





# “Managing price changes: Role of consumer thinking styles on perceived price fairness and purchase intention”

<b>AUTHORS</b>	Sayanti Shaw  Miloslava Chovancová  Jiří Bejtkovský 
<b>ARTICLE INFO</b>	Sayanti Shaw, Miloslava Chovancová and Jiří Bejtkovský (2022). Managing price changes: Role of consumer thinking styles on perceived price fairness and purchase intention. <i>Innovative Marketing</i> , 18(2), 212-223. doi: <a href="https://doi.org/10.21511/im.18(2).2022.18">10.21511/im.18(2).2022.18</a>
<b>DOI</b>	<a href="http://dx.doi.org/10.21511/im.18(2).2022.18">http://dx.doi.org/10.21511/im.18(2).2022.18</a>
<b>RELEASED ON</b>	Wednesday, 29 June 2022
<b>RECEIVED ON</b>	Friday, 18 March 2022
<b>ACCEPTED ON</b>	Wednesday, 11 May 2022
<b>LICENSE</b>	 This work is licensed under a <a href="https://creativecommons.org/licenses/by/4.0/">Creative Commons Attribution 4.0 International License</a>
<b>JOURNAL</b>	"Innovative Marketing "
<b>ISSN PRINT</b>	1814-2427
<b>ISSN ONLINE</b>	1816-6326
<b>PUBLISHER</b>	LLC “Consulting Publishing Company “Business Perspectives”
<b>FOUNDER</b>	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

50



NUMBER OF FIGURES

3



NUMBER OF TABLES

9

© The author(s) 2022. This publication is an open access article.



## BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"  
Hryhorii Skovoroda lane, 10,  
Sumy, 40022, Ukraine  
[www.businessperspectives.org](http://www.businessperspectives.org)

**Received on:** 18<sup>th</sup> of March, 2022  
**Accepted on:** 11<sup>th</sup> of May, 2022  
**Published on:** 29<sup>th</sup> of June, 2022

© Sayanti Shaw, Miloslava Chovancová,  
Jiří Bejtkovský, 2022

Sayanti Shaw, M.Sc., Faculty of  
Management and Economics,  
Department of Management and  
Marketing, Tomas Bata University  
in Zlín, Zlín, Czech Republic.  
(Corresponding author)

Miloslava Chovancová, Ph.D. Associate  
Professor, Faculty of Management  
and Economics, Department of  
Management and Marketing, Tomas  
Bata University in Zlín, Zlín, Czech  
Republic.

Jiří Bejtkovský, Ph.D., Faculty of  
Management and Economics,  
Department of Management and  
Marketing, Tomas Bata University in  
Zlín, Zlín, Czech Republic.

Sayanti Shaw (Czech Republic), Miloslava Chovancová (Czech Republic),  
Jiří Bejtkovský (Czech Republic)

# MANAGING PRICE CHANGES: ROLE OF CONSUMER THINKING STYLES ON PERCEIVED PRICE FAIRNESS AND PURCHASE INTENTION

## Abstract

Consumers expect companies to practice fair pricing. Understanding the underlying cognitive mechanism that determines consumers' price fairness perceptions is significant. It could help mitigate negative outcomes from unfairness perceptions and place firms in a better competitive position. This study examines the role of consumers' thinking styles in perceived price fairness and purchase intention in a price increase situation. An online experiment was conducted wherein 171 participants across India, primarily from tier-1 cities frequently using car rental services, took part from September to December 2021. The majority of the participants (72) were 21-30 years old (42%). All involved participants met the initial criteria of using car rental services at least once a week. Proposed hypotheses were checked by one-way ANOVA following Tukey post hoc test and PROCESS. One-way ANOVA results shows a significant influence of thinking styles on cognitive attribution with large effect size,  $F(2, 168) = 28.04, p < .001, \eta^2 = 0.25$ ; presents a significant influence of thinking styles on perceived price fairness with large effect size,  $F(2, 168) = 30.07, p < .001, \eta^2 = .026$ ; demonstrates a significant influence of thinking styles on purchase intention  $F(2, 168) = 19.94, p < .001, \eta^2 = .019$ . Findings revealed that, in the face of a price increase occurrence, consumers thinking holistically and analytically differ in perceived price fairness and purchase intention. Furthermore, holistic thinkers with higher cognitive attribution perceive a price increase as fairer. Thereby, they have higher purchase intention than analytic thinkers.

**Keywords** attribution, holistic, analytic, India, experiment

**JEL Classification** M31, D91

## INTRODUCTION

Companies make huge investments toward forming positive connections with consumers; an undesirable and/or negative incident, for instance, a price increase resulting in perceptions of unfairness, could emasculate. Perceived price fairness affects consumers' purchase intentions, attitudes, loyalty, and satisfaction positively (Bettray et al., 2017; Chung & Petrick, 2015; Gorondutse & Hilman, 2014; Kasiri et al., 2017; Liao et al., 2020). Alternatively, perceived price unfairness leads to negative responses such as decreased purchase intentions, complaints, changing companies, goods return or services refusal, and negative oral communication (Santos et al., 2019; Xia et al., 2004). Hence, diminishing consumers' perceptions of unfairness is crucial, given the risks involved. Consequently, it is of practical value to marketers and managers to comprehend the conditions under which consumers perceive a price as fair or unfair. A consumer has to experience a sequence of cognitive stages to determine price fairness.



This is an Open Access article,  
distributed under the terms of the  
[Creative Commons Attribution 4.0  
International license](https://creativecommons.org/licenses/by/4.0/), which permits  
unrestricted re-use, distribution, and  
reproduction in any medium, provided  
the original work is properly cited.

**Conflict of interest statement:**  
Author(s) reported no conflict of interest

A price increase event generally instigates several questions in consumers' minds, for example, responsible factors, type of the responsible factors (external, internal, controllable and/or uncontrollable), price fairness, and willingness to purchase. This paper proposes that consumers' answers to these questions may differ depending on their cognitive styles of thinking. Prior studies showed the relationships between purchase intention, price fairness perceptions, styles of thinking, and cognitive attribution separately (Choi et al., 2007; Chung & Petrick, 2013; Konuk, 2018; Vaidyanathan & Aggarwal, 2003; Yoon, 2013). However, a research gap in the extant literature is the demonstration of interrelationships between all these variables together. Based on a substantial literature search, no prior studies have investigated the influence of thinking styles on purchase intention shaped by cognitive attribution and, consecutively, price fairness perceptions. Aiming to fill this gap, the current paper attempts to examine how different thinking styles (analytic vs. holistic) will affect consumers' price fairness perceptions and subsequent purchase intention in the event of price increase. Addressing this topic is important because it not only sheds light on a novel promising avenue but can also help businesses in developing strategies for dealing with unfairness perceptions, decreased purchase intention, and achieving competitive success in the market.

