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Customer loyalty and customer value - 9

Modeling customer retention

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Models formalize, simplify and measure knowledge gained through research and experience. The most obvious way to model customer retention is to identify the factors that contribute to retention (as we discussed in our earlier articles) and use these factors as input to the retention model.

Mistaking random noises for real effect

Nowadays it is fashionable among loyalty specialists to talk about 'zero defections'. Many modellers take this literally and fail to recognize attrition as a part of any process. This leads them to model a steady state process as though it can be directly influenced by marketing and management actions. Not everyone can be retained, no matter how hard we try. Customers' needs may change, their perceptions may change, their social influences may change, their habits may change and their tastes may change. The best we can hope for is to retain a large proportion of our customers. Even the meaning of 'large' will depend on the category and on the nature and fierceness of competition.

Loyalty, then, operates in a psychological and competitive context. The most loyal group of customers may have a probability of 0.99 (99%) of dealing with the same bank the following year. Yet the most loyal group of telephone customers may have a probability of only .85 (85%) of dealing with the same company the following year. A customer can change his or her telecommunications company with a single phone call while changing one's bank is somewhat more involved. As a result, there is no retention rate that defines loyal customers across different product or service categories. In the above example, a retention rate of 89% of their best customers may be good news for a telecommunications company but not for a bank.

Even if we could retain 100% of our customers, it is probably unwise both in terms of cost and efforts required to do so.

Building retention models

Here we will review the steps involved in building a customer retention model and the issues that confront the modeller at each stage of model building:

1. Defining loyalty for modelling purposes

Our first task in building a retention model is to define loyalty. We can define loyalty in simple terms as the number of times a person bought our product or the number of years a person has been our customer. We quickly note that such a definition is not entirely satisfactory. A product can be in a monopolistic, oligopolistic or in a highly competitive market. In a monopolistic or oligopolistic market repeat purchase is more a function of the marketplace rather than of the firm. It will not help us in the long run to consider a customer 'loyal' when, in reality, measured loyalty is an artifact of the marketing environment and not of customer endorsement of the product or service.

Even when a product or service is in a truly competitive environment, problems of definition can persist. Consider a competitive environment in which customers have true choices. In this case, we might assume that the number of repeat purchases (or the number of years a person has been a customer) is a reasonable measure of customer loyalty - until we consider its implications. It might sound logical to consider a customer who has been with us for four years to be more loyal than one who has been with us only for two years. Yet the 'more loyal' customer who has been with us for four years may leave the following year while the 'less loyal' customer who has been with us for only two years may stay with us for the next twenty years.

So we need a definition of loyalty which is not a simple summary of past behaviour but is also an indicator of

future behaviour. For instance, we can define loyalty as the number of years a person has been a customer, along with his or her intention to continue as a customer.

There is no single best solution to this problem, but any retention model should take it into account and arrive at a definition that is best suited for the product or service on hand.

2. Deciding on input variables

The second step in building a retention model is to decide what should go into the model. To identify the variables that should go into the model, we first need to identify the relative importance of attributes that contribute to customer retention. This is done on the basis of theoretical formulations and empirical analysis.

From an empirical point of view, we would include only those variables that are related to loyalty (as defined in Step 1) in a demonstrable way. This step involves testing different variables assumed or known to be related to loyalty. If, for instance, we believe that certain performance measures are related to loyalty, then in this step we will statistically quantify such relationships using techniques such as correlational analysis, regression analysis, discriminant analysis and classification tree analysis. On the basis of such analyses, we will choose those variables that have the power to predict customer loyalty.

Problems that arise at this stage of model building include poor predictability and multicollinearity (variables used in the model being redundant). One should also be wary of including variables here over which the firm has no control. (If we assume that the purpose of the model is to enable the firm to manipulate the variables it can control in order to increase customer retention, there is little point in including those attributes over which management has little control.)

Identifying attributes that are related to retention is also important for another reason. In recent years there has been much controversy surrounding customer satisfaction measurement. The main criticism of customer satisfaction measurement is that it does not relate to customer retention.

We cannot assume a direct relationship between customer satisfaction and loyalty. If an attribute is expected, then a high degree of delivery on this dimension may contribute to customer satisfaction but not necessarily to loyalty. On the other hand, if an attribute is attractive, then it can contribute both to customer satisfaction and to customer loyalty.

