"An additional dimension in determining the net promotion score for business planning"

AUTHORS	K. Jeyaraman Soh Keng Lin Ishak Ismail

NUMBER OF REFERENCES

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K. Jeyaraman (Malaysia), Soh Keng Lin (Malaysia), Ishak Ismail (Malaysia)

An additional dimension in determining the net promotion score for business planning

Abstract

In the competitive business world, marketing the existing products or services or newly launched products needs comprehensive promotional strategies. Although commercial people follow different business strategies for different products, it is preferable to have an ideal index for promotion of any product. The net promotion score (NPS) has been developed in this context in addition to the customer satisfaction index (CSI). In this paper, a scientific method of computing NPS has been evolved and new models are proposed under different marketing promotion strategies. A research framework has also been set up to study the relationships in the managerial perception between socio-demographic and economic factors with the functions of NPS.

Keywords: Likert scale, word-of-mouth, detractors, customer satisfaction, loyalty measurement, brand loyalty.
JEL Classification: M31.

Introduction

The promotion of sales, particularly for costly commodities like electric generators, high capacity air-conditioners, computer laptops, massage equipments, laser machines for medical treatment, and photocopy machines require some special skills and talents from sales representatives. In addition to commodities, insurance polices, medical insurances, telecommunication connections and others will require special attention on the part of service providers. In a highly competitive world, running a business is a difficult task unless the owner of the business knows the correct management strategies to target the potential customers. In this attempt, there are some interesting research articles containing word-of-mouth and essential skills to promote sales have been published. The CSI and NPS are some of the indices that have been used to predict or assess the potential sales of a commodity.

The object of this article is to develop further the NPS found in the book *Ultimate Question: Driving Good Profits and True Growth* (Reichheld, 2006). It will be preceded by a discussion on the criticism it has attracted in relation to the single question methodology by Reichheld (2006) and in the process the present paper provides justifications to further develop the NPS. However, it is not the object of this paper to extensively discuss the advocacy of different approaches to promote a product.

In order to understand NPS better a search until December 31, 2008 into the Proquest and Emerald database using key words such as "net promotion score" or "promotion" has not yielded journal arti-

cles that are directly related to NPS. Therefore, the authors have relied on googling and this has yielded two important articles namely a criticism by Burke (circa 2008) and the explanation of NPS by Satmetrix of Bain & Co. (2008) in its homepage. The success of the sales of a product in the marketplace is invariably tied to the design of the product and the design has the primary intent to make, sell, and profit. However, the success rate of ideas turning into a design and resulting in a marketable product is found in one in 250 ideas (Kanter et al., 1997). The subsequent task of promoting a marketable product can be daunting enough to deter some people from venturing into the field of product or engineering design when faced especially with such a bleak rate of success.

The development and introduction of a new product are extremely difficult. It is even a more difficult task to promote the product in the marketplace. The success of a new product will normally require some form of publicity to increase its sales. Advertisements in mass media such as the television, newspapers, magazines, flyers, billboards, neon lights, and on internet websites are the common promotion media. In addition, promotion can also be affected by word-of-mouth. The word-of-mouth promotion can be considered as prevalent as attested by the establishment of the Word-of-Mouth Marketing Association or WOMMA. The effects of word-of-mouth in the life cycle of cultural goods have been mathematically modeled by César et al. (2006). Grewal et al. (2003) have provided the evidence to the conditions under which word-of-mouth communication is effective. Since marketers sometimes doubt the effectiveness of investments in advertising, the apparently cost-free word-of-mouth promotion would be an alternative way to promote products. In addition, loyalty measurements found in some models can also be viewed as instruments of

