New Customer Management Technique:
CRM by "RFM + I" Analysis

Katsutoshi MURAKAMI and Shigeki NATORI

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Traditional customer management analysis has mostly focused on the "purchasing power of customers themselves," as typified by RFM (recency, frequency and monetary) analysis. However, given the increasing importance of information disseminated by customers such as through word-of-mouth communication, a need arises for incorporating the perspective of a "customer's ability to disseminate information = I (influence)" into customer management.

In 2012, as part of its research activities to develop new customer management analysis techniques, Nomura Research Institute (NRI) undertook an experiment in cooperation with a consumer goods manufacturer. This experiment revealed that (1) by making use of social media, it is possible to determine a "customer's ability to disseminate information," (2) information dissemination activities originate from only a small percentage of customers (influencers) and (3) by implementing measures that leverage the information dissemination ability of individual customers, a better marketing effect than that which has been possible in the past can be obtained.

The use of the perspective of "RFM + I" analysis that is proposed by NRI will add an expanse of new landscapes to the concept of customer management. For example, even when a customer himself or herself has low purchasing power, if that customer strongly recommends the purchase of a company's products to people around him/her, the company must give importance to this customer in its marketing activities. NRI's RFM + I analysis adds this perspective to traditional customer management. In addition, the company needs to build relationships with customers having high RFM + I scores in terms of two aspects: making them promoters of the company's products and preventing them and those who are influenced by them from defecting to competitors.

With traditional customer management, the focus was on maximizing profits generated from customers themselves. However, with RFM + I analysis, which takes information dissemination ability into account, in addition to maximizing profits, it can be expected to acquire new customers based on the connections between customers. As such, RFM + I analysis offers a vast expanse of new marketing possibilities that can drive increased sales.

I Differences between Traditional RFM Analysis and "RFM + I" Analysis Proposed by Nomura Research Institute

1 Significance of customer management analysis

With the maturing of the Japanese market in recent years, consumer preferences have become increasingly heterogeneous, and consumer values and purchasing behaviors have become much more complex. The appearance of national fads and runaway hit products is very rare these days, which makes it more and more difficult for companies to increase their sales. Now, consumers show little interest in products, services, advertising campaigns and sales promotion programs that are aimed at the mass market without distinctive value proposition. The reality is that a product will not sell unless a company is fully aware of its target customers' attributes and characteristics at every step of the entire value chain from upstream (planning and development of a product) to downstream (sales and promotion of a product) so as to provide value that satisfies the needs of target customers.

It is still fresh in our minds that, in Japan, there has been a boom of expressing "customer management" as "individual customer management" (both "customer" and "individual customer" are pronounced as *kokyaku* in Japanese, but for which different characters are used. "Individual customer management" refers to the trend in which efforts have been made to better understand the needs of each individual customer and to offer products and services that are personalized for individual customers.) It is not going too far to say that, in a mature market, customer management is one of the most important aspects of business.

With traditional customer analysis, the recency (most recent purchase date), frequency (purchase frequency) and monetary (monetary amount of purchase) variables are analyzed (RFM analysis) using databases in which customer attributes and purchase histories are stored. Customers are then ranked in order, based on perspectives such as:

- Which customers make a greater contribution to a company's profits?
- Which customers are likely to contribute to increased profits for a company in the future?

Based on the results of such rankings, it is common to implement measures aimed at retaining good customers and key customers that are identified through the analysis.

The data that is used for the analysis consists of "demographic attributes" that include the target customer's gender, age, occupation, residence and family structure, as well as "purchase history" that describes the sales performance of a product or service. Such analysis has made it possible to implement efficient and effective measures that are tailored to target customers, rather than spending advertising and promotion resources uniformly on all customers.

When this type of database marketing was first applied, it marked the beginning of increased sophistication in marketing, which is represented by implementing sales strategies while watching the reactions of customers, building up ties with customers, maintaining relationships with customers and fostering enthusiasts. These days, it has become impossible to talk about marketing without first analyzing customer data.

2 The growing importance of the effects of word-of-mouth information

To the question of "who their important customers are" from the standpoint of a company, the "purchasing power of individual customers" as identified through RFM analysis mentioned in Section 1 is not the only aspect to examine. Another important aspect is a customer's "ability to disseminate information" through word-of-mouth communication and so on, whereby a customer helps build a company's positive reputation through communication with people around him or her.

While the importance of word-of-mouth information for corporate marketing activities has long been recognized, such a trend has become much more noticeable in recent years.
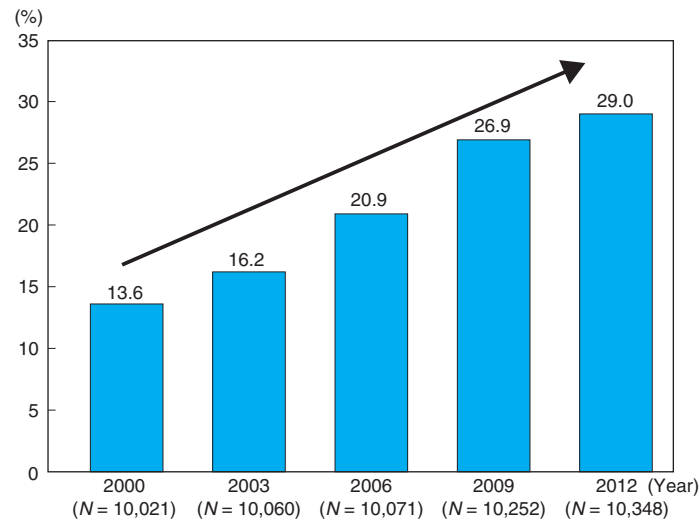
According to the results of the Questionnaire Survey of 10,000 Consumers conducted every three years by Nomura Research Institute (NRI), we can draw the three conclusions stated below.

