

Good and bad market research: A critical review of Net Promoter Score

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Abstract

Net Promoter Score, touted as the “single customer metric you need” and calculated from customers' answer to one simple question about their loyalty, has been in use since 2003 and adopted in a wide variety of settings. However, it has not lived up to its claimed benefits. This article evaluates the NPS approach in terms of its positive and negative results.

This article is for people interested in NPS, still considering implementing NPS in their company, or interested in its technical underpinnings. It points out the benefits and shortcomings and explains why, and it describes what can be done to achieve the outcomes NPS theory claimed it would produce, but has not.

The article is written in two parts for quite distinct audiences: firstly, for executives and managers who need customer data and information to make marketing decisions; and secondly, for market researchers, statisticians, and business analysts who are responsible for capturing and providing reliable, understandable, and meaningful customer data to the executives and managers who need the information. Consequently, the two sections are written in two different styles. The first section takes the form of a summary for managers and executives of our findings and recommendations in language aimed at business leaders; the second section provides a detailed analysis and critical review of NPS for market researchers, statisticians, and business analysts. Both sections present a better solution than NPS for understanding what customers value, delivering the best value to customers, winning market share, and creating truly loyal customers.

KEYWORDS

Customer Value Management, market research, satisfaction surveys, transaction surveys

1 | SUMMARY FOR EXECUTIVES AND MANAGERS

Net Promoter Score.^{*} This is a splendid term for marketing purposes. It resonates similarly to *Net Income*, a very well-known financial term that all executives know and respect. From the name itself, Net Promoter sounds as if it must

^{*}If you do not know how it is actually calculated, here is its original definition. After an interaction with a company's products or services, people are asked “How likely is it that you would recommend our company to a friend or colleague?” Based on their responses on a 0-to-10 rating scale, group the respondents into “promoters” (9-10 rating—extremely likely to recommend), “passively satisfied” (7-8 rating), and “detractors” (0-6 rating—extremely unlikely to recommend). Then, subtract the percentage of detractors from the percentage of promoters.

be important. Moreover, when you add the business consultants' sales pitch that "*It is the only number you ever need to succeed in the marketplace*" it is extremely tempting to buy into the concept. But should you?

The answer is simple. No. A little critical thought can provide the answer. Suppose a business consultant or academic or research paper from a leading business school asserted that:

"Net Income is the only number you will ever need to manage your business, forget cash flow, assets, income analysis, production costs, process improvement cost, investments, liabilities, share price, dividends, interest rates, etc. Stop spending needless money on expensive accounting, reporting, tracking, and analysing these unnecessary metrics."

You would tell the people, politely or perhaps not so politely, to leave the premises. In addition, you would pitch the research paper into the recycling bin.

Everyone knows you cannot manage and improve the financial results of your business with only one financial marketplace number such as *Net Income*. If you tried, you would not be in business very long. Why would anyone think you could manage and improve your results in the customer marketplace with one customer number, *Net Promoter Score*?

Yet many businesses are trying this simplistic approach. Remember how childish it was to do something just because everyone else was doing it and it was the latest thing, only to learn there is a wrong way and a right way. *There are no shortcuts.*

In this summary, we will cover five problems with NPS and recommendations to avoid them:

- a) NPS provides no data on what to do to improve;
- b) NPS focuses only on keeping customers, not on winning new customers;
- c) There is no such thing as a "passive" customer;
- d) NPS provides no competitive data;
- e) NPS is internally focused not externally focused.

a) NPS is an indicator of how you are doing but provides no data to help you know what to do

NPS is *one* way of calculating *one* customer loyalty score. It is important to know the percentage of customers who are loyal, will buy again, and recommend. *And as one of a number of loyalty metrics, it may well be useful.* However, it is unsatisfactory for business decision-making because it does not tell you *why* they are loyal or disloyal. NPS does not provide any statistically reliable data and information on what it is that customers *value*, so that you can both retain them *and win additional customers*. A customer loyalty metric helps answer the question, "How are we doing *with our own customers*?" However, it gives no information to help you answer the question, "What should we do?" let alone "What should we do and in what order?"

Currently, Bain and Company has two meanings for the acronym NPS. One is the classical metric called the Net Promoter Score. According to Bain, the new meaning of NPS is the *Net Promoter System*. It was developed because the NPS score itself has no value for helping companies decide how to improve. Therefore, Bain needed to improve the usefulness of their NPS metric. The Net Promoter Score is based on the concept of finding out if your customers are loyal. Nice to know, but not helpful. The new *Net Promoter System* is based on a follow-up customer inquiry process when, if they do not say they love you, ask more questions and find out why not? What originally was promoted as a simple "all you need to know is the answer to one question" system has morphed into an expensive and intricate gathering of anecdotal information by personnel at all levels of the company, leading to a complex summary of nonstatistically reliable customer complaints. While modern text mining and machine learning techniques can find nuggets in such material, the data are by definition low level, operational (at the level of the user), based on a transitory experience and not representative of the decision-makers in the market.

b) NPS focuses on keeping customers not on winning new and retaining old customers

Keeping customers is very important. However, without winning new customers a business cannot grow. No matter what, you will always lose some percentage of customers. Winning new customers is imperative. NPS is one reasonable customer loyalty metric, but is not good enough for business success because *it is not a competitive metric*. A measure directly linked to and predictive of winning customers is critical.

