Examining the Antecedents of Repurchase Intention in Convenience Stores: A Perspective of Expectation-Disconfirmation Theory

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Abstract

The density of convenience stores in Taiwan is the highest in the world. In a convenience store context, this study attempts to examine the relationship between service quality, customer satisfaction and repurchase intention, as well as the impact of customer familiarity with employees on customer satisfaction and repurchase intention. The result indicated that expectation had direct effect on service quality. The result also showed that service quality was positively related to disconfirmation. As expected, there were interrelationships among service quality, satisfaction, and repurchase intention. Moreover, customer familiarity with employees had positive, direct influence on both satisfaction and repurchase intentions.

Keywords: Convenience store, service quality, expectation-disconfirmation theory, customer satisfaction, repurchase intention.

Introduction

In 2006, ACNielsen announced that more than 85% customers go to convenience store 3 to 4 times every one week. The Department of Statistics, Ministry of Economic Affairs also reported the gross rate of convenience stores in 2006 was 8.85% and the growth rate was higher than other industries. Since convenience stores were introduced to Taiwan in 1979 by Uni-President Company, they have been grown rapidly in Taiwan due to the convenience of distance, time, shopping, and service. According to the reports provided by Fair Trade Commission Executive Yuan, R.O.C, in 2006, every 2,700 people in Taiwan is served by a convenience store, but the average rate has been down to 2,500 people in 2009, making Taiwan's density of convenience stores is the highest in the world. The amount of convenience stores in Taiwan has already exceeded 9,200. Among these convenience stores, 52.15% are 7-ELEVEN, which belong to Uni-President Company.

As 7-ELEVEN convenience stores are widespread in Taiwan, how customers expect and evaluate overall performance of 7-ELEVEN stores (i.e., customer expectation and perceived service quality) is an important issue in the Taiwanese retailing environment. More important, the mechanism of how customer expectations lead to repurchase intention and customer loyalty is also worth noting [35][36][40]. Therefore, the main objectives of this research are described as follow:

(1) **Identifying the key dimensions of service quality that customers take into account.** This research will explore main dimensions that customers will concern when they evaluate the service quality of 7-ELEVEN convenience stores.

(2) **Exploring the gap between the expectations and the perceptions of service quality.** This research uses the PZB's model [40] to measure the expected service quality and perceived service quality. Measuring service quality in this way can get differences between these two constructs and specify which items and dimensions are the closest to customers' expectations and which items and dimensions are the worst in order to provide remediation to 7-ELEVEN's managers.

(3) **Examining the relationships among service quality, satisfaction, and repurchase intention.** By integrating the expectation-disconfirmation theory (EDT) and the concept of PZB's [41] Gap 5, this study attempts to analyze and estimate the direct or indirect relationship among service quality, satisfaction, and repurchase intention in a convenience store context.

Literature Review

Expectation-disconfirmation theory

Expectation-disconfirmation theory (EDT) is extensively used in consumer research and service marketing [2] [20] [35] [40] [46] [51]. Due to its predictability, EDT has been applied to product and service repurchase contexts, including automobile [40], camcorder [50], photographic products [20], restaurant service [52], professional services [46], and so on.

EDT denotes that product/service performance will be compared to pre-use expectations, and this comparison process will result in the state of

disconfirmation. If actual performance outperforms expectations (positive disconfirmation), customers will feel satisfied. Contrarily, while actual performance fails to meet the expectations (negative disconfirmation), consumers will feel dissatisfied [35] [51]. Finally, the level of satisfaction will affect customers' repurchase intention; the more satisfied customers' feel, the higher they intend to repurchase.

EDT contains expectations, performance, disconfirmation, and satisfaction.

(1) Expectations. Expectations are a determinant of satisfaction because it serves as the baseline or reference level for customers to form evaluative judgments about the focal product or service. Based on customers' pre-purchase experiences, word-of-mouth communications, or product information and service promises provided by salespersons, customer expectations may represent expected product attributes in the future [50]. Oliver thinks of that customer expectations compose of two components, including a probability of occurrence and an evaluation of the occurrence, where customer judgments of these two components will affect their expectations [36]. According to these two components, expectations can be divided into "high expectations" (desirable events will occur or undesirable events will not occur) and "low expectations" (desirable events will not occur or undesirable events will occur).

(2) Performance. Performance refers to the customers' evaluations of recent consumption experiences. After purchasing, customers usually compare performance to their expectations in order to evaluate the level of confirmation/disconfirmation. Oliver and DeSarbo find out that product performance has a direct impact on customer satisfaction [38]. Other research also indicates the positive relationship between performance and satisfaction [2] [3].

