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Effects of Cause-Related Marketing on Online Participation and Expenditure

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Abstract

A cause-related marketing strategy involves donating a portion of the profits generated by a customer's transaction to a predefined non-profit organization. Companies with numerous points of contact with their customers have linked CRM directly to their product sales because it is beneficial to them. Recently, social media has made it easier for consumers to participate in CRM campaigns without having to purchase products. This study examines whether CRM campaigns have a significant effect on customer participation and spending even if they are not directly related to product sales, which has not been investigated previously. Data was gathered from the panel of a Korean cosmetic company, as well as from the purchase histories of these customers, their usage of mobile apps, their online shopping behavior, and their demographic profiles. A total of 78 weeks of data were used from January 2020 to June 2021. To account for self-selection bias, a propensity score is calculated, followed by difference-in-difference estimation in order to estimate the campaign's impact. The analysis found a significant increase in both online participation and purchase activity, which supports the research hypothesis. Furthermore, customer characteristics were taken into account when analyzing the heterogeneity of campaign effects. Throughout the study, it was found that customers with longer membership

periods responded more positively to the campaign. In the present environment of corporate social responsibility, the study suggests that companies may conduct cause-related marketing campaigns that are not directly related to product sales, and it is anticipated that a variety of corporate activities will emerge in the future.

Table of Contents

Table

Figure

    3.1. Mobile application activity
    3.2. Online channel activity
    3.3. Expenditure

Chapter 1. Introduction

1.1. Study Background

"The only social responsibility of business is to increase profits." – Milton Friedman (1970). 6%. About 40 years later, according to Cone Communication's survey (2011), only 6% of global consumers in 10 countries agreed with Friedman's argument. Most of them (81%) answered that corporations should have a major role in society. Two-thirds of US consumers also responded that brands should take a stand on social and political issues (Sprout Social 2017). In light of this, corporate social responsibility (CSR) has become an increasingly significant issue.

In order to respond to this trend, companies should expand beyond their traditional role which is maximizing shareholder profits. Now it is imperative for companies to take responsibility for society and the environment, as well as contribute to sustainable development in collaboration with all stakeholders. Therefore, cause-related marketing has been in the spotlight as a countermeasure.

Cause-related marketing (CRM) is a form of marketing strategy in which a company provides a certain amount to a designated cause when customers engage in transactions that solve social problems (Varadarajan and Menon 1988). It can create a

win-win-win solution for profit organizations by increasing sales (Arora and Henderson 2007; Buell and Kalkanci 2021), non-profit organizations by increasing awareness of the cause and the number of donors (Now and Clarke 2003; Polonsky and Wood 2001), and consumers by fulfilling their need for helping others and warmth (Koschate-Fischer, Stefan and Hoyer 2012; Andrews et al. 2014).

The first CRM case was American Express' 1983 campaign to restore the Statue of Liberty. During the campaign, a cent was donated for every card spent and a dollar was donated for every new account opened. A total of $1.7 million was raised, and the use of credit cards increased by 27 percent (Varadarajan and Menon 1988). Since then, CRM has grown exponentially. According to the IEG Sponsorship Report 2020, corporate spending on CRM has increased from $0.82 billion in 2002 to $2.23 billion in 2019 (see Figure 1).
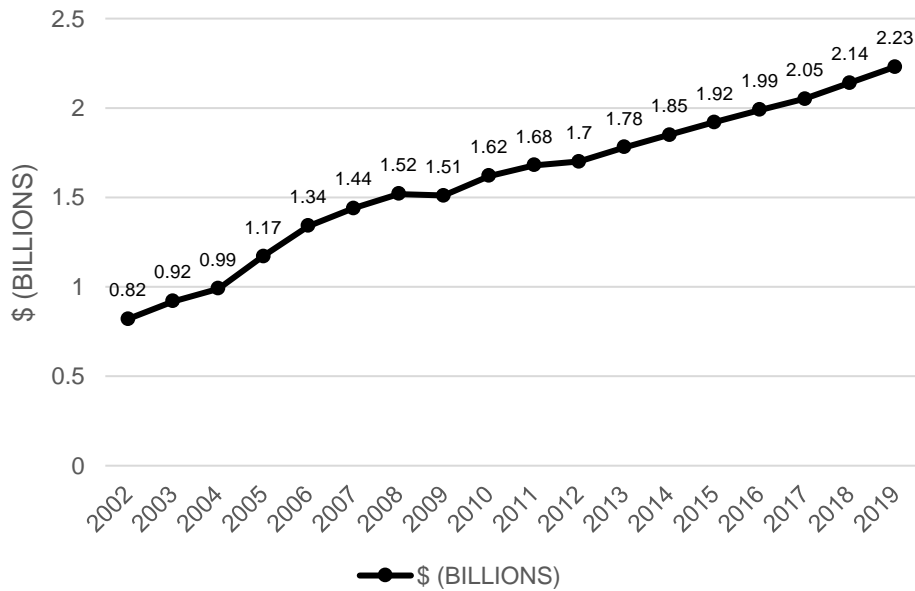
Figure 1. Annual corporate expenditure on CRM from 2002 to 2019

