets [its rates] by 5%.

**Indirect framed as direct:** Therefore, due to the decreased capacity, the cost to fly each passenger [host each guest] has increased.

To cover the increased per passenger [guest] cost, the airline [hotel] has decided to increase the price of its tickets [its rates] by 5%.

## Results

A two-way ANOVA revealed a significant effect of context, where fairness perceptions were lower for the airline compared to the hotel ( $M_{\text{airline}} = 5.80$ ,  $SD = 2.45$  vs.  $M_{\text{hotel}} = 6.57$ ,  $SD = 2.00$ ,  $F(1, 819) = 21.9$ ,  $p < .001$ ). This is consistent with Campbell (1999), who shows that perceptions of fairness can be influenced by the firm's reputation, since airlines tend to have less favorable reputations than hotels. We also find a main effect of the reason for cost increase ( $F(2, 819) = 23.4$ ,  $p = .013$ ), as well as a significant context by reason-for-cost-increase interaction ( $F(2, 819) = 21.9$ ,  $p = .017$ ; see fig. 2).

Examining pairwise analyses with Bonferroni correction for the *airline* conditions, we find no significant effect of the reason for cost increase ( $M_{\text{direct}} = 5.79$ ,  $SD = 2.28$  vs.  $M_{\text{indirect}} = 5.69$ ,  $SD = 2.71$ , vs.  $M_{\text{ind-framed}} = 5.93$ ,  $SD = 2.34$ ; all  $p > .3$ ), suggesting that hypothesis 3 might not apply evenly across all contexts. The fairness ratings in all three airline conditions are lower than in the three hotel conditions, so the depressed ratings could explain why no difference was detected between conditions (i.e., a floor effect), although we did not predict this *ex ante*. Explaining this attenuation would be a valuable future research topic, as it may help clarify boundary conditions of our findings.

Next we compare the reasons for the cost increase across the *hotel* scenarios. Consistent with hypothesis 3, we find that fairness perceptions are significantly higher in the *direct-cost* scenario ( $M = 7.20$ ,  $SD = 1.64$ ) compared with both the *indirect-cost* scenario ( $M = 6.15$ ,  $SD = 2.33$ ,  $p < .001$ ,  $d = .45$ ), and the *indirect-framed-as-direct-cost* scenario ( $M = 6.33$ ,  $SD = 2.44$ ,  $p = .002$ ,  $d = .37$ ). Although fair-

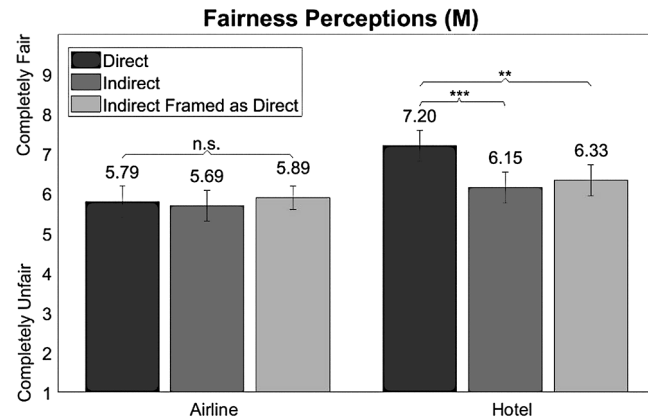


Figure 2. Study 3A. In the airline scenarios, there was no difference in fairness perceptions between conditions. In the hotel scenarios, participants viewed the decision to raise prices as more fair in response to a direct increase in costs compared to an indirect increase, and an indirect increase framed as direct. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

ness perceptions are directionally higher in the scenario where the per-guest cost implication of decreased capacity is highlighted versus not, this difference is not significant ( $p > .5$ ,  $d = .08$ ).

## Follow-Up Studies

To further test hypothesis 3, we ran three preregistered replications of the same hotel scenarios. Study 3B ( $N = 365$ ) used a two-cell design comparing the direct-cost condition to the indirect-cost condition. Consistent with hypothesis 2, we again find that participants viewed the price increase as more fair in the direct-cost ( $M = 6.72$ ,  $SD = 2.19$ ) than the indirect-cost condition ( $M = 5.78$ ,  $SD = 2.50$ ,  $t(364) = 3.83$ ,  $p < .001$ ,  $d = .39$ ). Study 3C ( $N = 359$ ) explored the more conservative test, comparing the direct-cost condition to the *indirect-cost-framed-as-direct* condition. We found that participants viewed the price increase in the direct-cost condition ( $M = 6.65$ ,  $SD = 1.99$ ) as marginally more fair than the price increase in the indirect-cost-framed-as-direct condition ( $M = 6.29$ ,  $SD = 2.07$ ,  $t(358) = 1.68$ ,  $p = .093$ ,  $d = .18$ ), suggesting that reframing the nature of the cost change is not sufficient to bring fairness perceptions in line with an actual more direct cost.