(3) Confirmation/Disconfirmation. Confirmation or disconfirmation is the main determinant of satisfaction. It represents the product of the difference between actual performance and expectations; that is, either confirmation or disconfirmation is the combination of expectations and performance [11]. Oliver suggests that confirmation or disconfirmation is a mental comparison, which may be lower than expectations (i.e., negative disconfirmation), higher than expectations (i.e., positive disconfirmation), or just the same as expectations (i.e., zero disconfirmation or confirmation) [35].

(4) Satisfaction. Satisfaction is originally defined by Locke in the context of job performance as "a pleasurable or positive emotional state resulting from the estimate of one's job" [30]. Oliver extends the definition to consumption context as "the summary psychological state resulting when the emotion

surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience [35] [36]." Westbrook notes that satisfaction is often treated as the mediator of post-purchase behavior. It connects the prior beliefs of alternatives, customers' communication, and willingness to repurchase [60].

Parasuraman et al. propose a gap-based model of service quality based on the comparison with consumer expectations and perceived performance. It is similar to what EDT suggests and applied in numerous studies [16] [17] [44] [47] [55]. Rather than the performance-based measures of service quality, this study suggests that customers will use a variety of cues to infer the perceived quality of goods and services. As a result, we utilize the gap-based model to evaluate the expectations and perceptions pertaining to service quality in convenience stores. The next section will discuss the retail service quality.

Retail Service Quality

Compared with tangible products, the characteristics of service (include intangible, inseparability, variability, and perishability) lead to a variety of difficulties in measuring service quality. Parasuraman, Zeithaml, and Berry develop a scale to measure service quality [42]. It is well known as SERVQUAL, which contains five key dimensions, including tangible, reliability, responsiveness, assurance, and empathy [42]. SERVQUAL has been extensively used service quality in different contexts [43] [44] [64] [65].

However, several scholars suggest the dimensions of SERVQUAL need to be revised in order to meet the characteristics of different industries, countries and research contexts [4]. As for the retailing context, Dabholkar et al. develop a five-facet Retail Service Quality Scale (RSQS) for the retailing contexts, including physical aspect, reliability, personal interaction, problem solving, and policy [18]. Accordingly, Dabholkar et al.'s [18] service quality dimensions are further applied to the convenience store context in the current study.

Repurchase Intention

According to the attitudinal theory of consumer behavior, behavioral intention is the necessary process of any behavior performance. In other words, it determines the behavior performed [1]. Engel, Blackwell and Miniard suggest that a customer's overall assessment to a certain object is determined by his/her perceptions and feelings toward the object [20]. The customer's attitude toward the object will further affect his/her behavioral intention, and then in turn affect his/her actual behavior.

Zeithaml, Berry, and Parasuraman suggest that when customers perceived superior service quality,

they will have positive behavioral intention for the company, and can strengthen the relationships between customers and the company. If customers perceived poor service quality, they will result in negative behavioral intention toward the company [64]. Zeithaml et al. [65] suggest that favorable behavioral intention is associated with an company's ability to make customers to (1) say positive things about the company;(2) recommend the company to other customers;(3) remain loyal to the company (i.e., repurchase from it);(4) spend more with the company, and (5) pay price premiums. Furthermore, they identify five factors of behavioral intention, including "loyalty", "switch", "pay more", "external response", and "internal response." These constructs has been used in numerous past studies [65].

Research Framework and Hypotheses

According to research motivation and research objectives, this research attempts to identify the dimensions of service quality and evaluate the relationship among service quality, satisfaction, and repurchase intention in the convenience store context (i.e., 7-ELEVEN).

Figure 2 presents our research framework. Based on EDT, our model tested in this research describes that customer expectations will affect perceived service quality, and both have an impact on the disconfirmation construct. Then, disconfirmation will predict customer satisfaction, which in turn influences repurchase intention. In addition, the relationship between service quality and behavioral intention is mediated by customer satisfaction. Moreover, we suggest that customer familiarity with employees has an impact on satisfaction and repurchase intention.