First, among consumers, the importance of word-of-mouth information has been growing. This trend is apparent from the fact that, since 2000, the proportion of respondents who selected "I place importance on the opinion of people who actually use the product" has kept on increasing (Figure 1).

Second, consumers have recently been facing difficulties in "choosing useful information." This finding comes from the fact that the majority of respondents find that there is an excess of product information rather than a shortage of product information, which makes it difficult to discern useful information (Figure 2).

Third, consumers place importance on word-of-mouth information in their selection of useful information. This trend is evident from the finding that consumers place greater trust in the evaluations of actual users of the product or service, rather than the official information published by the company (Figure 3).

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Figure 1. Consumers' thoughts on consumption: "I place importance on the opinions of people who actually use the product"
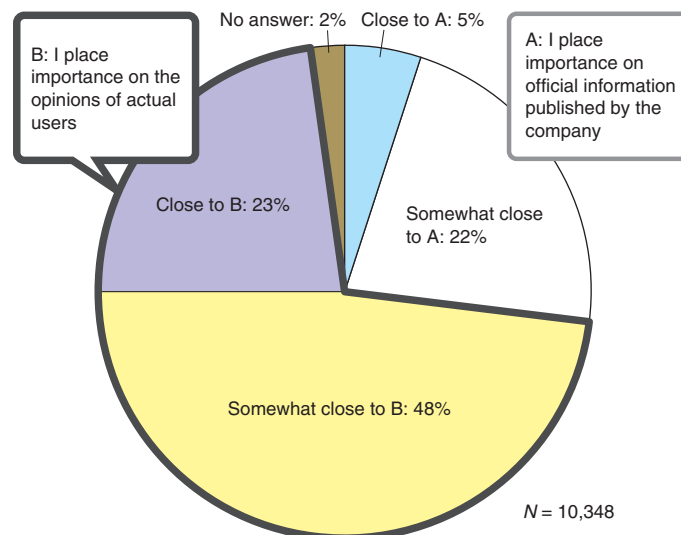

Source: Questionnaire Survey of 10,000 Consumers conducted every three years by Nomura Research Institute.

Figure 2. Lack or excess of product information
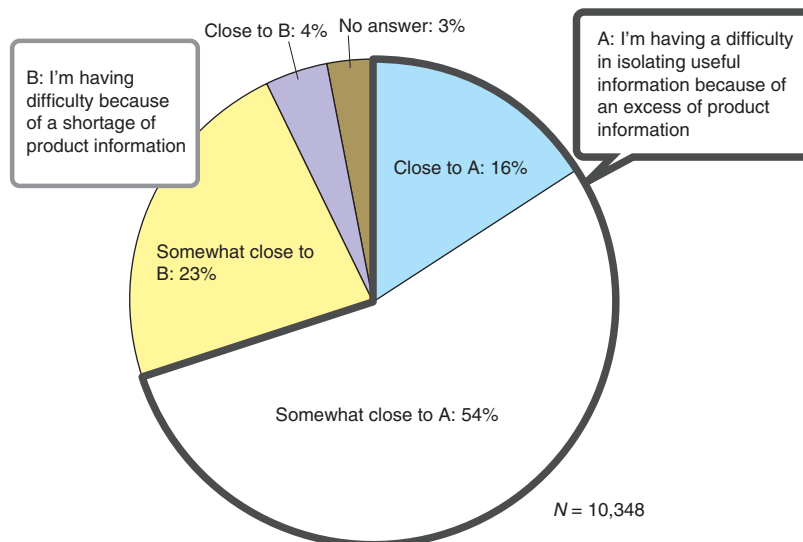
Source: Questionnaire Survey of 10,000 Consumers conducted in 2012 by Nomura Research Institute.

Figure 3. Source of information on which importance is placed in choosing a product

Source: Questionnaire Survey of 10,000 Consumers conducted in 2012 by Nomura Research Institute.

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With advances in information and communications technology, as represented by the increased use of the Internet and the appearance of smartphones, consumers are now able to easily and quickly collect a variety of information about products and services. However, such convenience causes consumers to experience a state of information overload to the point where such a vast amount of information has become little more than noise.

Therefore, it is not just word-of-mouth information that is important. Rather, the source of truly reliable information that is disseminated through word of mouth (that is, the influencer) will gain greater and greater importance in the future. For example, user comments at Amazon. com are rated based on their usefulness. Furthermore, services such as "Klout" have appeared in which a person's ability to disseminate information (degree of influence) is visualized in the form of a score.

Given that we now live in an era of information overload and if it is word-of-mouth communication that serves as a lubricant to smooth the interactions between companies and consumers and between consumers, the influencers who disseminate reliable information will continue to play an increasingly important role in expanding consumption.

3 Advantages of RFM + I analysis and differences from traditional RFM analysis

As discussed in Section 2, word-of-mouth information is expected to become increasingly important in the future, such that a customer's ability to disseminate information will be an important aspect of customer data analysis. That is, in customer data analysis, the need will arise not only to perform the traditional RFM analysis, but also to take "I (influence) = an ability to disseminate information" into account.

