Promote the price promotion

The effects of price promotions on customer evaluations in coffee chain stores

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Abstract

Purpose – The authors empirically evaluated the effect of price promotions on customer quality evaluations and repeat-purchase intentions in coffee chain stores. The moderating role of customer characteristics in this process was also investigated.

Design/methodology/approach – Consumers in 12 coffee chain stores were surveyed and 488 usable questionnaires were obtained. Relationships in the test model were examined using structural equation modeling techniques. A multiple-group solution was used to test the moderating effects of consumer characteristics.

Findings – The results of structural equation modeling analyses suggested that price-promotion activities at Starbucks in Taiwan had a favorable effect on customer quality evaluations and positively influenced repeat-purchase intentions. The moderating effects of consumer characteristics were partially supported. Whereas sex showed no significant moderating effect, consumption frequency did demonstrate a moderating effect.

Practical implications – The results indicate that existing customers may see price promotions at Starbucks in Taiwan as a reward or incentive, and thus lead to an increase in favorable evaluations. The findings provide a new perspective that may encourage those involved in the marketing of coffee chain stores to manage price promotions in a more strategic manner by considering customer characteristics.

Originality/value – The effects of price promotions on brand evaluation remain controversial and may vary among product categories. Additionally, most studies regarding price promotions have used an experimental approach, and few studies of price promotions in the coffee industry have been reported. The study is among the first to empirically examine the effects of price promotions and the moderating role of consumer characteristics in the process at coffee chain stores.

Keywords Service quality, Food quality, Moderating effect, Customer characteristics, Coffee industry, Price promotion

Paper type Research paper

Introduction

Price promotions are common strategies for attracting consumers and increasing sales in the food service industry. Price promotions are "reduce the price for a given quantity or increase the quantity available at the same price, thereby enhancing value and create an economic incentive to purchase" (Raghubir and Corfman, 1999). Companies usually use consumer promotions to increase trials, attract brand switchers, motivate price-sensitive buyers, encourage repeat usage, or provide added value (Huff and Alden, 2000). It is widely accepted that short-term price promotions can generate tangible extra sales immediately, presumably due to increased numbers of buyers, some of whom

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companies hope will be converted into repeat buyers (Ehrenberg *et al.*, 1994). Thus, it is important to understand the long-term effects of price promotions, including their influence on consumer product evaluations and repeat-purchase behaviors. A positive product evaluation may help to retain consumers and encourage repeat purchases, whereas a negative evaluation may reduce consumer purchasing behavior when the promotion ends.

Research on the effects of price promotions on consumer brand evaluations has yielded inclusive results according to the literature. Some studies have shown distinctly negative effects of price promotions on consumer quality and satisfaction evaluations, whereas others have shown positive or non-existent effects (Campo and Yague, 2008; Davis *et al.*, 1992; Ehrenberg *et al.*, 1994; Villarejo-Ramos and Sanchez-Franco, 2005). Additionally, the effects of price promotions in the food service industry may differ from those in other product categories because the product includes both intangible and tangible characteristics. Thus, it is important for food-service managers to understand the impact(s) price promotions may have and to be aware of related influential factors. The current study sought to determine how price promotions influence customer product evaluations in coffee chain stores and to identify factors that influence this process.

Starbucks Coffee Company opened its first retail store in Taiwan in 1998. It brought a Western coffee-drinking culture to Taiwan and increased the popularity of coffee consumption in the country (Su *et al.*, 2006). Recognized as a Western brand, Starbucks has now become the leading coffee chain store in Taiwan. Due to the generally increasing popularity of drinking coffee in Taiwan, several other coffee chain stores have since opened, increasing competition in the coffee-drinking industry. For example, "85°C" is a fast-growing local coffee chain store in Taiwan. It provides coffee drinks and a variety of desserts at budget prices. McDonalds also expanded their "McCafe" concept by introducing the budget-priced coffee-house-style food and drink option to Taiwan. Compared with their competitors in Taiwan, Starbucks sells relatively high-priced coffee drinks. In response to the increasingly competitive coffee market, Starbucks launched a variety of price-related promotional activities to attract new and existing customers. These activities included discounts on a breakfast set menu and holiday gift packages, a joint promotion with convenience stores, a loyalty card with bonus points and, most successfully, an offer to "buy one, get one free". The latter yielded a significant flow of consumer traffic and successfully attracted new customers. It also increased the volume of sales and attracted an increased amount of attention from consumers. As mentioned earlier, price promotions may yield tangible sales increases immediately; however, it may also influence customer brand evaluations and repeat-purchase behavior after the promotional activity ends. Given the controversial findings of previous research (Campo and Yague, 2008; Davis *et al.*, 1992; Ehrenberg *et al.*, 1994; Raghubir and Corfman, 1999; Villarejo-Ramos and Sanchez-Franco, 2005), which will be discussed in detail later, this study was intended to explore the impact of Starbucks' price-promotion activities on consumer brand evaluations and to clarify the moderating role of consumer characteristics in the relationship.