product promotion. Towards this, Beerli et al. (2002) and Luarn and Lin (2003) have constructed a customer loyalty model for specific applications. Rundle et al. (2001) have studied the performance of brand loyalty measurements. The survey of 180 respondents in three dominant cities in India was made in an attempt to develop an empirical model for measuring brand loyalty (Punniyamoorthy et al., 2007). A recently introduced measurement to gauge the potential of the sales growth of a product is the net promotion score or NPS. The NPS is a relatively simple tool and therefore has its detractors. The "*Net Net*" on the Net Promotion Score by Burke (circa 2008) argued that the interpretation of the measurement used in NPS is problematic and is similar to problems encountered in misleading averages in statistical process control without the range values. Burke (circa 2008) maintained that businesses require many operations (or factors) to work in tandem and therefore require those factors to be studied together to bring about supposedly better or more accurate results. In his proposal, Reichheld (2006) used the summation of the answers to a single question to represent NPS. Burke (circa 2008) contended that customer loyalty is not represented by a single question. Given the points forwarded by Burke (2008), the authors opine that neither numerous questions nor a model with many variables necessarily always give more predictive results. This is because simple forecasting models have proven to be more accurate than complex models (Kulendran and Witt (2003), Gonzalez and Moral (1995)). In addition, the single question asked in NPS was recommended by Reicheld (2006) only after research efforts by Laura Brooks of Satmetrix (2008). She discovered that "this one simple statistic explained much of the variation in relative growth rates". Therefore, Reichheld's single number NPS representing the summation of values from the single question to reflect the potential of sales growth deserves some exploration.

1. Research methodology

Organizations such as Telekoms of Malaysia and Australian car makers have used a questionnaire containing the single question to determine NPS (Satmetrix Benchmarks Net Promoter Scores in Four Key Industry Sectors, Business Wire, April 10, 2008). The NPS measures the likelihood of adopters to recommend a particular product to a colleague, friend or relative using a scale of 1 through 10 with 1 as most unlikely and 10 as being highly likely. NPS classifies a score of 8 and above as promoters, 4-8 as passive customers and below a score of 4 as detractors. This rating scale appears to be arbitrary as there is no scientific justification for benchmarking and therefore it challenges a relatively more

complex at the same time compact rating scale. There are many ways to promote a product either by way of advertising or giving out samples when launching a product. However, to grab the attention of potential customers, the word-of-mouth method is now popularly used. The present research article offers a newer dimension for determining NPS in a scientific and more systematic manner. It also develops bivariate models with a research framework not commonly found in literature.

1.1. Objectives of the study. The primary objectives of the present article are to:

♦ provide an additional indicator to net promotion score (NPS) to gauge customer satisfaction level;

♦ develop an enhanced method in the computations of NPS so as to correctly identify the detractors, passive customers and promoters;

♦ propose a research framework to study the relationships among the socio-demographic and economic variables in the context of NPS.

2. Discussion

In marketing research, there are two important strategies to be fulfilled to promote the sales of a product. Firstly, the customer must feel that he is receiving the superior product in terms of price, quality, features and ease of use. Secondly, he should feel that the service provider understands him, values him, listens to him and acts accordingly. The NPS is a simple indicator of how customers think and feel at a specific point in time about the product of interest. Based on NPS, customers may be classified into three categories, namely promoters, passives and detractors. It is common knowledge that promoters are loyal enthusiasts who keep buying products and urge their friends to do the same because they believe that they are getting good value. Passive customers are satisfied with the product and services but unenthusiastic and who also can be easily wooed by the competition. Further, they exhibit moderate purchases and referral behaviors. On the other hand, detractors complain more frequently about the overall quality and services of the product and are responsible for the negative word-of-mouth references. For instance, Telekom Malaysia uses the NPS to identify promoters, passives and detractors for their product. They have formulated a questionnaire with just one question which is measured on a 10-point Likert scale, namely:

Question 1: "Would you recommend TELEKOM MALAYSIA products or services to your relative or friend?"

1	2	3	4	5	6	7	8	9	10

Where 1 being highly unlikely to recommend to 10 – highly likely to recommend the product/service.

This questionnaire is administered to extract the impact of their product upon their customers.