Hypotheses

The customer's expectations of product or service will affect the cognition of perceived service quality. When customer expectations are not met, his/her evaluation of the perceived service quality may be lower than those whose expectations are met or exceeded. On the contrary, while the customer expectations are met or exceeded, his evaluation of perceived service quality will be higher than those whose expectations aren't met. Prior literature also suggests that customer expectations have a direct influence on perceived service quality [33] [50] [62]. When the expectations can't be satisfied, the perceived service quality is "unacceptable quality"; when meeting the expectations, the perceived service quality is "satisfied quality"; when better than the expectations, the perceived service quality is "ideal quality" [41]. Hence, customer expectations of service quality will affect customer perceptions of service quality. Thus, we hypothesize:

H1. *Expectations have a positive, direct influence on service quality.*

According to EDT, expectations have a negative effect on disconfirmation. Therefore, when customer expectations are higher, perceived service quality will not be likely as high as the expectations, resulting in the negative disconfirmation. However, low expectations are more likely to be exceeded by perceived service quality, leading to the positive or zero disconfirmation. The negative effect of expectations on disconfirmation has been proven in a number of studies [40]. On the other hand, EDT also suggests that service quality has a positive effect on disconfirmation. Thus, superior service quality is more likely to be higher than the expectation level, resulting in the positive or zero disconfirmation. While poor service quality is more likely to be lower than the expectation level, leading to the negative disconfirmation. Thus, we hypothesize:

H2. *Expectations have negative, direct influence on disconfirmation.*

H3. *Service quality has a positive, direct influence on disconfirmation.*

Based on EDT, when service quality is better than what customers expected (positive disconfirmation), the satisfaction level will be higher than the levels while expectations are just or not met. That is, disconfirmation has a positive effect on satisfaction. Thus, we hypothesize:

H4. *Disconfirmation has a positive, direct influence on satisfaction.*

The service quality that customers perceived is an antecedent of satisfaction [23]. When customer perception of service quality is better, the probability that the customer will be satisfied seems higher. On the other hand, when service quality that customers perceived is poor, the probability that the customer will be satisfied appears low. Parasuraman et al. also suggest that superior service quality is more likely to increase customer satisfaction [58]. Moreover, positive perceptions of service quality can result in satisfaction, which in turn may lead to customer repurchase intention [16]. Thus, we hypothesize:

H5. *Service quality has a positive, direct influence on satisfaction.*

The positive effect of satisfaction on behavioral intention has been proven in numerous studies [2] [8] [17] [62]. That is, the higher level of satisfaction is more likely to lead to positive behavioral intention in the future. Hence, customer satisfaction will increase customer loyalty, such as customer's willingness to repurchase and the frequencies or quantities of repurchase [46]. We utilized Zeithaml et al.'s [64] classification of behavioral intention in this study. Thus, we hypothesize:

H6. *Satisfaction has a positive, direct influence on behavioral intention.*

The service quality that customer perceived will affect his/her evaluation on overall satisfaction, and then in turn leads to future repurchase intention [9]. If the level of perceived service quality is higher, the customer will be satisfied and then he will be more likely to behave positively in the future. On the other hand, if the level of perceived service quality is lower, the customer will be dissatisfied and then he will be more likely to behave negatively in the future. Therefore, service quality and satisfaction have positive impacts on behavioral intention [54], for example, Cronin verified the relationship among service quality, satisfaction and repurchase intentions [17]. The mediation effect of customer satisfaction will be also tested in this study. Thus, we hypothesize:

H7. *The relationship between service quality and repurchase intention is mediated by satisfaction.*

The customer familiarity with employees has been shown as an important interpersonal element in the service context [13] [45]. If there is a good relationship between the customer and the employee, the employee may well know about the customer's personality, habits or preferences and will provide more exact products or services that meet the customer's needs. Hence, the customer who has a good relationship with the employee will be more satisfied with services that the employee provides, and the customer will probably have positive behavioral intentions toward the service provider, such as repurchase, willingness to recommend to his friends, or trust in the employee. In addition, several scholars also suggest that the interpersonal relationship between the employee and the customer can have a substantial impact on important relational outcomes for the company because it fosters customer satisfaction, commitment and trust in the staff, as well as customers' repurchase intention, willingness to recommend the employee or the company to other potential customer, and to provide referrals [25] [28] [29] [31] [32] [57]. As such, customer familiarity with employees seems to be a positive effect on customer satisfaction and behavioral intention. Thus, we hypothesize:

H8. *Customer familiarity with employees has a positive, direct influence on customer satisfaction.*