In recent times, car rental services have played an essential role in the transportation sector. It provides instant access, demand-oriented service, self-service, flexibility, and pricing (Li & Pang, 2017; Narsaria et al., 2020; Oliveira et al., 2017; Shah & Shah, 2021; Yu et al., 2018b). Consumers throughout the globe, irrespective of age, gender, race, culture, and profession, use car rental services for both private and work-related purposes. Unfortunately, consumers worldwide are facing a hike in car rental prices since December 2019. Consumers have wide alternative selections and easily switch service providers in this fast-growing, dynamic, and intensely competitive car-rental service industry. Hence, it has become more important for car rental firms' managers to understand how consumers react to price increase situations and how to maintain positive price perceptions, purchase, and repurchase intentions to succeed in the market. Keeping these issues in mind, car rental service was chosen for this study.

---

## 1. LITERATURE REVIEW AND HYPOTHESES

Considering the aim of this paper, the review was performed on the subsequent aspects: perceived price fairness – attributional approach; thinking styles – attribution tendency; purchase intention, perceived price fairness, styles of thinking, and attribution.

Perceived price fairness has been the key variable employed in the pricing literature to understand the impact of price increases on consumers (Koschate-Fischer et al., 2016, p. 610). To comprehend individuals' perceptions of fairness, it is required to understand their attributions of responsibility and cause. Attribution theory says individuals tend to look for causal reasons for events, more particularly when events are undesirable, surprising, or negative (Pallas et al., 2018). As price increase is often observed as a negative and/or surprising event, consumers can infer causal reasoning behind price increase by firms

(Koschate-Fischer et al., 2016). When confronted with undesirable and/or negative events, such as price increases, customers are inclined to be involved in the cognitive attribution process. By definition, cognitive attribution is a cognitive process that infers the cause(s) of an event or others' behavior, which in turn leads to behavioral intentions or consequences (Kelley, 1973; Weiner, 1980; Chung, 2010, p. 7). It affects price fairness. Subject to consumers' understanding related to dimensions of cognitive attribution, outcomes evaluation beget negative or positive emotions (Somervuori, 2014), which affects consumers' behavioral intentions (Dominique-Ferreira et al., 2016). The price increase seen as most fair is one whose cause is located external to the seller and is beyond the seller's volitional control (Vaidyanathan & Aggarwal, 2003, p. 461).

The difference between holistic and analytic styles of thinking illustrates the variances in individuals' ways of perceiving, categorizing, and reasoning about their world (Shavitt & Barnes, 2019).

Analytic and holistic thinkers use diverse cognitive processes to foresee and explain the reasons behind behaviors/events (Choi, 2016). Styles of thinking (analytic vs. holistic) are prone to dictate the level of situational and/or contextual factors considered in drawing attributions (Choi, 2016). Thinking styles affect “cognitive process of making causal attributions, i.e., cognitive attribution to a behavior/event” (Shaw, 2020, p. 222). Compared to sources inside firms, customers, to a greater extent, are inclined to ascribe responsibility/blame on sources outside firms while considering either situational, contextual factors or both (Monga & Hsu, 2018; Monga & John, 2008). For ascribing causes, individuals thinking holistically to a greater extent rely on wider context along with being more focused on relationships amid person/event and situation and/or context, namely external attribution propensities. Analytic thinkers are more likely to attribute causes to internal disposition/object-based factors and ignore situational and contextual influences, namely internal attribution propensities (Monga & John, 2008). Compared to analytic thinkers, holistic thinkers deploy more situational and/or contextual information while processing cognitive attribution (de Oliveira & Nisbett, 2017; Monga & John, 2008; Monga & Williams, 2016). Holistic thinkers tend to deploy external factors, including internal factors, while individuals thinking analytically depend exclusively on the latter (Hollebeek, 2018; Monga & John, 2008; Monga & Williams, 2016). The attributions enable consumers to prophesy and manage their environments along with determining consumers’ satisfaction, perceptions, emotions, behavioral consequences, and brand evaluations (Monga & John, 2008; Song et al., 2015). While processing cognitive attribution, inclusion of internal factors lays blame on the company, and therefore, consumers thinking analytically “are more likely to revise their brand evaluations in a negative manner” (Monga & John, 2008, p. 322). Conversely, inclusion of internal factors leads to a reverse situation in case consumers thinking holistically (Monga & Hsu, 2018; Pallas et al., 2018).

Causal attribution pertaining to negative events has a significant influence on consumers’ purchase intention. Consumers’ blame attribution to brand sways purchase intention negatively (Yu et

al., 2018a). In case of a negative event, consumers who attribute blame on the brand are less prone to buy the brand’s product (Laufer & Coombs, 2006). The stronger a consumer believes that the brand should be held responsible for a negative incident, such as negative publicity, the lesser favorable is his/her purchase intentions (Yu et al., 2018a). The more people attribute the causes of a negative situation, such as a crisis, to a foreign country, the more they feel animosity towards that country, and thereby they are less prone to purchase that country’s products/services (Leong et al., 2008). Styles of thinking are important influencers of consumer behavior in diverse areas (Monga & Williams, 2016). Styles of thinking (holistic vs. analytic) affect consumers’ causal attribution and purchase intention after experiencing a negative episode. It sways the direction of attribution and thereby purchase intention. Analytic thinkers are more inclined to ascribe negative consumer experience to brand, resulting in lower brand purchase intention (Yoon, 2013). In contrast, holistic thinkers are more inclined to ascribe negative consumer experience to retailers, resulting in lower retailer purchase intention.