Much previous research related to price promotions has been conducted using experimental designs. Because the business has long encouraged academics to engage in more real world problems and solutions (Gagnon, 1982), we intended to empirically examine the effects of price promotions by working in a real-world environment. A

model was proposed and tested to investigate the effects of price promotions on perceived quality, satisfaction and repeat-purchase intentions, and the moderating role of customer characteristics in this process.

Theoretical framework

Concepts of perceived quality evaluation

High-quality services enhance customer satisfaction, retain customers, increase market share and increase the profitability of service organizations (Dabholkar *et al.*, 2000; Hoffman and Bateson, 1997). Two different concepts of service quality have been discussed in previous research (Ekinci, 2002). The well-known SERVQUAL model is a multi-dimensional scale developed by Parasuraman *et al.* (1988) that defined service quality as "the degree and direction of discrepancy between consumers' perception and expectations" (Parasuraman *et al.*, 1988, p. 17). SERVQUAL measures service quality along five dimensions: tangibles, reliability, responsiveness, assurance and empathy. Although SERVQUAL is a popular approach to assessing service quality in multiple industries including those involving food service, the five-dimensional model has not been consistently defined in empirical research conducted in food service settings. For example, six dimensions rather than five were identified by Bojanic and Rosen (1994) in their study of a chain restaurant. Fu and Park (2001) found three dimensions in their evaluation of the perceptions of senior customers with regard to the service quality in two family-style restaurants. Johns and Tyas (1996) used SERVQUAL to evaluate the services of a contract catering service and included items from five dimensions as well as additional items related to food quality on their questionnaire. Carmen (1990) also reported that the SERVQUAL dimensions were not completely generic. It has been suggested that the dimensional structure of quality evaluation may vary in different service settings (Babakus and Boller, 1992).

Gronroos (1984) proposed conceptualized service quality in terms of two dimensions, technical quality and functional quality. Technical quality refers to what consumers receive as a result of their interaction with a service company. Functional quality involves consumer evaluations of the service delivery process. Lehtinen and Lehtinen (1991) suggested that service consisted of two dimensions: process quality and outcome quality, which are essentially equivalent to Gronroos's dimensions of functional and technical quality, respectively (Ekinci, 2002). Unlike the SERVQUAL instrument, which includes only customer perceptions of service delivery, the two-dimensional model includes both process and outcome. Treating food quality as an outcome, this two-dimensional model of service seems to be more appropriate for food service settings. In previous studies, food quality has been found to be a significant contributor to customer evaluations of food service operations (Almanza *et al.*, 1994; Clark and Wood, 1998; Johns and Tyas, 1996).

Relationships among perceived quality, satisfaction and repeat-purchase intentions

The relationship between service quality and satisfaction and their influence on behavioral intentions have been addressed widely by studies in the food service industry. Fu and Parks (2001) found that the perceptions of service quality held by senior customers contributed significantly to their intentions to return to family-style restaurants. Oh (2000) conducted a study of fine dining restaurants and found that customer satisfaction was a significant determinant of both pre-purchase and

post-purchase behaviors. Huang and Shanklin (2008) surveyed residents in assisted living facilities and found that customer satisfaction toward the restaurants was a mediator between service quality and behavioral intention. This result was consistent with those of Tam's study (2000), which identified satisfaction as a mediator between service quality and behavioral intentions in restaurant customers. Similar results were also found in the coffee industry. A study surveyed 274 customers in four coffee shops and found that satisfaction significantly enhanced customer loyalty (Walsh *et al.*, 2011). Sathish and Venkatesakumar (2011) conducted a study of the coffee industry and found that service offered by the staff and quality of products played an important role in creating consumers' coffee experience. The experience positively influenced consumers' satisfaction and, further, impacted loyalty. Jheng (2006) also confirmed that customer satisfaction toward the coffee stores was a mediator between perceived quality and customer loyalty.

Effects of price promotions on perceived quality and repeat-purchase intentions

Price is an important and frequently used sales-promotion tool in service industries. Indeed, service firms often use price-related promotions, such as discounts, coupons, bonus packs, refunds or rebates, to attract consumers. However, studies of the effects of price promotions on perceived quality and repeat-purchase behaviors have reported contradictory results. Some studies have found positive outcomes, whereas others have reported negative outcomes. For example, Campo and Yague (2008) analyzed the formation of tourist loyalty to tour operators and found that price promotions had indirect and negative effects on perceived quality, satisfaction and consumer loyalty. These indirect and negative effects of price promotions are sometimes intensified among repeat-purchase customers, whereas first-time purchasers did not show similar negative influences (Martínez and Guillen, 2006). In contrast, a few empirical studies reported that, instead of decreasing perceived quality, price promotions had a positive effect on perceived quality (Villarejo-Ramos and Sanchez-Franco, 2005) and brand evaluations (Chung, 2006). Some researchers have otherwise argued that there is no significant relationship between price promotions and repeat-purchase behavior and brand evaluation (Davis *et al.*, 1992; Ehrenberg *et al.*, 1994).