Traditional RFM analysis is, in a sense, a method of customer management that is based on the expected future purchasing amount of a specific customer. Those customers who make purchases often and who usually spend a large amount on each purchase are expected to make similar high-value purchases in the future and are thus ranked as "best customers" or "loyal customers."

In contrast, those customers who make only irregular purchases but who spend a large amount on each purchase, or those who make frequent purchases but who make low-value purchases on each purchase, are not expected to spend as much in the future and are therefore managed as "prospects" or "development targets."

For best customers, companies usually take measures to encourage repeat purchases in order to continue maintaining relationships with them. The measures usually taken for prospects are those that create new purchasing opportunities to encourage their visits by providing items such as free trials of new products. In

short, conventional RFM analysis only provides indicators related to a specific customer's contribution to sales as determined by the amount that the customer purchased.

The "RFM + I" customer management analysis being advocated by NRI not only considers the purchasing power of a given customer, but also the ripple effect that is caused by that customer's dissemination of information. That is, this approach also measures a customer's "ability to attract other customers (estimated purchases by other customers)."

This is a new customer management technique that pays attention to the connections between people. Introducing RFM + I analysis will enable the implementation of customer relationship management (CRM) and marketing measures to stimulate new purchases.

II Impact of Customer Connections on Consumption

The behavior of any one consumer influences that of other consumers. This effect is not limited to word-of-mouth communication. Rather, the authors ask you to consider your own day-to-day lives. When you make a selection from a variety of products or services, it is probably fair to say that you often draw on the opinions and actual experiences of the people around you.

When considering the relationships with their customers, companies must first focus their efforts on getting to fully know the individual customers themselves. At the same time, since the behavior of each customer is affected by the other consumers around him or her, naturally, it is also necessary to consider how the behavior of each consumer affects that of the others.

Of course, this is not easy. Nevertheless, "marketing activities that consider the influence that a consumer has on other consumers" have already started. The beginning of such activities can be seen in the efforts of some leading companies.

1 Case study: Mobile phone service provider T-Mobile USA

T-Mobile USA, a mobile phone service provider and subsidiary of Deutsche Telekom, has been conducting a detailed analysis of the data on the calling histories and attributes of its subscribers. Based on such analysis, the company has been able to prevent its subscribers from canceling their contracts.

A notable feature of T-Mobile is the way that the company leverages the connections between its subscribers to discourage some subscribers from canceling their contracts. By analyzing the data for its 34 million subscribers, T-Mobile was able to recognize certain trends among those who canceled. It was found that when a subscriber canceled and moved to another provider,

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those other subscribers with whom he or she is assumed to have a personal relationship were 70 percent more likely than were other subscribers to also cancel their contracts. This means that the domino effect is likely to occur among subscribers as influenced by the cancellation of a contract by one subscriber with whom they have a personal relationship.

When one subscriber cancels his or her contract, the people with whom he or she has a personal relationship are given the impression that "another mobile phone provider is offering superior service." This situation can be seen as that positive word-of-mouth information about a competitor is being disseminated in the form of the behavior of one subscriber canceling the company's contract. As a result, those subscribers that have some kind of relationship with the subscriber who has canceled are given, relative to other subscribers, a more negative impression of the company, making them much more likely to cancel their own contracts.

By analyzing data on the relationships between its customers, T-Mobile was able to recognize how one cancellation could lead to many others, and so implemented pinpoint campaigns to prevent such cancellations. Through these measures, the company was able to halve the rate of its contract cancellations. In terms of revenue, it has been reported that these measures have led to an improvement equivalent to $70 million.

2   Using social media to perform RFM + I analysis

As seen in the case of T-Mobile, considering how consumers can have an impact on one another can unfold new facets of measures that companies can adopt. While

T-Mobile has had access to calling history data that could point to the relationships between its subscribers, obtaining such data was not an option for many other companies in the past. However, with the spread of social media, many companies now have the means to acquire similar data.

In the case of Facebook, for example, which has seen an explosion in the number of users in recent years, a company will be able to access data on the friendships that a user has on Facebook by obtaining a user's permission when providing a user with an app (software) to use on Facebook. In this way, it becomes possible for a company to acquire data that clarifies the relationships between consumers in the same way as is offered by the call history available to a mobile phone provider.

In the case of Twitter, it is possible to determine the number of tweets posted by a user and the number of users who receive those tweets (followers). If a company uses these data to measure the degree of each user's influence, the company can identify which users have a major influence on the people around them as influencers.

Of course, what is feasible from a technical point of view is not necessarily identical to what is psychologically acceptable from the perspective of consumers. Therefore, the major premises for companies pursuing these initiatives are to consider a consumer's psychological acceptance and to obtain prior permission to access a user's data. Based on these premises, the spread of social media offers the potential for increasing the number of options available to companies to understand their customers.