Consumers’ minds are important assets; if utilized effectively, they could strengthen firms’ competitiveness in today’s highly competitive business world. Price attributes have been considered high impact variables that influence consumer purchase intentions in a growing competitive marketing environment (Sakkthivel & Rajev, 2012, p. 293). Fairness can be a source of competitive advantage. Consumers use perceived price fairness concept in shaping their purchase behavior (Yağci, 2010). Purchase intention represents consumer’s likelihood of buying a product/service (Peña-García et al., 2020). Price fairness perceptions significantly determine buyers’ buying intention (Lee et al., 2011). Several prior studies have provided evidence of a significant positive effect of price fairness on purchase intention in different sectors such as automobiles, food, and airlines (Konuk, 2018; Setiawan et al., 2016; Wang & Chen, 2016). While prices deemed as fair by buyers can increase purchase intention, conversely, prices deemed as unfair can decrease purchase intention (Fernandes & Calamote, 2016; Homburg et al., 2014). Perceived price fairness can increase consumers’ purchase intention even

in the case of high perceived prices (Son & Jin, 2019). Consumers purchase a high-priced product/service when the price seems fair to them. In the event of price increase, perceived price fairness gives more instant responses than downstream variables, for example, purchase intention (Koschate-Fischer et al., 2016).

Extant literature presents purchase intention, price fairness perceptions, styles of thinking, and cognitive attribution are related individually. Based on literary sources mentioned above, the study proposes, in the face of a price increase occurrence, that thinking styles affect cognitive attribution and then sway perceived price fairness, thereby influencing purchase intention. This experimental study aims to present how perceived price fairness and purchase intention get affected by thinking styles concerning a price increase occurrence.

Accordingly, subsequent hypotheses are made:

- H1: *Thinking styles (analytic vs. holistic) will influence perceived price fairness in a price increase context. Specifically, holistic thinkers will perceive a price increase as fairer than analytic thinkers.*
- H2: *Cognition attribution will mediate the influence of thinking styles on perceived price fairness.*
- H3: *The influence of thinking styles on purchase intention will be serially mediated via cognitive attribution and perceived price fairness.*

## 2. METHODS

### 2.1. Design and sample

Participants in the online experiment were assigned to either analytic thinking, control, or holistic thinking condition randomly. Unlike the other two groups, participants in the control group did not receive any styles of thinking manipulation. Power analysis using the statistical package G\*power was performed to get the necessary sample size. In G\*power tool, – the following options were selected: F tests, one-way ANOVA, and ‘A Priori’ power analysis. Results showed 159

as the total sample size, given medium effect size, 80% statistical power, 0.05 significance level, and the number of groups = 3.

As the first step, information was spread via word-of-mouth, e-mail communications, online forums, and social media to find people willing to participate in this experiment voluntarily. In the second step, participants having frequent experience (i.e., at least once a week) of using car rental services were only qualified. Participants were chosen using a simple random sampling method. The sample consists of participants throughout India, mostly from tier-1 cities (where the population as well as living costs are high). Consumers from tier-1 cities frequently use car rental services. The experiment was conducted online, and anonymity of the participants was maintained. Finally, 171 Indian participants took part in this experimental study during September 2021 – December 2021. Among them, male and female participants were 58% (99) and 42% (72), respectively. The majority of the participants (72) were from the 21 to 30 years old group (42%).

### 2.2. Styles of thinking manipulation

For manipulating styles of thinking, a grayscale picture was displayed to participants, wherein 11 smaller objects images were embedded (Lalwani & Shavitt, 2013; Monga & John, 2008). Participants assigned to the analytic thinking group were instructed to find maximum individual objects among the 11 embedded smaller objects from the displayed picture. Finding out the individual embedded objects from the picture stimulates field independence, one of the significant attributes of analytic thinkers. Participants assigned to the holistic thinking group were instructed to concentrate on the same grayscale picture’s background and write their observations about the picture in a few lines. Concentration directed towards background stimulates relational processing and field dependence, vital attributes of holistic thinkers. The information about the presence of 11 embedded smaller objects in the picture was not provided to this group of participants. Additionally, the picture’s objects were ably embedded so that participants in this thinking condition would not be able to find them spontaneously.



### 2.3. Manipulation check

A pretest ( $n = 47$ ) was performed to verify the manipulation method's effectiveness. After completing the manipulation task, the participants responded to a "twelve-item thinking style measurement" having a seven-point Likert scale (Song et al., 2015, p. 13). Example of an item used in thinking styles measurement: "everything in the universe is somehow related to each other" (Choi et al., 2007, p. 694). In the styles of thinking measurement scale, holistically-manipulated participants scored significantly higher than analytically-manipulated participants ( $M_{holistic} = 5.54$ ,  $M_{analytic} = 4.56$ ;  $t(45) = 5.23$ ,  $p < .001$ ). Hence, styles of thinking manipulation were validated and used in this study.

### 2.4. Procedures and measurement scales

The experimental study included three segments – i) Styles of thinking were manipulated by the procedure mentioned in the section "Styles of thinking manipulation.» ii) Participants were asked to read the following hypothetical scenario of a price increase event in the context of a car rental: «Imagine you need to rent a car for a travel purpose. You get to the website for rental cars, which you commonly use. During the procedure of car booking, you discover that the price has increased compared to last time though pick-up station, destination, car category, and car configuration are same as your last order.» iii) Participants completed perceived price fairness, cognitive attribution, purchase intention measurement scales including specific demographic questions.

All utilized measurement scales have their sources in the literature. However, they were revised (when required) to fit this study. Perceived price fairness measurement contained six items (Chung & Petrick, 2013) on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (Chung & Petrick, 2015, p. 912). Example of an item used in its measurement: –"the price increase is fair" (Chung & Petrick, 2013, p. 175; Chung & Petrick, 2015, p. 916). Cognitive attribution measurement contained five items having a bipolar rating (semantic differential) scale from 1 to 7 (Chung & Petrick, 2013, p. 175). One of its items was – "the

cause(s) of price increase is something about the car rental/other situations" (Chung & Petrick, 2013, p. 175). Purchase intention measurement contained three items on a seven-point rating scale (Koschate-Fischer et al., 2016, p. 624). Those items were chosen from Koschate-Fischer et al. (2016), Maxwell (2002), and Dodds et al. (1991). Example of an item used in the measurement of purchase intention – "The likelihood of you purchasing this (service) is high" (Koschate-Fischer et al., 2016, p. 623).

## 3. RESULTS

As presented in Table 1, Cronbach's alpha values for cognitive attribution ( $\alpha = 0.800$ ), purchase intention ( $\alpha = 0.733$ ), and purchase intention (0.874) ensure acceptable internal consistency.

