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Differential Impact of Customer Equity Drivers on Satisfaction: The Case of China's Telecommunications Industry☆

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Abstract

As the necessity of customer relationship management (CRM) increases, measuring the performance of CRM have been actively discussed. Customer equity (CE) is regarded as an appropriate indicator for evaluating the outcomes of marketing activities. There are three drivers of CE: brand, value, and relationship equity. This study aims to investigate the impact of three drivers on customer satisfaction. Market competition is an environmental factor that affects the effectiveness of CRM. This study divides target firms into leaders and followers. This study found that the differential impact of CE drivers on customer satisfaction depends on the firm's status (leader or follower). Specifically, the brand equity driver significantly impacts the leader firm. However, the impacts of value and relationship equity drivers are bigger for follower firms. The above results suggest that firms need to build CRM strategies that consider the competitive situation of the market and their position.

Keywords: Customer relationship management, Customer equity, Customer satisfaction, Market competition, Leader or follower

1. Introduction

Customer relationship management has become a key mission for firms. Previous research emphasized discovering, attracting, and retaining profitable customers (McGahan and Ghemawat 1994; Sheth and Parvatiyar 1995; Villanueva et al. 2007; Song and Kim 2020; Song 2020). A long-term relationship with customers leads to repeated transactions, which helps enhance firm performance (Kumar 2008; Rust, Lemon, and Zeithaml 2004). As awareness of the importance of customer relationship management has increased, academic and practical discussions on measuring management performance have been actively conducted (Pfeifer and Farris 2004). Customer Equity (CE) has been regarded as an appropriate indicator for evaluating the accounting and financial performance of marketing activities (Schulze, Skiera, and Wiesel 2012; Song and Kim 2016). Many studies demonstrated a positive relationship between CE and firm's performance (Gupta and Zeithaml 2006; Kumar and Shah 2009; Rust, Lemon, and Zeithaml 2001; Schulze, Skiera, and Wiesel 2012; Song 2018).

Rust, Lemon, and Zeithaml (2001) proposed a CE model in which a firm's marketing activities affect customers' brand preferences and selection probability. Brand selection probability is the basis for determining CE. CE comprises value equity, brand equity, and relationship equity. Therefore, they propose that firms need to improve CE drivers (Rust, Lemon, and Zeithaml 2004). The value of a firm can be increased by understanding the three drivers of CE (Lemon, Rust, and Zeithaml 2001). Drivers influence a customer's switching matrix and lifetime value (Rust, Lemon, and Zeithaml 2001, 2004). Therefore, most previous research measures the value of

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CE by using customer lifetime value (CLV). The evaluation of the performance of customer relationship management using CLV has the advantage of enabling the efficient allocation of resources by applying a financial perspective. However, most firms have difficulty measuring CLV accurately (Stahl, Matzler, and Hinterhuber 2003; Ahn, Kim, and Kim 2011). To compensate for these limitations, this study aimed to use customer satisfaction, which practitioners could access and understand relatively easily. Although customer satisfaction is regarded as a leading indicator of future customer purchasing behavior (Fornell 1992; Rust, Zahorik, and Keiningham 1995; Oliver 1999; Seiders et al. 2005; Yi and Lee 2007), few studies have examined the relationship between CE and customer satisfaction by adopting the concept of CE drivers. Therefore, this study investigated the impact of the three equity drivers on customer satisfaction.

To provide more practical implications for the establishment of marketing strategies, there is need to understand how the impact of CE on customer satisfaction differs according to the market competition. According to previous studies, competitive environment of market affects the effectiveness of customer relationship management activities because customers' criteria for the firm's activities are flexible (Shugan 2005; Boulding et al. 2005). Market competition is an environmental factor that influences customer relationship management (Musalem and Joshi 2009; Song and Kim 2020). Under market competition, firms can be divided into leaders and followers. Based on prior studies, this study examines the impact of CE drivers on customer satisfaction depending on the competition structure of the market. By addressing these research questions, this study highlights the importance of considering market competition when implementing customer relationship management strategies and differentiated strategic approaches.

2. Theoretical background

2.1. *Customer equity and three drivers*

Firms can generate returns by discovering and attracting profitable customers and building long-term relationships with them (Sheth and Parvatiyar 1995; McGahan and Ghemawat 1994; Villanueva et al. 2007; Song 2020). The premise of the need for customer relationship management (CRM) is based on the argument that the long-term profitability of a firm can be increased by repeated transactions rather than a single or temporary transaction with customers through long-term relationships with them (Kumar 2008; Rust, Lemon, and Zeithaml 2004).

There have been academic discussions on how to quantify or measure CRM performance (Pfeifer and Farris 2004). CE is regarded as an appropriate indicator among several other marketing performance indicators for evaluating the accounting and financial performance of marketing activities (Schulze, Skiera, and Wiesel 2012; Song and Kim 2016). CE is defined as "the total discounted lifetime values of all the firm's customers" (Lemon, Rust, and Zeithaml 2001, p. 1). Many studies have examined the relationship between CE and performance, especially the accounting and financial performance of firms, to confirm the potential of CE as a valuable indicator. Previous studies have shown that CE has a high positive correlation with firms' accounting and financial performance (Gupta, Lehmann, and Stuart 2004; Gupta and Zeithaml 2006; Kumar and Shah 2009; Rust, Lemon, and Zeithaml 2004; Schulze, Skiera, and Wiesel 2012; Song 2018).

According to Srivastava, Shervani, and Fahey (1998), marketing is an investment to improve the drivers of CE. This leads to increased customer attraction and retention, and thus a higher return on marketing investment (Danaher and Rust 1996; Rust, Lemon, and Zeithaml 2004). Lemon, Rust, and Zeithaml (2001) presented three drivers of CE: brand equity, value equity, and relationship equity. First, the brand equity driver is related to the subjective and intangible evaluation of customers of a brand. Customers' brand awareness, attitude toward the brand, and firm ethics influence brand equity. Second, value equity is defined as the objective evaluation of customers' utility of a brand. The assessment is primarily influenced by the price, quality, and convenience of products or services. Third, relationship equity is important because brand and value equity may not be sufficient for customer retention. The relationship equity driver is used to make customers adhere to the brand. Knowledge-building, loyalty, and affinity programs increase relationship equity.

The value of a firm can be increased by understanding the three drivers of CE. Previous research linking marketing investments to customer attitudes or behaviors through the CE concept has been gaining significance (Vogel, Evanschitzky, and Ramaseshan 2008). These studies primarily suggest that the three equity drivers have an impact on a customer's switching matrix, which in turn influences customer lifetime value (CLV) and CE (Rust, Lemon, and Zeithaml 2001, 2004). Evaluating operational marketing inputs from a financial perspective using CLV is advantageous for allocating marketing activity costs more efficiently.

However, measuring CLV accurately is difficult for most companies (Stahl, Matzler, and Hinterhuber 2003; Ahn, Kim, and Kim 2011).