In 2012, NRI undertook its Questionnaire Survey on the Use of Big Data aimed at Japanese companies in all industries with sales of at least JPY 20 billion. The

Figure 4. Data used for customer relationship management (CRM) by companies
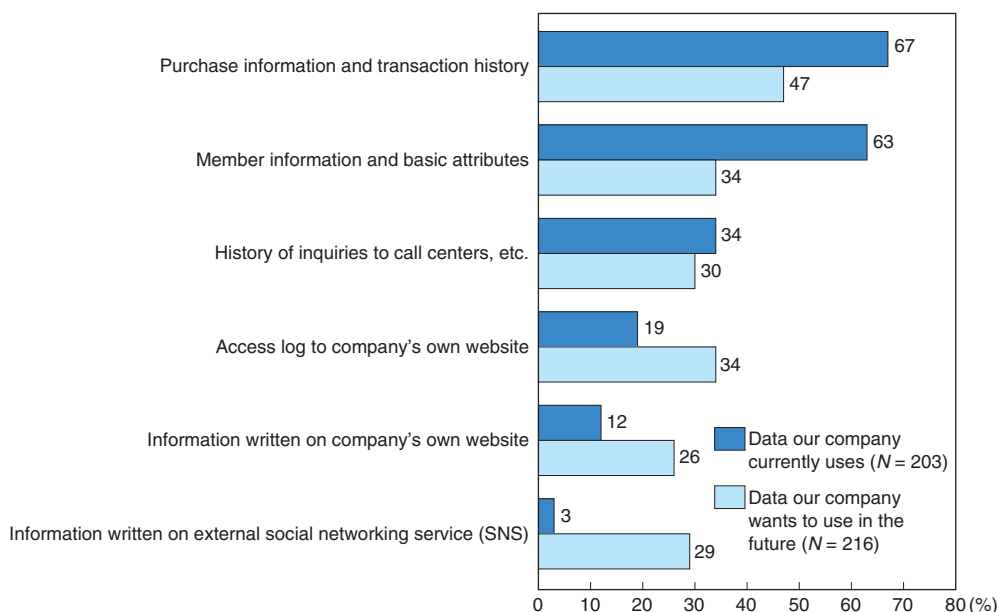
Note: SNS = social networking service.
Source: "Questionnaire Survey on the Use of Big Data" conducted in 2012 by Nomura Research Institute.

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survey revealed that many responding companies are currently using transaction history data (purchase information and transaction history) and customer attribute data (member information and basic attributes) for their CRM analyses. Although not currently being used, 29 percent of responding companies would like to use data appearing in social media (information written on external social networking service (SNS)), as shown in Figure 4. These survey findings suggest that although all of the companies surveyed are currently only in the very early stages of attempting to use such data, they have begun to examine the possibility of pursuing these new initiatives.

III NRI's Experiment to Identify Influencers and Its Results

1 Overview of experiment

In 2012, NRI set out to determine whether it is possible to identify influencers as part of a company's customer management. To this end, NRI performed an experiment in collaboration with a consumer goods manufacturer (Company A).

Company A manufactures products that are targeted at general consumers. The company's CRM activities include inviting its customers as members, regularly providing them with information through access to the company's website and by sending newsletters via e-mail. The company also conducts campaign lotteries in which customers can win the company's products.

The experiment consisted of two parts.

In the first part, Company A's members were asked to cooperate in joining the experiment. From those who consented, their Twitter user ID information was collected. Then, the member IDs were linked to the corresponding Twitter user IDs. Based on these links, data on the number of tweets posted by each member and the number of followers was recorded. Using this information, the members were ranked according to their degree of influence, and the levels of influencers were defined.

In the second part, Company A's website was used to implement a Twitter-linked campaign. Usually, when Company A announces a campaign, consumers who noticed the campaign would go to the company's website and register to be part of that campaign. However, in the case of the Twitter-linked campaign, when consumers register for the campaign on Company A's website in response to the announcement by the company, a tweet appears on Twitter stating that the person has registered for Company A's campaign. A link is established in this tweet to the URL (uniform resource locator) of the campaign page on the company's website, which would be seen by all the followers of the person who signed up for the campaign. In addition, any third party who would see that tweet through followers can click the URL,

which would then take them to the campaign page of Company A's website.

Using these two experiments, we examined the following three aspects:

1) Use of social media to identify influencers
2) Difference in information dissemination ability between influencers and non-influencers
3) Effect of information-propagation campaign using social media in attracting new customers

2 Results of experiment

(1) Use of social media to identify influencers
In this experiment, the information dissemination ability of each member was defined from the following two perspectives:

- Frequency of information dissemination
- Range of influence with that information

Any person who frequently disseminates information and who disseminates that information to a greater number of people than do other persons is considered to have high information dissemination ability as an influencer.

The indicators for evaluating these two points of view were defined as follows. First, the number of tweets each member posted on Twitter in one week was measured and used as the indicator for "frequency of dissemination." Because the number of each member's followers represents the degree to which information was disseminated, this number was used as the indicator for "range of influence."

In order to rank influencers, frequency of dissemination and range of influence were respectively divided into four levels, as shown on the left-hand side of Figure 5. Specifically, while examining the distributions of frequency of dissemination and of range of influence, a threshold was set for each and each was divided into four levels. For each cell created by the four-level x four-level matrix, information dissemination ability was set as a value between 1 and 5. Each member is allocated to a cell of this 4 x 4 matrix, and the level of the cell to which each member is allocated is set as that member's influencer rank.

As a result of this ranking, it was found that about 5 percent of all the members were given the topmost rank (Rank 5), as shown on the right-hand side of Figure 5. The highest level for frequency of dissemination was set to at least 14 tweets per week; that for range of influence was set to 500 or more followers.

(2) Difference in information dissemination ability between influencers and non-influencers
At the next step, for the five influencer ranks set as described in Item (1), a comparison of their ability to disseminate information was made.

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First, the total amount of information disseminated by all the members was defined as the sum of the product of the "number of tweets posted by each member in one week" times the "number of each member's followers." Then, for each influencer rank, the percentage of members and the percentage of the amount of information disseminated by members at that rank were measured to compare their ability to disseminate information. The results are shown in Figure 6.