What drives customer growth? Simply stated, it is customers choosing your products and services over the competition's products and services. Revenue growth or decline is driven by customer perception of the worth of your products and services compared to the competition. It is all relative, and it is all perception. NPS does not measure the perceived worth of your products and services compared to that of your competition.

c) NPS provides no competitive data

NPS is not a competitive measure ... *but the marketplace is all about competition!* Customers have all the votes and they vote with their dollars for the products and services that they feel are worth it. A metric that accurately measures customer perceptions of the relative value of one firm's offer compared to the alternatives is what is critical but missing with NPS.

There are numerous examples of companies having high or increasing customer loyalty while losing customers and not winning new customers. One example is Oldsmobile. Oldsmobile, founded by Ransom E. Olds in 1897, was one of the oldest companies in the world before it went out of business in 2004. At that time, its remaining old customers were extremely loyal to the Oldsmobile brand. Oldsmobile had customer surveys and measured customer loyalty by tracking the percentage of customers responding with "very willing to buy again" and/or "very willing to recommend" on their surveys. The data were solid and predictive of repurchase rates. Over time, the percentage of their customers who were loyal increased, but total sales revenue decreased! How could that be? The answer was simple math. The increase in percentage of their customers who were loyal (number of loyal customers divided by the total number of customers) was a result of the loss of the customers who were not loyal and left for the competition. Only the loyal customers were left. The decrease in the denominator led to the increase in the percent of loyal customers. Their key customer satisfaction metric was misleading. Even if Oldsmobile had been using the NPS metric, it too would be misleading. The NPS score will improve as the number of detractors decreases because they are no longer customers available for surveying. Not only will detractors leave, so will a significant amount of the "passives." Therefore, the percentage of total customers surveyed who are promoters can easily increase as you lose the "detractors" and a fair amount of "passives."

d) There is no such thing as a "passive" customer

The NPS concept puts customers into three categories: promoters, passives, and detractors. The NPS categorization theory is absolutely correct about the promoters and detractors but absolutely wrong about the passive category. Promoters are loyal and will speak favorably about a company. They are not looking for a better, more valuable alternative. Detractors are disloyal and speak unfavorably about a company. They are looking for a better offer and will leave for the competition. However, the NPS concept of "passive customers" is completely erroneous. These customers may be passive about speaking favorably or unfavorably, but they are very willing to shop for better value. Good is not good enough. There is no such thing as a passive customer. By definition, passive customers are not loyal customers. They are very willing to consider competitors and readily switch should they be presented with better competitive value.

Keeping customers is important. However, winning new customers is also very important because growth is important. To win new customers, a firm must beat the competitors' offers. NPS does not measure a firm's competitive customer perception. Let's go back to the Oldsmobile experience. New younger customers were entering the automobile market. They were shopping for the best car at the best price. Oldsmobile worked very hard to improve its cars and indeed they made major improvements. However, in spite of their continuous improvements, their cars were not perceived to be the best value in the automobile marketplace. Oldsmobile continued to lose market share in spite of their older customers' loyalty to the car they had driven most of their lives. Young potential customers were not buying the much improved car.

Oldsmobile invested in a major marketing and advertising campaign. The slogan and theme was "This is not your father's Oldsmobile!" It was true enough, but their new cars were not as good and not worth as much as other cars in the market. Before too long, General Motors killed the Oldsmobile brand, in spite of their remaining customers' fierce loyalty. After 107 years, competition killed Oldsmobile.

e) NPS is internally focused not externally focused

The NPS metric and the NPS system are still internally focused. They are based on the notion that the purpose of a business, its reason for being, is to create profit for the business and its shareholders and that customers' loyalty is required to do so. It preaches and teaches the concept that we need customer loyalty because the purpose of a business is to make money and create shareholder value.

By way of comparison, the Customer Value[†] system is based on the principles of understanding what customers value and using that knowledge to manage your systems and processes to deliver greater value than is offered by any competitor. By delivering a superior product or service at a fair price a firm attracts, wins, and retains customers.

The Customer Value concept is based on the truth that the real purpose of a business—*the reason a business is even allowed to exist*—is to fill customer needs and to improve customers' quality of life with its products and services. *Shareholder value is the reward for fulfilling customer needs the best.* Customers vote with their pocketbooks as they evaluate the products and services in the marketplace. To win their vote, a business must provide products and services that are worth what they ask customers to pay and are worth more than what your competition is offering. Tomáš Baťa, founder

[†]Described in the next section of this article.

of the great Bafá Shoe Company, recognized this a long time ago, when he said[‡]: “Do not pursue money. He who pursues money will never achieve it. Serve! If you serve as best as you can, you will not be able to escape money.”

Senior leaders and bosses who preach “we need all customers to be very willing to recommend us” set an internal focus. They measure and manage their employees on customer loyalty metrics. They want customers to be loyal to the firm (them) because customers create value for the business (them). However, these executives have the cause and effect backwards. The customer is the real boss. Customers demand value from the company before they are willing to give their loyalty and money to the company.