Based on the responses, customers are classified into three categories, namely:

1. Promoters who are customers having given scores above 8 on the 10-point Likert scale.
2. Passives who are customers having given scores from 4 to 8.
3. Detractors – those having given scores of less

The formula used to calculate the net promotion score (NPS) is:

$$NPS = Promoters - Detractors.   \qquad (1)$$

Clearly, NPS may take positive or negative values. If it takes positive value then it shows the customer's loyalty towards the product/service, while negative value for NPS indicates that there are more detractors. However, the NPS formula needed to be modified for clarity. The service provider might influence the customer and the customers are sometimes forced to respond positively to the question posed to them. The conduct of the market survey, the place where it is conducted and the type of questions posed are very important aspects to correctly identify the promoters for the product. The selection of customers and the sampling scheme adopted to include appropriate samples are crucial in correctly portraying the success of the business strategies and to evaluate NPS. In addition, it is of interest to know whether the customer who recommended actually bought the product. Under these circumstances, one might encounter four exhaustive promotional strategies and they are tabulated below.

Table 1. Situations encountered in the process of promotion

Case	Customer / interviewee	Relative / friend
1	Not bought the product / just visitor	Bought the product already
2	Not bought	Not bought yet
3	Bought	Not bought yet
4	Bought	Bought already

Although, the four exhaustive cases given in Table 1 lead to promotion, case 4 does not directly converge to a productive customer for the product/service since the customer and the person whom he/she recommends already possess the product. Hence, we focus our attention on the first three cases only.

2.1. Conduct of the marketing survey. The agency which is responsible to carry out the marketing research for the promotion of the product/service should first find out under which case (as given in Table 1) the customer belongs. After the oral confirmation from the customer, the questionnaire given in either section 2.3 or section 2.4 may be adminis-

tered. The sample size is a function of the number of customers visiting the showroom per day. The systematic sampling scheme may be used to select the sample units for the survey. Accordingly, every 4th customer (say) may be interviewed to get his/her opinion. If the 4th customer is not willing to participate in the survey then the next consecutive customer may be requested to participate in the survey and consequently the selection process continues. In case, the purchasing behavior of the customers varies widely with respect to their income status then the one-way stratified random sampling with respect to income may be used to select the sample unit to reduce the sampling bias provided the data on the income of the customer is available.

2.2. Assumptions of the model. Customers will certainly meet their friends and relatives who have interest in the product concerned.

Both customers and their friends can afford to buy the product/service. They should not possess the similar product in their house or working place. The rating scores are consistent and uniform so that they are authentic and reliable without any subjective bias of the interviewer. The administration of the questionnaire should be done by a third party to indicate strict confidentiality without any traceability to the identity of the respondent.

2.3. Model construction for case 1 and case 2. In addition to the existing Question 1 in the questionnaire as specified in section 3 to evaluate NPS, it is better to include one more question and that is: If your friend recommends to you the product or service, will you keep the same rating in the event of you being unaware of the product/service? The need for this question arises because it will authenticate the respondent's response to the first question and to evaluate the influence of word-of-mouth. Thus, the proposed marketing survey questionnaire will consist of two questions. Both questions are measured on a 10 point Likert scale from 1 being highly likely as given below:

1) Would you recommend the product/service to your relative or a friend?

1	2	3	4	5	6	7	8	9	10

2) Would you buy a product or service when it is introduced by your relative or a friend?

1	2	3	4	5	6	7	8	9	10

The authors opined that both the questions are functions of sales promotion as the former represents 'intention to promote' and the latter 'intention to buy when recommended'. The second question is necessary to evaluate the promotional influence by friends and relatives. Also observe that the second question

is not applicable to case 3 and case 4 as the customer already has the product.

Now, let X_1 be the response value of the customer to the first question, let X_2 be the response value of the customer for the second question and n be the number of customers surveyed.

The scientific way of deciding the benchmark for the rating scale may be classified as follows:

Let m_1 = median of $X_1 = p^1{}_{50}$, m_2 = median of $X_2 = p^2{}_{50}$, where $p^1{}_{1, ..., }p^1{}_{99}$ are the percentiles of the first series (X_1) and $p^2{}_{1, ... ,}p^2{}_{99}$ are the percentiles of the second series (X_2).