These results show that consumers' information dissemination conforms to the Pareto Principle. According to the Pareto Principle, the "majority of values within an overall sample is caused by only a few of the values making up the whole."

Those members who were classified as Rank-5 influencers (those who exhibited the greatest information dissemination ability) in this experiment were involved in the circulation of approximately 80 percent of the total amount of information disseminated even though the percentage of Rank-5 influencers was only 5 percent. When Rank-4 influencers are included, which together with Rank-5 influencers, constitute approximately 15 percent of all members, the amount of information disseminated by them was about 98 percent of the total.

Figure 5. Influencer ranking by frequency of information dissemination and range of influence and percentage of members by influencer rank
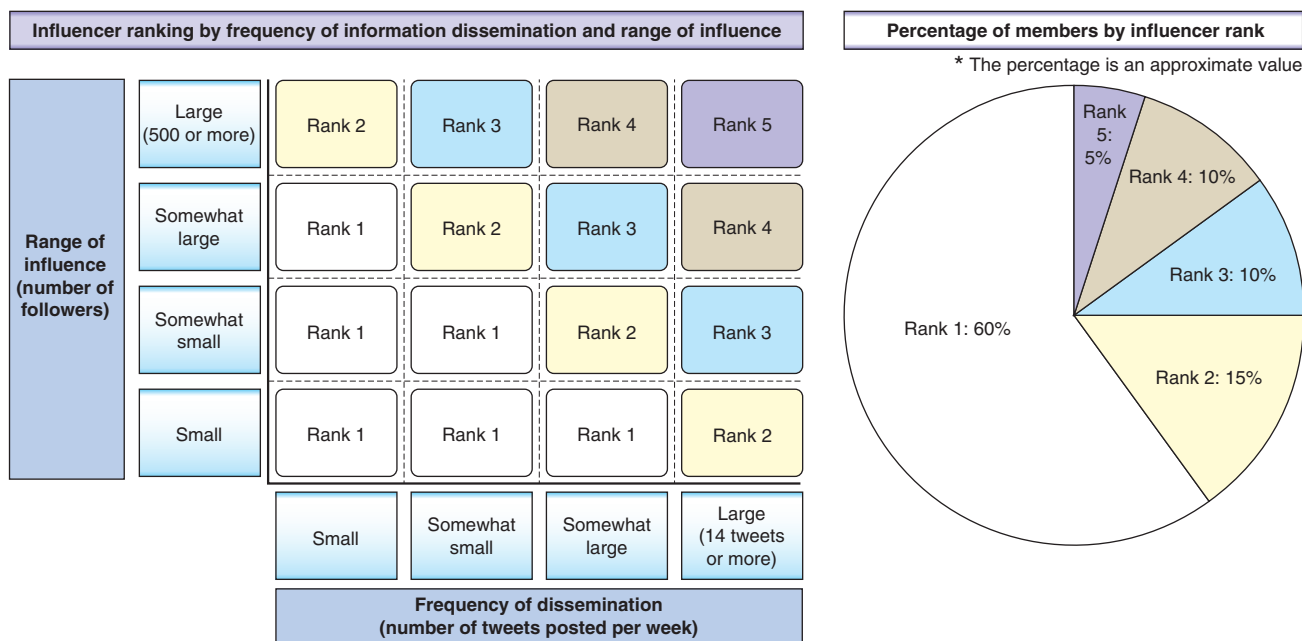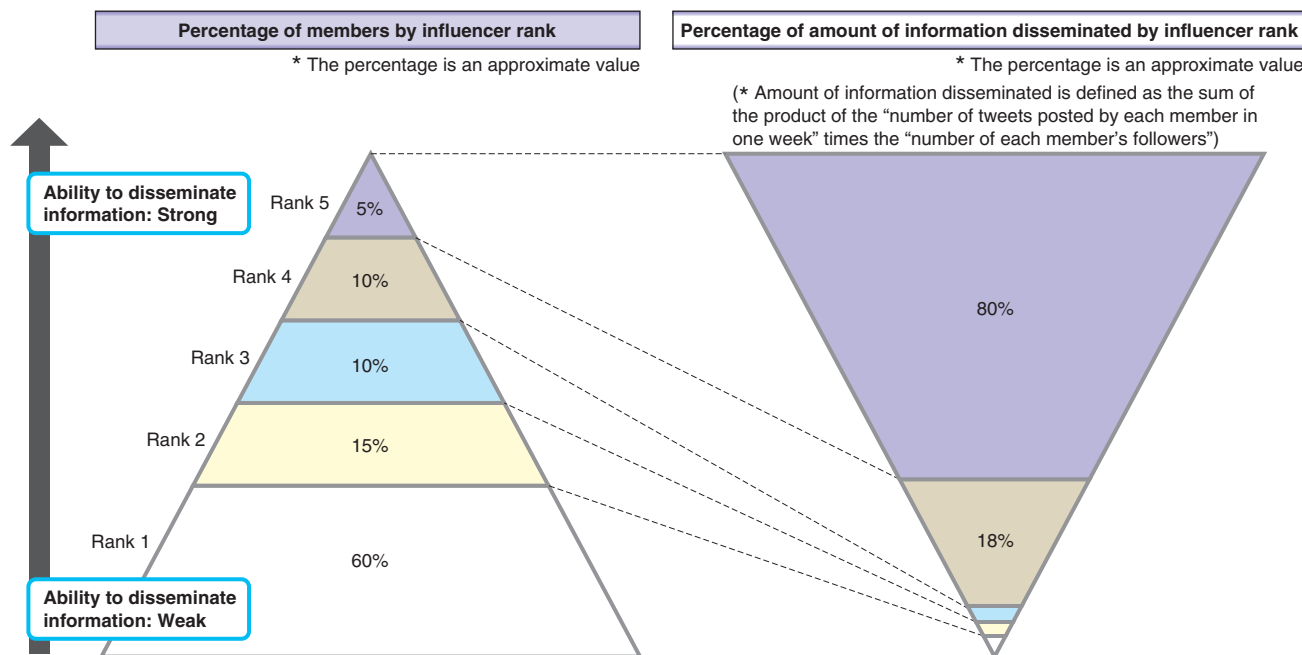