The new Net Promoter System has it backwards too. It also puts loyalty to the firm over a firm’s loyalty to the customer. The “system” first ask the customer if they are willing to recommend. Then, for customers who are not very willing to recommend, the “system” probes further and asks customers why not? That is too late. It is much better to first find out what is important to customers and design your products, services, and business processes to satisfy their needs. Think of it this way. Personal relationships are rewarding and lasting when each person puts the other’s needs first rather their own first. Each person understands what is important to their partner and does what is necessary to fulfill their partner’s needs and desires. To ensure they do, they ask for occasional feedback with sincere questions on how satisfied their partner is. In return, they receive love, respect, and a rewarding relationship. The Net Promoter System essentially puts the customer’s loyalty to the firm over the firm’s loyalty to the customer. To maintain great customer relationships and a strong vibrant business, focus on the customer. Or, put more simply, NPS is measuring what customers do for you whereas Customer Value Management (CVM) is measuring what you do for customers.

Thus, there are no shortcuts to winning and keeping customers, but there is a proven path.

We conclude this section with a comparative summary of the two methods:

NPS Approach	CVM Approach
<ul style="list-style-type: none"> • A customer satisfaction metric • Triggered by recent events 	<ul style="list-style-type: none"> • A marketplace perception survey • Not triggered by an event but measures the general market perception at the time
<ul style="list-style-type: none"> • Surveys a person who had the recent experience, even if they are not decision-makers or purchase-influencers • Does not survey competitors’ customers 	<ul style="list-style-type: none"> • Surveys decision-makers and key influencers who determine which company they buy from • Measures both the sponsoring company’s value and that of the competitors
<ul style="list-style-type: none"> • Only focused on the recent transaction and experiences no matter how unimportant or important the event 	<ul style="list-style-type: none"> • Studies and provides data on the market’s perception of the competitive value of a company’s products, services, image, and prices which influence purchases
<ul style="list-style-type: none"> • Used by middle managers to measure the performance of service centers such as technical support and individuals such as service representatives 	<ul style="list-style-type: none"> • Used by senior managers to determine where to focus a company’s scarce resources to improve the competitive value of their products and services

2 | TECHNICAL EVALUATION OF NET PROMOTER SCORE

2.1 | Introduction

Here is a scenario from everyday life.

You have just completed a small online transaction. Before you log out, you are presented with a request to answer a one question customer survey:

On a scale of 0 to 10, where 0 = Not at all and 10 = Definitely, please rate your willingness to recommend us to others.

As a statistician or market researcher, this should trouble you.

This familiar scene is an example of the use of NPS (Net Promoter Score), a ubiquitous metric collected routinely by companies after most transactions. We contend that statisticians should be taking a stand against the use of NPS as a panacea for the problems it purports to address, including its use as a stand-alone metric in assessing customer satisfaction or staff satisfaction.

[‡]https://en.wikiquote.org/wiki/Tom%C3%A1%C5%A1_Ba%C5%A5a

To expose NPS's failings, we shall focus primarily on a customer (rather than a staff member) as the stakeholder being surveyed. The customer may be a consumer or may be a corporation. We will be making a critical distinction between two different types of survey respondents: on the one hand, *the person who actually makes the purchasing decision about a product or service*, and on the other, *the person who actually uses it*. These may be coincident, or maybe not. Thus, in a corporation, the purchasing decision about an automobile may be made by a senior executive, but the transaction carried out by an administrative assistant. In the consumer world, a purchasing decision about a teenager's first car may be made by a parent (taking account of price, safety, etc), whereas the teenager may be making the actual choice of vehicle and have much of the experience of interacting with the vendor.

Section 2.2 outlines key goals of customer satisfaction surveys and provides a brief description of a long-established and proven process (Customer Value Management or CVM) to achieve these goals. Section 2.3 gives a description of NPS and evaluates it as market research metric. Section 2.4 provides some concluding remarks. Full details of how statistical modeling and analysis for CVM are carried out can be found in the works of Kordupleski¹ and Fisher^{2,3} and so will not be discussed here.

2.2 | Carrying out market research: *Why and How?*

The customer survey process is an important means of managing a company's relationship with customers. Let us start by asking why we carry out market research. Here are some of the main reasons:

- a. Find out what's important to people about the product or service they are seeking to purchase.
- b. Ascertain what people think about your company's offerings.
- c. Obtain timely feedback about what you need to fix and with what priority.
- d. Detect changes in the market, eg, emerging preferences, styles, technologies, etc.
- e. Find out how the competition is viewed.
- f. Ultimately, improve your business bottom line!

If these are important, then there are strong implications for how the market research should be carried out:

- a. Use a statistically sound method that provides assurance that no attributes of the product or services that are important to the customer have been omitted from the survey and that produces reliable data.
- b. Have a means of linking survey results to higher-level business drivers.
- c. Ensure that the survey results are actionable, including the ability to drill down.
- d. Ensure that there is a means of identifying where to focus improvement priorities in order to have the greatest beneficial impact on both customers and the business bottom line.
- e. Create a design that will provide comparable and useful benchmarking metrics.

A process to design and conduct customer satisfaction surveys that meets these criteria was developed some 30 years ago at AT&T ... in response to a crisis. The crisis is described in detail by Kordupleski¹ and subsequently summarized in the work of Fisher² as follows:

In the mid-1980s, AT&T was confronted by a paradox: on the one hand, customer satisfaction levels were running at about 95%; on the other hand, they lost 6% market share, where 1% was worth \$600 000 000. For the first time in corporate history, AT&T laid people off—25 000 worldwide from an overall staff of 300 000—including managers recently rewarded for the apparently outstanding customer satisfaction performance.

An AT&T trouble-shooting team discovered that one of the critical factors explaining the paradox was the way in which Customer Satisfaction was being measured ...