Therefore, this study uses customer satisfaction, an indicator that can be measured relatively easily and that is easy for practitioners and stakeholders to understand. Given that customer satisfaction is a leading indicator of future customer purchasing behavior (Fornell 1992; Rust, Zahorik, and Keiningham 1995; Oliver 1999; Seiders et al. 2005; Yi and Lee 2007), this study analyzes the relationship between the three equity drivers and customer satisfaction.

2.2. The relationship between customer equity and customer satisfaction

Firms can improve their performance by satisfying customers based on favorable images, positive word-of-mouth, recommendations, and repeated purchases (Bolton 1998; Fornell 1992; Yi 2000; Saeidi et al. 2015). Customer satisfaction is a core concept in business management. According to Oliver (1997), customer satisfaction is a response to satisfaction status, that is, the judgment on whether the characteristics of the product/service or the product/service itself provide a pleasant level of satisfaction. Customer satisfaction increases customers' intent to recommend and decreases the switching of customers to competitors, consequently influencing firm performance (Rust, Zahorik, and Keiningham 1995).

Previous studies have used the customer satisfaction index (CSI), such as the U.S. ACSI, to verify the relationship between customer satisfaction and firm performance (Yi and Lee 2010). CSI is the result of measuring the perceived value and expectation of the firm for general customers who have experienced the firm's product or service (Fornell 1992). Customer satisfaction has a positive effect on firms' financial performance in terms of operating income, net profit, sales growth rate, and market value of firms (Bolton 1998; Anderson, Fornell, and Mazvancheryl 2004; Ittner and Larcker 1998; Swaminathan et al. 2014; Yeung et al. 2002; Saeidi et al. 2015). Research using the Customer Satisfaction Index of Korea (NCSI or KCSI) has also demonstrated the positive effect of customer satisfaction (Park and Kim 2003; Yi, Cha, and Lee 2008; Choi and Kim 2017). Although some studies have presented conflicting results, most of them have shown positive effects on customer satisfaction (Yi and Lee 2007). Therefore, this study suggests the importance of CE in predicting firm performance by verifying the relationship between CE drivers and customer satisfaction.

2.3. Market competition

A firm's ultimate goal is to improve its performance, which is achieved by building long-term relationships with customers (Kumar 2008; Rust, Lemon, and Zeithaml 2004). Therefore, it is important to derive an effective customer relationship management strategy, and the effect of this strategy can be analyzed by measuring the effect of customer equity (Musalem and Joshi 2009).

Customer relationship management strategies are classified as acquisition and retention strategies (Musalem and Joshi 2009). Many studies have suggested that existing customer retention strategies are more effective than new customer acquisition strategies (Blattberg and Deighton 1996; Reichheld and Sasser 1990; Sheth and Parvatiyar 1995). However, previous studies have also suggested the low profitability of long-term loyal customers or an increase in customer retention costs due to overheated competition in the market (Reinartz and Kumar 2000; Musalem and Joshi 2009; Villanueva et al. 2007). These mixed results suggest that discussions on optimal customer relationship management strategies are required.

Previous studies have also identified the influence of environmental factors, such as the level of competition in the market or growth rate, as factors that caused mixed research results (Song and Kim 2016; Shaffer and Zhang 2002; Song 2020). One environmental factor that can have a significant impact on customer relationship management is market competition (Musalem and Joshi 2009). Under market competition, firms can be divided into leaders and followers. According to previous research, the effectiveness of customer relationship management strategies on firm profitability differs depending on market competition. For example, Song and Kim (2020) suggest that the optimal customer relationship management strategy of a leader is different from that of a follower. For leaders, existing customer retention strategies are more effective than new customer acquisition strategies. However, in the case of followers, depending on the level of the market growth rate, the customer retention strategy may be poisonous to firm performance. They argued that it is necessary to selectively implement an effective customer relationship management strategy according to competitive market conditions by comparing the performance of each strategy. Based on prior studies, this study predicts that the impact of CE drivers on a firm's performance, specifically customer satisfaction, may differ depending on market competition (leader firm vs. follower firm).

3. Hypotheses development

According to the literature, the impact of brand equity on customer choice or behavior is extensive. As stated earlier, brand equity has several dimensions, such as brand association, awareness, and attitude. Keller (1993) proposed a customer-based brand equity concept. Brand equity is built when consumers evaluate a brand more favorably than their competitors (Lassar, Mittal, and Sharma 1995). Lemon, Rust, and Zeithaml (2001) stated that brand equity acts as a customer's emotional bond with the firm. Brand image and knowledge are components of brand equity (Keller 1993). Brand association and image are among the levers of brand equity. Brand image plays an important role in building brand equity. Rust, Lemon, and Zeithaml (2004) argued that a well-formed brand image can increase the chances of retaining customers. Brand knowledge is also important to create the emotional tie toward brand (Holehonnur et al. 2009). In the same vein, Vogel, Evanschitzky, and Ramaseshan (2008) stated that practitioners should focus on building brand knowledge, including awareness or recognition of brands, to establish brand equity. Taken together, well-established brand equity leads to higher customer satisfaction, a willingness to pay a premium price for the brand, and loyalty. Compared to followers, leaders have higher brand awareness, attitudes, and favorable images (Park, Choi, and Shin 2021). Generally, leaders have a greater market share, superior performance, and a higher reputation (Giachetti and Torrisi 2018; Abrahamson 1996; Lieberman and Asaba 2006). Therefore, this study expects brand equity drivers to influence customer satisfaction for leader firms relative to follower firms.

H1. *The impact of the brand equity driver on customer satisfaction is bigger for leader firm than follower firm.*

Value equity drivers can be defined as an objective evaluation of customers' brand utility. Price, quality, and convenience are the main factors in customer evaluations (Lemon, Rust, and Zeithaml 2001; Rust, Lemon, and Zeithaml 2004). When the perceived value of a product or service is high, it is more likely to attract and retain customers (Rust, Lemon, and Zeithaml 2001). Many studies have demonstrated that quality is an antecedent of customer satisfaction (Dick and Basu 1994; Anderson and Fornell 1994; Taylor and Claxton 1994). Wang et al. (2016) argued that one of the drivers of value equity is the quality of a product or service. They found that high quality is a vital element for customer satisfaction and repurchase. Without a favorable evaluation of brand utility, it is difficult for brand- or relationship-related factors to have a significant impact on customer satisfaction (Kim and Kim 2013; Kim 2017; Wang et al. 2016). Therefore, value equity management is important for both leaders and followers. However, compared with a leader with a higher market share and reputation, the follower has no choice but to focus on product quality. Kim, Kim, and Hwang (2020) revealed that smaller stores with fewer customers offer customers more tailored offerings. Previous studies have shown that the impact of brand utility on customer satisfaction and loyalty is obvious for stores or retail formats with low market positions and few customers (Kim 2017; Park 2018; Kim, Kim, and Hwang 2020).