Figure 6. Percentage of members by influencer rank and percentage of amount of information disseminated

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Classifying consumers according to their information dissemination ability reveals that a very small proportion of people are involved in the circulation of the majority of information. As such, if companies place importance on the information dissemination abilities of their customers, it goes without saying that they should pay very close attention to the influencers in this relatively small layer.

The next question is to what degree the circulating information actually influences the purchasing behavior of consumers. The answer to this question is discussed in the second experiment described in Item (3).

(3) Effect of information-propagation campaign using social media in attracting new customers

As our second experiment, we undertook a Twitter-linked campaign. An outline of this experiment was briefly given in Section 1. The point of the experiment was to count the number of people who visited the campaign website via a Twitter-spread URL in order to see if this method of spreading information is effective in attracting new customers.

Generally speaking, it is difficult to measure the effect of a Twitter-linked campaign in attracting new customers. The reason for this difficulty is that, compared to other media, there is a large gap between the theoretically estimated degree of information diffusion and the effect that can actually be felt.

Such a large gap is attributable to the characteristics of Twitter. With Twitter, screens of new information are displayed one after another, and then cleared from the screen. If a user is not paying careful attention to a specific tweet, there is a definite possibility that the tweet will be gone before the user has had a chance to notice it. Therefore, compared to other media, the difference between the theoretical and actual values is particularly large. It is the existence of this gap that makes marketing personnel mistakenly believe that it is difficult to measure the effect of a Twitter-linked campaign.
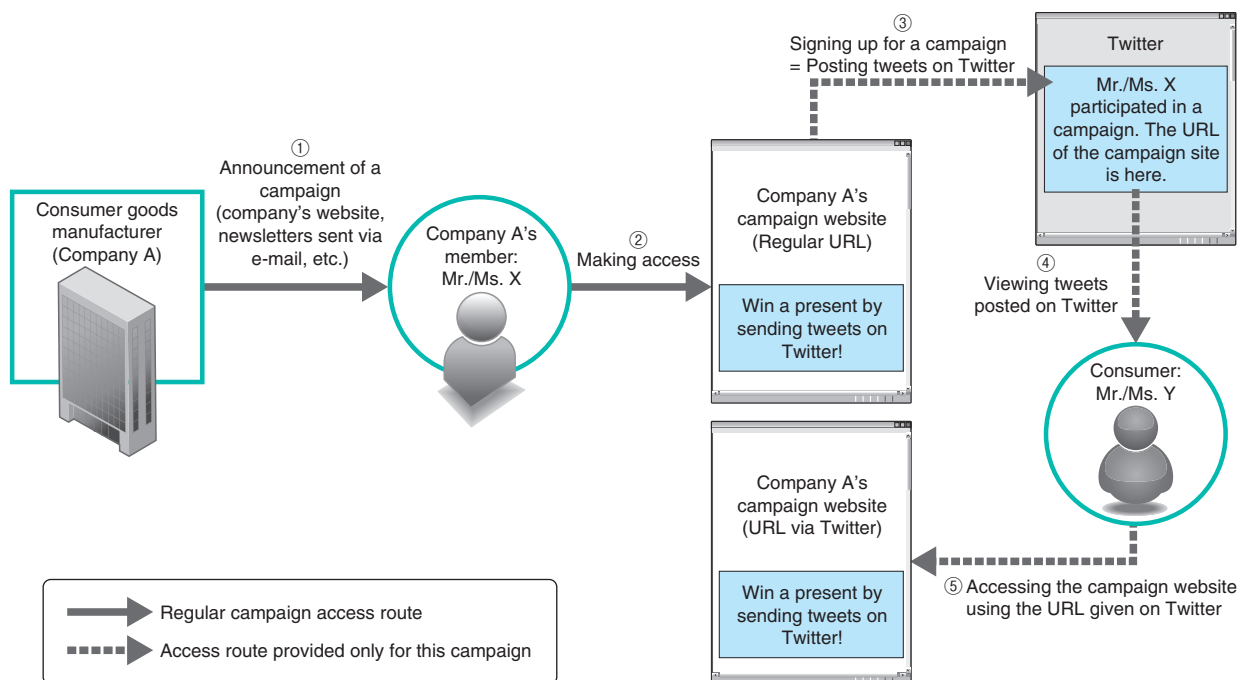
Assuming the background described above, we undertook an experiment to verify the effect of spreading information using the mechanism shown in Figure 7. As the routes to be taken by users to access our campaign website, we provided:

① The company website and newsletters sent to members via e-mail, in the same way as with a regular campaign
② A Twitter-linked access route provided only for this campaign

Furthermore, rather than trying to determine the amount of information disseminated via Twitter, we set out to measure the number of accesses resulting from the information spread through Twitter. We did this by creating a second campaign website for accesses through Twitter that was identical to the regular campaign website, but which had a different URL, thus allowing us to compare the number of accesses resulting from both campaign sites.

