Article

An Empirical Test of Mobile Service Provider Promotions on Repurchase Intentions

Kwangchul Ji and Hong-Youl Ha *

Department of International Trade, Dongguk University-Seoul, Seoul 04620, Korea; kwangchulji@gmail.com

* Correspondence: hyha@dongguk.edu

Abstract: Little empirical evidence is obtained for the moderating outcomes of mobile promotions (M-promotions) during subsequent repurchasing events. This study examines how M-promotions indirectly influence repurchase intentions, and how the level of promotions moderates the relationship between repurchase intentions and their determinants. The findings show that three determinants (i.e., brand attitude, functional quality, and online reviews) directly lead to repurchase intention. However, the moderating effects of M-promotions vary. Especially, our findings show that the moderating effect of M-promotions is only significant in the relationship between functional quality and repurchase intentions and that between online reviews and repurchase intentions. Repurchase intentions are increased by high M-promotions when functional quality is low, and when online reviews are positive.

Keywords: mobile promotions; online reviews; brand attitude; functional quality; design quality

Citation: Ji, K.; Ha, H.-Y. An Empirical Test of Mobile Service Provider Promotions on Repurchase Intentions. *Sustainability* **2021**, *13*, 2894. <https://doi.org/10.3390/su13052894>

Academic Editor: Jose Ramon Saura

Received: 5 February 2021

Accepted: 3 March 2021

Published: 7 March 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Promotions are commonly used to facilitate consumer behavior, but they are important to retain existing customers, particularly in the mobile communication industry. Mobile service provider promotions (hereafter, M-promotions), defined as financial or non-financial incentives for replacing specific mobile devices, are powerful and attractive marketing tools [1–3] in maintaining a sustainable relationship with their potential or existing customers. These promotions are highly valuable for mobile operators because they increase short-term sales volume [4] and accelerate mobile user repurchases [5] during the promotion periods.

However, we question this positive evidence because existing customers perceive M-promotions to be similar to competitors' promotions. This indicates that the effect of M-promotions is direct but limited, and not indirect. Alternatively, we demonstrate that higher-level M-promotions have a moderating effect on repurchase intentions. However, no empirical evidence specifies the moderating outcomes of M-promotions during repurchasing events. This approach highlights the gaps in extant promotion research, revealing how M-promotions influence repurchase intentions, directly and indirectly. The approach also shows how the level of promotions affects the relationship between repurchase intentions. However, their determinants remain unclear. Sustainability is crucial for the mobile service provider as it has become a central concept to improve mobile service quality and maintain customer satisfaction in a highly competitive marketplace. Besides, repurchasing is fundamental to a firm's long-term growth. This study provides significant implications for maintaining customer engagement and improving firm performance [6] from a sustainable perspective.

Moreover, whether M-promotion level is a key determinant of repurchase intentions remains to be determined. We argue that empirical evidence could help the promotion literature better elucidate the moderating influence of this link. Many studies have investigated promotions from positive and negative perspectives [7,8] to temporal (in)consistency [9,10];

the direct and moderating roles by which M-promotions translate into dynamic consumer behavior are not well documented. It is crucial to understand the role of M-promotions because the mobile service providers market is highly competitive. Furthermore, customers will search for sales information from mobile sources when they are able to renew their contracts. As this marketplace is dynamic, this study is an integrated response to capture the role of M-promotions and guide the sustainable growth of firms.

The purpose of this study is to examine: (1) four determinants (e.g., brand attitudes, functional quality, design quality, and online reviews) on a mobile device and their effect on repurchase intentions; (2) how these determinants are related to M-promotions and mobile choice; and (3) how M-promotions moderate the direct and indirect influence of repurchase intentions.

In the following sections, we review the promotions and relevant literature and propose a model that links to the overall hypotheses. We then present our methodological approaches and test the model. Finally, we conclude with a discussion of key theoretical and practical implications, and further research directions.

2. Literature Review

Existing literature discussed specific topics related to marketing promotions, but researchers have focused on both direct and indirect roles of promotions using cross-sectional studies. As noted, empirical studies that address repurchasing events at the promotion level are scarce. Furthermore, most researchers have depended on self-reported or firm-sales promotion data, which may differ from the existing customer perspective. For example, in one meta-analysis study, sales promotions did not influence post-promotion brand preference, but the promoted value affected brand preference [11]. Similarly, only a few studies have focused on repeat behavior [12], and the mainstream of research has focused on the direct role of promotions in sales volume [1,4,5].

We defined M-promotions; however, the definition was similar to traditional sales promotions. This study includes financial and nonfinancial tools because different promotional tools may have different effects on sales and customer equity [12]. To capture an integrated response to M-promotions, the definition is acceptable.

Regarding antecedents of behavioral intentions, researchers have conducted cross-sectional examinations of the drivers of (re)purchase intentions for people who were likely to (re)purchase mobile phones. Their studies have investigated price and mobile quality (e.g., function and design) [13,14] because these factors play an important role in facilitating behavioral activities.

Alternatively, online reviews account for pivotal influences on customer purchase decisions [15,16], differentiating between information sources obtained from individual experiences and those not. However, online reviews play a dual influencer role (e.g., driving force) and an indicator role (e.g., outcome) in customer purchase behavior [17]. In this study, we focus on the former role because the effect of customer reviews varies because of promotion levels [18]. As a consequence, the promotion effect may be critical during repurchase periods and could lead firms to improve long-term sustainability [19,20].