(IEG 2020)

CRM campaigns can be conducted in various ways, but are perceived as particularly advantageous for companies that sell products with broad mass market appeal, a large customer base, and a variety of distribution channels (Kotler, Hessekiel and Lee 2012). Therefore, It is common for them to directly link their product sales to CRM campaigns in practice. When a product is sold, a portion or a certain amount of the proceeds is donated to a cause that has been specifically identified. Avon, for example, has contributed over $800 million since 1992 to help breast cancer patients through its "Pink Ribbon" products. A further example is '(PRODUCT) RED,' which is a collaboration between several companies to support HIV/AIDS-affected communities. Through

the sale of (PRODUCT) RED devices and accessories, Apple has raised more than \$270 million since 2006. CRM, however, has also undergone a significant change as a result of the spread of social media. It is no longer necessary for consumers to participate in campaigns by making purchases – they are able to engage online instead. Through its 'Million Dog Mosaic' campaign in 2008, for example, Pedigree promised to donate \$1 for every photo posted on a website. This resulted in more than 2,000 bloggers sharing it on their blogs, and more than 50,000 photos were collected. In 2010, Pedigree launched a 'Become a Fan, Help a Dog' campaign, with singer and animal lover Carrie Underwood. The campaign offered to donate a bowl of dog food whenever people clicked the 'like' button on the Facebook page. A total of more than one million people responded, and within a year, the number of Facebook fans had grown to 1.2 million, which was record−breaking (Kotler et al. 2012). In South Korea, a similar trend is observed. Hera, a domestic cosmetic brand, releases a 'pink ribbon limited edition' every year and donates a portion of the proceeds to the Korea Breast Cancer Foundation. For Earth Day, Timberland donated its products to the domestic foundation 'Beautiful Store' for a specific period (April 20 to 24, 2022) in proportion to the number of eco−friendly shoes sold with the 'Earth Day Donation Campaign' sticker in offline and online stores. Additionally, CRM campaigns that are not directly associated with sales have become

increasingly prevalent. One of the most rapidly growing campaigns is the 'walk and donate' campaign. Using vibration sensors on smartphones, it counts the number of steps of participants and turns them into donations. Recently, a mobile platform that specializes in step donation campaigns was introduced, and dozens of campaigns have been commissioned on these platforms. Jang Tae-Won, CEO of mobile platform 'Big Walk' said "walking is highly accessible and can be measured accurately with current sensor technology (Oh 2020)." The CRM campaign examined in this study takes the form of a step donation, which is being conducted using the mobile loyalty application of a large multinational cosmetics company. The goal of the program was to increase customer engagement and monthly active users (MAUs) of the app. Consumers can participate in the campaign by downloading the app and agreeing to the terms, and when they walk with their smartphone, the app automatically measures their steps. Upon reaching the number of steps set in advance by combining everyone's steps, donations are made to the cause designated in advance (a foundation that primarily helps animals was chosen as the beneficiary). It raised approximately 2 billion Korean won in nine months, from 20,000 participants in the first campaign in September 2020 to 90,000 participants in the ninth campaign in June 2021. It is widely considered one of the most successful step donation campaigns in Korea, which started with

2.14 billion steps in the 1st campaign and grew to 11.14 billion steps in the 9th campaign.

1.2. Purpose of Research

The purpose of my research is to evaluate the effectiveness of the 'walk and donate' campaigns and determine which characteristics of customers influence the success of the campaigns. Despite the rapid growth and spread of a novel form of CRM, there remains a significant gap as to how participation in campaigns not directly related to sales impacts online participation and customer expenditures. We have seen in the previous case that measuring the effectiveness of the campaign strictly is critical since an organization can never underestimate the value of a donation. Therefore, this study offers several worthwhile contributions for companies by analyzing (1) whether campaign execution increases customer engagement which was the initial goal, (2) whether a campaign that is not directly linked to sales has a spillover effect on expenditures, and (3) customer characteristics affecting CRM effectiveness, which can be used for planning marketing strategy. This study can be summarized as follows. A discussion of previous CRM research is presented in Chapter 2. In Chapter 3, a hypothesis is presented and theoretical support is provided for the study. A description of the empirical setting and methodology (e.g., PSM and DID) is presented in Chapter 4, followed by a description of the

results obtained by applying the method described above to actual data in Chapter 5. Chapter 6 explores heterogeneity, and chapter 7 discusses implications and limitations.

Chapter 2. Related Literature

This study investigates the effects of CRM on online participation and expenditures, as well as their heterogeneity among customers. In addition, several related studies have been conducted, but all take place in the context of donations made when a product is purchased. Most of the articles discuss how CRM affects consumer behavior and what motivates people to engage in CRM.