**Table 1.** Cronbach's alpha values for construct measures

Construct	Cronbach's alpha
Cognitive attribution	0.800
Perceived price fairness	0.874
Purchase intension	0.733

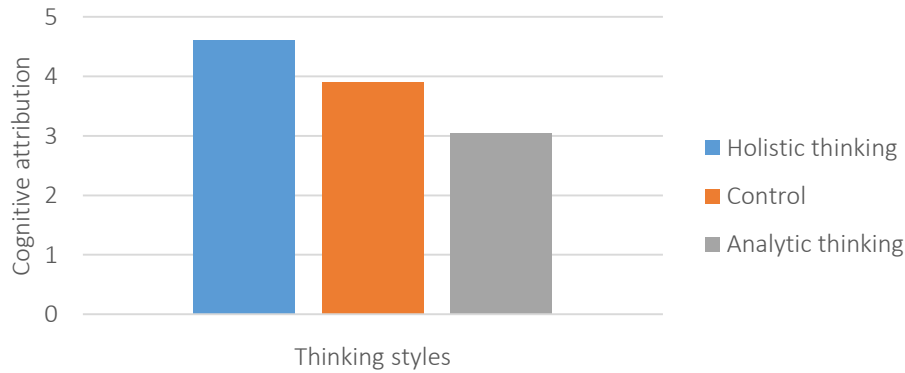
### 3.1. Effect on cognitive attribution

Table 2 (one-way ANOVA results) shows significant influence of thinking styles on cognitive attribution with large effect size,  $F(2, 168) = 28.04$ ,  $p < .001$ ,  $\eta^2 = 0.25$  (see Figure 1). Specifically, cognitive attribution was statistically significantly different for different thinking conditions at the level of 0.05. The calculated large effect size reading indicates that 25% of the change in the cognitive attribution (dependent variable) can be accounted for by the styles of thinking (independent variable). The difference is statistically significant, but it is also meaningful and has practical significance.

**Table 2.** Effect on cognitive attribution (one-way ANOVA results)

Thinking styles	Mean	Standard Deviation	F	p-value	$\eta^2$
Holistic	4.61	1.20	28.04	0.000*	0.25
Control	3.90	1.00			
Analytic	3.04	1.14			

Note: \* denotes significant at the 0.05 level.



**Figure 1.** Cognitive attribution concerning thinking styles

In addition, the Tukey post hoc test was employed to compare means of all groups to the mean of every other group (multiple comparisons). As seen in Table 3, the pairwise comparison between holistically manipulated thinkers and the control group demonstrated a significant increase of mean (0.71) in cognitive attribution from the control group to holistic thinkers, wherein  $p = .003$  and confidence interval (CI) did not contain zero [0.21, 1.20]. Similarly, the comparison between analytically manipulated thinkers and the control group demonstrated a significant decrease in the mean (0.86) in cognitive attribution from the control group to the analytic thinkers group, wherein  $p < .001$  and CI did not contain zero [-1.35, -0.36]. Likewise, the comparison between holistically manipulated thinkers and analytically manipulated thinkers demonstrated a significant increase of the mean (1.56) in cognitive attribution from the analytic thinkers to holistic thinkers, wherein  $p < .001$  and CI did not contain zero [1.07, 2.06]. As expected, cognitive attribution differs between groups and the difference is statistically significant.

**Table 3.** Effect on cognitive attribution (Turkey HSD results)

Thinking styles	MD	$p$ (sig) -value	95% CI	
			LB	UB
Holistic Control	0.71*	0.003	0.21	1.20
Analytic Control	-0.86*	0.000	-1.35	-0.36
Holistic Analytic	1.56*	0.000	1.07	2.06

Note: MD, UB, and LB denote a difference in means, upper bound, and lower bound, respectively; \* indicates  $p < 0.05$ .

### 3.2. Effect on perceived price fairness

Table 4 (one-way ANOVA results) presents significant influence of thinking styles on perceived price

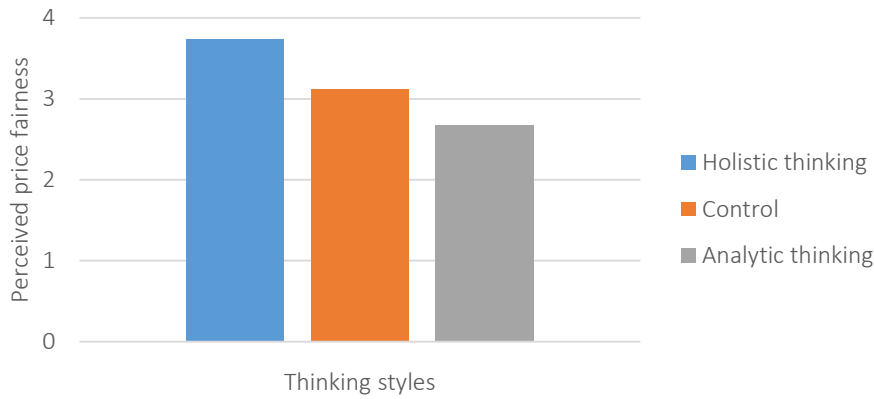
fairness with large effect size,  $F(2, 168) = 30.07, p < .001, \eta^2 = .026$  (see Figure 2). Specifically, perceived price fairness was statistically significantly different for different thinking conditions at the level of 0.05. The calculated large effect size reading indicates that 26% of the change in the perceived price fairness (dependent variable) can be accounted for by the styles of thinking (independent variable). The difference is not only statistically significant but also meaningful and has practical significance.

**Table 4.** Effect on perceived price fairness (one-way ANOVA results)

Thinking styles	Mean	Standard Deviation	F	$p$ -value	$\eta^2$
Holistic	3.74	0.75	30.07	0.000*	0.26
Control	3.12	0.64			
Analytic	2.67	0.82			

Note: \* denotes significant at the 0.05 level.