2.1. Determinants of Mobile Repurchase Intentions

Figure 1 shows the overall framework proposed in this study. It contains the direct effects of determinants of repurchase intentions and the moderating effect of M-promotions on repurchase intentions. Although this framework is based on a mobile context, it is inspired by the contextual marketing theory and consumer experience used in traditional and IT-based marketing settings [21]; thus, the framework links the mobile device to antecedents and consequences.

In the four-determinant model, brand attitudes reflect a psychological and attitudinal factor. Functional quality reflects perceived functions and perceived quality of alternatives. Design quality reflects the perceived beauty of mobile devices, and online reviews reflect overall evaluations provided by customer experiences. As a moderator, M-promotions are

based on an individual's evaluation of their past purchasing experience. These determinants and M-promotions should be linked to repurchase intentions, directly or indirectly.

Figure 1. Proposed model considering the impact of prosumers.

2.2. Brand Attitudes

Brand attitudes are defined as “consumers’ overall evaluations of a brand” [22]. This construct reflects the general appreciation of a brand by a consumption-system approach that relies on brand experience, particularly for high-tech product or service choices. Following Keller [22] and Dolbec and Chebat [23], we conceptualize brand attitudes as the overall consumer responses and their behavioral responses toward a particular brand. Empirically, brand attitudes are related to dispositions specific to consumer context that link individual values to actual consumption behaviors [24].

Brand attitudes also change over time, and positive attitudes with continuous repurchase or usage are typically considered keys to fostering loyalty among customers [25]. Similarly, attitudes toward the same product during the repurchase period or the termination of a mobile contract are more critical for overall responses to the gap between the initial (initial purchasing stage) and adjusted (repurchasing stage) attitudes [26]. Changes in attitude based on a consumption approach have emerged as a fundamental issue in the IT and marketing literature [11,25]. Furthermore, attitude formation can be changed by external cues (i.e., promotions and advertising), suggesting that changes in the attitude–behavior framework.

2.3. Functional Quality and Design Quality

Research on product (or service) quality is popular, but it is too broad. In the mobile service renewal context, our focus here is on functional and design quality. Regarding this approach, Sweeney and Soutar [27] pointed out that a more specific construct than perceived quality would increase the construct’s usefulness. In this study, we define functional quality as a consumer’s overall judgment between his/her expectations for mobile performance and perceptions of the mobile device experienced.

Functional quality differs from design quality, which is defined as a consumer’s visual impression of the relative superiority of the mobile device. The central difference between these two constructs is the time dependency; that is, the former emphasizes a consumer’s

consumption over time, whereas the latter focuses on an instant response when he/she makes a decision about a mobile device or provider. However, they have other features beyond mobile phoning [28]. Research shows that mobile phone functionality and design have a direct effect on behavioral engagement [29].

2.4. Online Reviews

One of the main advantages of online reviews is that they provide reliable information from actual customers and experts. The notion that online reviews are trustworthy relies on customers' willingness to use review information to make (re)purchase decisions [30]. Online reviews can significantly mediate or moderate the complex relationship between uncertainty and behavioral intention [31]. Research on online reviews divides them into positive and negative. Our focus is on the overall online reviews, which are relatively unbiased and independent from marketing communication [32]. This approach may avoid issues of trustworthiness because of the tendency of people to be skeptical of online product reviews [33]. In a recent study on mobile devices and apps, Kowatsch [34] and Liang et al. [35] demonstrated the direct effects of online reviews on actual behavior for in-store purchases. Although customers have rich experience with their mobile devices, online reviews are still critical due to consumers' need for new alternatives [15,16,31].

3. The Role of M-Promotions

To capture the M-promotion effect of the proposed link between the four determinants and repurchase intentions, we should identify the different roles of M-promotions. As presented in Figure 1, researchers view the indirect impact of dynamics on promotion effectiveness [9]. Thus, the indirect role of M-promotions should enhance consumer choice behavior.

Hypotheses of the Moderating Role of M-Promotions

The traditional argument for the promotion effect suggests that consumers rarely shop an entire store [36], making M-promotions desirable for attracting target consumers. The importance of M-promotions is rooted in how promotions facilitate consumer behavior. Specifically, just as M-promotions are likely to trigger consumers' unplanned activity, research suggests that promotion stimulus can create new needs and reminds consumers about their expiring mobile service contracts, resulting in more favorable attitudes toward promotion [37].

We argue that if a customer has received valuable M-promotions from the current mobile service provider for the same mobile device, positive brand attitudes convert into repurchase intentions; in particular, attitudes drive repurchase intentions because consumers identify with their favorable mobile brand, which enhances the M-promotion effect. M-promotions increase consumer benefits of acting on their preferred brand through repurchase behavior [38]. That is, consumers' favorable experience of a specific mobile device, their desire to use the device in the future, and the impact of M-promotions that enhance a new perception of the brand increase repurchase intentions. Consequently, M-promotions can facilitate consumer actions to fully experience a specific brand with which they identify [10].