AT&T assembled a team to find out why there was no apparent connection between customer satisfaction (95%) and business performance (market share down 6%), and to fix it. As described by Kordupleski,¹ this team identified three core issues:

- The first was what they were doing with their raw data. Customer satisfaction was being measured on a four-point scale: *Poor*, *Fair*, *Good*, and *Excellent*. The *Good* and *Excellent* responses were being combined into a single *Satisfied Customer* category, giving rise to the 95% score for customer satisfaction. This was a major mistake. Of those who had

rated them Excellent, almost all were very willing to repurchase from AT&T. In contrast, of customers who had rated them Good, some 40% were not very willing to buy again and were shopping for an alternative provider.

- The second mistake was to not benchmark their customer satisfaction scores against those of the competition. After all, business is a competition and customers have choices. If competitors do a better job at satisfying customers, you will lose market share.
- The third and the most important mistake was a failure to focus on Value as the ultimate metric, where Value was defined as the trade-off between people's satisfaction with the Quality of the product or service they were receiving balanced against their satisfaction with the Price paid. In simple words, did customers perceive the products and services received to be "worth what they paid"? AT&T developed a value metric called CVA or Customer Value added and deployed a process called Customer Value Management (CVM). It leads to a major turnaround in AT&T's fortunes (an increase of seven points of market share in a year and a half as reported by the *Wall Street Journal*) and, subsequently, the fortunes of many enterprises worldwide who learned and adopted the approach. Fuller descriptions of the following very terse summary of CVM can be found in the works of Kordupleski¹ and Fisher.^{2,3}

At the heart of the CVM tool set is the Customer Value tree. Let us take as an example the purchase of an automobile. The overall concept of Value (*Worth What Paid For*) is modeled as having two principal drivers, Quality and Price, each of which can also be elaborated, as shown in Figure 1.

The Customer Value tree also forms the basis for reporting the results in a format that is simple to understand and simple to use ... in other words, *actionable*. Respondents are asked to rate the performance of their supplier on **Automobile** attributes (on a scale of 1 to 10, where 1 = *Poor* and 10 = *Excellent*). Then, they are requested to provide an overall rating of the **Automobile**, together with the main reason for assigning this overall rating. The rating process continues for the whole tree, up to an overall rating of **Worth What Paid For**. At this point, it is useful to request higher-level ratings of business impact, such as **willingness to repurchase** or **willingness to recommend your company to someone else**. In addition, after being asked for a summary rating for each main branch, a respondent is invited to provide reasons for assigning this rating.

Thus, the overall response from a respondent takes the form of a tree-structured set of ratings, together with associated tree-structured comments for main branches. A sample of numerical tree-structured data can then be analyzed by a fitting a sequence of hierarchical regression models: **Automobile** as a function of its attributes, ... , **Delivery Process** as a function of its constituent subprocesses, ... , all the way up to **Value** as a function of **Quality** and **Price**. This modeling process yields two critical sets of information:

- the hierarchy of fitted models, which provide confirmation, or otherwise, that no important factor affecting the market's overall perception of Value has been omitted; and
- for each model, the relative rating of each explanatory variable and its impact weight.

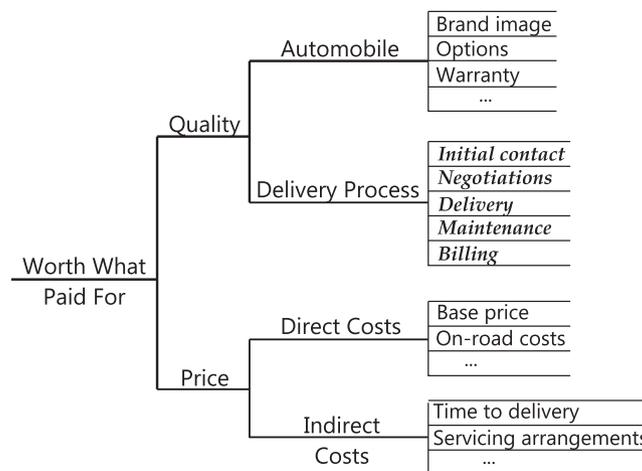


FIGURE 1 A prototypical Customer Value tree for buying and using an automobile. Value (*Worth What Paid For*) is represented as having two main drivers, Quality and Price. Quality has as its drivers: the product (in this case, an automobile) and *Delivery Process*—the sequence of experiences (*service subprocesses*) when the customer interacts with the supplier. Automobile, direct costs, and indirect costs each have up to 6 or 7 attributes determined from market focus groups. In some cases, brand image may be sufficiently important as to be elevated to the same status as Quality and Price as a Driver of overall Value

The first endows this approach to perception surveys with a unique advantage over other approaches. The second provides the basis for a very powerful management decision process to focus improvement efforts. We sketch a simple synthetic example.

Table 1 shows the top-level profile for your company and the average of your competitors. Overall, you are somewhat below par on Relative Value and relative satisfaction with Quality, and around par on relative satisfaction with Price.

Therefore, we look at two issues:

- how to connect the current rating of Value to business performance;
- how to use the results to select and act on improvement priorities.

Figure 2 is an example of a Loyalty curve. Recall that we had collected respondent data on **willingness to recommend**. Conventionally, a rating of 8, 9, or 10 is regarded as indicative of a respondent being very willing to recommend your product or service (although it could be defined as just a rating of 9 or 10). Figure 2 indicates that the current Value score of 7.3 corresponds to about 63% of your customers being very willing to recommend. To boost this figure to, say, 80% will require an increase in the Value score to around 7.8.