H2. *The impact of value equity driver on customer satisfaction is bigger for follower firm than leader firm.*

According to Lemon, Rust, and Zeithaml (2001), high brand and value equity are insufficient to retain customers. A 1% increase in customer retention leads a 5% increase in firm's profits (Moenardy, Arifin, and Kumadji 2016). Firms need to connect customers and brands closely, and relationship equity plays an important role. The relationship equity driver is used to make customers stick to the brand (Rust, Lemon, and Zeithaml 2004). Hawkins and Hoon (2019) characterized follower firm as having a niche customer base and limited market share (Taneja, Pryor, and Hayek 2016). They argued that follower firms need to acknowledge the value and importance of building relationships with customers because customer retention is the key to the longevity of the business. Small firms, as followers in the market, are relatively more vulnerable to customer loss (Ciubotariu 2013). Therefore, customer relationship management is essential for follower firms, and it has been empirically shown that follower firms with satisfied customers have a competitive advantage (Soltani and Navimipour 2016; Bhat and Darzi 2016). This is because follower firms with relatively small customer bases are better able to provide customers with satisfying experiences through a tailored and effective relationship management system (Moenardy, Arifin, and Kumadji 2016). Increases in customer retention is useful for follower firm to lead higher profits and customer satisfaction, expand their market share, and raise their market revenue (Lumanaj et al. 2013; Wu et al. 2014; Sharmeela-Banu, Gengeswari, and Padmashantini 2012). Previous studies have emphasized the importance of customer relationships for follower firms compared to that for the leader firm. According to Song and Kim (2020), market competition affects customer relationship management performance. Specifically, the effectiveness of the customer

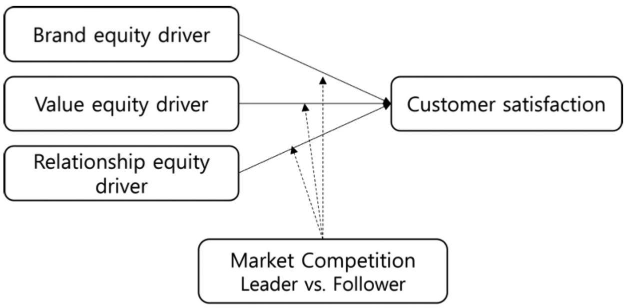

Fig. 1. Research model.

retention strategy, which is more closely associated with relationship equity than the customer acquisition strategy, is greater for followers in the growth phase. This is in contrast to the results obtained by the leader. This study provides the possibility of differences in the impact or importance of relationships depending on whether the firm is a leader or follower. Considering the results of these studies, relationship equity is a fundamental element of growth for follower companies. Fig. 1. illustrates the research model used in this study.

H3. *The impact of the relationship equity driver on customer satisfaction is bigger for follower firm than leader firm.*

4. Method

This study conducted a survey targeting actual customers using online questionnaire platform in China. Customers who had used the service of the target firm in the past year were targeted. A total of 411 out of 425 respondents were analyzed, excluding invalid responses.

4.1. Targeted industry

This study analyzes the effect of each driver on customer satisfaction in the telecommunications industry, which is a contractual industry. According to Lemon, Rust, and Zeithaml (2001), CE management is important, especially for products or services that require customer action to discontinue consumption of the product or service. Therefore, this study considers telecommunications businesses to be an appropriate target industry. To examine the influence of market competition as an environmental factor, the influence of drivers was analyzed by dividing firms into leaders and followers.

Customers in the telecommunications industry show diverse distribution in terms of age, occupation, and residential area. Additionally, as a mature industry, leaders and followers can be clearly distinguished. Therefore, this study chose telecommunications as a suitable industry for analysis.

In China, the telecommunications industry is led by three firms: China Mobile, China Telecom, and the China Union. Fig. 2. shows the number of customers identified in each firm's IR reports. This shows that China Mobile is the market leader (Fu 2022). The market share data as of 2020 also support the classification of this study: China Mobile 52%, China Telecom 27%, and China Unicom 21% (Xiaotian 2022). This was also confirmed by the number of customers of each firm in the responses of the sample (China Mobile: 41.1%, China Unicom: 27.59%, China Telecom: 25.8%).

4.2. Sample

This study selected a sample based on the 2020 China Census to increase the representativeness of

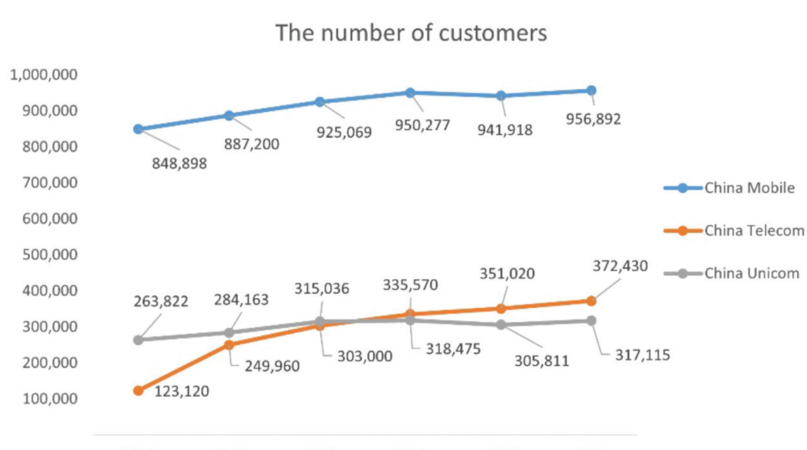

Fig. 2. The number of customers of three firms.

Table 1. Gender distribution.

		2020 census population (%)	Sample population (%)
Gender	Male	721,210,000(51)	221(54)
	Female	688,568,724(49)	190(46)
Total		1,409,778,724(100)	411(100)

the sample. First, as a result of the census, the distribution of gender was 51% male and 49% female, and the sample had a similar composition, at 54% and 46%, respectively (refer to Table 1). Next, in the case of age, the actual distribution (0–14:18%/15–64:68%/>65:14%) and the distribution of the sample (0–19:17%/20–59:64%/>60:19%) were similar[2]. Finally, this study attempted to reflect the actual regional distribution. China was divided into seven regions and samples were collected according to the population of each region (Table 2).

4.3. Measurement

All variables were measured using multiple items on a 7-point Likert scale (1 = "strongly disagree," 7 = "strongly agree"). To measure the construct validity of each variable, exploratory factor analysis was conducted. Items with factor weights greater than .5 were retained for analysis (Zaichkowsky 1985). The reliability of the scales was tested by computing Cronbach's alpha for all multi-item measures. Cronbach's alpha for all factors exceeded the minimum value (0.7; Nunnally 1978).

The measure of the three drivers of equity was adopted from Rust, Lemon, and Zeithaml (2004). For brand equity drivers, respondents were asked about their sponsor activity for community events, ethical standards, and advertising messages. The scale for value equity driver included statements such as "The firm has competitiveness of the price" and "The firm provide various services." Respondents rated the relationship between equity drivers using a 7-item scale. Three items were removed through exploratory factor analysis. The final measurement items were as follows: "The firm recognizes me as being special," "I feel a sense of community with other customers of the firm," and "I have a high level of trust in the firm." Table 3 presents the results of the factor analysis and reliability tests.