Hypothesis 1. *M-promotions enhance the effect of brand attitudes on repurchase intentions.*

One of the key issues in the promotion literature is understanding the influence of specific promotions on consumer product (or service) evaluations [39]; mixed findings have shown negative, positive, and even nonexistent effects of promotions on quality evaluations [40,41]. Specifically, high-quality services increase market share and profitability, whereas functional and design quality may produce varying effects in different product settings and contexts. In the case of the latter, promotions may be efficient when consumers evaluate a specific brand based on functional and design quality [42]. For example,

Samsung Galaxy 21 provides more functional and customer-friendly design quality than the previous version, and thus, M-promotions can play an important role in facilitating behavioral activities. However, this effect is less clear when the M-promotion construct is included as the service renewal stage between quality evaluations and repurchase intentions. Thus, we propose the following hypotheses:

Hypothesis 2. *M-promotions enhance the effect of functional quality on repurchase intentions.*

Hypothesis 3. *M-promotions enhance the effect of design quality on repurchase intentions.*

Online reviews are experience-based recommendations that can be highly credible and influential [43]. Traditionally, positive reviews are trusted communications of consumers' perceptions of specific brands that increase sales performance. The literature has emphasized the importance of online reviews from a theoretical approach [44]. In particular, researchers note that user-generated comments are valuable for redesigning and redeveloping products and obtaining a better understanding of the changes in customer needs, indicating online reviews to be components in marketing communication theories. They are particularly salient in the mobile device and communication industry given that most potential and existing customers checked reviews and opinions before their repurchasing decisions.

We also offer a marketing consistency view based on an M-promotion perspective. Online reviews are closely related to sales [45]; hence, the incentive value of M-promotions is likely to lead to a favorable product choice. This occurs because consistency between online communication and promotion plays an important role in facilitating consumers' repurchasing behavior [9]. Once consumers have checked positive online reviews about new mobile devices, the consistency of M-promotions positively affects consumer product (or brand) evaluations, which can increase consumers' choice of that particular mobile device. Thus, we propose the following hypothesis:

Hypothesis 4. *M-promotions enhance the effect of online reviews on purchase intentions.*

4. Methodology

4.1. Sample Data

To test our hypotheses, we collected data from a professional online research firm with large panels that enabled the surveys of our target groups in Korea. To qualify for our sample, participants must have one mobile device (Samsung Galaxy, Apple iPhone, LG, etc.) with a particular mobile service provider (SK Telecom, KT, or U+) in the Korean mobile service industry. Another important criterion for participant selection was that participants must have three months left on their mobile usage contracts, indicating the necessity for them to replace their mobile phone or mobile service provider. In South Korea, fixed-term mobile contracts expire after two years, and most Koreans usually replace their phones during that period.

We explained the main purpose of this study to all participants. Those who completed the survey received an incentive. After two follow-up mobile-text contacts, this survey allowed us to collect research data from 214 usable questionnaires in the summer of 2019. The following is the demographic information of the respondents.

Of the total sample, approximately 71 percent were 29 years old or younger and 29 percent were 30–50 years old. Moreover, 51 percent were male and 78 percent had undergraduate or post-graduate degrees. In terms of the users' mobile device, approximately 37 percent were Galaxy; 23 percent, iPhone; 14 percent, LG; and 26 percent, other brands. For providers, 47 percent of the respondents used SK Telecom; 26 percent, KT; 22 percent, U+; and 5 percent, other providers.

4.2. Measures

We used existing published measures of marketing promotion and repurchasing-related constructs needed to test the proposed hypotheses. We measured brand attitude using four items (Cronbach's alpha = 0.81) adapted from Raghubir and Corfman [46] and Yi and Yoo [10]. Moreover, functional quality was measured using four items (Cronbach's alpha = 0.74) adapted from Yong [47]. Meanwhile, the design quality was measured using three items (Cronbach's alpha = 0.87) from Lu et al. [48] and Yong [47]. In particular, the online reviews used in this study had to be related to mobile sales. To accomplish this, we measured online reviews using two items (Cronbach's alpha = 0.76) adapted from Filieri and McLeay [49].

Moreover, we measured M-promotions using three items (Cronbach's alpha = 0.89) adapted from Honea and Dahl [50], excluding one item, unlucky/lucky. As an alternative, we added the "inconsistent/consistent" item because the consistency of sales promotions involves a temporal dimension [9]. This characteristic is directly linked to the current study. Finally, we measured repurchase intentions using three items (Cronbach's alpha = 0.80) adapted from Kaman [51]. All measures were rated on a five-point scale (from 1 = strongly disagree to 5 = strongly agree).

5. Results

After the confirmatory factor analysis, the measurement model with M-promotions obtained the following fit statistics that were all acceptable: $\chi^2 = 309.556$ (df = 137), CFI = 0.953, and RMSEA = 0.052. According to Thompson [52], chi-square/degree of freedom (<3), CFI (>0.900), and RMSEA (<0.080) is the key to measure overall model goodness of fit. Our scientific justifications support these recommended criteria.

As shown in Table 1, most factor loadings were above 0.70. However, loadings between 0.70 and 0.60 are invalid cut-offs [52]. Moreover, the average variance extracted (AVE) were all above 0.50, indicating adequate convergent validity [53].

For discriminant validity, we applied the criterion suggested by Fornell and Larcker [53]. That is, the AVE of all indicators must exceed the squared correlation. As shown in Table 2, our results supported the criterion, suggesting adequate discriminant validity.

To test the proposed four hypotheses on the moderated effects, we conducted regression analysis using Process Macro. Specifically, we used path analysis because its statistical performance is better than that of other moderation test methods [54]. We also used bootstrapping to generate confidence intervals and avoid any potential issues caused by asymmetric or other intervening effects [55].

Table 3 shows the results of regression analyses using Process Macro. We also plotted the significant moderating effects in Figures 2 and 3. H1 predicted that M-promotions enhance the effect of brand attitudes on repurchase intentions. Although the direct effect of brand attitude on repurchase intentions was significant ($\beta = 0.51, p < 0.05$), the interaction of brand attitudes and M-promotions was negative and insignificant ($\beta = -0.01, p > 0.05$), thus rejecting H1.