The results of this experiment revealed that the Twitter-linked information-propagation campaign attracted 1.5 times as many accesses as did the regular campaign. Looking at the number of accesses via Access Routes ① and ② as described above, we found that Route ①, which is the same as the access route used for a regular

Figure 7. Overview of Twitter-linked campaign

Note: URL = uniform resource locator.

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campaign, attracted a similar number of accesses as with past regular campaigns. If we assume the number of accesses attracted through this regular route to be 100, the Twitter-linked route created for this experiment attracted an extra 50 accesses, that is, 1.5 times as many in total.

Of particular note here is the fact that the Twitter-linked campaign was able to attract accesses from consumers other than existing members. It is easy for a company to contact its existing members because there are already several ways in which contact can be made. However, to contact new members, a company has had no alternative other than to resort to the mass media, which is costly. This experiment revealed that simply posting the tweets of existing members on Twitter led to accesses from consumers other than existing members. This point, among others, proves the effectiveness of an information-propagation campaign using social media.

Because the number of accesses increased, we could verify that the dissemination of information by consumers does influence the behavior of other consumers. Moreover, when the Pareto Principle described in Item (1) is taken into account, there is a high possibility of such influence originating from a very small number of influencers.

These findings suggest that "how to identify" influencers who have great influence over people around them through connections among consumers and "how to contact" such influencers constitute major challenges for companies in their customer management in the future.

IV Use of RFM + I Analysis for CRM

Given that the "I (influencer)" now has more influence over decisions on purchasing products and/or services than in the past, companies face the need to rethink their marketing and sales activities aimed at their customers. This need is not limited to B2C (business-to-consumer) sales activities, which sell products and services directly to consumers, but also applies to B2B (business-to-business) transactions, which target companies.

Those customers who buy a company's products or services in large quantities, frequently and at high prices remain important to a company. Therefore, it is a basic policy for a company to treat these important customers as valuable and special customers.

At the same time, those customers who do not themselves actually make a major contribution to a company in terms of purchasing the company's products or services, but who provide information and recommend the company's products or services to their families, friends and acquaintances, may very well boost the sales of the company. The dissemination of such information could lead to the possibility that these customers might produce sales for the company that would far outstrip the level that would result from their own purchases.

With the increased sophistication of information technology (IT), it has become possible to better understand these "connections between people" and the "ability of certain individuals to attract new customers." In the future, it will become vital to be able to manage the total value of customers who have influence over other people, including aspects such as the connections between people, the way in which information is disseminated, and their abilities to recommend the company's products or services and to attract new customers.

Sales measures that focus on these interpersonal relationships between individuals include the already common friend-referral systems for selling cars, as well as those for housing and credit cards. Such systems rely on new customers being introduced by existing customers, with benefits being given both to the introducing and to the newly introduced parties.

Although these conventional measures pay attention to the connections between people as well as to the propagation of information, these measures do not go beyond the management of each individual introduction. In the future, sales measures should continuously and purposely make use of the power of influencers. In addition, the sales initiatives that have so far relied on referrals have concentrated on high-value products and services that are only bought infrequently, whereas the authors believe that this idea should be expanded to a much wider range of goods and services including commodities.

If we could visualize relationships, such as which customers have relationships with what kind of people and with how many, and the depth of those relationships, we would be able to implement a variety of marketing and sales promotion measures that are more appropriately targeted and more efficient.

1 Definition of new value and effect of customer management

In the future, in addition to managing customers individually, the concept of "managing in a continuous manner an overall scope of each individual person including the community to which that person belongs, personal relationships and networks as potential customers" should be adopted. An example is given below.

Suppose that the results of RFM analysis showed that Customer A spent JPY1 million per year, while Customer B spent JPY500,000 per year (the most recent purchase period and purchase frequency are assumed to be the same for both).

Based on conventional thinking, Customer A is more important to a company than is Customer B, with Customer A being given more points and being granted greater benefits than Customer B.

However, if the personal relationships of Customers A and B are identified through RFM + I analysis, there is a

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possibility that the importance of these two customers may be changed from the company's perspective. While Customer A is important to the company in that Customer A spent a large amount of money to purchase the company's products and/or services, suppose that Customer A is of the type that does not tell anyone else about his/her purchasing experience and has rather weak relationships with other customers.

On the other hand, suppose that Customer B is closely related to other customers and often speaks favorably about the company's products and/or services and recommends them to not only his/her family, but also to his/her friends and work colleagues. If, as a result of Customer B's influence, other customers purchase at least another JPY500,000 of the company's products and/or services in a year, the company should give Customer B as much importance as it gives Customer A. In certain cases, if the number of new customers were to continue to increase as a result of Customer B's influence, leading to even more selling opportunities, the company should give Customer B greater importance than that given Customer A.

Because the information to be managed and analyzed by RFM + I is not included in the attribute information that has been collected in the past, it is necessary to begin with a review of what customer information needs to be identified. For example, the collection of all the information on family and household as well as on personal and social relationships such as old school friends, superiors at work, co-workers, other people in the office and friends in the neighborhood will enable a multi-faceted analysis based on the identified relationships.

However, given that utmost security is required for personal information these days, the collection of all such information will be a fairly difficult task. Nevertheless, even if it is difficult to comprehensively identify social semantic information about a person such as "what kinds of personal relationships a person has," continuously monitoring the personal relationships of Customer B will enable the identification of Customers C, D and E, who are in regular contact with Customer B. With such identification, RFM + I analysis becomes possible.