Possible explanations for these inconsistent findings may include differences in product categories, the nature of the promotional activities and consumer characteristics (Raghubir and Corfman, 1999; Anderson and Simester, 2004; DelVecchio *et al.*, 2006; Montaner and Pina, 2008; Nusair *et al.*, 2010). A meta-analysis from DelVecchio *et al.* (2006) suggested that sales promotion can either increase or decrease post-promotion brand preferences, depending upon characteristics of the sales promotion and the promoted product. Nusair *et al.* (2010) also indicated that the type of service product was a critical factor in consumer perceptions of price discounts. Yoon *et al.* (2010) further confirmed that consumers perceived and evaluated price promotions differently in hospitality and non-hospitality industries. Montaner and Pina (2008) also observed that the effect of price promotions on consumers' evaluations of brands image was moderated by the product category. Using both scanner data and experiments, Lemon and Nowlis (2002) found that high-tier brands benefitted more than low-tier brands from price promotions. Sivakumar (1996) reported that high-priced brands benefitted from infrequent, large price cuts, whereas low-priced brands benefitted more from frequent, small price cuts. Raghubir and Corfman (1995) argued that the effect of

price promotions on brand evaluations depended on the frequency of such price promotions. They found that a brand that promoted more frequently was perceived to offer poorer quality compared with others in its industry.

Consumer experience may also moderate the effects of price promotions. In a study conducted by Shen *et al.* (2007), loyalty had a moderating effect on price promotions. Price incentives can enhance the brand effect on the high-loyalty consumers of a non-prestigious brand. However, they can decrease the brand effect on the high-loyalty consumers of a prestigious brand. Price incentives have had no impact on the brand effect on the low-loyalty consumers of prestigious and non-prestigious brands. Ortmeyer and Huber (1991) conducted a laboratory study and found that prior brand experience moderated the impact of price promotions. The negative impact of price promotions on quality evaluation and repeat-purchase intentions was eliminated among those who had tried the brand.

Thus, it is important to determine how price promotions actually influence brand evaluations in specific product sectors. Price promotion is an important and frequently used tool to attract customers in coffee chain stores. However, relatively few studies of price promotion have been conducted in the coffee industry. This study proposed and tested a theoretical model for investigating the influence of price promotions on brand evaluations and repeat purchases intentions. The moderating effects of consumer characteristics were also investigated.

Theoretical model

In this study, a model was developed to assess relationships among price promotion, perceived quality (food quality and service quality), satisfaction and repeat-purchase intentions in relation to coffee chain stores (Figure 1). Based on a literature review, seven research hypotheses were generated to explain the relationships among these five variables:

H1. Price promotion exerts a significant effect on perceived food quality.

H2. Price promotions exert a significant effect on perceived service quality.

H3. Perceived food quality exerts a significant effect on satisfaction.

H4. Perceived service quality exerts a significant effect on satisfaction.

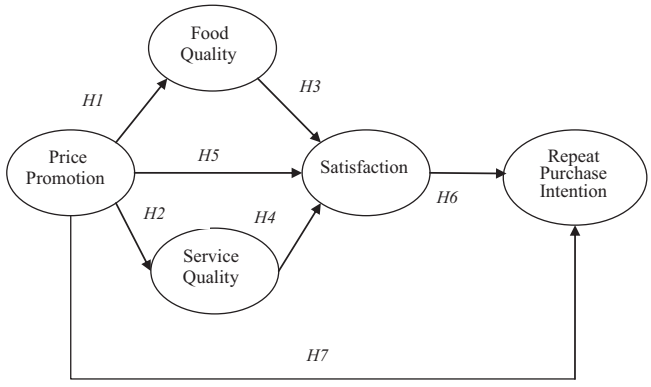

Figure 1.
Proposed theoretical model to identify the effects of price promotions on customer evaluation

H5. Price promotions exert a significant effect on satisfaction.

H6. Satisfaction exerts a significant effect on repeat-purchase intentions.

H7. Price promotions exert a significant effect on repeat-purchase intentions.

The relationships of price promotion and customer evaluations and repeat-purchase intentions (*H1*, *H2*, *H5*, and *H7*) were proposed in the model based on research by Chung (2006), Campo and Yague (2008), Davis *et al.* (1992), Ehrenberg *et al.* (1994), Raghubir and Corfman (1999) and Villarejo-Ramos and Sanchez-Franco (2005), which have been discussed in a previous section. Due to a contradictory result obtained in a general literature review, we thus expected to justify if significant relationships exist between price promotion and perceived quality, satisfaction and repeat-purchase intentions in coffee chain stores. This study also proposed a significant relationship between perceived quality, satisfaction and repeat-purchase intentions (*H3*, *H4* and *H6*) based on research from Fu and Parks (2001), Oh (2000), Huang and Shanklin (2008), Tam (2000), Walsh *et al.* (2011), Sathish and Venkatesakumar (2011), and Jheng (2006).