H2 posited that M-promotions enhance the effect of functional quality on repurchase intentions. The direct effect of functional quality on repurchase intentions was significant ($\beta = 0.36, p < 0.05$). Interestingly, the interactive effect of functional quality and M-promotions on repurchase intentions was negative but significant ($\beta = -0.19, p < 0.05$), thus supporting H2. As shown in Figure 2, repurchase intentions are increased by high M-promotions when functional quality is especially low.

H3 predicted that M-promotions enhance the effect of design quality on repurchase intentions. The results showed that the interactive effect of design quality and M-promotions on repurchase intentions was positive ($\beta = 0.01, p > 0.05$), but insignificant. The direct effect of design quality on repurchase intentions was also insignificant. Thus, H3 is rejected.

Table 1. Measurement models and confirmatory factor analysis results.

Constructs	Mean (SD)	Factor Loading	AVE χ^2 (d.f.) and Indexes
<i>Brand attitude</i>	3.67 (0.94)	0.59	309.556 (137)
Dislike/Like		0.74	CFI = 0.953
Harmful/Beneficial		0.74	TLI = 0.941
Unfavorable/Favorable		0.83	RMSEA = 0.052
Inappropriate/Appropriate		0.77	
<i>Functional quality</i>	2.94 (1.20)		0.56
It is easy to make a call.		0.72	
This mobile device has simple steps to take a picture.		0.77	
This device makes it easy to find what I need.		0.72	
It operates without any special hardware.		0.78	
<i>Design quality</i>	3.82 (.99)		0.69
When I choose a mobile device, color is important to me.		0.78	
The slim shape of a mobile device gives me a deep impression.		0.87	
In general, this mobile design meets my needs.		0.83	
<i>Online reviews</i>	2.68 (1.03)		0.61
The overall ranking of different mobile devices facilitates the evaluation of the available alternatives.		0.74	
Overall mobile device rankings help me to rapidly select the best device among several alternatives.		0.82	
The overall online reviews are trustworthy.		0.78	
<i>Mobile service provider promotions</i>	2.72 (1.08)		0.68
Unlucky/lucky		0.78	
Valueless/valuable		0.77	
Discouraged/encouraged		0.87	
Inconsistent/consistent		0.87	
<i>Repurchase intention</i>	2.91 (1.27)		0.61
I will rebuy the same mobile device in the near future.		0.73	
I plan to rebuy the same mobile device on a regular basis.			0.89
I will rebuy the same mobile device for my convenience		0.71	

Table 2. Construct correlations.

	1	2	3	4	5	6
1. Brand attitude	0.59					
2. Functional quality	0.34	0.56				
3. Design quality	0.51	0.32	0.69			
4. Online reviews	0.29	0.52	0.09	0.61		
5. M-promotions	0.26	0.32	0.01	0.34	0.68	
6. Repurchase intention	0.49	0.51	0.28	0.50	0.49	0.54

Notes: AVEs (in bold) appear in diagonal.

Table 3. Results on moderating effects using bootstrapping (Process model = 1).

H1	Std. Beta	t-value	LLCI	ULCI
Brand attitude (BA)	0.51 *	1.97	0.0021	1.0207
M-promotions (MP)	0.19 (ns)	0.34	−0.9185	1.3049
BA * MP	−0.01 (ns)	−0.04	−0.3144	0.3033
Model: $R^2 = 0.17$; $F = 14.60$ (df1 = 3, df2 = 210, $p = 0.000$)				
H2	Std. Beta	t-value	LLCI	ULCI
Functional quality (FQ)	0.36 *	2.12	0.0277	0.7051
M-promotions (MP)	−0.88 **	−2.99	−0.3003	−1.4609
FQ * MP	−0.19*	−1.89	−0.3831	0.0240
Model: $R^2 = 0.08$; $F = 6.07$ (df1 = 3.0, df2 = 210, $p = 0.000$)				
H3	Std. Beta	t-value	LLCI	ULCI
Design quality (DQ)	0.42 (ns)	1.57	−0.1087	0.9643
M-promotions (MP)	0.12 (ns)	0.19	−1.1922	1.4507
DQ * MP	0.01 (ns)	0.03	−0.3256	0.3345
Model: $R^2 = 0.12$; $F = 9.60$ (df1 = 3.0, df2 = 210, $p = 0.000$)				
H4	Std. Beta	t-value	LLCI	ULCI
Online reviews (OR)	0.11 (ns)	0.56	0.0028	0.4225
M-promotions (MP)	0.96 **	2.38	0.1689	1.7625
OR * MP	0.33 **	2.46	−0.0663	0.5969
Model: $R^2 = 0.15$; $F = 12.35$ (df1 = 3.0, df2 = 210, $p = 0.000$)				

Note: * $p < 0.05$; ** $p < 0.01$.

Figure 2. The moderating effect of M-promotions on the relationship between function quality and repurchase intentions (H2).

Figure 3. The moderating effect of M-promotions on the relationship between online reviews and repurchase intentions (H4).

H4 predicted that M-promotions enhance the effect of online reviews on repurchase intentions. The interactive effect of online reviews and M-promotions on repurchase intentions is positive and significant ($\beta = 0.33, p < 0.01$). Moreover, Figure 3 depicts the moderating effect of M-promotions on online reviews and repurchase intentions, which is the opposite result of H2. Furthermore, repurchase intentions are increased by high M-promotions when online reviews are especially positive. Thus, H4 is supported.