2.1. Effects of Cause-Related Marketing

As a first benefit of CRM, it significantly enhances consumer purchases. The use of CRM can increase sales and alter perceptions of a brand, especially for lesser known brands, which can be further enhanced through customization (Arora and Henderson 2007). According to Andrews et al. (2014), CRM increases consumer purchases significantly, and the impact of CRM on purchases is likely to follow an inverted U-shaped relationship if price discounts are offered. Additionally, transparency in external responsibility initiatives (e.g., CRM) may also motivate consumer purchases,

since consumers take into account a company's responsibility efforts when making a purchase decision (Buell and Kalkanci 2021).

Consumer utility is also affected by CRM. Krishna and Rajan (2009) demonstrate that CRM increases a consumer's utility for a product that is directly linked to a cause (direct benefit), and for products that the company offers indirectly (indirect benefit). Additionally, if there is a combination of promotional discounts and charitable donations, the demand for the underlying product of CRM campaigns can be reduced (Dube et al. 2017).

2.2. Key Moderators

CRM has been found to be moderated by the following factors in many studies. Several articles have examined the relationship between brand and cause. According to Kuo and Rice (2015), perception of fit and participation intentions are positively influenced by perceived congruence between a firm and its cause (e.g., pink lemonade and breast cancer). There is also a possibility of decomposing brand-cause fit into two macro-fits (i.e., prominence fit and marketing strategy fit), which both have a significant effect on attitudes toward the brand and sponsorship (Zdravkovic, Magnusson, and Stanley, 2010).

A further factor noted by the authors Is the type of product. In CRM, one-for-one promotion, also known as BOGO (Buy One, Give One), involves donating a product for every product sold. This

enhances purchase intentions for utilitarian products, but undermines purchase intentions for hedonic products, according to Dugan, Clarkson and Beck (2021). In Zemack-Rugar et al. (2016), the addition of charitable donations to hedonic (versus utilitarian) products significantly increases their appeal, especially among individuals with heightened guilt-sensitivity, alleviating consumption guilt and increasing preferences and choices for hedonic products.

Chapter 3. Hypothesis Development

Consumer engagement refers to consumers participating in a company's 'interactive and co-creative experiences' (Brodie et al. 2011). According to Calder et al. (2009), customer engagement refers to customers' experiences and beliefs regarding the fit between an online site and their lives. In a study by Kuo and Rice (2015), it was found that CRM can significantly increase participation intentions when fit type is perceived. As a result of outstanding customer service, emotional connection, and shared identity facilitated by CRM, consumers are more likely to participate in marketing campaigns, which results in a heightened level of consumer engagement (Singh and Pathak 2020). Accordingly, I propose the following hypothesis.

Hypothesis 1. Online participation will increase as a result of a CRM campaign.

CRM campaigns have a significant impact on both the consumer's purchase decision and the utility of the product. Consumers are motivated to purchase more when companies spend an additional portion of profits to support their community, which supports that they consider corporate responsibility efforts in decision making (Buell and Kalkanci 2021). Additionally, CRM can lead to consumers in the treatment group purchasing 2 times more than those in the control group when $5 is donated to a charity per movie ticket sold (Andrews et al. 2014). Krishna and Rajan (2009) examined the spillover effect of CRM among two firms competing in each of two products in the context of a duopoly model where two firms compete in both products. They concluded that CRM influences both the products directly related to a cause and the products offered by the firm as a whole. Therefore, I propose the following hypothesis.

Hypothesis 2. Customer expenditure will increase as a result of a CRM campaign.

Chapter 4. Empirical Setting and Methodology

4.1. Data Description

In this study, data sets from a multinational cosmetic company that serves millions of customers are analyzed. The firm has a multi-channel distribution network that encompasses both online and offline distribution channels. Additionally, it offers a mobile loyalty application for point redemption and promotions, as well as an online mall to provide information and sell its products. The empirical data set consists of individual consumer panel data on purchases, mobile app activities, online mall activities, and demographic profiles from January 2020 through June 2021 (78 weeks).

The data is treated as 1 if an activity log was recorded on the mobile app or online mall, or as 0 otherwise. A customer's revenue is calculated on a weekly basis and represents the total amount of cosmetics purchased by the customer during a given week. Following is a summary of the descriptive statistics of each variable without logging (Table 1).