Word of mouth (WOM) tendency was included as a covariate, along with gender and age. Previous literature has demonstrated that WOM influences customer satisfaction because it affects customer expectations and perceived quality (Zeithaml, Parasuraman, and Berry 1985; Schumann et al. 2010; Jeon, Kim, and Seok 2020). The measures for WOM tendency were based on Feick and Price (1987) and Moon, Kang, and Lee (2011). This scale included statements such as "I would recommend to my friends/family about things I have bought or used" and "I would actively refer recommend of my friends/family."

Table 3. Factor analysis and reliability analysis on independent variables.

	Factor				
	Brand equity driver	Value equity driver	WOM tendency	Relationship equity driver	Cronbach's α
BED 1	.867	.245	.256	.196	.963
BED 2	.863	.226	.282	.213	
BED 3	.863	.260	.306	.193	
BED 4	.809	.210	.258	.245	
VED 1	.256	.814	.330	.268	.954
VED 2	.239	.800	.309	.306	
VED 3	.301	.785	.300	.240	
VED 4	.237	.782	.328	.302	
WOM 1	.272	.315	.792	.233	.936
WOM 2	.309	.269	.770	.237	
WOM 3	.321	.341	.765	.194	
WOM 4	.343	.355	.745	.226	
RED 1	.228	.232	.165	.844	.834
RED 2	.189	.233	.290	.734	
RED 3	.237	.336	.179	.717	

*BED: Brand equity driver, VED: Value equity driver, RED: Relationship equity driver, WOM: Word of mouth

[2] Exact population numbers by age are not given by STATISTA.

Table 2. Regional distribution.

Region	Cities	2020 census population (%)	Sample population (%)
North China	Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia	169,334,110(12)	51(12)
East China	Shanghai, Jiangsu, Zhejiang, Shandong, Anhui	423,469,844(30)	120(29)
Central China	Liaoning, Jilin, Heilongjiang	223,562,940(16)	64(16)
South China	Hubei, Hunan, Henan, Jiangxi	205,148,550(15)	53(13)
Southwest China	Guangdong, Guangxi, Hainan, Fujian	186,220,546(13)	58(14)
Northwest China	Sichuan, Chongqing, Guizhou, Yunnan, Tibet	103,527,786(7)	38(9)
Northeast China	Shaanxi, Gansu, Xinjiang, Qinghai, Ningxia	98,514,948(7)	27(7)
Total		1,409,778,724(100)	411(100)

Customer satisfaction is the dependent variable. Respondents were asked to evaluate all three firms: China Mobile, China Telecom, and China Union. This measure was based on Bolton and Lemon (1999), Fornell et al. (1996), and Seiders et al. (2005). The measurement items included price, service, and overall performance. For the three firms, Cronbach's alpha for the satisfaction scale exceeded the minimum value (China Mobile: $\alpha = .916$; China Telecom: $\alpha = .914$; and China Unicom: $\alpha = .882$).

5. Results

5.1. Demographics

Table 4 presents the demographic characteristics of the sample. The proportion of male and female was similar. The 20–59 years group had the largest number of patients. The results show that the education level and annual income vary. This is meaningful in that the proportion of the sample in most categories reflects that of the actual population.

5.2. Results of analysis

This study examines the impact of CE drivers on customer satisfaction, depending on firm status

Table 4. Sample profile.

Category		Frequency	Percentage
Gender	Male	221	54
	Female	190	46
Age	Less than 20	73	17
	20~59	261	64
	Over 59	77	19
Region	North China	51	12
	East China	120	29
	Central China	64	16
	South China	53	13
	Southwest China	38	14
	Northwest China	27	9
	Northeast China	14	7
Education	Less than a high school diploma	55	13
	High school diploma	72	18
	Some college	109	27
	Bachelor's degree	132	32
	Master's degree	38	9
	Doctorate degree	5	1
Annual income (yuan)	Less than 25,000	75	18
	25,000~35,000	43	10
	35,000~45,000	85	21
	45,000~55,000	60	15
	55,000~65,000	37	9
	65,000~75,000	52	13
	Over 75,000	59	14
Total		411	100

Table 5. Result of the regression analysis with a dummy variable for firm status (leader vs. follower).

DV: CS	B	S.E.	β	t value
Constant	−.141	.089		−1.577
BED	−.005	.019	−.005	−.254
VED	.141	.028	.153	5.129***
RED	.048	.023	.051	2.106**
WOM tendency	.817	.025	.801	32.832***
Gender	.028	.029	.012	.966
Age	.012	.008	.019	1.540
Leader*BED	.166	.035	.353	4.797***
Leader*VED	−.101	.036	−.224	−2.766***
Leader*RED	−.065	.031	−.146	−2.084**

$R^2 = .942$, $F = 678{,}895$.
DV: Dependent Variable, CS: Customer Satisfaction, BED: Brand equity driver, VED: Value equity driver, RED: Relationship equity driver, WOM: Word of mouth.
$^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

(leader vs. follower). As stated earlier, China Mobile has the largest number of customers, followed by China Unicom and China Telecom (China Mobile: n = 169 (41.1%); China Unicom: n = 113 (27.6%); China Telecom: n = 106 (25.8%); other firms: n = 23 (5.5%)).

Table 5 shows results of the regression analysis to verify the hypotheses. Firm status is a dummy variable that equals one if a firm is a leader. As shown at the lower end of Table 5, the brand equity driver significantly impacts customer satisfaction in leader firms. This result is generated by the positive coefficient on the interaction term "brand equity driver*firm status dummy." Hypothesis 1 was supported.

According to 'The annual report on the most valuable and strongest Chinese brands May 2021' published by Brand Finance Institute, in the Top 500 most valuable Chinese brands ranking, China Mobile ranked 14th, which ranks first in the telecommunication industry. Looking at the report's Brand Valuation Methodology, brand value refers to the present value of earnings specifically related to brand reputation. This report shows that China Mobile has the highest earnings and reputation in the market. Brand equity is related to brand awareness, reputation, and attitude (Keller 1993; Lassar, Mittal, and Sharma 1995; Lemon, Rust, and Zeithaml 2001). Previous studies showed that leaders have higher brand awareness, attitudes, reputation, and favorable images (Giachetti and Torrisi 2018; Lieberman and Asaba 2006; Park, Choi, and Shin 2021). This study verifies that brand equity driver on customer satisfaction is bigger for leader firm than follower firm.

However, the interaction term of the value equity driver and firm status dummy has a negative value, and so does the coefficient of the interaction term of the relationship equity driver and dummy.

Table 6. The impact of CE driver on customer satisfaction for leader firm.