2　Relationship that a company should have with its customers from the perspective of RFM + I analysis

More so than for other important customers, companies need to strengthen their relationships with customers having high RFM + I scores, that is, customers with high information dissemination abilities such as Customer B from two aspects.

The first aspect involves building a relationship with a customer as a promoter of the company's products and/or services. By pinpointing customers with high RFM + I scores, the company should adopt measures to encourage them to introduce the company's products and/or services to other customers and to take actions that influence purchase decisions. For example, by giving priority to customers with high RFM + I scores in sampling studies such as providing trial offers, these customers will likely recommend the products to others. Alternatively, by implementing a bulk-buying campaign with the aim of these customers entering into joint buying arrangements with other customers, these customers will bring more customers to the company.

The second aspect relates to preventing the defection of customers to competitors. Given the current importance of word-of-mouth information, it is more important than ever before to prevent the defection of customers with high RFM + I scores (high information dissemination ability). As well as having high brand loyalty to the products and/or services of a particular company, if this type of customer were to defect to another company as a result of dissatisfaction or distrust, the chances are very high that he or she would broadcast their dissatisfaction or distrust of the previous company, which would have a very negative effect on its reputation. As such, a customer's ability to influence others can also be very dangerous.

Because of such possibility, every effort should be made to take measures that make the cost of switching to other companies unattractive in order to retain those customers with high RFM + I scores. One way to this end would be to simply increase the benefits provided to such customers. However, providing economic advantages is not necessarily the only way to strengthen relationships with these customers. Measures to increase the degree of customer satisfaction could also achieve the same purpose. For example, in the case of hardware such as information equipment, customer satisfaction can be improved by cross selling the peripheral products or software, or by customizing the products for a particular customer.

3　Use of RFM + I analysis to restructure a company's customer-related operations

In order to introduce a customer management technique using RFM + I analysis, it becomes necessary to review various customer-related operations within a company.

When a company's research and marketing departments adopt this method to analyze its customers, the ideas and suggestions obtained from such analysis should be provided to all in-house organizations such as front-line departments that are in regular contact with customers (sales departments and customer service departments), advertising, product planning and development departments. In return, all of these departments should respectively change their activities to correspond to a new way of perceiving customers. By doing so, it will become possible to build true relationships with new customers and to offer value that is fitting for individual customers.

In sales departments, it is necessary to review target customers and important customers. By identifying influencer customers who have a major impact on people around them, effort should be made to redesign activities to deal with them in terms of frequency and method. Furthermore, there is a need to develop a system of providing incentives to reward influencers, as well as to newly design sales promotions to make the best use of influencers.

In customer service departments such as call centers, a need arises for an information system that can identify incoming calls and emails from influencer customers. In addition, special response manuals and scripts should be prepared for dealing with these customers. Of course, there will be companies that say that they have a policy of treating every customer in exactly the same way. Even in such a case, there is no doubt that, as a bare minimum, instruction on the power of influencers must be provided.

The advertising departments of many companies have already begun to use mass media and social media for different purposes, and efforts are now underway to explore the optimization of advertising spending. By using the results of RFM + I analysis in these efforts, it will be possible to perform advertising to targeted customers with higher precision. It is also effective to reflect these results in the creative content of advertising and to incorporate such results in the PDCA (plan, do, check and act) cycle to examine the effect of advertising.

In product planning and development departments, the opinions of influencer customers should be seriously considered as the analytic target in the planning process. In particular, careful attention must be paid to the opinions and behavior of customers who have so far not been regarded as good customers because their RFM scores were not high, but who turn out to have high RFM + I scores. In addition to knowing which customers purchase products and services directly from the company, identifying which of these customers are influencers capable of affecting purchasing decisions and customer defections, and understanding what kind of value they are seeking, would provide a cue for the development of next-generation products and services.

4 Moving from the era of CRM to CCM

Traditional CRM focused on preventing the loss of particular customers and maximizing revenues from such customers.

However, in the future, in addition to the need to retain individual customers, there will be an ever greater need to be able to manage and leverage customers who disseminate information to people around them such as their immediate family, relatives, friends and work colleagues, and thus attract new customers. In addition to the management of relationships between a company and individual customers (personalized management of each individual customer), it is also necessary to consider expansion toward "management of customer groups (tailgating management).

These days, with the increased use of the Internet and the spread of social networking service (SNS), the imbalance in the information available to companies and individuals has been redressed. We are no longer able to expect the growth of sales in a mature and shrinking market by means of CRM-based marketing that set out to earn one new customer after another, to say nothing of mass-marketing.

The concept proposed by the authors in this paper that considers the interrelationships between customers and their ability to disseminate information to others can be referred to as "Customer Connection Management (CCM)." In addition to traditional CRM analytic factors, this CCM concept analyzes and manages customers with high RFM + I scores (those who are highly able to disseminate information) over time, thereby simultaneously managing the possibilities of acquiring new customers by means of referrals based on personal networks and through word-of-mouth communication. Based on such management, the aim is to increase sales by devising effective measures. In this way, the CCM concept points to a vast expanse of new marketing possibilities.

Without a doubt, the Japanese market has now transitioned from the era of CRM to that of CCM. In order to keep abreast of or even go ahead of other companies in effectively using the word-of-mouth network of its customers, a company must first redefine its customers in an effort to improve its customer management.

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