Exhibit 1 - The Kano Model



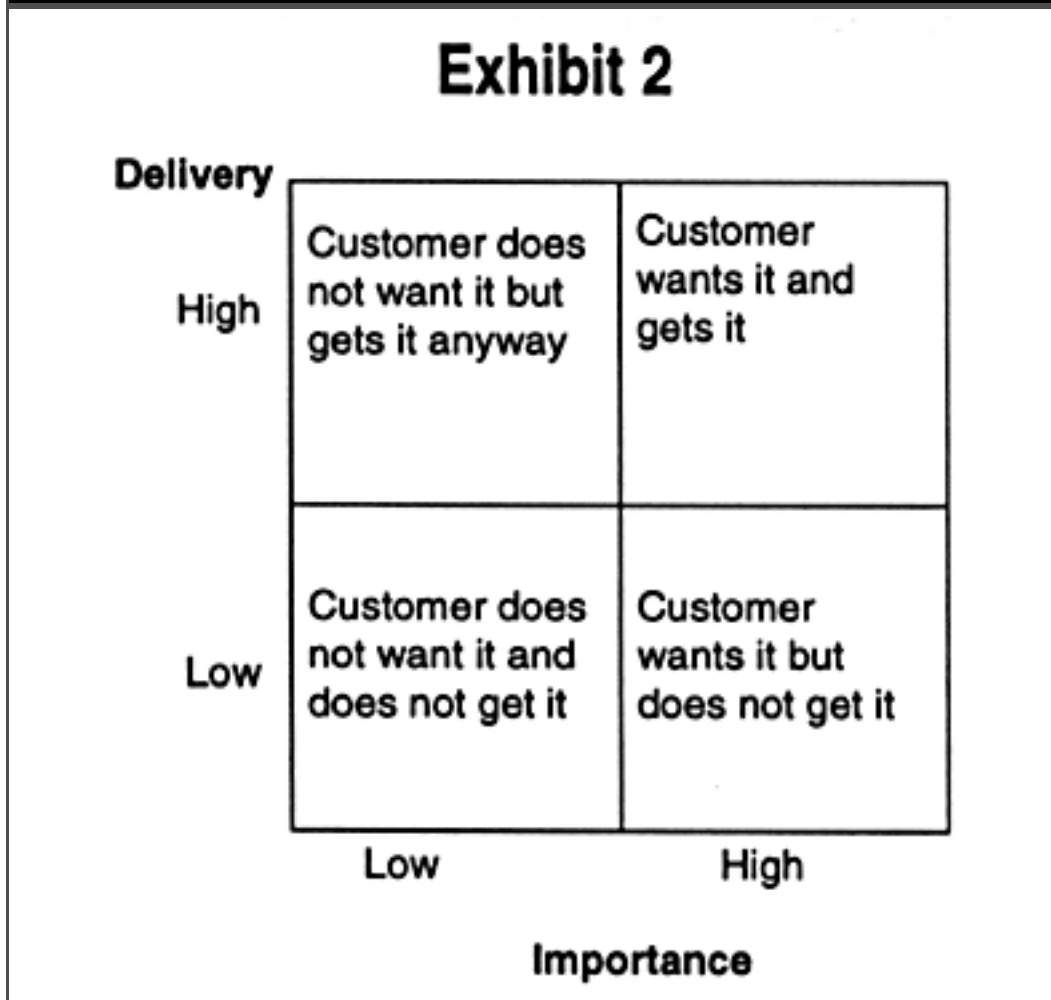
I have argued earlier that customer satisfaction is a necessary but not a sufficient condition of customer loyalty. The model proposed by Kano *et al.* (1984) shows that we cannot assume a direct relationship between customer satisfaction and loyalty. The authors posit two types of attributes: expected and attractive. If an attribute

is *expected* (e.g. computer does not crash frequently), then a high degree of delivery on this dimension may contribute to customer satisfaction but not necessarily to loyalty. On the other hand, if an attribute is *attractive* (eg. computer company has outstanding customer support and is innovative), then their attribute contribute both to customer satisfaction and to customer loyalty. This model is illustrated in Exhibit 1. It shows why we should not automatically use attributes that contributed to customer satisfaction as proxy measures for predicting customer loyalty.

3. Identifying our performance on key retention measures

Once we identify the key measures of retention, the next step in modeling is to track how important these key attributes are to customers and how we deliver on those attributes. This can be illustrated with the help of quadrant analysis, as shown in Exhibit 2. The Exhibit divides attributes into four groups: attributes that contribute to retention and which we deliver (top right); attributes that contribute to retention on which we do not deliver (bottom right); attributes that do not contribute to retention on which we deliver (upper left); attributes that contributes little to retention and which we do not deliver (bottom left).