Besides, we analyzed the impact of demographic variables on M-promotions. While both age and education level were insignificant, the role of gender was significant. More specifically, females appeared to comprehensively acquire positive online reviews when M-promotions were high ($\beta = 0.19, p < 0.05$), rather than male customers.

6. Discussion

We expected direct effects arising from an established match among four determinants and repurchase intentions and proposed four moderating effects of M-promotions on repurchase intentions. Two direct effects were significant, whereas the effects of both online reviews and design quality on repurchase intentions were not supported. Furthermore, two hypothesized moderating effects (e.g., functional quality and online reviews) on repurchase intentions were significant. This is consistent with our theorizing that, if consumers positively check online reviews during their contract renewal, M-promotions enhance their evaluations, which can lead to increased repurchase intentions. Meanwhile, the moderating effect of M-promotions on repurchase intentions is stronger when functional quality is low.

6.1. Theoretical Implications

Drawing on sales and mobile communication promotions [11], brand attitudes [22], online information [31], and repeat behavior [5], we hypothesize the moderation effect of M-promotions and provide robust evidence to demonstrate its mechanisms. This study shows that M-promotions partially lead to positive repurchase intentions unlike other direct effects of sales promotion. Furthermore, the moderating effects vary. Our work suggests that the effects of M-promotions can be explained by the functional quality of mobile devices and that repurchase intentions can be enhanced by positive online reviews.

Past research suggests that attitudes are likely to endure over time and are also changed by sales promotions in different purchase stages [56,57]. In this sense, M-promotions should play an important role in enhancing the relationship between brand attitude and repurchase intention during the end period of a mobile contract [58]. In this study, however,

brand attitudes only have a direct impact on repurchase intentions. Meanwhile, the moderating effect of M-promotions is not significant in the brand attitude–repurchase intention link. Although our findings are consistent with previous studies that highlight the robustness of the attitude–repurchase intention framework during the repeat consumption period, the effect of M-promotions is relatively limited. Unlike previous studies, this study suggests that the direct and indirect effects of M-promotions vary due to the dynamics of purchasing context.

Our research contributes to the marketing communication literature by clarifying the uniqueness of online customer reviews. Generally, online reviews are essential to consumers in evaluating product quality, directly or indirectly [59], but empirical evidence shows that online review information has a direct effect on repurchase intention. Moreover, the linkage between online reviews and repurchase intention is also moderated by the influence of M-promotions. Regarding the latter, our findings add to the extant literature on the influence of M-promotions. Researchers have previously considered how the moderating role of online reviews influences attitude formation before buying [60], whereas we look at online reviews from a different perspective of how M-promotions enhance the link between online reviews and repurchase intention. Our work suggests that when online reviews are highly positive, M-promotions increase repurchase intentions, which highlight the potential upsides of online reviews.

6.2. Practical Implications

This study provides clear insights for managers of long-term, sustainable, individually consumed mobile devices and their communication services. These managers can benefit from M-promotions because both online reviews before repeat buying and functional quality before the contract renewal of mobile service have significant impacts on repurchase intentions through the influence of M-promotions. During the mobile service renewal stage, M-promotions can be highly effective for high-tech product decision-making, for which consumers engage in extensive online review searches. This implication is especially important for mobile service providers because present firms are willing to accept their customer requests to achieve long-term sustainability.

M-promotions may be beneficial when customers face repeat purchasing conditions in the context of mobile service renewal. As a consequence, the consistency of M-promotions is especially important for mobile service firms concerned about decreasing or maintaining their market share because most mobile customers consider the mobile device brand first and then select the mobile service provider. As such, M-promotions should be temporally consistent with past meaning and messages that can strengthen customer choices, resulting in the increase in firm performance.

Our findings provide robust evidence for the limitation of repurchase intentions as the absence of empirical findings, thus emphasizing the importance of functional quality through promotion strategies available to managers. Compared with the sales promotion strategies (e.g., both churn and lock-in management in mobile services) [61], a more strategic role in matching customer needs to emphasizing innovative functions and offering financial/non-financial values may be considered by providers. Because companies track which customers are sustainable [62], we propose their expansion to include more specific personalized offerings based on the importance of device functionality. For example, SK Telecom, KT Corporation, and LG U+ are the main telecommunication companies in South Korea, and 46.4 percent of mobile phone service subscribers use the service provided by SK (KT = 31.6%; LG U+ = 22%), which are highly personalized offerings and M-promotions [63]. Based on our data analyses, these implications are crucial for the application of the theoretical model to disconnect it from reality.

6.3. Limitations and Future Research Directions

Despite this study's significant implications before the contract renewal, further investigation is necessary to assess the underlying role of change in M-promotions over time.

Our work is the first step toward a better understanding of M-promotions in the context of mobile renewal. Because promotions generally hold financial and non-financial values, the comparison of promotion packages may be different from competitive alternatives. This approach would help further explain post-promotions and help researchers understand their impacts in the context of mobile sustainable business.

The non-representativeness is the limitation of this study. There is a lack of generalization because we focus on the mobile service provider industry in a single country. Future research is beneficial for investigating a link between the current results and consumer behaviors. Similarly, we did not focus on the overrepresentation of respondents among two demographic subgroups: education and age. As these subgroups can play an important role in bridging the gap between repurchase intentions and their determinants, future research is crucial for a better understanding of M-promotions. Finally, we did not consider how many people buy new mobile devices. Especially, researchers should identify what potential this market has got. They can then measure the effectiveness of M-promotions. Thus, our suggestions are important topics for future research.