Research has shown that situational characteristics, such as type of service product and consumer experience, may have significant moderating roles on the effects of price promotions on brand evaluations. Additionally, personal characteristics have been found to be significant moderating factors in forming consumer purchasing intentions (Mittal and Kamakura, 2001; Han and Ryu, 2006). Demographic characteristics could also influence consumer's level of involvement in obtaining a hotel discount (Lee *et al.*, 2012). Thus, the moderating effects of consumer characteristics, including sex, consumption frequency and occupation, were also tested.

Methods

Instrument development

A questionnaire was developed based on an in-depth literature review and a pilot study. Food services are unique in that the "product" combines both tangible (i.e. food) and intangible (i.e. service) components. When considered as an outcome, food quality has been found to be a significant attribute that contributed to customer evaluations of food service operations (Almanza *et al.*, 1994; Clark and Wood, 1998; Johns and Tyas, 1996). Thus, we used a two-dimensional model of service that includes outcome and process. Perceived quality was measured in terms of two dimensions in this study: service quality and food and beverage quality. Service quality was measured by three items:

(1) employee-provided professional services;

(2) employee-provided recommendations to meet consumers' specific needs; and

(3) employee courtesy.

Food and beverage quality was measured by five items:

(1) taste of food;

(2) taste of beverages;

(3) quality consistency of food;

(4) quality consistency of beverages; and

(5) variety of choices of food and beverages.

These items were adapted from Jheng (2006), Huang and Shanklin (2008) and Yang (2003), and were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Price promotions were measured in terms of six regular promotional activities in Taiwan Starbucks (Chung, 2006): discounts for holiday gift packages, discounts on "Starbucks Appreciation Day", special offers for the breakfast menu, "buy one, get one free", a loyalty card with bonus points collection to redeem a cup of free coffee and a joint promotion with a convenience store, based on the definition of price promotion from Raghubir and Corfman (1999): "reduce the price for a given quantity or increase the quantity available at the same price, thereby enhancing value and create an economic incentive to purchase". Satisfaction was assessed using a five-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied) to rate three statements about customer satisfaction with beverages and food, service and overall dining experience (Jheng, 2006; Huang and Shanklin, 2008). Repeat-purchase intentions were also measured by four items using a five-point Likert rating (extremely unlikely to extremely likely): willingness to return, willingness to recommend, intention to return and likelihood of repurchasing (Jheng, 2006; Huang and Shanklin, 2008).

Data collection and analysis

A pilot study was conducted to increase the validity of the instrument. A total of 20 Starbucks consumers were surveyed and asked to review the questionnaire and provided suggestions on ways to enhance its clarity and content validity. A few statements were rephrased based on the comments to enhance readability of the questionnaire.

Due to difficulties with obtaining a population frame, a convenience sample was used. Questionnaires were administered in person to consumers in 12 coffee chain stores. Consumers were asked for their willingness to participate the survey before a questionnaire was distributed. A total of 512 questionnaires were collected. Responses with significant missing data were excluded, leaving 499 questionnaires for the analysis. Basic assumptions for multivariate analyses and descriptive statistical analyses were assessed to gain insights into the nature of the data. Outliers were screened using Mahalanobis distances, and 11 outliers were removed. Thus, data from 488 participants were used to test the hypothesized relationships.

The SPSS software (ver. 14.0 for Windows; SPSS Inc., Chicago, IL) and AMOS (ver. 16.0, SPSS Inc., Chicago) were used for data analyses. Reliability coefficient *alphas* were used to test the internal consistency of study constructs. Relationships in the test model were examined using structural equation modeling techniques. The overall model fit of the test model was also assessed. Following Jaccard and Wan (1996), the moderating effects of consumer characteristics were tested using a multiple-group solution.

Results

Sample profile and descriptive information

Among survey participants, 68 per cent were female and 32 per cent were males. Forty per cent of respondents were students. Most (63 per cent) consumed Starbucks coffee occasionally (1-3 times/month). While most people went to Starbucks for its coffee (41 per cent) and to socialize (32 per cent), many consumers also went because of its promotional activities (31 per cent). Respondents were most attracted by promotional activity involving "buy one, get one free" (with a mean score of 4.38), whereas "discounts for

holiday gift packages" were the least attractive (2.97; Table I). Consumers were more satisfied with Starbucks' service (4.04) than with the food and beverages (3.73). The item that generated the most favorable perceptions of quality was employee courtesy (4.18), and the one that elicited the least favorable perceptions of quality was "taste of food" (3.50).

Measurement model

A two-step approach to structural equation modeling was adopted. First, a measurement model was evaluated prior to the structural model to assess construct validity (Anderson and Gerbing, 1988). Confirmatory factor analysis was used to test the measurement model and to evaluate the validity of the study constructs. The measurement model consisted of five latent variables and 21 measurement items. The overall model fit was evaluated by χ^2 tests and several goodness-of-fit indices. Whereas the χ^2 statistics showed a significant difference ($\chi^2 = 565.344$; df = 179; $p < 0.001$), these values are often reported to be sensitive to sample size and model complexity (Bagozzi and Yi, 1988; Hair *et al.*, 1998). Other indices suggested a good model fit, with χ^2/df = 3.158, RMSEA = 0.067, CFI = 0.910, and SRMR = 0.0523, indicating that the measurement model closely reproduced the original data structure.