Exhibit 2

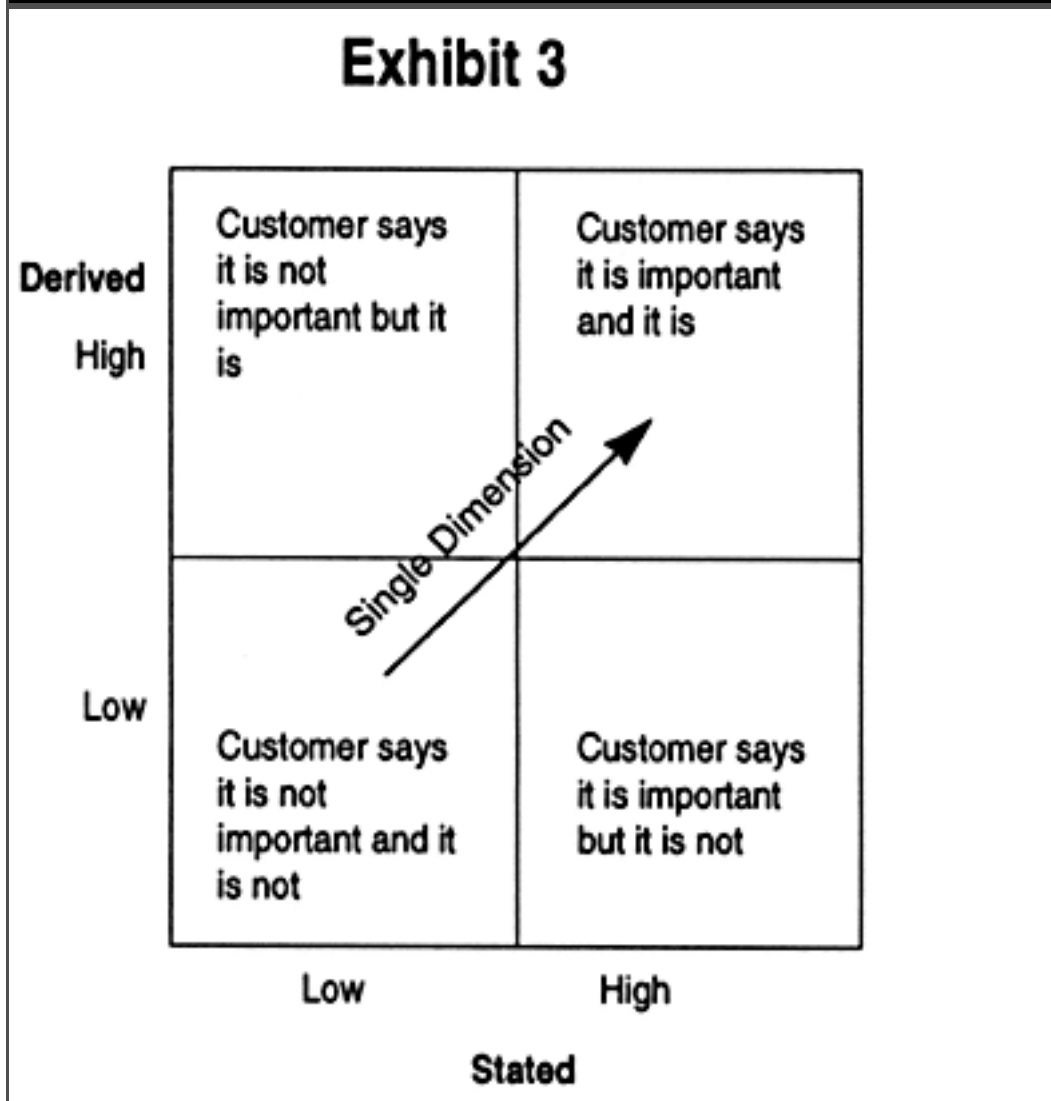


Obviously the gaps that are most serious occur in the bottom right quadrant. But there are problems in accepting preliminary quadrant analysis as the basis for action. The main reason is that, as we alluded to earlier, what customers say and what actually contributes to retention could be different.

4. Relating stated importance to derived importance

The purpose of this step is to identify what customers say is important to them and what is important to them when we analyze the statistical relationships between their statements and their actual behaviour. These results can once again be presented in the form of quadrant analysis (Exhibit 3).

Exhibit 3



At this stage, we may find that some attributes which customers said were important may turn out to be unimportant because they are not correlated with loyalty.

Why do customers say something is important to them when it is not true? One reason is that some answers sound 'more sophisticated' or more socially acceptable. Another reason is that customers are not sure what they want.

Cost-of-entry attributes. Some attributes that are actually important to customers *do not* contribute to loyalty. As an example consider 'error free billing', which customers may say is an important attribute. If we, as well as our competitors, deliver on this attribute then the fact that we deliver on this important attribute will not contribute to loyalty. Instead, such attributes will become the 'cost-of-entry'. Not delivering on them will lead to customer defections but delivering on them will not increase customer retention.