If $X_1 \leq m_1$, then the customer becomes a possible detractor. If $m_1 < X_1 \leq p^1{}_{75}$, then the customer may be passive and when $X_1 > p^1{}_{75}$ then the customer becomes promoter.

Similarly if $X_2 \leq m_2$, then the customer becomes a possible detractor. If $m_2 < X_2 \leq p^2{}_{75}$, then the customer may be passive and when $X_2 > p^2{}_{75}$ then the customer becomes promoter. It is unlikely to get detractors in this case unless or otherwise the respondent is very against with the opinion of the friend or relative.

Following the steps in sections 2.1-2.2 and from the responses of the customers for questions 1 and 2, one can construct an idealistic model as shown in Table 2.

Table 2. Idealistic model

	Response to question 2		
Response to question 1	Promoters	Passives	Detractors
Promoters	Real promoters (RP)	-	-
Passives	Influenced by friend (IBF)	Real passives (RPA)	-
Detractors	Highly influenced by friend (HIBF)	Slight improvement (SI)	Real detractors (RD)

Thus, the formula for net promotion score is as follows:

$$(NPS) = RP - RD + HIBF + IBF. \qquad (2)$$

It can be easily verified that NPS given in (2) is always greater than or equal to NPS given in (1). Thus, the constructed model provides a more robust estimate for NPS under any circumstances. Interestingly, this model segregates those who were detractors from the response to the first question who might become either passives or promoters due to the influence of friends or relatives based on the response from the second question. Similarly, those who were classified as passives to the first question might become promoters due to the impact of the second question. These options necessitate the importance of the second question that will definitely

improve the accuracy of NPS calculations. Understandably, the greater the NPS the higher the chances of the success of the business strategic plans adopted in the entire marketing process of the product. Also, a negative score of NPS would require some changes to the business strategies to increase sales.

2.3.1. An alternative model. In realistic situation, one should expect only the idealistic model. However, an alternative model (Table 3) may exist due to the following reasons:

1. The bias due to the survey either in the form of interviewer negligence or the subjectivity of the interviewee.
2. Friends or relatives influence might result in negative impact.
3. The nature of the rating scale and its benchmark.

Table 3. An alternative model

	Response to question 2		
Response to question 1	Promoters	Passives	Detractors
Promoters	Real promoters (RP)	Negative impact (PNI)	High negative impact (HNI)
Passives	Influenced by friend (IBF)	Real passives (RPA)	Negative impact (PANI)
Detractors	Highly influenced by friend (HIBF)	Slight improvement (SI)	Real detractors (RD)

The formula is as follows:

$$NPS = RP - RD + HIBF + IBF - PNI - HNI - PANI. \qquad (3)$$

We have to provide quality service which would maximize RP, HIBF and IBF and simultaneously NPS score will tend to be positive. The original calculation of NPS does not take into account passive customers and detractors whereas the proposed models in Table 2 and Table 3 focus on how they become promoters once they are influenced by their friends or relatives. It is no point telling people how good the product is, but it should be consumers telling how good it is.

2.4. Model construction for case 2 and case 3. In this section, the proposed marketing survey questionnaire will consist of two questions, of which the first question is the same as in section 2.3 and both questions are measured on a 10-point Likert scale and are given below:

1) Would you recommend the product/service to your relative or a friend?

1	2	3	4	5	6	7	8	9	10

2) Would your relative or a friend buy the product recommended by you?

1	2	3	4	5	6	7	8	9	10

Here, the second question is not applicable to case-1 and case 4 as the relative or friend of the customer has the product already.

Let X_1 be the response value of the customer to the first question, let X_2 be the response value of the customer to the second question and n be the number of customers surveyed. The constraints on X_1 remain the same as in the construction of model given in section 2.3 whereas the constraints on X_2 are defined as follows:

If $X_2 > p^2{}_{75}$, then the customer succeeded in influencing the other person (friend/relative) to buy the product/service whereas if $X_2 \leq p^2{}_{75}$, then he fails to influence his friend/relative.