A critical issue in applying CVM is that, at any one time, we only look for a few high-priority areas for improvement. We can look at less important things next time after the ones with the greatest impact on the business (as judged by the change in Figure 2) have been attended to. Therefore, where should improvements be focused in this case?

We have a statistical model for Value as a function of Quality and Price: $Value = 0.51 \times Quality + 0.30 \times Price$. Of course, the model is imperfect: 19% of the variation is unexplained. However, if we are just looking for the most important improvements, the following course of action has proved effective in many CVM applications. Suppose that by working on improving Quality, and communicating these improvements to the market, you can achieve an increase in the overall rating of Quality of 0.6 when you resurvey the market in 12 months' time (an analogous analysis for Price is also appropriate). Then, the predicted increase in Value would be simply $0.51 \times 0.6 \approx 0.31$. (Of course, this argument assumes that the mentioned statistical model is not merely association between Value and Quality ratings, but a causal link, and such a link typically cannot be established through data fitting alone. The use of the model in this way has proved useful in numerous case studies; see, eg, the works of Kordupleski¹ and Fisher^{2,3}).

TABLE 1 Top-level table of impact weights and comparative ratings for Value and its main drivers. The Relative Value metric is known as Customer Value Added, or CVA. (Note that the weights sum to R^2 , not to 100. Quality and Price do not totally explain Value)

Driver	Impact Weights (%)	Mean Ratings (± 0.2)		Relative Rating (%)
		Our Company	Competitors	
Quality	51	7.4	7.7	96
Price	30	7.1	7.0	101
Value	$(R^2 = 81\%)$	7.3	7.5	CVA = 97

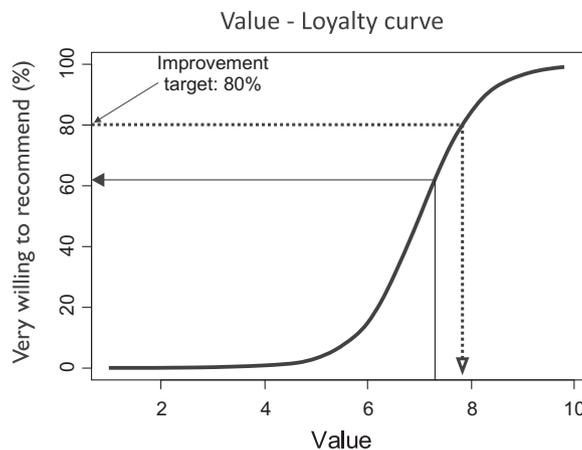


FIGURE 2 The current Value rating of 7.3 corresponds to just 63% of your customers being very willing to repurchase from you. If you want this to be at least 80% within 12 months, you will need to raise your Value score to about 7.8

TABLE 2 Profile of impact weights and comparative ratings for Quality and its main drivers

Driver	Impact weights (%)	Mean ratings (± 0.2)		Relative rating (%)
		Our company	Competitors	
Automobile	30	7.8	7.5	104
Del. Process	59	6.9	7.8	88
Quality	($R^2 = 89\%$)	7.4	7.7	96

TABLE 3 Profile of impact weights and comparative ratings for Delivery Process and its subprocesses

Driver	Impact Weights (%)	Mean Ratings (± 0.2)		Relative Rating (%)
		Our Company	Competitors	
<i>Initial contact</i>	...			
...
<i>Billing</i>	40	6.1	7.5	81
Delivery Process	($R^2 = 86\%$)	7.4	7.7	96

Table 2 shows the corresponding profile for Quality—and drilling down further, we get Table 3, the profile for the Delivery Process and its subprocesses. It appears that there are serious problems for customers interacting with your finance department. Now, you know where to focus attention.

The actions to take are the following:

- Develop a lower-level tree for Billing (Figure 3) and put in place some internal process metrics to track improvements. *Note that, in contrast with a Value survey which is focused on decision-makers, this survey is actually focused on actual users, a critical issue when we come to clarifying the characteristics of NPS.*
- Carry out a transaction survey, focused just on your own customers, to ascertain where the specific issues are with Billing.
- Make appropriate improvements, using the internal metrics to confirm stabilization of the Billing process and monitor it; communicate them to the market and resurvey.

We are now in a position to capture the CVM continuous improvement process in a simple diagram (Figure 4).

It is easily verified that this process meets the five criteria (a) to (e) outlined at the beginning of the section (but see Section 4 for further discussion of the benchmarking issue). In summary, then, CVM is a robust, rigorous, and proven process for gaining and sustaining a company’s competitive position in the market (see the works of Kordupleski^{1,4} for numerous applications). It is based on an ongoing cycle of continuous improvement, building and sustaining the relationship between the company and its market by monitoring and responding to the current and emerging market needs and its competitive performance in relation to these needs.

It may be helpful to explain a few more details about the CVM process before passing to a comparison with NPS.

- Typically, a representative sample of at least 30 to 50 respondents is needed to obtain sufficiently precise results to be actionable.
- An online CVM survey takes some 10 to 12 minutes to complete, including providing comments. (By way of contrast, an NPS request might take just seconds to respond to, or perhaps a minute if a lengthy comment is being added. Actually, a CVM survey will typically include an NPS-type request as just one of its 25 to 30 rating requests.)