Distinguishing cost-of-entry attributes from not truly important attributes. In light of the above discussion, it is obvious that an attribute that is judged to be important by customers but not by statistical analysis can mean one of the two things: the attribute is unimportant even though the customers say it is; or, the attribute is as important as customers say it is and it does not show up in our statistical analysis only because it is a cost of entry variable and is expected to be provided (The Kano model in Exhibit 1 shows that an expected variable contributes differently to loyalty than an attractive variable does.)

This makes it important for us to take a further look at the attributes in the bottom right quadrant. We cannot

simply ignore them because this quadrant contains some attributes that are critical to customer loyalty and others which are not at all critical. A simple way to distinguish the two sets of attributes is to look at the variability of scores as exemplified by statistical measures such as the standard deviation. If the variability is low, then it is likely that the attribute is a cost-of-entry attribute.

But why? When an attribute is expected, it is assumed to be uniformly present in the product or service. Customers' loyalty, as a result, does not go up or down on the basis of such expected attributes. This results in a lack of variability, when we relate loyalty to importance.

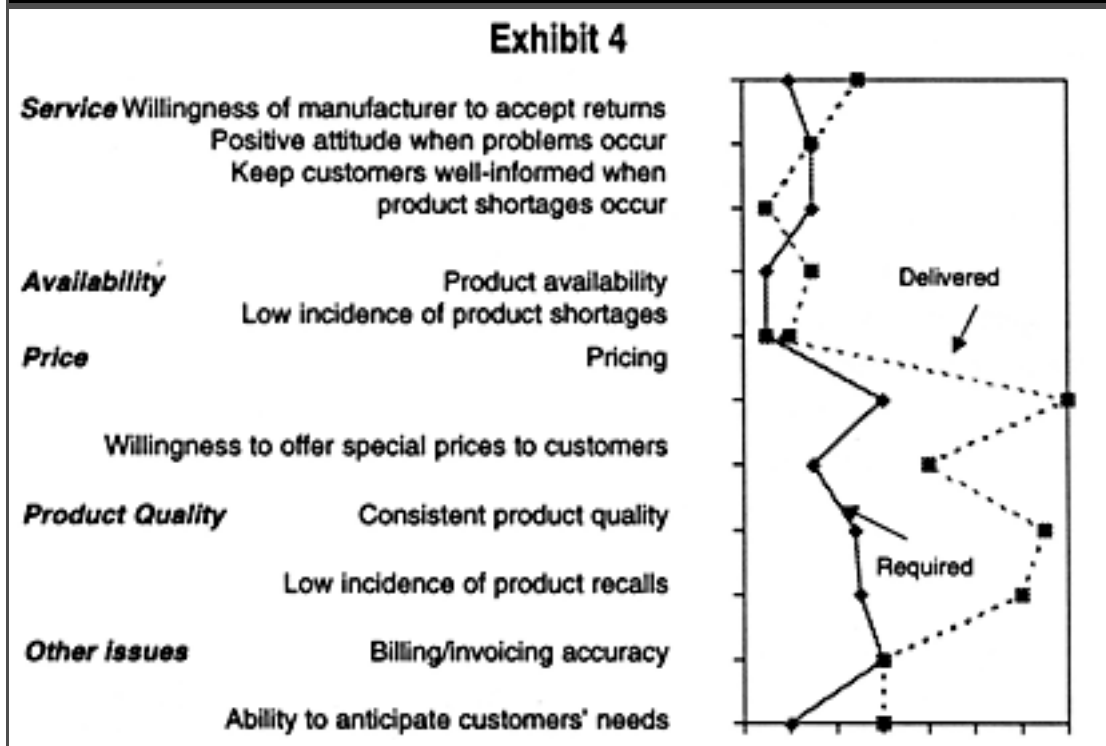
5. Identifying gaps and their importance

The above four steps should provide us with the following information:

1. Which attributes contribute to customer loyalty;
2. How we perform on those measures;
3. Which attributes, if we implement them, will increase customer loyalty;
4. Which measures are cost-of-entry and which are loyalty generating; and
5. The statistically derived importance of important attributes.

Most of the information derived above can be presented visually in gap charts (Exhibit 4).

Exhibit 4



Building quantitative models. The modeling process described so far combines statistical and graphical analysis. It is also possible to extend this process further to create highly quantitative models. Such models could potentially relate the cost of retention to the profitability of the organization. The cost of retaining a customer is not uniform. Neither is the profitability of customers retained.

As we attempt to retain more and more customers we will find that the per capita cost of retention keeps increasing. Is the increased retention worth the cost involved? The answer to this question would depend on the nature of customers who are difficult to retain. If such customers happen to be highly profitable, then it makes sense to spend extra resources to retain them. On the other hand, if such customers happen to be 'spinners' (those who are always ready to accept any deal that is better), it may not be worth the cost. Quantitative models that relate costs to benefits can be built such that we can track how our costs relate to benefits and how best to spend our marketing dollars.

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