Variables (without log)	Mean	Variance	Standard deviation	Skewness	Kurtosis
App activity	0.674	3.987	1.997	4.643	24.945
Online mall	0.286	0.759	0.871	3.829	17.915

activity					
Expenditure	6478.676	1854972417	43069.391	20.911	821.283

Table 1. Descriptive statistics of variable without logging

For expenditures, the variance was too high, so a histogram was also drawn in order to examine the distribution. There were 1,706 outliers that bought more than 300,000 won per week, and the distribution of the histogram showed a long tail. Log is typically applied in this case for analysis, so in this study, expenditures are analyzed using log $(\ln(Expenditure_{it}+1))$.
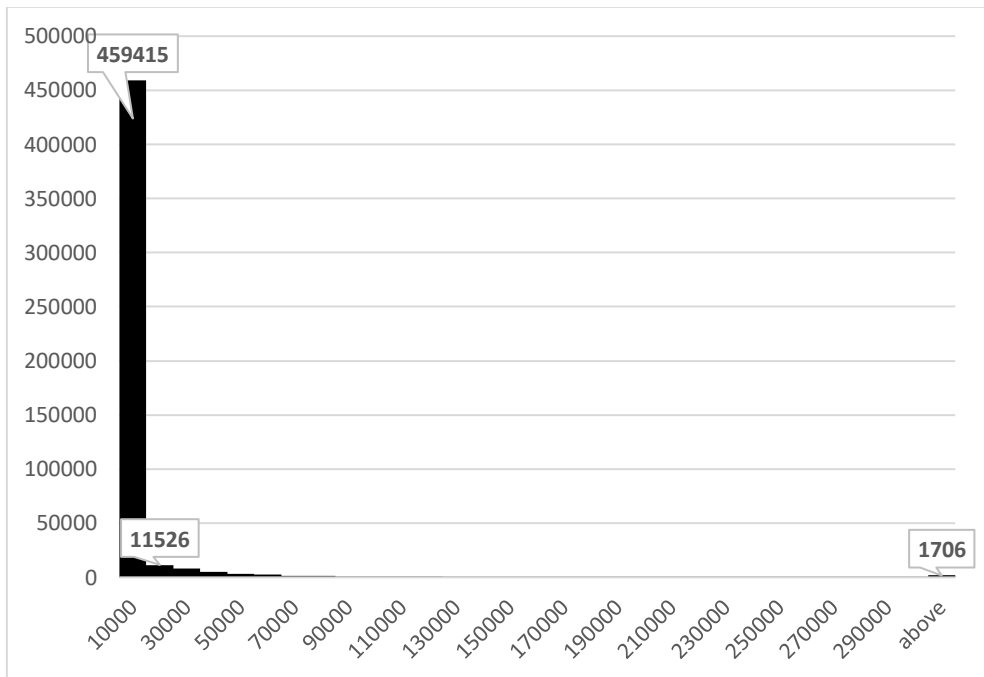

Figure 2. Long−tail distribution of expenditure without logging

Sample pool refers to individuals who have accessed the loyalty app at least once between September 16th 2020 and December 31st 2020. This is for the period of the first to third CRM campaigns offered by the company. Therefore, those who were able to participate in the CRM campaign within the same time period are included in the sample pool (11,144 customers). The treatment group consists of those customers who participated in the campaign within the same period as the sample (4,059 customers), while the control group consists of those customers who did not engage in the campaign until the end of June 2021 (7,085 customers).

	Sample pool (11,144)	Treatment group (4,059)	Control group (7,085)
Sex	Female: 10,705 Male: 439	Female: 3,911 Male: 148	Female: 6,794 Male: 291
Age (average)	37.38	36.39	37.95
DM	Yes: 5,756 No: 5,388 Receive rate: 51.65%	Yes: 2,060 No: 1,999 Receive rate: 50.75%	Yes: 3,696 No: 3,389 Receive rate: 52.17%

SMS	Yes: 9,532 No: 1,612 Receive rate: 85.53%	Yes: 3,410 No: 649 Receive rate: 84.01%	Yes: 6,122 No: 963 Receive rate: 86.41%
EMAIL	Yes: 5,508 No: 5,635 Receive rate: 49.43%	Yes: 1,985 No: 2,074 Receive rate: 48.90%	Yes: 3,523 No: 3,562 Receive rate: 49.72%
Nationality	Korean: 11,082 Foreign: 62	Korean: 4,033 Foreign: 26	Korean: 7,049 Foreign: 36
Membership grades	Yes: 2,247 No: 8,897 Rate: 20.16%	Yes: 671 No: 3,388 Rate: 16.53%	Yes: 1.576 No: 5,509 Rate: 22.24%

Table 2. Demographic statistics

4.2. Propensity Score Matching

Since the data were not gathered from a controlled field experiment, the estimate of CRM campaign participation may be biased as a result of potential self－selection. The propensity score matching is used to address this problem. Statistically, propensity

score matching (PSM) is a technique used to match treatment and control groups by calculating the propensity score that reflects the influence of the covariates (Rosenbaum and Rubin 1983). In order to analyze the effectiveness of PSM, demographic variables are taken into account (e.g., sex, age, agreement to receive DM/SMS/e-mail, nationality, customer membership grade) as well as three additional variables (e.g., mobile app activities, online mall activities, expenditures).

After PSM, there are 3,813, 3,985, 4,047 pairs of customers remaining to examine the effect of CRM campaigns on mobile app activities, online mall activities, and expenditures. A parallel trend assumption is then examined to determine whether it is satisfied.