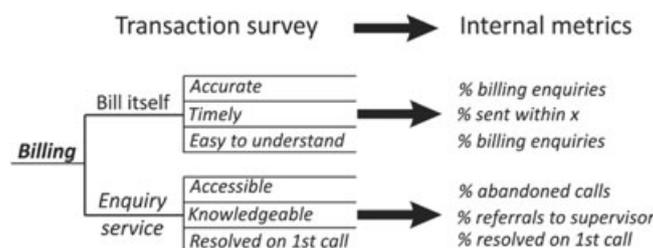


FIGURE 3 Billing tree for a transaction survey, together with internal metrics that can be tracked to monitor improvements

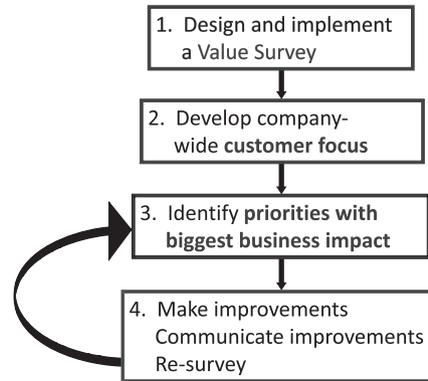


FIGURE 4 The Customer Value Management improvement cycle

- (c) In the CVM approach, the quantitative data are used to identify where to make improvements that are likely to have the most beneficial impact on the business. Once these areas have been selected, the comments can provide valuable insight into what might need to be fixed.
- (d) The statistical analysis requires the usual level of practical skills as do other areas of application. For example, not all respondents complete all requests in a CVM survey. However, the sort of imputation techniques commonly used in regression and other settings can be applied to handle such complications.

Full details are available in the works of Fisher.^{2,3}

2.3 | Comparison with net promoter score

Net Promoter Score (hereafter, NPS) was introduced by Reichheld in a 2003 issue of *Harvard Business Review*, in an article entitled “The One Number You Need to Grow.” The article started out with a striking assertion:

If growth is what you are after, you will not learn much from complex measurements of customer satisfaction or retention. You simply need to know what your customers tell their friends about you.

The full description of NPS in the article reads as follows:

Asking a statistically valid sample of customers “How likely is it that you would recommend our company to a friend or colleague?” enables you to calculate your **Net Promoter score**: the ratio [*sic*] of promoters to detractors.

Based on their responses on a 0-to-10 rating scale, group your customers into “promoters” (9-10 rating—extremely likely to recommend), “passively satisfied” (7-8 rating), and “detractors” (0-6 rating—extremely unlikely to recommend). Then, subtract the percentage of detractors from the percentage of promoters.

Readers were advised of the very substantial benefits likely to flow:

Many companies—striving for unprecedented growth by cultivating intensely loyal customers—invest lots of time and money measuring customer satisfaction. However, most of the yardsticks they use are complex, yield ambiguous results, and do not necessarily correlate to profits or growth.

The good news is you do not need expensive surveys and complex statistical models ... By asking this one simple question, you collect simple and timely data that correlate with growth. You also get responses you can easily interpret and communicate. Your message to employees—“Get more promoters and fewer detractors”—becomes clear-cut, actionable, and motivating, especially when tied to incentives.

Leaders of numerous enterprises that were using rigorous ongoing market research to gain and maintain competitive advantage were attracted by the twin prospects of massive savings and greatly improved business performance, canceled their market research campaigns, and signed up to NPS. For example, at the time of writing, Australia’s four largest

banks are literally in the dock (in the form of a Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry) because of their treatment of their customers. The principal metric that banks were using to judge their performance with customers was NPS. As is evident from the definition of NPS, it is not customer friendly. For example, simply by discarding their detractors, a bank can improve its NPS rating yet it has done nothing to improve how it treats customers. The interim report of the Royal Commission has also commented on the unsatisfactory nature of NPS as a customer satisfaction metric.

Much of Reichheld's article amounts to a simple statement of the obvious: the importance of customer loyalty—whether expressed as repeat purchasing of the same product or service, purchasing across the range, or recommendations to others—and how this “correlates to” higher-level business drivers such as market share and profitability. However, there is some space devoted to debunking other approaches. For example,

One of the main takeaways from our research is that companies can keep customer surveys simple. The most basic surveys employing the right questions can allow companies to report timely data that are easy to act on. Too many of today's satisfaction survey process yield complex information that's months out of date by the time it reaches front line management. Good luck to the branch manager who tries to help an employee interpret a score from a complex weighting algorithm based on feedback from anonymous customers, many of whom were surveyed before the employee got his current job.

Where do we find fault with NPS?

- i. Many examples in Reichheld's article are of operational symptoms, without insight into root causes (systemic or otherwise). See for example the first main paragraph in the second column on page 4:

Even the most sophisticated satisfaction measurement systems have serious flaws. I saw this first hand at one of the Big Three car manufacturers. The marketing executive at the company wanted to understand why, after the firm had spent millions of dollars on customer satisfaction surveys, satisfaction ratings for individual dealers did not relate very closely to dealer profits or growth. When I interviewed dealers, they agreed that customer satisfaction seemed a reasonable goal. However, they also pointed out that other factors were far more important to their profits and growth, such as keeping pressure on salespeople to close a high percentage of leads, filling showrooms with prospects through aggressive advertising, and charging customers the highest possible price for a car.