Variables	Mean	*SD*
Price promotion		
P1: Discounts for holiday gift packages	2.97	0.75
P2: Discounts on the appreciation day	3.56	0.82
P3: Special offers for the breakfast menu	3.19	0.93
P4: Buy one, get one free	4.38	0.76
P5: A loyalty card with bonus points	3.66	0.85
P6: A joint promotion with a convenience store	3.72	1.12
Food and beverage quality		
FQ1: Taste of beverages	3.96	0.66
FQ2: Quality consistency of beverages	3.73	0.78
FQ3: Variety of choices of food and beverages	3.74	0.72
FQ4: Taste of food	3.50	0.78
FQ5: Quality consistency of food	3.66	0.69
Service quality		
SQ1: Employee-provided professional services	4.07	0.69
SQ2: Employee-provided recommendation to meet consumers' needs	3.91	0.81
SQ3: Employee courtesy	4.18	0.68
Satisfaction		
S1: Food and beverages	3.73	0.67
S2: Service	4.04	0.64
S3: Overall dining experience	3.86	0.66
Repeat purchase intention		
R1: Willingness to return	3.55	0.92
R2: Willingness to recommend	3.56	0.83
R3: Intention to return	3.65	0.74
R4: Likelihood of repurchasing	3.41	0.83

Table I.
Descriptive statistic for variables

Composite reliability values and average variance extracted (AVE) were calculated based on the formula suggested by Fornell and Larcker (1981) to assess construct reliability and validity (Table II). The composite reliability scores of all constructs were greater than 0.70, as recommended by Hair *et al.* (1998), and demonstrated that these items were reliable for the measurement of each construct in the measurement model. Each of the 21 measurements loaded significantly on the intended factors, ensuring construct validity. Two constructs' AVE levels were slightly less than 0.5, the level recommended by Fornell and Larcker (1981). Previous reports have explained that Fornell and Larcker's (1981) AVE test is quite conservative and very often variance-extracted estimates will be below 0.5, even when reliabilities are acceptable (Hatcher, 1994, p. 331; Campo and Yague, 2008). Thus, the measurement model was used to further test the structural model.

Structural model

In the second step of SEM, the structural model was tested. The results of the proposed structural model are summarized in Figure 2. Although the χ^2 statistics were significant

Variables	Standardized factor loading	*t*-value	Composite reliability	AVE
Price promotion			0.72	0.30
P1	0.49	–		
P2	0.63	9.06*		
P3	0.52	7.81*		
P4	0.59	7.69*		
P5	0.55	7.70*		
P6	0.48	6.98*		
Food and beverage quality			0.78	0.42
FQ1	0.66	–		
FQ2	0.66	11.51*		
FQ3	0.61	11.19*		
FQ4	0.65	11.77*		
FQ5	0.67	11.48*		
Service quality			0.84	0.63
SQ1	0.84	–		
SQ2	0.71	16.55*		
SQ3	0.83	19.13*		
Satisfaction				
S1	0.70	–	0.76	0.52
S2	0.73	13.60*		
S3	0.73	14.28*		
Repeat purchase intention			0.88	0.65
R1	0.75	–		
R2	0.84	18.68*		
R3	0.80	16.94*		
R4	0.84	17.97*		