However, the conditions in studies 3A–3C might have disproportionately drawn attention to the benefits of the cleaning procedures, by framing the price change as compensating for the “increased cleaning costs,” while the justification in the indirect conditions made no such reference to the benefits

of the social distancing procedure. Thus, the difference in fairness perceptions could be driven by believing the hotel was doing more to address potential infection, rather than being driven by direct versus indirect costs. We ran study 3D ( $N = 710$ ) to address this concern.

Participants were randomly assigned to one of four conditions in a 2 (cost: direct vs. indirect)  $\times$  2 (highlight-hygiene-procedure: yes vs. no) between-subjects design. The beginning of the scenarios followed the direct versus indirect cost hotel conditions from the previous three studies. However, the final sentence was edited as follows:

**Procedure highlighted:** To compensate (for the increased cleaning costs/this social distancing measure), the hotel has decided to increase its rates by 5%.

**Procedure not highlighted:** To compensate for this measure, the hotel has decided to increase its rates by 5%.

If fairness perceptions were driven by highlighting the hygiene procedure, we would expect to see a main effect of highlighting the procedure but not of direct versus indirect cost. Our account, in contrast, predicts a main effect of direct versus indirect costs. A two-way ANOVA indeed confirmed a significant main effect of direct versus indirect cost ( $F(1, 706) = 26.2, p < .001$ ). The effect of highlighting the procedure was not significant ( $p > .3$ ), nor was the interaction ( $p > .5$ ). Pairwise comparisons with Bonferroni correction confirm that both in the procedure-highlighted conditions ( $M_{\text{direct}} = 6.88, SD = 1.99$  versus  $M_{\text{indirect}} = 6.09, SD = 2.41, p = .001, d = .34$ ) and the procedure-not-highlighted conditions ( $M_{\text{direct}} = 6.80, SD = 2.12$  vs.  $M_{\text{indirect}} = 5.83, SD = 2.59, p < .001, d = .42$ ), the direct-cost justification was seen as more fair than the indirect-cost justification. The differences in highlighting the procedure was not significant for either the direct-cost ( $p > .7$ ) or the indirect-cost ( $p > .2$ ) conditions. Taken together, these results provide evidence that consumers view price increases caused by hygiene measures as more fair when the implied costs are direct compared with indirect, and that this result is not driven by a difference in highlighting the steps the firm is taking to protect against infection.

## GENERAL DISCUSSION

The COVID-19 pandemic has brought numerous changes to the marketplace, including downgraded product and ser-

vice quality, and increased costs due to hygiene measures. Many of the changes to product quality or value come without a significant change in costs, and the changes in costs come without a significant change in value, creating pricing challenges for organizations. As businesses decide whether and how to adjust prices in response to these changes, and how to communicate those decisions to consumers, considering perceptions of fairness is paramount. This article explores how consumers perceive pricing decisions made in response to the unusual circumstances caused by the pandemic.

Our contributions to the literature on fairness in pricing are threefold. First, to the best of our knowledge, past work has not studied how consumers respond to pricing decisions when a product is downgraded, and thus value is reduced, without significant changes to retailer costs. We demonstrate that maintaining prices following a product downgrade is perceived as less fair than maintaining prices following an equivalent reduction in cost. Second, we show that if firms do reduce prices following a product downgrade, price reductions positioned as passing on (even modest) cost savings are perceived more favorably than similar price reductions positioned as compensating customers for the loss in value. Interestingly, the firm's sacrifice is likely higher in the latter case, without a cost decrease to offset the reduced price. Third, the pandemic has caused businesses to take costly measures to ensure the safety of their customers. We find that fairness perceptions regarding price increases are more favorable when tied to more direct costs increases, such as hiring staff for increased cleaning, compared with less direct cost increases, such as those incurred through capacity constraints.

From a managerial perspective, our work may help inform whether organizations should adjust prices depending on the circumstances they face. Firms whose costs increase due to capacity reductions, for instance, may be better off weathering the increase without raising prices, while those who incur more direct costs may justify a price increase. Additionally, our work suggests more effective communication strategies when firms do change prices, such as tying those changes to direct changes in costs.

Moreover, the limitations of this work provide important avenues for future research. For one, while we propose potential explanations for our results based on extant literature, we do not focus our investigation on empirically exploring these mechanisms. Future work could measure potential follow-up variables, or test other potential communication strategies, to shed light on the relevant factors that may affect fairness perceptions. In hypothesis 2, for example,



we compare a cost-related justification to a value-related justification; testing related frames, such as “in order to support our customers” or “using donated funds,” could provide additional richness and insight.