DV: CS **China mobile**	B	S.E.	β	t value
Constant	−.050	.126		−.394
BED	.202	.037	.219	5.398***
VED	.043	.026	.045	1.628
RED	−.076	.023	−.018	−.690
WOM tendency	.760	.039	.754	.000***
Gender	−.010	.044	−.004	.819
Age	.018	.012	.025	.143

$R^2 = .953$, $F = 550.156$.
DV: Dependent Variable, CS: Customer Satisfaction, BED: Brand equity driver, VED: Value equity driver, RED: Relationship equity driver, WOM: Word of mouth.
$^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

This means that the impact of the two drivers was significant for follower firms. Hypotheses 2, that the impact of value equity driver on customer satisfaction is bigger for follower firm than leader firm, was accepted. This result is in line with prior studies, wherein the smaller the store with lower market share, the more important is its management of price, quality, and convenience (Kim 2017; Park 2018; Kim, Kim, and Hwang 2020). Regarding Hypothesis 3, this study shows the importance of the customer relationship for follower firms. The result supports that firms with relatively small customer bases are better able to provide customers with satisfying experiences through a tailored and effective relationship management system (Moenardy, Arifin, and Kumadji 2016).

Further analysis was conducted to examine the impact of equity drivers on customer satisfaction for each of the three firms. Tables 6–8 present the analysis results.

Further analysis yielded interesting results regarding the value equity and relationship equity drivers. Each equity driver was significant only for one follower firm: value equity driver-China Unicom and relationship equity driver-China Telecom. China Telecom is the third largest firm in the real market. In addition, the firm had the fewest number of customers in this study, although there is a slight gap from the second-ranked firm. Previous studies have found that firms with small customer bases are more vulnerable to customer loss (Ciubotariu 2013). This can be interpreted as the management of relationships with customers being more essential for firm longevity compared to firms with high market positions (Soltani and Navimipour 2016; Bhat and Darzi 2016). The results of this study confirm this argument. As follower firms are likely to lose customers for reasons such as relatively low reputation, there is a need to establish and maintain a more intimate and strong relationship with their customers. Regarding value equity drivers, only China Unicom showed a significant result. China Unicom is the second-ranked firm; thus, it has a lower brand awareness or reputation than the leader, while it may be more difficult to manage one-on-one customers than the third-ranked firm. These conditions may lead the firm to focus more on product and quality management. Stores with fewer customers offer more tailored offerings to customers (Kim, Kim, and Hwang 2020). Value equity relates to the quality of products and services. Therefore, the results of the China Unicom case study can be understood.

Table 7. The impact of CE driver on customer satisfaction for follower firm (1).

DV: CS **China unicom**	B	S.E.	β	t value
Constant	−.096	.186		
BED	−.019	.030	−.019	−.629
VED	.165	.043	.185	3.827***
RED	−.002	.030	-.002	−.063
WOM tendency	.838	.044	.821	19.199***
Gender	.045	.056	.020	.804
Age	.011	.014	.019	.766

$R^2 = .935$, $F = 254.114$.
DV: Dependent Variable, CS: Customer Satisfaction, BED: Brand equity driver, VED: Value equity driver, RED: Relationship equity driver, WOM: Word of mouth.
$^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

Table 8. The impact of CE driver on customer satisfaction for follower firm (2).

DV: CS **China telecom**	B	S.E.	β	t value
Constant	−.245	.186		−1.317
BED	.011	.025	.014	.445
VED	.051	.042	.060	1.225
RED	.233	.046	.240	5.019***
WOM tendency	.743	.056	.704	13.306***
Gender	.019	.049	.011	.388
Age	.001	.013	.001	.049

$R^2 = .926$, $F = 205.319$.
DV: Dependent Variable, CS: Customer Satisfaction, BED: Brand equity driver, VED: Value equity driver, RED: Relationship equity driver, WOM: Word of mouth.
$^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

6. Conclusions

This study examines the impact of CE drivers on customer satisfaction depending on market competition. The results show that these three CE drivers influence customer satisfaction. Among the three drivers, the impact of brand equity drivers was significant for leaders. Meanwhile, the other two drivers, value equity drivers and relationship equity drivers, have a significantly greater impact on customer satisfaction for follower firms. Based on these results, this study has several implications.

6.1. Academic and managerial implications

CE models are a theoretical framework for firms that focus on customers (Lemon, Rust, and Zeithaml 2001). This study provides an opportunity to show the performance of CE drivers using customer satisfaction as an outcome variable. Studies on the relationship between CE drivers and customer satisfaction are lacking. Therefore, this study is meaningful in that it shows the extended influence of CE on firm performance. Many previous studies have used customer lifetime value to analyze and measure CE value. Adopting a financial perspective, this study provides implications for an efficient allocation strategy for marketing expenses. However, the accurate measurement of CLV is difficult for most companies. Furthermore, qualitative outcomes, such as customer satisfaction, are as important as quantitative outcomes, such as the CLV of customer relationship management strategies (Song and Kim 2020). Therefore, this study uses customer satisfaction because it is easier to measure and understand. This study extends the research that analyzes the impact of CE from a consumer-centered perspective using customer satisfaction. Although some previous studies have investigated the possibility of the influence of market environmental factors, such as market growth rate, on the effect of CE (Song, Kim, and Kim 2013; Song and Kim 2016), studies that consider market competition (Song and Kim 2020) are limited. This study presents an additional research flow by showing the differential impact of CE drivers by competitive market structure.

Our finding that brand equity drivers have a significant impact on leader firms suggests that the leader firm must invest in the management of brand associations and build a positive and clear brand image and reputation. Essentially, quality, product or service, and management of customer relationships are important, but as a market leader, investment in a brand is essential. The more attractive a brand is perceived as, the less likely customers are to change (Rust, Lemon, and Zeithaml 2001; Vogel, Evanschitzky, and Ramaseshan 2008). Therefore, leaders' marketers should focus on establishing and sustaining brand equity to influence customer satisfaction. The impact of the value-equity driver on customer satisfaction is noteworthy. Vogel, Evanschitzky, and Ramaseshan (2008) presented value equity as an outcome of balancing what is given and received in return. Therefore, it is important that managers of follower firms strengthen "what is given." What is provided includes quality products or services, adequate prices, and better convenience. According to the results of this study, follower firms must be aware of the importance of value equity drivers. This is especially true for second-ranked firms, which may have less brand value than the leader firm and simultaneously find it more difficult to provide one-on-one care for customers than the third-positioned firm. Moreover, this study demonstrates that the impact of relationship equity drivers on customer satisfaction is greater in the case of the follower firm. This finding agrees with previous research that emphasizes the importance of relationships with customers (Reynolds and Beatty 1999; Rust, Lemon, and Zeithaml 2001; Hennig-Thurau, Gwinner, and Gremler 2002; Patterson and Smith 2001). The results of this study suggest that follower firms should establish and maintain sound relationships with customers to tie them to the brand and firm. Firms with a small customer base and low market position must focus more on relationships with customers to compensate for and overcome relatively weak brand equity. This study provides implications for which assets should be managed and strengthened with more weight, depending on market competition.