As observed in Table 5, the pairwise comparison between holistically manipulated thinkers and the control group showed a significant increase of the mean (0.62) in perceived price fairness from the control group to the holistic thinkers group, wherein  $p < .001$  and CI did not contain zero [0.29, 0.94]. Similarly, the comparison between analytically manipulated thinkers and the control group demonstrated a significant decrease of the mean (0.45) in perceived price fairness from the control group to analytic thinkers group, wherein  $p = .004$  and CI did not contain zero [-0.78, -0.13]. Likewise, the comparison between holistically manipulated thinkers and analytically manipulated thinkers demonstrated a significant increase of the mean (1.07) in perceived price fairness from analytic thinkers to holistic thinkers, wherein



**Figure 2.** Perceived price fairness concerning thinking styles

$p < .001$  and CI did not contain zero [0.74, 1.40]. Perceived price fairness differs between groups, and the difference is statistically significant. As expected, holistic thinkers showed greater perceived price fairness than analytic thinkers. *H1* is accepted.

**Table 5.** Effect on perceived price fairness (Turkey HSD results)

Thinking styles		MD	<i>P</i> (sig)-value	95% CI	
				LB	UB
Holistic	Control	0.62*	0.000	0.29	0.94
Analytic	Control	-0.45*	0.004	-0.78	-0.13
Holistic	Analytic	1.07*	0.000	0.74	1.40

Note: \* indicate  $p < 0.05$ .

### 3.3. Mediation effects through cognitive attribution

PROCESS Model 4 (Hayes, 2018) “with 5000 bootstrap samples and 95% bias–corrected confidence intervals (CIs)” (Newman et al., 2019, p. 83) was employed to test *H2*. Results presented in Table 6 revealed that the indirect effect (IE) of holistic thinking → perceived price fairness (IE = 0.28; CI [0.12, 0.45]) did not contain zero and thereby is significant. Similarly, the IE of analytic thinking → perceived price fairness (IE = -0.34; CI [-0.52, -0.18]) did not contain zero and thereby is significant. Thus, the expected mediation effects were observed. *H2* is accepted.

**Table 6.** Mediation effect through cognitive attribution

Mediation paths	Parameter estimates (standard errors)	Confidence interval
<b>Bootstrapped indirect effect (IE)</b>		
Holistic thinking style → Cognitive attribution → Perceived price fairness	0.28 (0.08)	CI: 0.12, 0.45
Analytic thinking style → Cognitive attribution → Perceived price fairness	-0.34 (0.09)	CI: -0.52, -0.18

### 3.4. Effect on purchase intention

Table 7 (one-way ANOVA results) demonstrates significant influence of thinking styles on purchase intention  $F(2, 168) = 19.94, p < .001, \eta^2 = .019$  (see Figure 3). Specifically, purchase intention was statistically significantly different for different thinking conditions at the level of 0.05. The calculated large effect size reading indicates that 19% of the change in the purchase intention (dependent variable) can be accounted for by the styles of thinking (independent variable), and the difference is not only statistically significant but also meaningful and has practical significance.

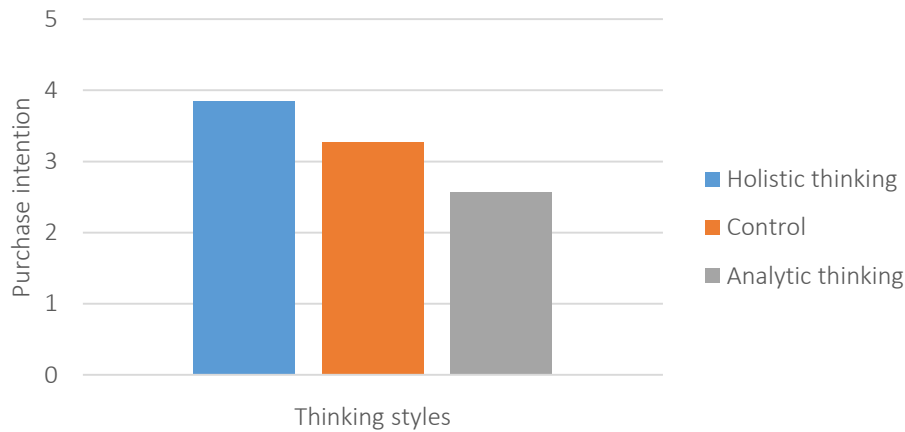
**Table 7.** Effect on purchase intention (one-way ANOVA results)

Thinking styles	Mean	Standard Deviation	F	<i>p</i> -value	$\eta^2$
Holistic	3.85	1.04	19.94	0.000*	0.19
Control	3.27	1.20			
Analytic	2.56	1.03			

Note: \* denotes significant at the 0.05 level.

As seen in Table 8, the pairwise comparison between holistically manipulated thinkers and the control group showed a significant increase of the mean (0.58) in purchase intention from the control group to holistic thinkers, wherein  $p = .015$  and CI did not contain zero [1.06, 0.94]. Similarly, the comparison between analytically manipulated thinkers and the





**Figure 3.** Purchase intention concerning thinking styles

control group demonstrated a significant decrease of the mean (0.71) in purchase intention from the control group to analytic thinkers, wherein  $p = .002$  and *CI did not contain zero* [-1.20, -0.23]. Likewise, the comparison between holistically manipulated thinkers and analytically manipulated thinkers demonstrated a significant increase of the mean (1.29) in purchase intention from analytic thinkers to holistic thinkers, wherein  $p < .001$ , *CI did not contain zero* [0.81, 1.78]. As expected, purchase intention differs between groups, and the difference is statistically significant.

**Table 8.** Effect on purchase intention (Turkey HSD results)

Thinking styles		MD	P (sig) -value	95% CI	
				LB	UB
Holistic	Control	0.58*	0.015	0.94	1.06
Analytic	Control	-0.71*	0.002	-1.20	-0.23
Holistic	Analytic	1.29*	0.000	0.81	1.78

Note: \* indicates  $p < 0.05$ .

### 3.5. Serial mediation effects through cognitive attribution and perceived price fairness

PROCESS Model 6 (Hayes, 2018) with 5000 bootstrap samples and 95% bias-corrected CIs

**Table 9.** Serial mediation effects

Mediation paths	Parameter estimates (standard errors)	Confidence interval
<b>Bootstrapped indirect effect (IE)</b>		
Holistic thinking style → Cognitive attribution → Perceived price fairness → Purchase intention	0.11 (0.05)	CI: 0.03, 0.23
Analytic thinking style → Cognitive attribution → Perceived price fairness → Purchase intention	-0.13 (0.05)	CI: -0.24, -0.04

(Newman et al., 2019, p. 89) was employed to test *H3*. Results shown in Table 9 revealed that the IE of holistic thinking → cognitive attribution → perceived price fairness → purchase intention did not contain zero and thereby is significant (IE = 0.11; CI [0.03, 0.23]). Similarly, results revealed that the IE of analytic thinking → cognitive attribution → perceived price fairness → purchase intention did not contain zero and thereby is significant (IE = -0.13; CI [-0.24, -0.04]). Hence, the expected serial mediation effects were observed. *H3* is accepted.