6.4. Conclusions

A valuable offering of M-promotions can be perceived as long-term customer care, which creates subsequent repurchasing events. Our findings show that two direct effects on repurchase intentions are significant; however, the other two direct effects (design quality and online reviews) are insignificant. In particular, M-promotions moderate the relationships between functional quality and repurchase intentions and between online reviews and repurchase intentions. The results offer benefits for researchers and firms. Repurchase intentions benefit researchers because it is enhanced by positive online reviews. Firms also gain because the effects of M-promotions can be explained by the functional quality of mobile devices.

Author Contributions: Conceptualization, K.J. and H.-Y.H.; methodology, H.-Y.H.; software, H.-Y.H.; validation, K.J. and H.-Y.H.; formal analysis, K.J.; investigation, H.-Y.H.; resources, H.-Y.H.; data curation, H.-Y.H.; writing—original draft preparation, H.-Y.H.; writing—review and editing, K.J.; visualization, K.J.; supervision, H.-Y.H.; project administration, H.-Y.H.; funding acquisition, H.-Y.H. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Garnefeld, I.; Böhm, E.; Klimke, L.; Oestreich, A. I Thought It was Over, but Now It is Back: Customer Reactions to *ex post* Time Extensions of Sales Promotions. *J. Acad. Mark. Sci.* **2018**, *46*, 1133–1147. [\[CrossRef\]](#)
2. Kim, J.Y.; Natter, M.; Spann, M. Sampling. Discounts or Pay-What-You-Want: Two Field Experiments. *Int. J. Res. Mark.* **2014**, *31*, 327–334. [\[CrossRef\]](#)
3. Simonson, I.; Carmon, Z.; O’Curry, S. Experimental Evidence on the Negative Effect of Product Features and Sales Promotions on Brand Choice. *Mark. Sci.* **1994**, *13*, 23–40. [\[CrossRef\]](#)
4. Boonlertvanich, K. Relationship between Sales Promotions, Duration of Receiving Reward and Customer Preference: A Case Study on Financial Product. *J. Acad. Bus. Econ.* **2010**, *10*, 53–64.
5. Ailawadi, K.L.; Harlam, B.; César, J.; Trounce, D. Promotion Profitability for a Retailer: The Role of Promotion, Brand, Category, and Store Characteristics. *J. Mark. Res.* **2006**, *43*, 518–535. [\[CrossRef\]](#)
6. Shen, Y.; Chi, C.; Chen, J. A New Perspective on the Effects of Price Promotions in Taiwan: A Longitudinal Study of a Chinese Society. *Int. J. Consum. Stud.* **2007**, *31*, 385–390. [\[CrossRef\]](#)
7. Jones, J.P. The Double Jeopardy of Sales Promotions. *Harv. Bus. Rev.* **1990**, *68*, 145–152.
8. Kang, J.; Tang, L.; Fiore, A.M. Restaurant Brand Pages on Facebook: Do Active Member Participation and Monetary Sales Promotions Matter? *Int. J. Contemp. Hosp. Manag.* **2015**, *27*, 1662–1684. [\[CrossRef\]](#)
9. Swait, J.; Erdem, T. The Effects of Temporal Consistency of Sales Promotions and Availability on Consumer Choice Behavior. *J. Mark. Res.* **2002**, *39*, 304–320. [\[CrossRef\]](#)
10. Yi, Y.; Yoo, J. The Long-term Effects of Sales Promotions on Brand Attitude across Monetary and Non-monetary Promotions. *Psychol. Mark.* **2011**, *28*, 879–896. [\[CrossRef\]](#)