6.2. Limitations and directions for future research

Although this study considers realistic market conditions (market competition) that other studies have not considered, it has several limitations. First, in addition to external market environmental factors, such as market competition, internal environmental factors or capabilities, such as corporate management philosophy or market orientation, can influence the impact of CE. The internal factors may be why the results indicated a significant effect on only one equity driver for each of the three firms. These results imply that not only market competition but also firm-specific factors may have an impact. Therefore, in future studies, it will be necessary to investigate the possibility of interaction with each other by simultaneously considering both external and internal factors. Second, as a result of the study, the effect of WOM tendency included as a covariate was significant. Previous studies have revealed that WOM influences customer satisfaction because it affects customer expectations and perceived quality (Zeithaml, Parasuraman, and Berry 1985; Schumann et al. 2010). This study confirms this, but no further discussion of the effect has been conducted. WOM can be divided two stages: the generation of WOM and transmission of WOM (Berger and Schwartz 2011; De Angelis et al. 2012). To better understand the impact of WOM tendency, it would also be fruitful to examine the impact from a comparative perspective. Third, this study chose the data collection platform used by various previous studies. However, the data quality may have been affected by the collection method (e.g., online or offline) and characteristics of the platform. Therefore, future studies should fully consider online data collection and platform selection once again. Fourth, several beta values were negative. Most prior studies have suggested the positive impact of CE on firm performance. Therefore, an in-depth discussion and additional analysis are needed to clarify the cause of this result. Fourth, the influence of Chinese market characteristics cannot be ignored. For example, various regions of China have different economic and cultural backgrounds (Yeung and Hu 1992; Cho, Jin, and Cho 2010; Seo, Song, and Li 2020). Therefore, the results for other markets are worth investigating. Finally, as the subject of analysis in this study is the service industry where continuous customer relationships are important, specifically the telecommunications industry, there are limits to the generalization and market application of the result. Therefore, future research targeting other industries and various service industries (finance, insurance, etc.), in addition to the telecommunications industry, is needed.

Conflict of interest

There is no conflict of interest.

References

Abrahamson, Eric (1996), "Management Fashion," *Academy of Management Review*, 21 (1), 254–285.

Ahn, Kwang Ho, Sung Hwan Kim, and Mo Ran Kim (2011), "The Study of the Relative Effect of Customer Equity Drivers on Customer Loyalty," *Korean Journal of Marketing*, 26 (1), 23–45.

Anderson, Eugene. W., Claes Fornell, and Sanal K. Mazvancheryl (2004), "Customer Satisfaction and Shareholder Value," *Journal of Marketing*, 68 (4), 172–185.

Berger, Jonah and Eric M. Schwartz (2011), "What Drives Immediate and Ongoing Word of Mouth?," *Journal of Marketing Research*, 48 (5), 869–880.

Bhat, Suhail Ahmad and Mushtaq Ahmad Darzi (2016), "Customer Relationship Management: An Approach to Competitive Advantage in the Banking Sector by Exploring the Mediational Role of Loyalty," *International Journal of Bank Marketing*, 34 (3), 388–410

Blattberg, Robert C., and John Deighton (1996), "Manage Marketing by the Customer Equity Test," *Harvard Business Review*, 74 (4), 136.

Bolton, Ruth N. (1998), "A Dynamic Model of the Duration of the Customer's Relationship With a Continuous Service Provider: The Role of Satisfaction," *Marketing Science*, 17 (1), 45–65.

Bolton, Ruth N., and Katherine N. Lemon (1999), "A Dynamic Model of Customers' Usage of Services: Usage as an Antecedent and Consequence of Satisfaction," *Journal of Marketing Research*, 36 (2), 171–186.

Boulding, William, Richard Staelin, Michael Ehret, and Wesley J. Johnston (2005), "A Customer Relationship Management Roadmap: What is Known, Potential Pitfalls, and Where to Go," *Journal of Marketing*, 69 (4), 155–166.

Cen Xiaotian (2022), "Insight 2022: Competition Pattern and Market Share of China's Communications Industry," Research Report, Qianzhan Industry Research Institute (March 15).

Cho, Hyeon Jeong, Byoungho Jin, and Hira Cho (2010), "An Examination of Regional Differences in China by Socio-Cultural Factors," *International Journal of Market Research*, 52 (5), 613–633.

Choi, Hyunjeong and Bong-Kee Kim (2017), "The Effects of the Predictive Power of Customer Satisfaction Index for Future Financial Performance on Executive Compensation," *Korean Journal of Management Accounting Research*, 17 (2), 1–28.

Ciubotariu, Marius Sorin (2013), "The Role of Small and Medium Enterprises in the Modern Economy and the Importance of IFRS Application for SMEs," *The USV Annals of Economics and Public Administration*, 13 (1), 201–210.

Danaher, Peter J., and Roland T. Rust (1996), "Determining the Optimal Return on Investment for an Advertising Campaign," *European Journal of Operational Research*, 95 (3) 511–521.

De Angelis, Matteo, Andrea Bonezzi, Alessandro M. Peluso, Derek D. Rucker, and Michele Costabile (2012), "On Braggarts and Gossips: A Self-Enhancement Account of Word-of-Mouth Generation and Transmission," *Journal of Marketing Research*, 49 (4), 551–563.

Dick, Alan S., and Kunal Basu (1994), "Customer Loyalty: Toward an Integrated Conceptual Framework," *Journal of the Academy of Marketing Science*, 22 (2), 99–113.

Feick, Lawrence and Linda L. Price (1987), "The Market Maven: A Diffuser of Marketplace Information," *Journal of Marketing*, 51 (1), 83–97.

Fornell, Claes (1992), "A National Customer Satisfaction Barometer: The Swedish Experience," *Journal of Marketing*, 56 (1), 6–21.

Fornell, Claes, Michael D. Johnson, Eugene W. Anderson, Jaesung Cha, and Barbara Everitt Bryant (1996). The American customer satisfaction index: nature, purpose, and findings. *Journal of Marketing*, 60 (4), 7–18.

Fu, Linlin (2022), "A Study on the Impact of Customer Equity Drivers on Customer Satisfaction: Case of Telecommunication Companies," Master's thesis, Pusan National University.

Giachetti, Claudio, and Salvatore Torrisi (2018), "Following or Running Away From the Market Leader? The Influences of Environmental Uncertainty and Market Leadership," *European Management Review*, 15 (3), 445–463.

Gupta, Sunil and Valarie Zeithaml (2006), "Customer Metrics and Their Impact on Financial Performance," *Marketing Science*, 25 (6), 718–739.

Gupta, Sunil, Donald R. Lehmann, and Jennifer Ames Stuart (2004), "Valuing Customers," *Journal of Marketing Research*, 41 (1), 7–18.

Hawkins, Dr. LeAllen and Hoon, Stephanie (2019), "The Impact of Customer Retention Strategies and the Survival of Small Service-Based Businesses," *Electronic Journal*, 5 (564), 1–19.

Hennig-Thurau, Thorsten, Kevin P. Gwinner, and Dwayne D. Gremler (2002), "Understanding Relationship Marketing Outcomes: An Integration of Relational Benefits and Relationship Quality," *Journal of Service Research*, 4 (3), 230–247.