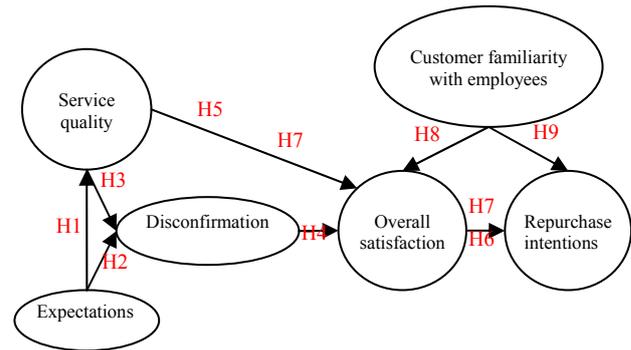**H9.** *Customer familiarity with employees has a positive, direct influence on repurchase intentions.*

Figure2. Research framework

Method

Operationalization of Variables

In this study, we select customers who have shopping experiences in 7-ELEVENs as our research participants. Table 1 lists the operational definitions and sources of our research constructs. All constructs are modified to meet our research context, 7-ELEVEN.

Table1. Definition of research construct

Construct	Definition	Source
Expectation	The customer's anticipation of services before purchase.	[50]
Service quality	The service benefits which customer actually perceived.	[41] [18]
Disconfirmation	The customer evaluates the difference between expected and actually perceived service performance.	[11] [35]
Customer familiarity with employees	Customer perceptions of social closeness to employees.	[10]
Satisfaction	Overall customer satisfaction after experiencing the services.	[36] [63]
Repurchase intentions	Customer intention to perform favorable behavior toward buying.	[1] [64]

Questionnaire Design

The research questionnaire was generated through several times of group discussion with one professor, one doctoral student and five graduate students to meet the face validity. Most items are adapted from prior studies and modified to meet the objectives of this study. The expectations and perceptions of service quality were measured by items adapted from Dabholkar et al.'s retail service quality measurements [18]. The items to measure disconfirmation were modified from Oliver [35] and Westbrook and Reilly [60]. The items to measure overall satisfaction are used from Westbrook and Oliver [62]. Furthermore,

behavioral intentions were measured by items adapted from Zeithaml et al. [65].

All items of focal constructs are anchored at the six-point Likert-type scale, ranging from "1 = very disagree" to "6 = very agree."

Sample
To collect data, first, we posted an announcement on BBS (telnet://ptt.cc) to ask for volunteers to participate in the study. Second, we invited those who usually go to 7-ELEVEN through interpersonal channels and asked them to fill out questionnaires.

We received a total of 310 returned questionnaires, in which 304 were valid. Out of 304 responses, 56.25% were male and 43.75% were female. The bulk of samples ranged in age from 21 to 30 years old (78.95%). Also, 96.38% had at least college degree and 69.41% students. In terms of average consumption frequency, 15.13% went to 7-ELEVEN one day per week, 18.09% for two days per week, 23.03% for three days per week, 12.5% for four days per week, 11.84% for five days per week, 3.29% for six days per week, and 16.12% for every day. Moreover, 87.5% of the samples have average expense amount under $100 N.T. dollars. 58.88% of the samples usually buy drinks and 29.93% usually buy food.

Result
Analytic strategy for assessing the model

The proposed model was evaluated using SEM, which is a powerful second-generation multivariate technique for analyzing causal models with an estimation of the two components of a causal model: measurement and structural models. The measurement model is estimated using confirmatory factor analysis (CFA) to test whether the constructs possess sufficient validation and reliability. The structural model is used to investigate the strength and direction of the relationship between the theoretical constructs. In this study, AMOS 7 was the software used to assess the measurement and the structural models.

The measurement model
The measurement model was tested using CFA. As shown in Table 3, factor loadings ranging from 0.62 to 0.93 exceeded the acceptable value of 0.50, as recommended by Fornell and Larcker [21]. The internal consistency of the measurement model was assessed by computing the composite reliability. As Bagozzi and Yi [6] suggest, all composite reliabilities were above the 0.70 benchmark. The average variance extracted for all constructs exceeded the threshold value of 0.50 recommended by Fornell and Larcker [21]. Since the values of reliability were above the thresholds, the scales for evaluating the constructs were deemed to exhibit convergence reliability.