## 4. DISCUSSION

Styles of thinking (analytic vs. holistic) affect cognitive attribution concerning a price increase occurrence. This finding is consistent with Yoon (2013), who employing U.S. university students showed that consumers' thinking styles shape their causal attributions. Consumers manipulated to think holistically at the cognitive attribution stage had a greater focus on external contextual factors, resulting in higher tendencies of external attribution. Oppositely, consumers manipulated to think analytically had greater ignorance towards external contextual factors and favored internal object/disposition-based factors, result-

ing in higher tendencies of internal attribution. Consumers manipulated to think holistically attributed causes of the price increase to the factors external to the company more than consumers manipulated to think analytically. As predicted, in the face of a price increase occurrence, among holistically manipulated consumers, more cognitive attribution was observed.

On the contrary, among analytically manipulated consumers, less cognitive attribution was observed. These findings are in line with Monga and John (2008), who indicated that holistic thinkers consider more external contextual factors/explanations while assigning causality of an event/behavior. Conversely, analytic thinkers consider less external contextual factors/explanations while assigning causality of an event/behavior. Choi et al. (2007) also reported similar findings where Koreans (representing holistic thinkers) exhibited higher causal attribution than Americans (representing analytic thinkers). In addition, a significant effect of thinking styles on consumers' price perceptions was found. Particularly, holistic thinkers perceive a price increase as fairer than analytic thinkers. Results also demonstrated the mediation role of cognitive attribution. As expected, consumers manipulated to think holistically considering external contextual factors perceive the price increase as fairer.

On the other hand, consumers manipulated to think analytically, ignoring external contextual factors, show opposite perceptions. These outcomes are consonant with prior studies indicat-

ing "cognitive attribution positively influenced price fairness" (Chung & Petrick, 2013, p. 175) and "price increases driven by external factors" are "perceived as fairer than those driven by internal factors" (Vaidyanathan & Aggarwal, 2003, p. 455). Additionally, results suggest that styles of thinking shape cognitive attribution, then influence price fairness perceptions, thereby affecting purchase intention. Current findings and Yu et al. (2018) results (indicating consumers' attribution of blame influences their purchase intention in the case of Chinese consumers) are congruent. Specifically, it was shown that holistically-manipulated consumers with higher cognitive attribution perceived the increase in price as fairer compared to those manipulated to think analytically. Greater price fairness perceptions among holistically-manipulated consumers lead to higher purchase intention than analytically-manipulated consumers. Laufer and Coombs (2006) also demonstrated similar results where consumers who attributed blame of a negative incident to a brand were less prone to buy their products. The findings are congruous with various prior studies indicating that higher perceptions of price fairness lead to greater purchase intention. Wang and Chen (2016) found that perceptions of price fairness significantly influence buying intention in a positive direction in Taiwan's low-cost carriers' context. Using Turkish consumers as respondents and considering organic food, Konuk (2018) also showed a positive association between purchase intentions and price fairness. Setiawan et al. (2016) reported a similar positive impact considering Indonesia's low-cost cars.

---

## CONCLUSION

This paper aims to analyze how perceived price fairness and purchase intention get affected by thinking styles concerning a price increase occurrence. The study was conducted on the example of car rental service in India because it has become more critical for car managers to understand this effect to succeed in the market. This study shows that styles of thinking significantly influence consumers' perceived price fairness.

In particular, holistic and analytic thinkers differ in their perception of price fairness: holistic thinkers perceive price increases as fairer than analytic thinkers. Cognitive attribution is a mediating variable through which this effect occurs: analytic thinkers with lower cognitive attribution perceive a price increase as less fair and have lower purchase intention than holistic thinkers. However, current findings indicate that companies may be able to defend themselves from decreased fairness and purchase intention by strategically divulging and highlighting external contextual factors as causes behind price increase incidents.

It is also essential to accentuate factors that are beyond firms' control. Strategies that encourage a holistic style of thinking (such as making external contextual factors more salient) may foster consumers to deflect blame away from the company, thereby can be useful in increasing consumers' perceptions of fairness and purchase intentions in price increase events. The mentioned strategies will help maintain positive price perceptions and consumers' purchase intentions, and gain a competitive advantage in the market. Hence, firms' competitiveness and performance will increase.

The limitations of this paper render potential opportunities for further research. Future studies using other goods and services (not only car rental) based on naturally occurring scenarios would augment the generalizability of the results. This study has focused on individual perspectives of thinking styles, future work focusing on their cultural perspective would expand the extant literature.

## AUTHOR CONTRIBUTIONS

Conceptualization: Sayanti Shaw, Miloslava Chovancová, Jiří Bejtkovský.

Data curation: Sayanti Shaw.

Formal analysis: Sayanti Shaw.

Funding acquisition: Miloslava Chovancová, Jiří Bejtkovský.

Investigation: Sayanti Shaw.

Methodology: Sayanti Shaw, Miloslava Chovancová.

Project administration: Jiří Bejtkovský.

Resources: Sayanti Shaw, Miloslava Chovancová, Jiří Bejtkovský.

Software: Sayanti Shaw.

Supervision: Sayanti Shaw, Miloslava Chovancová.

Validation: Sayanti Shaw, Miloslava Chovancová.

Visualization: Sayanti Shaw.

Writing – original draft: Sayanti Shaw.

Writing – review & editing: Sayanti Shaw, Miloslava Chovancová.

## ACKNOWLEDGMENT

This study received support from Internal Grant Agency (project number IGA/FaME/2022/010), Tomas Bata University in Zlín.