Holehonnur, A., Mary A. Raymond, Christopher D. Hopkins and Amanda C. Fine (2009), "Examining the Customer Equity Framework From a Consumer Perspective," *Journal of Brand Management*, 17 (3), 165–180.

Ittner, Christopher D., and David F. Larcker (1998), "Are Nonfinancial Measures Leading Indicators of Financial Performance? An Analysis of Customer Satisfaction," *Journal of Accounting Research*, 36, 1–35.

Jeon, Jaihyun, Byung-Do Kim, and Junhee Seok (2020), "Impact of Negative Word of Mouth on Firm Value," *Asia Marketing Journal*, 22 (3), 1–28.

Keller, Kevin Lane (1993), "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity," *Journal of Marketing*, 57 (1), 1–22.

Kim, Heung-Ryel (2017), "Analysis of Visitor Characteristics at a Traditional Market as a Tourism Destination," *International Journal of Tourism and Hospitality Research*, 31 (5), 49–59.

Kim, Woohyoung and Hyun Kim (2013), "Regional development strategy for increasing cultural tourism business in South Korea," *Asia Pacific Journal of Tourism Research*, 18 (6), 534–548.
Kim, Woohyoung, Hyun Kim, and Jinsoo Hwang (2020), "Sustainable Growth for the Self-Employed in the Retail Industry Based on Customer Equity, Customer Satisfaction, and Loyalty," *Journal of Retailing and Consumer Services*, 53, 101963.
Kumar, Vipin (2008), *Managing Customers for Profit: Strategies to Increase Profits and Build Loyalty*, Upper Saddle River, NJ: Wharton School Pub.
Kumar, Vipin and Denish Shah (2009), "Expanding the Role of Marketing: From Customer Equity to Market Capitalization," *Journal of Marketing*, 73 (6), 119–136.
Lassar, Walfried, Banwari Mittal, and Arun Sharma (1995), "Measuring Customer-Based Brand Equity," *Journal of Consumer Marketing*, 12 (4), 11–19.
Lemon, Katherine N., Roland T. Rust, and Valarie A. Zeithaml. (2001), "What Drives Customer Equity?", *Marketing Management*, 10 (1), 20–25.
Lieberman, Marvin B., and Shigeru Asaba (2006), "Why Do Firms Imitate Each Other?," *Academy of Management Review*, 31 (2), 366–385.
Lumanaj, Jasmina, Aulent Guri, Armend Aliu, and Otjela Lubonja (2013), "Quality of Service in the Banking Sector," *Mediterranean Journal of Social Sciences*, 4 (9), 418–418.
McGahan, Anita M., and Pankaj Ghemawat (1994), "Competition to retain customers," *Marketing Science*, 13 (2), 165–176.
Moenardy, Khalid K., S. Z. Arifin, and Srikandi Kumadji (2016), "The Effect of Service Quality and Relationship Marketing to Customer Value, Customer Satisfaction, Switching Cost, and Customer Retention: A Case Study on the Customers of Bank NTT at East Nusa Tenggara Province," *International Journal of Management and Administrative Sciences*, 3 (4), 48–63.
Moon, Sun-Jung, Bo-Hyen Kang, and Soo-Hyung Lee (2011), "Effect of Consumer Confusion on Word of Mouth and Trust Through Anger: Focusing on the Moderation Effect of Consumer's Negative Affectivity and Intolerance of Uncertainty," *Asia Marketing Journal*, 13 (1), 113–141.
Musalem, Andrés, and Yogesh V. Joshi (2009), "Research Note—How Much Should You Invest in Each Customer Relationship? A Competitive Strategic Approach," *Marketing Science*, 28 (3), 555–565.
Nunnally, Jum C. (1978), "An Overview of Psychological Measurement," In: Wolman B. B. (eds.), *Clinical Diagnosis of Mental Disorders*, pp. 97–146, Boston, MA: Springer.
Oliver, Christine (1997), "Sustainable Competitive Advantage: Combining Institutional and Resource-Based Views," *Strategic Management Journal*, 18 (9), 697–713.
Oliver, Richard L. (1999), "Whence Consumer Loyalty?," *Journal of Marketing*, 63 (4), 33–44.
Park, Sang-June and Hyeon-Cheol Kim (2003), "Customer Satisfaction Index and Business Performance," *Korean Journal of Marketing*, 18 (3), 19–50.
Park, Sangwoo, Woo Jin Choi, and Dongwoo Shin (2021), "Who Makes You More Disappointed? The Effect of Avatar Presentation, Company Market Status, and Agent Identity on Customers' Perceived Service Quality and Satisfaction of Online Chatting Services," *Asia Marketing Journal*, 23 (3), 36–47.
Park, Yong-jin, (2018), "A Study on the Effect of Traditional Market Visitors' Experiential Value on Place Attachment and Behavioral Intention," *Event & Convention Research*, 14 (1), 137–156.
Patterson, Paul G., and Tasman Smith (2001), "Relationship Benefits in Service Industries: A Replication in a Southeast Asian Context," *Journal of Services Marketing*, 15 (6), 425–443.
Pfeifer, Phillip E., and Paul W. Farris (2004), "The Elasticity of Customer Value to Retention: The Duration of a Customer Relationship," *Journal of Interactive Marketing*, 18 (2), 20–31.
Reichheld, Frederick F., and W. Earl Sasser (1990), "Zero Defeofions: Quoliiy Comes to Services," *Harvard Business Review*, 68 (5), 105–111.
Reinartz, Werner J., and Vijay Kumar (2000), "On the Profitability of Long-Life Customers in a Noncontractual Setting: An Empirical Investigation and Implications for Marketing," *Journal of Marketing*, 64 (4), 17–35.
Reynolds, Kristy E., and Sharon E. Beatty (1999), "Customer Benefits and Company Consequences of Customer-Salesperson Relationships in Retailing," *Journal of Retailing*, 75 (1), 11–32.
Rust, Roland T., Anthony J. Zahorik, and Timothy L. Keiningham (1995), "Return on Quality (ROQ): Making Service Quality Financially Accountable," *Journal of Marketing*, 59 (2), 58–70.
Rust, Roland T., Katherine N. Lemon, and Valarie A. Zeithaml (2001), *Driving Customer Equity: Linking Customer Lifetime Value to Strategic Marketing Decisions*, Cambridge, MA: Marketing Science Institute.
Rust, Roland T., Katherine N. Lemon, and Valarie A. Zeithaml (2004). "Return on Marketing: Using Customer Equity to Focus Marketing Strategy," *Journal of Marketing*, 68 (1), 109–127.
Saeidi, Sayedeh Parastoo, Saudah Sofian, Parvaneh Saeidi, Sayyedeh Parisa Saeidi, Seyyed Alireza Saaeidi (2015), "How Does Corporate Social Responsibility Contribute to Firm Financial Performance? The Mediating Role of Competitive Advantage, Reputation, and Customer Satisfaction," *Journal of Business Research*, 68 (2), 341–350.
Schulze, Christian, Bernd Skiera, and Thorsten Wiesel (2012), "Linking Customer and Financial Metrics to Shareholder Value: The Leverage Effect in Customer-Based Valuation," *Journal of Marketing*, 76 (2), 17–32.
Schumann, Jan H., Florian V. Wangenheim, Anne Stringfellow, Zhilin Yang, Vera Blazevic, Sandra Praxmarer, G. Shainesh, Marcin Komor, Randall M. Shannon, and Fernando R. Jiménez (2010) "Cross-Cultural Differences in the Effect of Received Word-of-Mouth Referral in Relational Service Exchange," *Journal of International Marketing*, 18 (3), 62–80.
Seiders, Kathleen, Glenn B. Voss, Dhruv Grewal, & Andrea L. Godfrey (2005), "Do Satisfied Customers Buy More? Examining Moderating Influences in a Retailing Context," *Journal of Marketing*, 69 (4), 26–43.
Seo, HaeJin, Tae Ho Song, and Wang Li (2020), "Effect of Cause-Related Marketing in the Chinese Market: Moderating Effects of Product Type and Regional Characteristics," *Asia Marketing Journal*, 22 (3), 29–50.
Shaffer, Greg and Z. John Zhang (2002), "Competitive One-to-One Promotions," *Management Science*, 48 (9), 1143–1160.
Sharmeela-Banu, S. A., K. Gengeswari, and P. Padmashantini (2012), "Customer Retention Practices Among the Major Retailers in Malaysia," *International Journal of Academic Research in Business and Social Sciences*, 2 (6), 157.
Sheth, Jagdish N., and Atul Parvatiyar (1995), "The Evolution of Relationship Marketing," *International Business Review*, 4 (4), 397–418.
Shugan, Steven M. (2005), "Brand Loyalty Programs: Are They Shams?," *Marketing Science*, 24 (2), 185–193.
Soltani, Zeynab, and Nima Jafari Navimipour (2016), "Customer Relationship Management Mechanisms: A Systematic Review of the State of the Art Literature and Recommendations for Future Research," *Computers in Human Behavior*, 61, 667–688.
Song, Tae Ho (2018), "A Comparison of Customer Equity to Financial Performance Using Corporate Disclosure Data: The Relationship between the Core Components of Customer Equity and the Customer Retention Strategies," *Korean Journal of Marketing*, 33 (3), 39–71.
Song, Tae Ho (2020), "Exploratory Study on the Role of a Competitive Factor in Measuring Customer Lifetime Value and Customer Equity: Empirical Comparison through Cross-validation," *Services Marketing Journal*, 13 (2), 99–109.
Song, Tae Ho and Ji Yoon Kim (2016), "Dynamic Effect of Customer Equity on Firm Performance: Comparison between Leader and Follower," *Journal of Product Research*, 34 (2), 1–10.
Song, Tae Ho and Ji Yoon Kim (2020), "The Differential Effect of Customer Relationship Management Strategy in the