Indeed, as our introductory scenario suggested, an invitation to provide an NPS rating can be triggered by the most low-level of customer experiences. Thus, an administrative assistant using an Enquiry service (eg, Figure 3) who was frustrated by being placed on hold for a lengthy period might vent that frustration by a very low NPS rating when asked to stay on the line at the end of the call and answer a question. Does a company really want to have its whole performance judged by an instant of minor irritation? The contrast with a Customer Value survey is critically important:

- In a Customer Value process, the person being surveyed is a decision-maker. The respondent is asked to rate all aspects of the customer experience before assigning a rating for overall Value. Only at that point is the respondent asked about *willingness to recommend*.
- In an NPS process, the person being surveyed is typically a user. Rather than being led through the whole customer experience before being asked about *willingness to recommend*, the respondent is being asked to make a decision based on one particular interaction with the company, no matter how trivial. There is no overall judgment of Value—after all, this is a transactional moment, and the user may well not be the decision-maker—and there is no way to get at Relative Value, which is the quantity that has a well-established track record as a lead indicator of business success.¹

As noted in Section 1, an NPS request is usually accompanied by a request for a comment on the reason for assigning a particular Loyalty rating. These comments can yield a large amount of unstructured data which, through application of text mining, machine learning, and other procedures, might yield some insights into reasons for customer dissatisfaction. However, there are significant limitations associated with such data and associated findings. For example, the data are completely observational, with no account taken of whether or not they are representative; thus, they are not a reliable guide to the most important cause of problems. They provide information about one single user experience—a user, but quite possibly not the person who made the

purchasing decision. They provide no information about Value, let alone Relative Value, and it is Relative Value that has been clearly established as a lead indicator of superior business performance (see also the comments in the work of Fisher³ on extracting information from such data).

- ii. Table 4 provides an assessment of NPS against the five criteria in Section 2.
- iii. Of course, there are plenty of poorly constructed market research surveys. However, there are good ones as well, and any comparison should be with what is best, not what is worst.
- iv. Correlation does not equate to causation, yet the evidence for the efficacy of NPS presented in the work of Reichheld⁵ is based only on correlation with business results.
- v. A company using NPS is basically not distinguishing those of its customers rating them 0 from those rating them 6, and is totally ignoring “passives”, who are rating them 7 or 8. This is a recipe for losing market share. Those rating them 0 to 3 or 4 are almost certainly going to leave. However, with more information about customer needs, those rating them 5 or 6 could possibly be converted to passives, and those currently categorized as passives could be boosted to promoter status.
- vi. As is well known from the AT&T work 30 years before, what is critical is the perception of Relative Value: there are many ways of measuring “customer satisfaction”, some OK, many others not OK, but *none of which Reichheld mentions*.
- vii. In the case of AT&T, some of the nine business units were operating business to business, a few were purely just business to consumer, but most were both. The CVA metric was predictive of market share for all industries, markets, and countries. For business to business, NPS is even weaker because the decision-maker is hardly ever surveyed. AT&T standards required CVA to be calculated from decision-maker surveys of the market that were random in time and sample and not triggered by a recent event.
- viii. Many executives use NPS as a way to pass on the responsibility for satisfying customer needs to a coal-face employee so that the executives can be free to focus on satisfying the business bottom line and the company's investors. However, no one employee can fulfill a customer's total and real needs, especially in the absence of guidance about where the real problems lie. It is the senior leadership who need to be able to see the whole picture, rather than just a single, often self-serving metric. Only by carefully evaluating what can be done to improve products, services, and costs can a company improve the quality of life for its customers.
- ix. As described by Kordupleski,⁴ the realization by AT&T in 1986 that they needed to focus on Value, and Relative Value, resulted from extensive statistical exploration of a very large market research data base, with considerable time being spent seeking correlations and cross-correlations to high-level business performance indicators such as market share and return on invested capital (ROIC). Thus, for example, CVA emerged as a *lead indicator* of market share, not simply as a metric correlated to market share. CVA, a customer satisfaction-derived marketing metric, could, using a metaphor, “predict the weather.” What is even more important, a firm could use the data and information to “improve the weather.”
- x. It is important to note that indicators such as market share and ROIC *relate to the entire market*, not just to one's own customers, whereas Loyalty, which is fine as far as it goes, still relates just to one's own customers. This brings to mind a series of annual Quality conferences in Australia where marketing for the next meeting was focused primarily on attendees at the previous meeting (the principal organizer of the conferences could not understand how, if every conference had nearly 90% satisfaction rating, attendance had fallen from around 1200 at an initial meeting to around 450 ten years later. $1200 \times (0.9)^9 \approx 464$).

TABLE 4 Evaluation of Net Promoter Score (NPS) against desiderata for satisfaction surveys

a. A statistically sound method that ensures that no important attributes of the product or services have been omitted from the survey	Totally ignored. The current routine collection of NPS scores for operational activities (cf the introductory example in Section 2) is purely observational, with little or no understanding of demographic factors let alone sampling biases
b. A means of linking survey results to higher-level business drivers	Assertion of “correlation with growth and profitability”
c. Actionable survey results, including the ability to drill down	No
d. A means of identifying where to focus improvement priorities so as to have the greatest beneficial impact on the business bottom line	No defensible method
e. Meaningful benchmarking metrics	Nothing below level of NPS. In addition, there are no agreed standards about how NPS should be aggregated in a company to produce an all-of-company metric

We note that NPS has not been entirely overlooked by statisticians as an object of study. Jeske et al⁶ studied NPS and the claims made for it by Reichheld and made the following insightful observations:

... the hope is that movements in NPS are positively correlated with revenue growth for the company. While Reichheld's research presented some evidence of that, other findings are not as corroborative Regardless of whether there is a predictive relationship between NPS and revenue growth, implementing policies and programs within a company that improves NPS is an intuitively sensible thing to do A difficult and important question, however, is how to identify key drivers of NPS. *Calculating* NPS alone does not do this.