## REFERENCES

- Bettray, J., Suessmair, A., & Dorn, T. (2017). Perceived Price Fairness in Pay-What-You-Want: A Multi-Country Study. *American Journal of Industrial and Business Management*, 7(5). <https://doi.org/10.4236/ajibm.2017.75051>
- Choi, B.-J. (2016). The Influence Of Cultural Thinking Style On Consumer Cognitive Complexity Underlying Wine Purchase Decisions. *Journal of Applied Business Research*, 32(4), 1257-1272. <https://doi.org/10.19030/jabr.v32i4.9735>
- Choi, I., Koo, M., & Choi, J. A. (2007). Individual differences in analytic versus holistic thinking. *Personality and Social Psychology Bulletin*, 33(5), 691-705. <https://doi.org/10.1177/0146167206298568>
- Chung, J. Y. (2010). *The antecedents and consequences of price fairness in tourism*. Texas A&M University.
- Chung, J. Y., & Petrick, J. F. (2013). Price fairness of airline ancillary fees: An attributional approach. *Journal of Travel Research*, 52(2), 168-181. <https://doi.org/10.1177/0047287512457261>
- Chung, J. Y., & Petrick, J. F. (2015). Measuring price fairness: Development of a multidimensional scale. *Journal of Travel & Tourism Marketing*, 32(7), 907-922. <https://doi.org/10.1080/10548408.2015.1063894>
- de Oliveira, S., & Nisbett, R. E. (2017). Culture Changes How We Think About Thinking: From "Human Inference" to "Geography of Thought." *Perspectives on Psychological Science*, 12(5), 782-790. <https://doi.org/10.1177/1745691617702718>

8. Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, 28(3), 307-319. <https://doi.org/10.2307/3172866>
9. Dominique-Ferreira, S., Vasconcelos, H., & Proença, J. F. (2016). Determinants of customer price sensitivity: an empirical analysis. *Journal of Services Marketing*, 30(3), 327-340. <https://doi.org/10.1108/JSM-12-2014-0409>
10. Fernandes, T., & Calamote, A. (2016). Unfairness in consumer services: Outcomes of differential treatment of new and existing clients. *Journal of Retailing and Consumer Services*, 28, 36-44. <https://doi.org/10.1016/j.jretconser.2015.08.008>
11. Gorodontse, A. H., & Hilman, H. (2014). Mediation effect of customer satisfaction on the relationships between service quality and customer loyalty in the Nigerian foods and beverages industry: Sobel test approach. *International Journal of Management Science and Engineering Management*, 9(1), 1-8. <https://doi.org/10.1080/17509653.2013.812337>
12. Hayes, A. F. (2018). Partial, conditional, and moderated mediation: Quantification, inference, and interpretation. *Communication Monographs*, 85(1), 4-40. <https://doi.org/10.1080/03637751.2017.1352100>
13. Hollebeek, L. D. (2018). Individual-level cultural consumer engagement styles: Conceptualization, propositions and implications. *International Marketing Review*, 35(1), 42-71. <https://doi.org/10.1108/IMR-07-2016-0140>
14. Homburg, C., Totzek, D., & Krämer, M. (2014). How price complexity takes its toll: The neglected role of a simplicity bias and fairness in price evaluations. *Journal of Business Research*, 67(6), 1114-1122. <https://doi.org/10.1016/j.jbusres.2013.05.049>
15. Kasiri, L. A., Cheng, K. T. G., Sambasivan, M., & Sidin, S. M. (2017). Integration of standardization and customization: Impact on service quality, customer satisfaction, and loyalty. *Journal of Retailing and Consumer Services*, 35, 91-97. <https://doi.org/10.1016/j.jretconser.2016.11.007>
16. Kelley, H. H. (1973). The processes of causal attribution. *American Psychologist*, 28(2), 107-128. <https://doi.org/10.1037/h0034225>
17. Konuk, F. A. (2018). Price fairness, satisfaction, and trust as antecedents of purchase intentions towards organic food. *Journal of Consumer Behaviour*, 17(2), 141-148. <https://doi.org/10.1002/cb.1697>
18. Koschate-Fischer, N., Huber, I. V., & Hoyer, W. D. (2016). When will price increases associated with company donations to charity be perceived as fair? *Journal of the Academy of Marketing Science*, 44(5), 608-626. <https://doi.org/10.1007/s11747-015-0454-5>
19. Lalwani, A. K., & Shavitt, S. (2013). You get what you pay for? Self-construal influences price-quality judgments. *Journal of Consumer Research*, 40(2), 255-267. <https://doi.org/10.1086/670034>
20. Laufer, D., & Coombs, W. T. (2006). How should a company respond to a product harm crisis? The role of corporate reputation and consumer-based cues. *Business Horizons*, 49(5), 379-385. <https://doi.org/10.1016/j.bushor.2006.01.002>
21. Lee, S., Illia, A., & Lawson-Body, A. (2011). Perceived price fairness of dynamic pricing. *Industrial Management & Data Systems*, 111(4), 531-550. <https://doi.org/10.1108/02635571111133533>
22. Leong, S. M., Cote, J. A., Ang, S. H., Tan, S. J., Jung, K., Kau, A. K., & Pornpitakpan, C. (2008). Understanding consumer animosity in an international crisis: Nature, antecedents, and consequences. *Journal of International Business Studies*, 39(6), 996-1009. <https://doi.org/10.1057/palgrave.jibs.8400392>
23. Li, D., & Pang, Z. (2017). Dynamic booking control for car rental revenue management: A decomposition approach. *European Journal of Operational Research*, 256(3), 850-867. <https://doi.org/10.1016/j.ejor.2016.06.044>
24. Liao, G.-Y., Tseng, F.-C., Cheng, T. C. E., & Teng, C.-I. (2020). Impact of gaming habits on motivation to attain gaming goals, perceived price fairness, and online gamer loyalty: Perspective of consistency principle. *Telematics and Informatics*, 49, 101367. <https://doi.org/10.1016/j.tele.2020.101367>
25. Maxwell, S. (2002). Rule-based price fairness and its effect on willingness to purchase. *Journal of Economic Psychology*, 23(2), 191-212. [https://doi.org/10.1016/S0167-4870\(02\)00063-6](https://doi.org/10.1016/S0167-4870(02)00063-6)
26. Monga, A. B., & Hsu, L. (2018). How Consumers' Styles of Thinking Can Control Brand Dilution. *GfK Marketing Intelligence Review*, 10(1), 40-45. <https://doi.org/10.2478/gfkmir-2018-0007>
27. Monga, A. B., & John, D. R. (2008). When does negative brand publicity hurt? The moderating influence of analytic versus holistic thinking. *Journal of Consumer Psychology*, 18(4), 320-332. <https://doi.org/10.1016/j.jcps.2008.09.009>
28. Monga, A. S. B., & Williams, J. D. (2016). Cross-cultural styles of thinking and their influence on consumer behavior. *Current Opinion in Psychology*, 10, 65-69. <https://doi.org/10.1016/j.copsyc.2015.12.003>
29. Narsaria, I., Verma, M., & Verma, A. (2020). Measuring satisfaction of rental car services in India for policy lessons. *Case Studies on Transport Policy*, 8(3), 832-838. <https://doi.org/10.1016/j.cstp.2020.05.019>
30. Newman, C. L., Cinelli, M. D., Vorhies, D., & Folse, J. A. G. (2019). Benefitting a few at the expense of many? Exclusive promotions and their impact on untargeted customers. *Journal of the Academy of Marketing Science*, 47(1), 76-96. <https://doi.org/10.1007/s11747-018-0601-x>