	Mean difference		Standardized difference	
	All	Matched	All	Matched
Sex	-0.0046	0.0016	-0.0239	0.0082
Age	-1.5618	0.2672	-0.1600	0.0274
DM	0.0142	-0.0131	0.0283	-0.0262
SMS	0.0240	-0.0176	0.0676	-0.0495
EMAIL	0.0082	-0.0171	0.0164	-0.0341
Nationality	0.0013	-0.0011	0.0175	-0.0139

Membership grades	0.0571	-0.0021	0.1449	-0.0053
Propensity score	0.2706	0.0169	0.4652	0.0290

Table 3. Standardized mean differences after PSM (treatment - control)

$$Outcome_{i,t} = \gamma_0 + \gamma_1 Treatment_i + \beta_\tau \sum_{\tau=-37}^{-2} 1[t=\tau] + \beta_\tau \sum_{\tau=0}^{24} 1[t=\tau]$$
$$+ Treatment_i \times \sum_{\tau=-37}^{-2} \alpha_\tau \cdot 1[t=\tau]$$
$$+ Treatment_i \times \sum_{\tau=0}^{24} \alpha_\tau 1[t=\tau] + \varepsilon_{i,t} \qquad (1)$$

In this study, the pre-treatment period extends from week 1 to week 37. Assume that week 37 is the baseline period. The beta values from week 1 to week 36 (tau values from −36 to −1), which represent changes from the baseline period, are analyzed. In order to satisfy the parallel trend assumption, the alpha values during the pre-treatment period in the equation (i.e., when tau ranges between −36 and −1) should be statistically insignificant. Therefore, 0 must be included in the confidence interval (95% in this study). Below is a graph that illustrates how this is implemented visually (see figure 3).

16

It Is evident that all 0s are within the confidence Interval for all periods of pre-treatment, indicating a parallel trend is observed. As a result, it was verified that PSM matching proceeded well, followed by difference-in-difference estimation of the hypothesis.
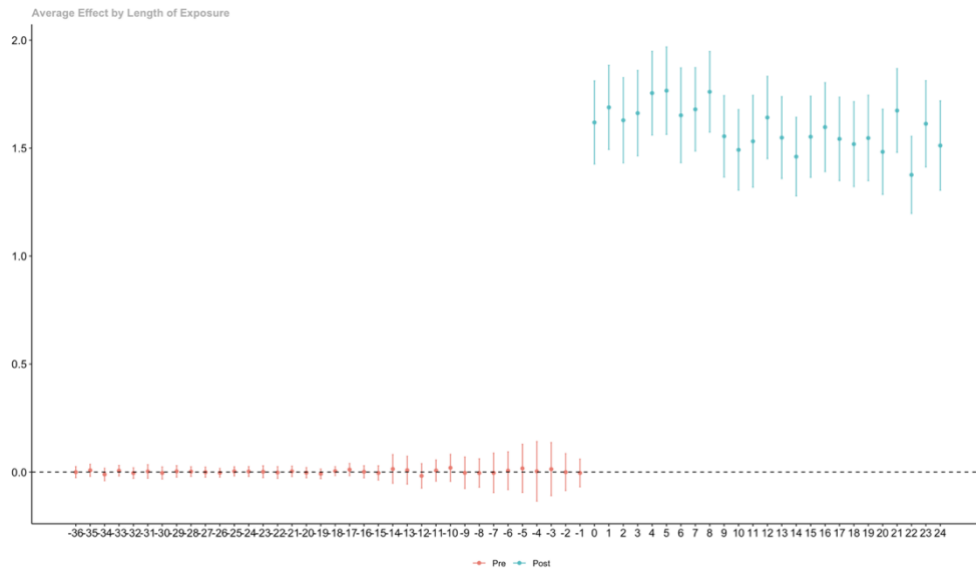

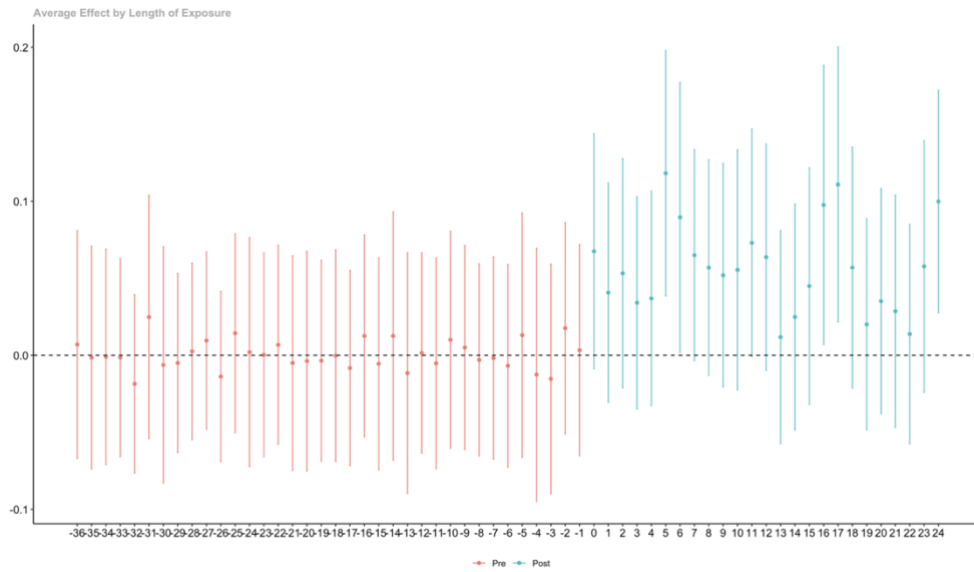Figure 3.1. Pre-treatment parallel trend assumption (mobile app activity)