Note: *Significant at $p < 0.001$

Table II.
Statistical summary for measurement model

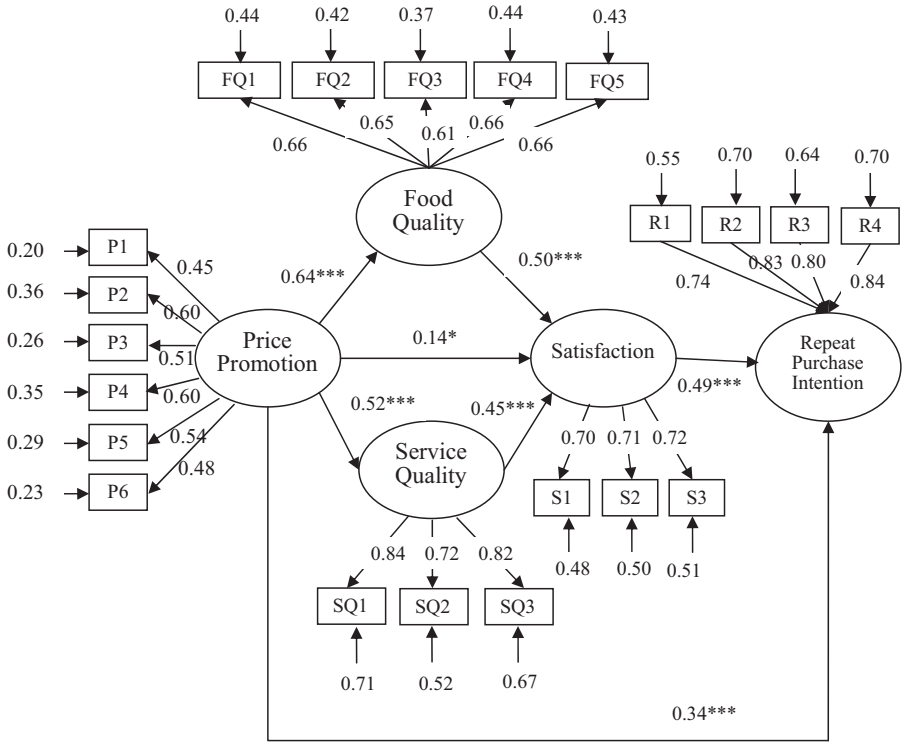

Figure 2.
Structural relationships among price promotion, food quality, service quality, satisfaction and repeat-purchase behavior. All hypotheses were supported

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

($\chi^2 = 636.60$; df = 182; $p < 0.001$), other fit indices fell within acceptable levels, with χ^2/df = 3.498, RMSEA = 0.072, CFI = 0.894, and SRMR = 0.0673. Standardized path coefficients (Figure 2) were estimated to test the relationships of study constructs. All hypothesized relationships were significant. Price promotions had significant and positive influences on food and beverage quality ($\beta = 0.64$; t-value = 7.142; $p < 0.001$) and service quality ($\beta = 0.52$; t-value = 6.920; $p < 0.001$). Food and beverage quality had a greater impact on satisfaction ($\beta = 0.50$; t-value = 7.035; $p < 0.001$) than did service quality ($\beta = 0.45$; t-value = 7.215; $p < 0.001$). In addition to an indirect effect through perceived quality, price promotions also showed a direct effect on satisfaction ($\beta = 0.14$; t-value = 2.011; $p < 0.05$). Satisfaction had a significant influence on repeat-purchase intentions ($\beta = 0.49$; t-value = 6.772; $p < 0.001$). In addition to an indirect effect on repeat-purchase intentions through perceived quality and satisfaction, price promotions also showed a direct effect on repeat-purchase intentions ($\beta = 0.34$; t-value = 4.269; $p < 0.001$).

Moderating effects of customer characteristics

The study further examined the moderating effects of sex, consumption frequency and occupation. The sample was divided into two groups according to sex: 153 males and 332 females, with three missing responses. The three missing responses were excluded

from the multiple-group analysis. Respondents were also separated into 309 non-frequent (1-3 times per month) and 179 frequent (≥ 4 times per month) consumers. With respect to occupation, respondents were divided into one group of 196 students and another group of 271 non-students (including 91 respondents from the manufacturing industry; 77 respondents from the service industry; 40 respondents working in military, government, or schools; and 63 respondents classified as others). Twenty-one missing responses were excluded from the multiple-group analysis.

Before testing the moderating effect of consumer characteristics on the structural model, a measurement invariance test was conducted to ensure that the measurement model was invariant across groups. An unconstrained measurement model was compared with a constrained measurement model in which all factor loadings were set to be equal across groups. An insignificant χ^2 change between these two models indicated that the measurement invariance across groups was supported. Results showed that the $\Delta\chi^2$ was not significant for sex [$\Delta\chi^2(16) = 31.401$; $p > 0.01$], consumption frequency [$\Delta\chi^2(16) = 30.704, p > 0.01$], and students versus non-students [$\Delta\chi^2(16) = 23.938, p > 0.01$]. This indicated that measurement invariance across groups was supported and that invariance tests of the structural paths could be used further.

The moderating effects of customer characteristics were tested using the two-step procedures recommended by Jaccard and Wan (1996). First, using a multiple-group solution, the structural models for the two groups were estimated with no across-group constraints (unconstrained model). Second, the across-group constrained models were estimated with the path coefficients of interest in the two groups constrained to be equal (constrained model). A significant χ^2 change between the unconstrained and constrained models indicated that the paths were significantly different for the two groups and that a moderating effect may exist.

The results partially supported the moderating effects of consumer characteristics (Table III). Consumption frequency demonstrated a moderating effect on the relationship between price promotions and repeat-purchase intentions ($\Delta\chi^2/\text{df} = 5.390$; $p < 0.05$). Among non-frequent customers, price promotions had a significant and positive influence on repeat-purchase intentions ($\beta = 0.43$; t-value $= 4.387$; $p < 0.001$), whereas price promotions did not show a significant influence on repeat-purchase intentions among frequent customers ($\beta = 0.006$; t-value $= 0.038$; $p > 0.01$). This indicated that price promotions encourage non-frequent users to return, but that frequent users would still purchase regardless of price promotions.