31. Oliveira, B. B., Carravilla, M. A., & Oliveira, J. F. (2017). Fleet and revenue management in car rental companies: A literature review and an integrated conceptual framework. *Omega*, 71, 11-26. <https://doi.org/10.1016/j.omega.2016.08.011>
32. Pallas, F., Bolton, L. E., & Lobschat, L. (2018). Shifting the Blame: How Surcharge Pricing Influences Blame Attributions for a Service Price Increase. *Journal of Service Research*, 21(3), 302-318. <https://doi.org/10.1177/1094670518755314>
33. Peña-García, N., Gil-Saura, I., Rodríguez-Orejuela, A., & Ribamar Siqueira-Junior, J. (2020). Purchase intention and purchase behavior online: A cross-cultural approach. *Heliyon*, 6(6), e04284. <https://doi.org/10.1016/j.heliyon.2020.e04284>
34. Sakkthivel, A. M., & Rajev, M. K. G. (2012). Empirical investigation on consumer purchase intentions in a growing competitive marketing environment. *International Journal of Electronic Finance*, 6(3-4), 285-297. Retrieved from <https://www.inderscienceonline.com/doi/abs/10.1504/IJEF.2012.051174>
35. Santos, F. A. do N., Mayer, V. F., & Marques, O. R. B. (2019). Dynamic pricing and price fairness perceptions: a study of the use of the Uber app in travels. *Turismo: Visão e Ação*, 21, 239-264. <https://doi.org/10.14210/rtva.v21n3.p239-264>
36. Setiawan, E. B., Kartini, D., Afiff, F., & Rufaidah, P. (2016). Impact of Price Fairness on Brand Image and Purchase Intention for Low Cost Car in Indonesia. *International Journal of Economics, Commerce and Management*, 4(9), 300-308. Retrieved from <https://p3m.itltrisakti.ac.id/wp-content/uploads/2019/03/Download-File-02.pdf>
37. Shah, T. R., & Shah, T. T. (2021). Innovative m-car rental service quality in India. *International Journal of Innovation Science*. <https://doi.org/10.1108/IJIS-11-2020-0265>
38. Shavitt, S., & Barnes, A. J. (2019). Cross-cultural consumer psychology. *Consumer Psychology Review*, 2(1), 70-84. <https://doi.org/10.1002/arcpc.1047>
39. Shaw, S. (2020). The Influence of Thinking Styles on Perceived Price Fairness: An Experimental Study. In A. Rocha, J. Reis, M. Peter, & Z. Bogdanović (Eds.), *Marketing and Smart Technologies* (pp. 219-228). Springer. [https://doi.org/10.1007/978-981-15-1564-4\\_21](https://doi.org/10.1007/978-981-15-1564-4_21)
40. Somervuori, O. (2014). Profiling behavioral pricing research in marketing. *Journal of Product & Brand Management*, 23(6), 462-474. <https://doi.org/10.1108/JPBM-06-2014-0653>
41. Son, J., & Jin, B. E. (2019). When do high prices lead to purchase intention? Testing two layers of moderation effects. *Asia Pacific Journal of Marketing and Logistics*, 31(5), 1516-1531. <https://doi.org/10.1108/APJML-07-2018-0271>
42. Song, L., Swaminathan, S., & Anderson, R. E. (2015). Differences in customers' online service satisfaction across cultures: the role of thinking style. *Journal of Marketing Channels*, 22(1), 52-61. <https://doi.org/10.1080/1046669X.2015.978700>
43. Vaidyanathan, R., & Aggarwal, P. (2003). Who is the fairest of them all? An attributional approach to price fairness perceptions. *Journal of Business Research*, 56(6), 453-463. [https://doi.org/10.1016/S0148-2963\(01\)00231-4](https://doi.org/10.1016/S0148-2963(01)00231-4)
44. Wang, Y.-H., & Chen, L.-Y. (2016). An empirical study of the effect of perceived price on purchase intention evidence from low-cost carriers. *International Journal of Business and Social Science*, 7(4), 97-107.
45. Weiner, B. (1980). A cognitive (attribution)-emotion-action model of motivated behavior: An analysis of judgments of helping. *Journal of Personality and Social Psychology*, 39(2), 186-200. <https://doi.org/10.1037/0022-3514.39.2.186>
46. Xia, L., Monroe, K. B., & Cox, J. L. (2004). The price is unfair! A conceptual framework of price fairness perceptions. *Journal of Marketing*, 68(4), 1-15. <https://doi.org/10.1509/jmkg.68.4.1.42733>
47. Yağci, M. I. (2010). The Impact of Perceived Price Fairness and Consumer Ethnocentrism on Consumers' purchase Intentions: An Exploratory Assessment. *Journal of the Cukurova University Institute of Social Sciences*, 19(3).
48. Yoon, S. (2013). Do negative consumption experiences hurt manufacturers or retailers? The influence of reasoning style on consumer blame attributions and purchase intention. *Psychology & Marketing*, 30(7), 555-565. <https://doi.org/10.1002/mar.20627>
49. Yu, M., Liu, F., Lee, J., & Soutar, G. (2018a). The influence of negative publicity on brand equity: attribution, image, attitude and purchase intention. *Journal of Product & Brand Management*, 27(4), 440-451. <https://doi.org/10.1108/JPBM-01-2017-1396>
50. Yu, Y., Dong, Y., & Guo, X. (2018b). Pricing for sales and per-use rental services with vertical differentiation. *European Journal of Operational Research*, 270(2), 586-598. <https://doi.org/10.1016/j.ejor.2018.03.035>