11. DelVecchio, D.; Henard, D.H.; Freling, T.H. The Effect of Sales Promotion on Post-Promotion Brand Preference: A Meta-analysis. *J. Retail.* **2006**, *82*, 203–213. [\[CrossRef\]](#)
12. Garretson, J.A.; Fisher, D.; Burton, S. Antecedents of Private Label Attitude and National Brand Promotion Attitude: Similarities and Differences. *J. Retail.* **2002**, *78*, 91–99. [\[CrossRef\]](#)
13. Gao, L.; Waechter, K.A.; Bai, X. Understanding Consumers' Continuance Intention toward Mobile Purchase: A Theoretical Framework and Empirical Study: A Case of China. *Comput. Hum. Behav.* **2015**, *53*, 249–262. [\[CrossRef\]](#)
14. Hsiao, K.; Chen, C. What Drives Smartwatch Purchase Intention? Perspectives from Hardware, Software, Design, and Value. *Telemat. Inform.* **2018**, *35*, 103–113. [\[CrossRef\]](#)
15. Adjei, M.T.; Noble, S.M.; Noble, C.H. The Influence of C2C Communications in Online Brand Communities on Customer Purchase Behavior. *J. Acad. Mark. Sci.* **2010**, *38*, 634–653. [\[CrossRef\]](#)
16. Motyka, S.; Grewal, D.; Aguirre, E.; Mahr, D.; Ruyter, K.; Wetzels, M. The Emotional Review-reward Effect: How Do Reviews Increase Impulsivity? *J. Acad. Mark. Sci.* **2018**, *46*, 1032–1051. [\[CrossRef\]](#)
17. Duan, W.; Gu, B.; Whinston, A.B. Do Online Reviews Matter? An Empirical Investigation of Panel Data. *Decis. Support Syst.* **2008**, *45*, 1007–1016. [\[CrossRef\]](#)
18. Ellison, G.; Fudenberg, D. Word-of-Mouth Communication and Social Learning. *Q. J. Econ.* **1995**, *110*, 93–125. [\[CrossRef\]](#)
19. Kahn, B.E.; Louie, T.A. Effects of Retraction of Price Promotions on Brand Choice Behavior for Variety-seeking and Last-purchase-loyal Customers. *J. Mark. Res.* **1990**, *27*, 279–289. [\[CrossRef\]](#)
20. Park, C.; Lee, T.M. Antecedents of Online Reviews' Usage and Purchase Influence: An Empirical Comparisons of U.S. and Korean Consumers. *J. Interact. Mark.* **2009**, *23*, 332–340. [\[CrossRef\]](#)
21. Andrews, M.; Goehring, J.; Hui, S.; Pancras, J.; Thornswood, L. Mobile Promotions: A Framework and Research Priorities. *J. Interact. Mark.* **2016**, *34*, 15–24. [\[CrossRef\]](#)
22. Keller, K.L. *Strategic Brand Management: Building, Measuring, and Managing Brand Equity*; Prentice Hall: Upper Saddle River, NJ, USA, 1998.
23. Dolbec, P.; Chebat, J. The Impact of a Flagship vs. a Brand Store on Brand Attitude, Brand Attachment and Brand Equity. *J. Retail.* **2013**, *89*, 460–466. [\[CrossRef\]](#)
24. Petruzzellis, L. Mobile Phone Choice: Technology versus Marketing: The Brand Effect in the Italian Market. *Eur. J. Mark.* **2010**, *44*, 610–634. [\[CrossRef\]](#)
25. Hsiao, C.; Chang, J.; Tang, K. Exploring the Influential Factors in Continuance Usage of Mobile Social Apps: Satisfaction, Habit, and Customer Value Perspectives. *Telemat. Inform.* **2016**, *33*, 342–355. [\[CrossRef\]](#)
26. Oliver, R.L. *Satisfaction: A Behavioral Perspective on the Consumer*; McGraw-Hill: Boston, MA, USA, 1997.
27. Sweeney, J.C.; Soutar, G.N. Consumer Perceived Value: The Development of a Multiple Item Scale. *J. Retail.* **2001**, *77*, 203–220. [\[CrossRef\]](#)
28. Weigel, M.; Lu, T.; Bailly, G.; Oulasvirta, A.; Majidi, C.; Steimie, J. iSkin: Flexible, Stretchable and Visually Customizable On-body Touch Sensors for Mobile Computing. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems, Seoul, Korea, 18–23 April 2015; pp. 2991–3000.
29. Fang, J.; Zhao, Z.; Wen, C.; Wang, R. Design and Performance Attributes Driving Mobile Travel Application Engagement. *Int. J. Inf. Manag.* **2017**, *37*, 269–283. [\[CrossRef\]](#)
30. Zhu, F.; Zhang, X. Impact of Online Consumer Reviews on Sales: The Moderating Role of Product and Consumer Characteristics. *J. Mark.* **2010**, *74*, 133–148. [\[CrossRef\]](#)
31. Reimer, T.; Benkenstein, M. When Good WOM Hurts and Bad WOM Gains: The Effect of Untrustworthy Online Reviews. *J. Bus. Res.* **2016**, *69*, 5993–6001. [\[CrossRef\]](#)
32. Li, C.; Bernoff, J. *Groundswell*; Harvard Business School: Boston, MA, USA, 2008.
33. Jiménez, F.R.; Mendoza, N.A. Too Popular to Ignore: The Influence of Online Reviewers on Purchase Intentions of Search and Experience Products. *J. Interact. Mark.* **2013**, *27*, 226–235. [\[CrossRef\]](#)
34. Kowatsch, T. The Role of Product Reviews on Mobile Devices for In-store Purchases: Consumers' Usage Intentions, Costs and Store Preferences. *Int. J. Internet Mark. Advert.* **2011**, *6*, 226–243. [\[CrossRef\]](#)
35. Liang, T.; Li, X.; Yang, C.; Wang, M. What in Consumer Reviews Affects the Sales of Mobile Apps: A Multifacet Sentiment Analysis Approach. *Int. J. Electron. Commer.* **2015**, *20*, 236–260. [\[CrossRef\]](#)
36. Hui, S.K.; Inman, J.J.; Huang, Y.; Suher, J. The Effect of In-store Travel Distance on Unplanned Spending: Applications to Mobile Promotion Strategies. *J. Mark.* **2013**, *77*, 1–16. [\[CrossRef\]](#)
37. Feng, X.; Fu, S.; Qin, J. Determinants of Consumers' Attitudes toward Mobile Advertising: The Mediating Roles of Intrinsic and Extrinsic Motivations. *Comput. Hum. Behav.* **2016**, *63*, 334–341. [\[CrossRef\]](#)
38. Kwok, S.; Uncles, M. Sales Promotion Effectiveness: The Impact of Consumer Differences at an Ethnic-group Level. *J. Prod. Brand Manag.* **2005**, *14*, 170–186. [\[CrossRef\]](#)
39. Huang, H.H.; Chang, Y.; Yeh, C.; Liao, C. Promote the Price Promotion: The Effects of Price Promotions on Customer Evaluations in Coffee Chain Stores. *Int. J. Contemp. Hosp. Manag.* **2014**, *26*, 1065–1082. [\[CrossRef\]](#)
40. Campo, S.; Yagüe, M.J. Tourist Loyalty to Tour Operator: Effects of Price Promotions and Tourist Effort. *J. Travel Res.* **2008**, *46*, 318–326. [\[CrossRef\]](#)