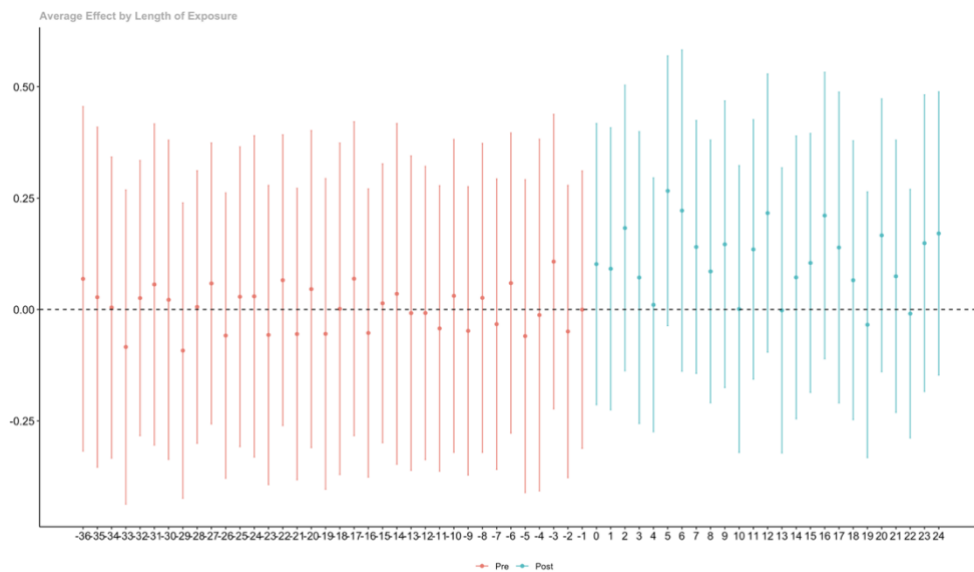Figure 3.2. Pre-treatment parallel trend assumption (online mall activity)

Figure 3.1. Pre-treatment parallel trend assumption (expenditure)

4.3. Difference-in-Difference Estimation

Based on the DID estimation, the following model is used to infer causal effects of CRM. This model measures how different trends change between treatment and control groups before and after treatment.

$$Y_{it} = \beta_0 + \beta_1 Treatment_i + \beta_2 PrePost_t + \beta_3 (Treatment_i \times PrePost_t) + u_{it} \quad (2)$$

Where i denotes the customer i, and t denotes the week t. Y_{it} is the dependent variable (i.e., mobile app activity, online mall activity, expenditure). $Treatment_i$ is time dummy variable that equals 1 if the customer belongs to the treatment group, 0 control group. $PrePost_t$ is treatment dummy variable that equals 1 if post-treatment, 0 pre-treatment. β_3, DID estimator, captures the effects of participation in the campaign on each dependent variable.

Chapter 5. Results

5.1. Main Results

Variables	Parameter estimates	Standard error	Adjusted R-square	Number of observations	Number of users
Mobile app	1.639***	0.011	0.163	472,812	7,626

activity	(t = 151.27)				
Online mall activity	0.062*** (t = 12.17)	0.005	0.001	494,140	7,970
Log expenditure	0.116*** (t = 6.11)	0.019	0.002	501,828	8,094

Table 4. Effects of CRM on online participation and expenditure

$(***p < 0.01)$

Based on the baseline matching technique, Table 4 presents the estimation results for model (2) using a sample based on one−to−one matching without replacement. Based on beta3 estimates, mobile app activities and online mall activities have increased by 1.6 times and 0.1 times, respectively. A further increase of 11.58% was observed in expenditures. Consequently, the main results support hypotheses 1 and 2 (p < 0.01). According to these results, consumers are more likely to visit the mobile app and online mall after participating in the CRM campaign as well as spend more money as a result.

The campaign is successful in increasing user activity, which is the original goal of the campaign. Therefore, the effectiveness of the CRM campaign has been demonstrated. It is noteworthy that the effect extended to online mall visits and purchase behavior. In spite

of the fact that the effect was small when compared with app activity, it was a significant result, suggesting that CRM had a significant impact at the brand level.