Table3. Reliability

Construct	Item	Factor loading	Cronbach's α	Composite reliability	AVE
Expectation-physical aspect (EPA)	EPA1	0.77	0.84	0.84	0.73
	EAP2	0.93			
Expectation-reliability (ERE)	ERE1	0.91	0.91	0.91	0.84
	ERE2	0.91			
Expectation-person interaction (EPI)	EPI1	0.85	0.84	0.91	0.72
	EPI2	0.85			
Expectation-problem solving (EPS)	EPS1	0.66	0.70	0.74	0.59
	EPS2	0.85			
Service quality-physical aspect (PA)	PA1	0.81	0.76	0.76	0.61
	PA2	0.76			
Service quality-reliability (RE)	RE1	0.93	0.90	0.90	0.81
	RE2	0.88			
Service quality-person interaction (PI)	PI1	0.88	0.85	0.86	0.75
	PI2	0.84			
Service quality-problem solving (PS)	PS1	0.77	0.87	0.80	0.66
	PS2	0.89			
Disconfirmation (DIS)	DIS1	0.77	0.83	0.86	0.67
	DIS2	0.70			
	DIS3	0.89			
Customer familiarity with employees (FA)	FA1	0.87	0.84	0.82	0.61
	FA2	0.79			
	FA3	0.68			
Overall satisfaction (SA)	SA1	0.86	0.91	0.90	0.75
	SA2	0.91			
	SA3	0.84			
Behavioral intentions (BI)	BI1	0.88	0.84	0.86	0.67

	BI2	0.93			
	BI3	0.62			

The correlations among constructs were ranging from 0.03 to 0.86, and any squared values were smaller than the variances extracted by constructs (AVE); this implied that constructs were empirically distinct. In summary, our measurement model test supported both convergent and discriminant validity.

χ^2, GFI (goodness-of-fit index), NFI (normalized fit index), CFI (an incremental fit index of improved NFI) and RMSEA (root-mean-square error of approximation) were used to test the goodness of fit of the proposed model. The value of normed χ^2 was smaller than the threshold value of 3.00 recommended by Bentler and Bonett [7] (normed χ^2=1.93). The value of GFI (GFI=0.88) exceeded the acceptable value of 0.85, as recommended by Hadjistavropoulos et al. [27]. As Bentler and Bonett [7] suggest, both NFI and CFI were above the 0.90 benchmark (NFI=0.90; CFI=0.95). Finally, as recommended by Hair et al. [26], the value of RMSEA was smaller than the acceptable value of 0.08 (RMSEA=0.06). Consequently, all the fitness measures in the study fell into acceptable ranges and the proposed model provided a suitable fit.

Tests of the structural model

We examined the structural equation model by testing the hypothesized relationships among the research variables (see Figure 3). The results showed that expectation had a significant effect on service quality (β=0.36, p<0.001) and service quality had a significant effect on disconfirmation (β=0.46, p<0.001), supporting hypotheses 1 and 3, respectively. Contrary to prediction, expectation had no direct influence on disconfirmation (0.09, p>0.05), hypothesis 2 was not supported. The results also showed that service quality had a significant, direct influence on overall satisfaction (β=0.15, p<0.05) and satisfaction had a significant, direct influence on repurchase intention (β=0.55, p<0.001). Hypothesis 5 and 6 were supported. This study used Sobel's test [49] to verify the mediated relationship of service quality, satisfaction, and behavioral intention. The results indicated that service quality had a significant, indirect influence on repurchase intention through satisfaction (Z=2.35, p < 0.05). Hence, hypothesis 7 was supported. As expected, disconfirmation had a significant, positive influence on satisfaction (β=0.49, p<0.001), supporting hypotheses 4. Also the results showed that customer familiarity with employees significantly predicted both satisfaction and repurchase intention (satisfaction: β=0.39, p<0.001; repurchase intention: β=0.24, p<0.001), providing support for hypotheses 8 and 9. Moreover, the results showed that the dominant dimensions of service quality include physical aspect, reliability, person interaction, and problem solving.
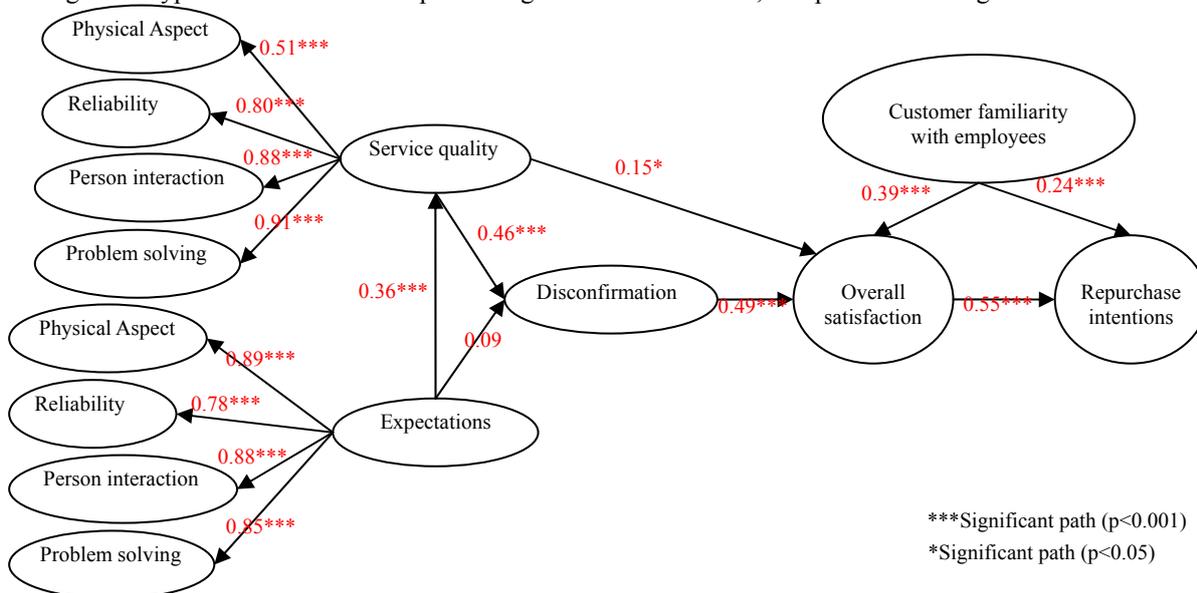