Status as a student or non-student had a moderating role in the relationships between price promotions and food quality ($\Delta\chi^2/\text{df} = 5.134$; $p < 0.05$), price promotions and repeat-purchase intentions ($\Delta\chi^2/\text{df} = 3.958$; $p < 0.05$) and satisfaction and repeat-purchase intentions ($\Delta\chi^2/\text{df} = 4.049$; $p < 0.05$). Price promotions had a slightly stronger effect on food quality evaluations among students ($\beta = 0.68$; t-value $= 4.854$; $p < 0.001$) than among non-students ($\beta = 0.60$; t-value $= 4.521$; $p < 0.001$). Price promotions also had a stronger positive impact on repurchase intentions among students ($\beta = 0.57$; t-value $= 3.475$; $p < 0.001$) than among non-students ($\beta = 0.25$; t-value $= 2.549$; $p < 0.05$). Customer satisfaction had a stronger effect on repurchase intentions among non-students ($\beta = 0.56$; t-value $= 6.006$; $p < 0.001$) than among students ($\beta = 0.29$; t-value $= 2.390$; $p < 0.05$). Thus, students were more likely to return as a result of price promotions, whereas non-student customers will return as a result of satisfaction. The moderating effects of sex were statistically insignificant in all paths.

Moderator		Standardized path coefficients		
		Consumption frequency		
Consumption frequency	Paths	Non-frequent	Frequent	$^{\Delta}\chi^2$/ df
	Price promotion → Repurchase intention	0.43***	0.006	5.390*
		Occupation		
Occupation		Student	Non-student	
	Price promotion → Food quality	0.68***	0.60***	5.134*
	Price promotion → Repurchase intention	0.57***	0.25*	3.958*
	Satisfaction → Repurchase intention	0.29*	0.56***	4.049*

Notes: Only significant moderating effects are listed; $^{*}p < 0.05$; $^{***}p < 0.001$

Table III.
Moderating effects of customer characteristics

Discussion

Although the effects of price promotions on customer evaluations have been studied in various settings, the findings have been inconclusive. The current study provides evidence that Starbucks' price-oriented promotions positively affected customer quality and satisfaction evaluations and further influenced repeat-purchase intentions. The results disagree with the findings of previous research of Campo and Yague (2008) and Martínez and Guillen (2006), but are consistent with that obtained by Villarejo-Ramos and Sanchez-Franco (2005). They suggest that the negative effects of price promotions on consumer evaluations found in other research may not hold for a leading brand in the coffee industry, such as Starbucks. Starbucks is now the leading brand with high awareness and brand evaluation in Taiwan coffee chain stores market. It sells a relatively high-priced drinking coffee compared with other chain coffee stores. A previous study found that high-tier brands may benefit more than low-tier brands from price promotions (Lemon and Nowlis, 2002). Some studies have also shown that the adverse effects of price discounts on customer evaluations are diminished in regard to a brand with high awareness (Lin *et al.*, 2009) or high quality (Grewal *et al.*, 1998). One possible explanation for this finding is that customers may consider the price-promoting activities of Starbucks to be after-sale customer services rather than price discounts. Existing customers may see price promotions as a reward or incentive, and therefore increase their brand evaluations (Villarejo-Ramos and Sanchez-Franco, 2005). Therefore, customers showed favorable brand evaluations, including positive food and service quality perceptions. Price promotions were observed to have a slightly higher influence on food quality evaluation than on service quality in the study. They also showed a direct and indirect influence through service and food quality on satisfaction. The possible reason is because Starbucks provides a counter service and some guests order drinks and/or food to takeout. Therefore, price promotions may have a stronger impact on food quality evaluation and further influence customer satisfaction. The result provides evidence that offering quality drink and food is particularly critical for creating customer satisfaction when promotional activities are implemented in coffee chain stores. Maintaining consistent food and drink qualities is suggested to operators of coffee stores during the promotion period.

These findings have profound implications for practitioners in coffee chain stores. They suggest that marketers of coffee chain stores should "polish" their price-oriented promotional campaigns. Marketers can communicate the benefit of a price-related campaign in terms of an incentive or reward for existing customers rather than as a regular price-cut activity to enhance customers' brand evaluations. Marketers can also use different promotional methods and adopt an optimal price-communication strategy to publicize price-related deals. For example, the price promotion framing may influence consumers' perception of the deal. While both the per cent and amount of deals affected deal evaluation (Krishna *et al.*, 2002), percentage-off promotions was evaluated as more significant and effective in low-price products (Chen *et al.*, 1998), and may lead to higher post-promotion price expectations and choice in high-depth promotions (DelVecchio *et al.*, 2007). In addition, using a coupon is less likely to reduce consumers' reference price, and is therefore likely to maintain brand image and evaluation (Folkes and Wheat, 1995; Chen *et al.*, 1998). A coupon can be distributed through a loyalty program to communicate its status as an incentive for current customers. This not only helps to maintain a more stable relationship with current customers and increases their brand evaluations but also encourages new users to become frequent customers.