The effect was small when compared with app activity, however, it was a significant result, suggesting CRM had a significant impact at the brand level. Even so, it is imperative to interpret the causal relationship between CRM campaign participation and changes in customer behavior with caution. Due to the fact that each customer's participation in the campaign was not exogenously assigned, selection biases associated with unobservable characteristics cannot be completely excluded.

5.2. Robustness Checks

Due to the use of observational data in the empirical analysis, whereby customers were not randomly assigned to either the control or treatment groups, it is possible that the decision to participate in the CRM campaign may be influenced by both observable and unobservable differences between the two groups. Therefore, I conduct a series of robustness checks to ensure that the main results are consistent. As a first step, I consider additional observable differences that might influence the outcome of the CRM campaign. Specifically, I employ alternative PSM specifications, include additional variables in the matching procedure, and use a

coarsened exact matching method. Throughout the series of robustness tests, the results have remained consistent.

	Original (caliper=0.2)	Without matching	PSM with caliper=0.1	PSM with caliper=0.25	CEM
Mobile app activity	1.6389 *** (t = 151.27)	1.7250 *** (t = 193.91)	1.6318 *** (t = 148.83)	1.6462 *** (t = 150.68)	1.4988 *** (t = 128.53)
Online mall activity	0.0615 *** (t = 12.17)	0.0341 *** (t = 8.11)	0.0607 *** (t = 12.14)	0.0586 *** (t = 11.66)	0.0292 *** (t = 12.58)
Log expenditure	0.1158 *** (t = 6.11)	0.0923 *** (t = 5.48)	0.1173 *** (t = 6.19)	0.1177 *** (t = 6.21)	0.1373 *** (t = 3.40)

Table 5. Robustness checks ($***p < 0.01$)

Chapter 6. Heterogeneity

In this chapter, I examine heterogeneity based on customer characteristics. The length of membership is used as a heterogeneous variable in this study. The reason for this is that consumers' length of membership can have an impact on their interests, the benefits that they seek, and the actions they take towards other community participants as well as brands (Alon and Brunel 2007; Langerak et al. 2004).

Depending on the date on which the customer joined the membership, customers are categorized as new or old members. This estimation model is modified by adding a dummy variable that is 1 when the value is greater than the median value (median=2010/Jul/18) or 0 if it is less than the median.

$$Y_{it} = \gamma_0 + \gamma_1 Treatment_i + \gamma_2 PrePost_t + \gamma_3(Treatment_i \times PrePost_t) + \gamma_4(Treatment_i \times PrePost_t \times MembershipLength) + v_{it} \tag{3}$$

In this case, γ_3 represents the treatment effect of treatment group customers who are "lower than median" in comparison with control group customers who are "lower than median", and $\gamma_3 + \gamma_6$ indicates that TG customers who are "higher than median" have "higher than median" compared to CG customers who are". Analyzing this expression results in the following results.

	γ_3 (lower than median)	γ_4	$\gamma_3 + \gamma_4$ (higher than median)
Mobile app activity	1.375 *** (t = 111.45)	0.525 *** (t = 44.42)	1.900 ***
Online mall activity	0.0267 *** (t = 4.66)	0.0703 *** (t = 12.75)	0.097 ***

	-0.0223 (ns)	0.2816 ***	
Log expenditure			0.259 ***
	(*t* = -1.04)	(*t* = 13.60)	

Table 6. Heterogeneity results ($***p < 0.01$)

According to the results of the analysis, customers who have been members for a longer period of time experience a greater treatment effect. Their increased response to CRM campaigns is consistent with previous studies on customer characteristics based on the length of their membership. Since new members are unfamiliar with the community and its rules, and because they are mainly motivated by information search (Walther 1995; Kozinets 1999; Langerak et al. 2004), they have fewer social links and are less embedded in it than long-time members. Mathwick, Wiertz and de Ruyter (2008) describe how members' interests shift from a dominating personal interest in gathering useful information to a feeling of obligation to the community as time progresses. It has been found that long-term members are more motivated by social ties than newcomers (Henning-Thurau et al. 2004). According to Langerak et al. (2004), long-term members use consumption as a means of communication and exchange (Mathwick et al., 2008), and they consider social support for other community members to be more significant (Langerak et al., 2004). Essentially, new members are attracted to the concept of more personal benefits and long-

time members to social benefits, and these effects occur as a result of CRM helping customers satisfy their desire to help others in a win-win situation.

Chapter 7. Conclusion

7.1. Implications

I examined how a shift from CRM directly linked with sales to new forms of CRM that are not associated with product sales affects consumers' online participation and purchase behaviors using data obtained from a multinational company. The findings indicate that CRM campaigns are associated with higher customer expenditures and increased online interaction. Additionally, long-term members are more likely to participate in CRM campaigns due to the social benefits they receive.