Figure3. Results of structural modeling analysis

Conclusion

Discussion

This study presented and validated a multi-facet model to evaluate the relationship among 7-ELEVEN's service quality, satisfaction, and repurchase intention. With empirical analysis, this research had found several implications as followings. First, expectation had positive, direct influence on

service quality in customer's perception of. That is, dissatisfied customers due to the expected service quality higher than the perceived quality may have the lower expectation than those satisfied customer whose perceived service quality was equal or higher than the expectation. This study showed that service quality had a significant effect on disconfirmation. Thus, superior service quality provided by 7-ELEVENs is more likely to lead to the positive or zero disconfirmation. However, expectation was found to have no effect on disconfirmation. It could be that expectation should be measured by overall service performance or attributes of products/service instead of service quality, which has been argued in some previous studies (e.g. [34] [37] [39]).

Second, this research uses the PZB's gap model [41] to measure the differences between expected service quality and perceived service quality. The results showed that the reliability of perceived service quality was the closest to customers' expectations (-0.58), while problem solving is the lowest (-0.81) among the four dimensions. Additionally, the results were found that RE2 (This store provides its services at the time it promises to do so) was biggest but still negative among all items (-0.53). It means that customer perceived service qualities were lower than expectations in the 7-ELEVENs.

Third, just as expected, there have interrelationships among service quality, satisfaction, and repurchase intention. That is, the service quality that customer perceived will affect his/her satisfactions, and then in turn affects repurchase intentions in the future. When the level of perceived service quality is higher, the customer will be more likely to be satisfied and then he/she will probably have positive repurchase intentions in the future. Therefore, both service quality and satisfaction have positive impacts on repurchase intentions.

Finally, customer familiarity with employees had positive, direct influences on both satisfaction and repurchase intention. It means that when customer get the better service provided from the 7-ELEVEN's employees according to the better acquaintance with customer, it would lead a higher and positive satisfaction and repurchase intentions in the future.

Implications for practice
This study generated some insights for 7-ELEVEN's managers and customers:
(1) The results were found that four dimensions play dominant roles in service quality of convenience stores. That is, when customers evaluate the service quality of 7-ELEVEN, the dimensions they will concern include physical aspect, reliability, person interaction, and problem solving. Therefore, 7-ELEVEN's managers should strive to improve the performances of these dimensions in order to increase service quality.
(2) Since service quality is so important to customer's satisfaction and future repurchase intention, 7-ELEVEN's mangers should attempt to improve their service quality, in particular for the dimension of problem solving, which is the lowest dimension as compared to its expectation. Therefore, 7-ELEVEN's managers and employees should straggle to improve their manners and show their sincere interest in solving problems and handling complaints in order to increase customers' satisfaction and loyalty.
(3) The relationship between customers and employees has become increasingly important in the interpersonal element of services. The employee who has a good relationship with the customer will lead the customer more likely be satisfied with services and possibly have positive behavioral intentions in the future, such as willingness to recommend to his friends and repurchase from the store. Hence, the managers of 7-ELEVENs should encourage their employees to have rapport relationships with customers and know what their customers need.

References are available upon request.