Competitive Marketing Environment: The Case of the Telecommunication Industry," *Korean Management Review*, 49 (2), 205–330.
Song, Tae Ho, Sang Yong Kim, and Ji Yoon Kim (2013), "Optimality of Customer Relationship Management: Does Profitability Really Matter?," *Asia Marketing Journal*, 15 (3), 141–157.
Srivastava, Rajendra K., Tasadduq A. Shervani, and Liam Fahey (1998), "Market-Based Assets and Shareholder Value: A Framework for Analysis," *Journal of Marketing*, 62 (1), 2–18.
Stahl, Heinz K., Kurt Matzler, and Hans H. Hinterhuber (2003), "Linking Customer Lifetime Value with Shareholder Value," *Industrial Marketing Management*, 32 (4), 267–279.
Swaminathan, V., Christopher Groening, Vikas Mittal, and Felipe Thomaz (2014), "How Achieving the Dual Goal of Customer Satisfaction and Efficiency in Mergers Affects a Firm's Long-Term Financial Performance," *Journal of Service Research*, 17 (2), 182–194.
Taneja, Sonia, Mildred Golden Pryor, and Mario Hayek (2016), "Leaping Innovation Barriers to Small Business Longevity," *Journal of Business Strategy*, 37 (3), 44–51.
Taylor, Shirley, and John D. Claxton (1994), "Delays and the Dynamics of Service Evaluations," *Journal of the Academy of Marketing Science*, 22 (3), 254–264.
Villanueva, J., Pradeep Bhardwaj, Sridhar Balasubramanian and Yuxin Chen (2007), "Customer Relationship Management in Competitive Environments: The Positive Implications of a Short-Term Focus," *Quantitative Marketing and Economics*, 5 (2), 99–129.
Vogel, Verena, Heiner Evanschitzky, and Balasubramani Ramaseshan (2008), "Customer Equity Drivers and Future Sales," *Journal of Marketing*, 72 (6), 98–108.
Wang, Huanzhang, Kyung Hoon Kim, Eunju Ko and Honglei Liu (2016), "Relationship Between Service Quality and Customer Equity in Traditional Markets," *Journal of Business Research*, 69 (9), 3827–3834.
Wu, Lei-Yu, Kuan-Yang Chen, Po-Yuan Chen, and Shu-Ling Cheng (2014), "Perceived Value, Transaction Cost, and Repurchase-Intention in Online Shopping: A Relational Exchange Perspective," *Journal of Business Research*, 67 (1), 2768–2776.
Yeung, Matthew, C. H., Lee Chew Ging, and Christine T. Ennew (2002), "Customer Satisfaction and Profitability: A Reappraisal of the Nature of the Relationship," *Journal of Targeting, Measurement and Analysis for Marketing*, 11 (1), 24–33.
Yeung, Yue-man and Xuwei Hu (1992), *China's Coastal Cities: Catalysts for Modernization*, Honolulu: University of Hawaii Press.
Yi, You Jae (2000), "A Theoretical Examination of Customer Satisfaction Research: Findings and Outlook," *Journal of Consumer Studies*, 11 (2), 139–166.
Yi, You Jae and Cheong Lim Lee (2007), "The Role of Customer Loyalty Variables in the Effects of Customer Satisfaction on Firm's Performance," *Korean Journal of Marketing*, 22 (1), 81–102.
Yi, You Jae and Cheong Lim Lee (2010), "The Dynamic Effects of Customer Satisfaction and Referral on Firm Performance: Focusing on KCSI and KNPS,", *Korean Management Review*, 39 (2), 279–307.
Yi, You Jae, Kyong Cheon Cha, and Cheong Lim Lee (2008), "The Dynamic Effects of Customer Satisfaction on Firm's Profitability and Value," *Asia Marketing Journal*, 10 (1), 1–23.
Zaichkowsky, Judith Lynne (1985), "Measuring the Involvement Construct," *Journal of Consumer Research*, 12 (3), 341–352.
Zeithaml, Valarie A., Ananthanarayanan Parasuraman, and Leonard L. Berry (1985), "Problems and Strategies in Services Marketing," *Journal of Marketing*, 49 (2), 33–46.