Following the steps in sections 2.1-2.2 and from the responses of the customers for questions 1 and 2 in section 2.4, one can construct an idealistic model as specified in Table 4.

Table 4. Idealistic model

	Response to question 2	
Response to question 1	Buy	Do not Buy
Promoters	Potential customer (RP)	Not able to influence (PNAI)
Passives	Able to influence (PAAI)	Not able to influence (PANAI)
Detractors	Able to influence (DAI)	Real detractors (RD)

The formula is as follows:

$$NPS = RP - RD + PAAI + DAI - PNAI - PANAI. \quad (4)$$

In sections 2.3 and 2.4, we computed NPS based on the assumption that the customer recommends the product/service only to one relative or a friend. However, if the customer is willing to recommend the product to more than one person then the questionnaire may be administered a number of times with the same customer to gather information.

3. Research framework

In addition to the two questions in the marketing survey questionnaire as discussed in section 2.3 and section 2.4, and if it is possible to collect some more details from the customers then the following research framework (Fig. 1) may be used:
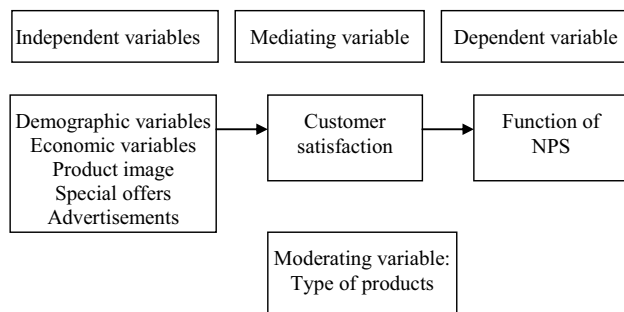

Fig. 1. **Research framework**

The description of the variables given in the research framework is:

Demographic variables: Gender, Age, Race, Place of residence.

Economic variables: Income, Occupation, Purchasing power (based on the bill), Cash/Credit.

Product image: Pricing factor, Reliability of the product, Product efficiency, Service, Value for money.

Special offers: Promotional offer, Installment schemes with low interest or without interest, Free offers, Special discount on MRP.

Advertisements: Media, Radio, News papers, Magazines, Notice.

Customer satisfaction: To be measured on a 5-point Likert scale.

Functions of NPS: As specified in equations (2), (3) and (4).

3.1. Research questions. For the proposed research framework in section 3, it is appropriate to find answers to the following research questions:

1. Which are the independent variables positively or negatively correlated with the functions of NPS?
2. Does customer satisfaction make the relationship between the independent and dependent variables stronger?
3. What is the role of the type of products as a moderating variable in deciding the relationship between the independent and dependent variables?

Conclusions

In big businesses, convincing the customers and selling the product are not an easy task. If some prior information is available regarding how many customers will be really interested in buying the product then one can decide on the demand of the product and accordingly plan on the manufacturing business strategies. Towards this, an attempt is made in this paper to propose a new formula to calculate the net promotion score (NPS) which will be the clear indicator reflecting the pulse of the customers. Although the computations of NPS exist in the literature, an improved and more scientific method of extracting its value has been suggested. Further, a research framework has been proposed to study the relationship between the socio-demographic and economic factors in relation to NPS. In this model, the type of products serves as a moderating variable and customer satisfaction plays the role of mediating variable. Since this study is an initial and pioneering work in this area, a lot more research has to be carried out so as to nurture the hourly need of the customers.

Limitations of the study. The conduct of the marketing survey to assess NPS has to be done with special attention and only by professional agencies. The sample units for the survey must be representative of the population depending on the volume of sales, purchasing power of the customers and have to be chosen using the probability sampling designs. However, the probability sampling is feasible only when we can obtain the list of the population frame and it would be difficult to obtain the consumer list with all information. Further, the evaluated benchmark of NPS may be used only for a limited period and it is a continuous process to repeat the experiment as the requirements of the customers change from time to time.

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