41. Villarejo-Ramos, A.F.; Sánchez-Franco, M.J. The Impact of Marketing Communication and Price Promotion on Brand Equity. *J. Brand Manag.* **2005**, *12*, 431–444. [[CrossRef](#)]
42. Chow, K.E.; Garretson, J.A.; Kurtz, D.L. An Exploratory Study into the Purchase Decision Process used by Leisure Travelers in Hotel Selection. *J. Hosp. Leis. Mark.* **1995**, *2*, 53–72. [[CrossRef](#)]
43. Ho-Dac, N.N.; Carson, S.T.; Moore, W.L. The Effects of Positive and Negative Online Customer Reviews: Do Brand Strength and Category Maturity Matter? *J. Mark.* **2013**, *77*, 37–53. [[CrossRef](#)]
44. Lee, T.Y.; Bradlow, E.T. Automated Marketing Research Using Online Customer Reviews. *J. Mark. Res.* **2011**, *48*, 881–894. [[CrossRef](#)]
45. Zhang, L.; Ma, B.; Cartwright, D.K. The Impact of Online User Reviews on Cameras Sales. *Eur. J. Mark.* **2013**, *47*, 1115–1128. [[CrossRef](#)]
46. Raghurir, P.; Corfman, K. When Do Price Promotions Affect Pretrial Brand Attitudes? *J. Mark. Res.* **1999**, *36*, 211–222. [[CrossRef](#)]
47. Yong, L.T. User Experience Evaluation Methods for Mobile Device. In Proceedings of the Third International Conference on Innovation Computing Technology, London, UK, 29–31 August 2013; pp. 281–286.
48. Lu, Y.; Zhang, L.; Wang, B. A Multidimensional and Hierarchical Model of Mobile Service Quality. *Electron. Commer. Res. Appl.* **2009**, *8*, 228–240. [[CrossRef](#)]
49. Filieri, R.; McLeay, F. E-WOM and Accommodation: An Analysis of the Factors that Influence Travelers' Adoption of Information from Online Reviews. *J. Travel Res.* **2013**, *53*, 44–57. [[CrossRef](#)]
50. Honea, H.; Dahl, D.W. The Promotion Affect Scale: Defining the Affective Dimensions of Promotion. *J. Bus. Res.* **2005**, *58*, 543–551. [[CrossRef](#)]
51. Kaman, L. Gender Differences in Hong Kong Adolescent Consumers' Green Purchasing Behavior. *J. Consum. Mark.* **2009**, *26*, 87–96.
52. Thompson, B. *Exploratory and Confirmatory Factor Analysis: Understanding Concepts and Applications*; American Psychological Association: Washington, DC, USA, 2004.
53. Fornell, C.; Larcker, D.F. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *J. Mark. Res.* **1981**, *18*, 39–50. [[CrossRef](#)]
54. Edwards, J.R.; Lambert, L.S. Methods for Integrating Moderation and Mediation: A General Analytical Framework Using Moderated Path Analysis. *Psychol. Methods* **2007**, *12*, 1–22. [[CrossRef](#)]
55. Mackinnon, D.P.; Lockwood, C.M.; Hoffman, J.M.; West, S.G.; Sheets, V. A Comparison of Methods to Test Mediation and Other Intervening Variable Effects. *Psychol. Methods* **2002**, *7*, 83–104. [[CrossRef](#)] [[PubMed](#)]
56. Haugtvedt, C.P.; Petty, R.E. Personality and Persuasion: Need for Cognition Moderates the Persistence and Resistance of Attitudes Changes. *J. Personal. Soc. Psychol.* **1992**, *63*, 308–319. [[CrossRef](#)]
57. Jones, J.M. An Exploratory Study on Attitude Persistence Using Sales Promotion. *J. Manag. Issues* **2008**, *20*, 401–416.
58. Aaker, D.A. *Building Strong Brands*; The Free Press: New York, NY, USA, 1996.
59. Filieri, R. What Makes Online Reviews Helpful? A Diagnosticity-Adoption Framework to Explain Informational and Normative Influences in e-WOM. *J. Bus. Res.* **2015**, *68*, 1261–1270. [[CrossRef](#)]
60. Huang, G.; Korfiatis, N. Trying before Buying: The Moderating Role of Online Reviews in Trial Attitude Formation toward Mobile Applications. *Int. J. Electron. Commer.* **2015**, *19*, 77–111. [[CrossRef](#)]
61. Chun, H.; Leem, B. Analysis to Customer Churn Provoker's Roles Using Call Network of a Telecom Company. *Korean J. Appl. Stat.* **2013**, *26*, 23–36. [[CrossRef](#)]
62. Coyles, S.; Gokey, T.C. Customer Retention is not enough: Defecting Customers are far less of a Problem than Customers Who Change Their Buying Patterns. *Mckinsey Q.* **2002**, *1*, 81–90.
63. Waldeck, Y. Market Share of Mobile Phone Service Providers in South Korea 2019. *Statista* **2020**. Available online: <https://www.statista.com/statistics/700467/south-korea-mobile-phone-market-share/> (accessed on 16 December 2020).