They then proceed to show how to gain insight into what these key drivers might be by applying statistical modeling to an existing customer survey. This analysis is fine, as far as it goes. However, it was conducted (seemingly) in the absence of knowledge of the CVM process and thus of the knowledge gained from a wealth of case studies identifying Value, and Relative Value, as the crucial lead indicators of high-level business drivers (market share, ROIC, etc) as spelt out by Kordupleski.^{1,4} Furthermore, among the valuable tools associated with CVM is the concept of a Value Map (Figure 5), which a company can use for strategic positioning. *Inter alia*, the Value Map gives meaning to the concept of a Value Proposition. First, a company selects which market (economy, average, or premium) it is targeting on the Value Map. Then, it decides whether it will gain market superiority by being superior on Quality and at par on Price, or by being superior on Price and at par on Quality, or both.

In fact, the work of Kordupleski⁴ is largely a published version of an unpublished article prepared in 1989. To quote from its Abstract:

The following article, "The Right Choice – What Does It Mean" by R.E. Kordupleski and W. C. Vogel, Jr, is a 1989 paper that reported on some of the most significant findings in the early days of Customer Value measurement and management. It is based on one of the largest empirical databases available at that time. AT&T was doing over 60 000 customer surveys per month. Three years of monthly findings were analyzed by some of the best researchers and scientists in the 300 000 employees and \$85 billion annual revenue company. The paper presented empirical evidence of the power of the consumer's perception of Customer Value, its impact on market share, growth, and customer loyalty and ultimately its impact on shareholder value and employee value. The paper was never published, but it was released throughout AT&T and also to AT&T's strategic business partners. Its content was presented and discussed at national conferences hosted by the American Marketing Association and the US Conference Board. Its findings have stood the test of time.

Clearly, there need to be more bridges built between the statistical and market research literatures!

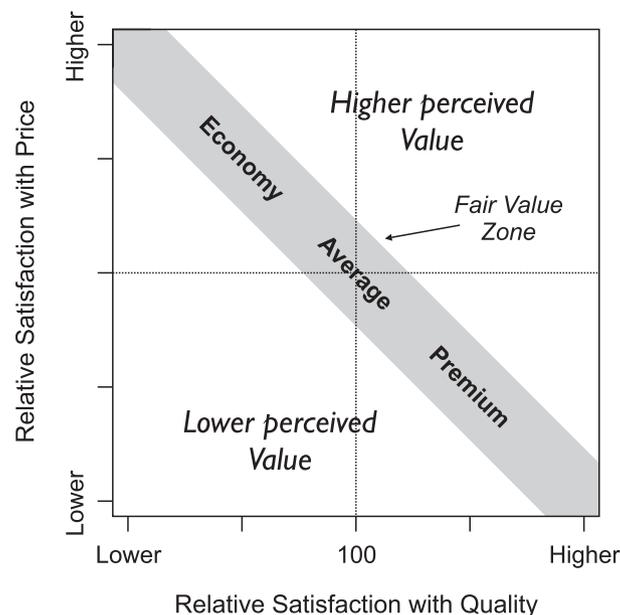


FIGURE 5 Value Map. The scores for Relative Quality and Relative Price are plotted against those of the competitors. The Fair Value zone relates to which market sector you are targeting. Adapted from the work of Fisher,² based on the concept described by Kordupleski^{1,4}

2.4 | Final comments

Customer satisfaction research needs to answer two simple questions

- How are we going?

and

- What should we do?

NPS does only a modest job answering the first but generally contributes little toward answering the second. For Customer Value Management,

- A. Extensive statistical analysis from a large amount of market research data has established that Relative Value is a lead indicator for competitive business outcomes such as market share and ROIC.
- B. Relative Value is derived from data collected from decision-makers (people making the purchasing decisions), and necessarily involves acquiring competitive data as well as data from your own company. It is calibrated by competitive information.
- C. The decision-maker's rating of Value is arrived at only after the consideration of the entire customer experience, *involving both Quality and Price*. The initial failure by AT&T to obtain a connection between customer satisfaction and business performance was due in part to overlooking satisfaction with Price.
- D. There is a clearly defined and proven process for identifying improvement priorities likely to have the greatest beneficial impact on the business.
- E. Statistical analysis and consequent action are based on representative samples of market data, with statistical uncertainty of current market position appropriately quantified.

For NPS,

- a. There appears to be little hard evidence that NPS is a lead indicator of business outcomes; indeed the AT&T experience suggests that there may be no connection.
- b. NPS focuses only on the user who, in many cases, will not be the person making the purchasing decision. It is uncalibrated by competitive information.
- c. It often derives from a single customer experience with unknown influence on a decision-maker's overall perception of Value.
- d. There is no sound approach to selection of improvement priorities.

There are well-established “best practice” approaches to creating and delivering superior value to customers and so gaining and sustaining market share, and there are associated metrics. NPS is not such a metric.

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