Additionally, future work could explore the boundary conditions to these results. It is possible, for instance, that a cost-based justification is preferred for a modest 5% price decrease because 5% may not be sufficient to make up for the lower value. If that were the case, we may expect the effect to attenuate or reverse if the price decrease were more substantial. Furthermore, in study 3A, the effect of direct- versus indirect-cost increases did not affect fairness perceptions of airlines. Exploring the reason for this attenuation may clarify the underlying drivers. Similarly, future work could further disentangle the importance of the directness versus tangibility of the costs in affecting fairness, since cleaning costs are also a concrete, tangible line item, while reduced capacity is not. For instance, would consumers view a reduction in capacity in which their room specifically is left empty for a few nights prior to their arrival (intangible but direct) as more fair justification than a general capacity constraint?

The current work focused on measuring fairness perceptions, and not on the downstream effects on both short- and long-term purchase intentions. Past work has found that fairness perceptions often do not map onto behavioral intentions (Urbany et al. 1989). While fairness perceptions capture an important attitude toward a firm’s actions, this divergence raises interesting questions about downstream behavior in these unique scenarios. Moreover, the scenarios were hypothetical and not tested on particular populations. Students, for example, may focus on different factors in a university’s communication strategy than the general public, which could lead to different results. Any reduction in value may also be more obvious in the real world than in a hypothetical scenario, which could affect consumer inferences and perceptions. Future work could thus explore related outcomes, populations, and real-world circumstances surrounding our findings. Overall, the pandemic created unusual circumstances that allowed us to both extend the fairness literature, as well as provide valuable insights for managers trying

to navigate these challenging times and maintain healthy relationships with their customers.

## REFERENCES

- Bechwati, Nada Nasr, Rajendra S. Sisodia, and Jagdish N. Sheth (2009), “Developing a Model of Antecedents to Consumers’ Perceptions and Evaluations of Price Unfairness,” *Journal of Business Research*, 62 (8), 761–67.
- Bolton, Lisa E., and Joseph W. Alba (2006), “Price Fairness: Good and Service Differences and the Role of Vendor Costs,” *Journal of Consumer Research*, 33 (2), 258–65.
- Bolton, Lisa E., Luk Warlop, and Joseph W. Alba (2003), “Consumer Perceptions of Price (Un) Fairness,” *Journal of Consumer Research*, 29 (4), 474–91.
- Brockner, Joel (2002), “Making Sense of Procedural Fairness: How High Procedural Fairness Can Reduce or Heighten the Influence of Outcome Favorability,” *Academy of Management Review*, 27 (1), 58–76.
- Campbell, Margaret C. (1999), “Perceptions of Price Unfairness: Antecedents and Consequences,” *Journal of Marketing Research*, 36 (2), 187–99.
- Gershoff, Andrew D., Ran Kivetz, and Anat Keinan (2012), “Consumer Response to Versioning: How Brands’ Production Methods Affect Perceptions of Unfairness,” *Journal of Consumer Research*, 39 (2), 382–98.
- Guo, Xiaomeng, and Baojun Jiang (2016), “Signaling through Price and Quality to Consumers with Fairness Concerns,” *Journal of Marketing Research*, 53 (6), 988–1000.
- Kahneman, Daniel, Jack L. Knetsch, and Richard Thaler (1986), “Fairness as a Constraint on Profit Seeking: Entitlements in the Market,” *American Economic Review*, 76 (4), 728–41.
- Kamanetz, Anya (2020), “Colleges Face Student Lawsuits Seeking Refunds after Coronavirus Closures,” *NPR*, May 29.
- LeBoeuf, Robyn A., and Michael I. Norton (2012), “Consequence-Cause Matching: Looking to the Consequences of Events to Infer Their Causes,” *Journal of Consumer Research*, 39 (1), 128–41.
- Shaddy, Franklin, and Anuj K. Shah (2018), “Deciding Who Gets What, Fairly,” *Journal of Consumer Research*, 45 (4), 833–48.
- Urbany, Joel E., Thomas J. Madden, and Peter R. Dickson (1989), “All’s Not Fair in Pricing: An Initial Look at the Dual Entitlement Principle,” *Marketing Letters*, 1 (1), 17–25.
- Vaidyanathan, Rajiv, and Praveen Aggarwal (2003), “Who Is the Fairest of Them All? An Attributional Approach to Price Fairness Perceptions,” *Journal of Business Research*, 56 (6), 453–63.
- Wilkins, Stephen, Carina Beckenuyte, and Muhammad Mohsin Butt (2016), “Consumers’ Behavioural Intentions after Experiencing Deception or Cognitive Dissonance Caused by Deceptive Packaging, Package Downsizing or Slack Filling,” *European Journal of Marketing*, 50 (1/2), 213–35.
- Xia, Lan, Kent B. Monroe, and Jennifer L. Cox (2004), “The Price Is Unfair! A Conceptual Framework of Price Fairness Perceptions,” *Journal of Marketing*, 68 (4), 1–15.