There are several important aspects to this study. In contrast to previous studies that examined the context in which donations occur during the purchase of products and services, this study examined a new type of CRM in which consumers can make donations without purchasing them. Also, I have found that these new CRMs have had a significant impact not only on customer engagement, but also on increased sales (spillover effect). In

addition, studies on customer heterogeneity have shown that different membership lengths respond differently to campaigns.

At this time, when corporate social responsibility is emphasized, this study is of practical value. CRM is primarily intended to improve image and ultimately sales. This is the reason why many companies conduct campaigns in connection with product sales. The findings of this study indicate that CRM, even if it is not directly related to product sales, helps to increase company sales. It is therefore possible that more types of CRM will emerge in the future.

Depending on how long a customer has been a member, businesses may take a different approach. It is more effective to target customers who have had a long relationship with a company. Giving direct benefits to customers with a short membership period can increase the effect when you need to target customers with a short membership period. Based on the findings of this study, it appears that new members also respond very positively to activities related to mobile apps that are relatively beneficial to them. The fact that they did not result in a purchase, however, suggests that if companies wish to improve sales, they can increase the effectiveness of their CRM campaigns by combining additional discounts and promotions.

7.2. Limitations and Future Research

In the following respects, this study has limitations. It was not possible to evaluate the duration of stay in mobile apps and online malls due to data limitations. It should be noted that observing the visit log of a customer does not rigorously validate his or her activity due to the fact that the data is preprocessed with 1 if the customer was visited and 0 otherwise. Purchase information from external channels could not also be combined. Approximately 70% of this campaign's users are between the ages of 25 and 44. It is common for consumers to carefully consider the price of a product before purchasing it. Thus, it is possible that you may purchase the product through an external channel even if you intend to participate in the campaign and purchase the product. This study does not reflect this situation. As a result of the lack of integrated channel data, it is impossible to measure the impact accurately, and it is expected that the impact will be greater (11.58% sales growth) than that reported in the study. Additionally, external factors, such as advertisements or promotions, may play a role. There are various promotions and events offered by the mobile app where the campaign takes place, and points can be exchanged for cash, and sales volume may vary according to variables such as television, digital, and outdoor advertising. My empirical analyses were based on observational data, in which customers were not randomly assigned to either the control or treatment groups. As a result, there may be both observable and unobservable differences that

may impact the decision of the two groups to participate in the CRM campaign. Thus, despite the use of matching to compensate for self-selection issues, it may still be necessary to address them. Despite my best efforts, I cannot rule out selection biases based on unobservable characteristics. Therefore, causal interpretations of the results should be approached with caution.

By collecting more diverse data and utilizing it for research, this problem is expected to be resolved in the future. The consistency of results can be improved by matching in more diverse ways and conducting robustness checks. A randomized field experiment could also be used in future studies to eliminate the possibility that unobservable factors may influence the results.

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국문 초록

공익연계 마케팅은 고객이 기업과 거래할 때 발생하는 수익의 일부를 사전에 지정한 비영리단체에 기부하는 마케팅 활동을 의미한다. 공익연계 마케팅은 고객과의 접점이 많은 기업에게 유리하며, 따라서 지금껏 많은 기업들은 이를 제품 판매와 직접 연결 지었다. 그러나 최근 소셜 미디어의 확산으로 소비자의 참여 범위가 늘어남에 따라, 구매를 하지 않아도 공익연계 마케팅에 관여할 수 있는 캠페인이 등장했다. 그러나 이러한 맥락에서 CRM 효과를 연구한 논문은 아직 없었으며, 본 연구는 공익연계 마케팅 캠페인이 제품 판매와 연결되지 않아도 여전히 고객의 온라인 참여와 지출 증가에 유의한 영향을 미치는 지 살펴본다. 연구에는 국내 화장품 회사의 소비자 패널 데이터를 사용했으며, 구매내역 및 모바일 앱/온라인 몰 활동, 고객 인구통계학적 데이터를 분석에 활용한다. 기간은 2020 년 1 월부터 2021 년 6 월까지 총 78 주의 데이터를 사용한다. 자기 선택적 편향을 보완하기 위해 성향점수를 계산해 실험군과 대조군을 매칭하며, 이후 이중 차분법을 통해 캠페인 효과를 추정한다. 분석 결과 고객의 온라인 참여와 구매 활동 모두 유의한 증가를 보여 연구 가설을 지지했다. 추가적으로 고객 특성에 따른 캠페인 효과의 이질성을 탐색했으며, 멤버십 기간이 긴 고객에게 캠페인에 더 크게 반응했음을 밝혀냈다. 기업의 사회적 참여가 강조되는 요즘, 본 연구는 기업들이 제품 판매와 직접 연결하지 않아도

공익연계 마케팅 캠페인을 진행할 수 있음을 시사하며, 앞으로 다양한 형태의 기업 활동이 등장할 수 있을 것으로 기대한다.