This study also confirmed the importance of price promotions for repeat-purchase intentions. Starbucks' price-promotion activities demonstrated a significant direct influence on repurchase intentions. The extra sales at Starbucks during a price promotion may derive from the brand's existing customers, those switching from competing brands and/or new customers who were not regular coffee drinkers. Although some researchers have argued that price discounts may damage a company's profits in the long run because they only encourage customers to buy what they would have to buy anyway, this may not apply to the market of coffee drinkers. Unlike some grocery products, such as canned foods or paper towels, which can be stored for future use, the coffee provided by coffee chain stores to be consumed on the premises is perishable and needs to be consumed immediately. A price promotion at Starbucks may encourage existing customers to consume more and increase their consumption level. Additionally, managers of coffee chain stores expect new customers and brand switchers to be converted into repeat buyers and thus build future sales. A few theories have explained the ability of appropriately implemented price promotions to affect repurchase behavior. According to the foot-in-the-door effect, one way to get a person to agree to a large request is getting him/her to agree to a smaller one first (Freedman and Fraser, 1966). Managers can use price-promotion activities to first attract new customers and brand switchers. When they are familiar with the brand, they will probably be more willing to buy it at the regular price. The results of the analysis of moderating effects confirmed that price promotions encourage non-frequent users to return. Non-frequent customers are more prone to purchase again as a result of a price promotions, whereas frequent customers are likely to continue buying regardless of price promotion. Thus, it is critical for operators of coffee chain stores to segment the market effectively so that a different promotional strategy can be implemented to attract price-sensitive or price-insensitive customers.

This study also revealed that student customers were more attracted by price-promotion activities and perceived them more positively in quality evaluations. They were more willing to return as a result of price promotions; however, the non-student group will also return if they are satisfied. This finding is not surprising.

The student group usually has no or a lower income and is therefore more conscious of price-related activities. In contrast, those in the non-student group consider more factors in their satisfaction evaluations and are less susceptible to price promotions. A previous study found that students responded more positively to various promotional tools, such as coupons, price discounts, or free samples (Osman and Fah, 2011). Students usually express a favorable attitude toward promotions and are more willing to search for and examine promotional activities. Price promotions may allow them to access a higher quality brand. Additionally, the student group is usually innovative and may show a favorable attitude toward promotions because this may encourage them to try a new product. Marketing personnel at coffee stores should carefully distinguish the price-prone from the quality-prone customers and understand their characteristics and specific needs. Understanding the traits and characteristics of both price-prone and quality-prone customers enables marketers to segment the market in an effective way and design appropriate promotional campaigns for each segment and ensure the company's long-term profits. An previous study from Zhang *et al.* (2011) has also suggested that the hospitality industry can generate benefits from understanding customers' specific expectation of a market segment and seeking to provide amenities accordingly. Students are recognized as price-prone customers in the study and they are also heavy users of the Internet and social network services. Developing promotional programs and offering online deals over social networking media might attract attentions, encourage new trials, and further build relationships with those potential customers. On the other hand, for frequent and quality-prone guests, it is suggested to reward those customers through loyalty programs and make them feel special and respected. A few activities have been implemented in service industries which are especially designed for loyal customers to appreciate their supports and make them feel exclusive. These activities include: advanced access to seasonal promotions, VIP-only event/party, special gifts for VIP members only, etc. These activities make promotional campaigns far beyond discounted prices on products and enhance these frequent and quality-sensitive customers' loyalty.

Although this study found that price promotions had a positive influence on quality evaluation, coffee chain store marketers must nonetheless use price-related activities with caution. Frequent, long-term and large price-cut activities may have the unintended consequence of lowering brand equity. It has been reported that deep discounting in some product categories might negatively influence consumer perceptions (Drozdenko and Jensen, 2005). Yoon *et al.* (2010) found that in hospitality firms, the quality perception was positive when the discount level was ranged between 20 and 40 per cent; however, it declined significantly when the discount level was between 60 and 80 per cent. Price deals are recognized as the most powerful form of sales promotion; however, marketers should be cautious in determining a price promotion scheme. It is suggested that price promotions be used in combination with advertising or other sales-promotion tools to increase brand awareness and image and to diminish negative effects on brand evaluations.

Limitations and conclusions

A major limitation of the current research is the sampling frame. The study sample was a convenience sample, and the study was conducted in an urban area, limiting the generalizability of the findings. Furthermore, the research was cross-sectional and not

longitudinal. There is inevitable uncertainty about the long-term effects of price promotions. A longitudinal study would help to further identify the effects of price promotions in the long run.

In conclusion, we empirically examined the effects of price promotions in coffee chain stores. The results suggest that price promotions at Starbucks in Taiwan had favorable effects on customer quality evaluations and that they positively influenced behavioral intentions to purchase again in the future. Because customer characteristics were found to partially moderate the consequences of price promotions, the results of this study provide marketing practitioners at coffee chain stores with a new perspective that may encourage them to manage price promotions in a more strategic manner by considering customer characteristics. An optimal price-communication and segmentation strategy is recommended in the study.

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