Can we get more out of Net-Promoter data?

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Abstract

Net-Promoter Score (NPS), a loyalty measure, is used extensively in commercial market research due to its simplicity of use and ease of understanding, despite criticism of the metric. Given the widespread use of NPS commercially, it is important to understand whether applying alternative loyalty measures has any advantages over Net-Promoter. This paper aims to demonstrate whether a likelihood mean and Polarization Index, φ, provide different results to Net-Promoter. These three measures were applied to data collected from an on-line survey of 1,818 participants who evaluated brands in a service industry. The findings show that all three measures provided similar variations in loyalty across brands and regions. The likelihood mean and NPS are strongly correlated, indicating that no one measure is more superior to the other at measuring loyalty within a service industry in New Zealand. However, the Polarization Index appears to assess loyalty differently to the likelihood mean and NPS.

Keywords: Net-Promoter, Polarization Index, brand loyalty metrics

Track: Marketing Research Methods

1.0 Introduction

Net-Promoter was first introduced by Reichheld (2003) as an alternative loyalty metric to predict brand growth. Reichheld (2003) proposes that by asking a single "would recommend" question, loyalty is determined and growth predicted. To determine the Net-Promoter Score (NPS), customers are asked, "On a scale of 0-10, how likely is it that you would recommend [company X] to a friend or colleague?" Scores of 10 indicate "extremely likely" to recommend, 0 indicates "not at all likely" and 5 indicates "neutral". Those scoring 9-10 are classified as "promoters", 7-8 as "passively satisfied" and 0-6 as "detractors". The NPS is calculated by subtracting the percentage of "detractors" from the percentage of "promoters".

Within the majority of the industries examined, Reichheld (2003) found that there was a strong correlation between NPS and company growth. Reichheld also claimed that a twelve-point increase in NPS corresponds to a doubling of a company's growth rate (Reichheld, 2006). Other research has found that a seven-point increase in NPS produces a one-percent increase in brand growth (Marsden, Samson and Upton, 2005). However, the findings of Reichheld (2003) and Marsden et al., (2005) are considered flawed because their NPS's were correlated with past growth rates (Keiningham, Cooil, Andreassen and Askoy 2007).

To address the concerns about Net-Promoter, Keiningham et al., (2007) examined the relationship between NPS and company growth rates in a cross-industry longitudinal study. They replicated Reichheld's study, but instead of using past growth rates they correlated NPS with company growth rates from identical time periods. They found no support for Reichheld's claim that Net-Promoter is the only question required to measure growth in customer surveys. By comparing correlations of both NPS and the American Customer Satisfaction Index (ACSI) with company growth rates, they determined that Net-Promoter performance is not superior to the ACSI.

Other researchers have identified further concerns with Reichheld's methodology as he broke the 11-point Net-Promoter scale into three categories and excluded the "passively satisfied" category from his calculations (Grisaffe, 2007). Grisaffe raises the concern that Reichheld's clustering of the scale results in different scenarios requiring diverse managerial actions being seen as similar (2007). For example, Company X may have 20 "promoters", 0 "passively satisfied" and 20 "detractors". Alternatively, Company Y may have 0 "promoters", 40 "passively satisfied" and 0 "detractors". Despite significantly different scenarios requiring different managerial actions, both companies have a NPS of zero. In this case, relying on NPS is likely to mislead marketing decisions as it is unclear which customer group requires more focus.

Further work by East, Hammond and Lomax (2008) revealed that Net-Promoter fails to directly measure negative word-of-mouth (NWOM). Instead, in Net-Promoter Score, NWOM is inferred from respondents who indicate low scores on the willingness to engage in positive word-of-mouth (PWOM), classified by "detractors" (East et al., 2008). Later work discovered that NPS is poor at capturing NWOM because "detractors" were shown to engage in both PWOM and NWOM (East, Romaniuk and Lomax, 2011).

Despite these criticism and weaknesses, Net-Promoter has been extensively adopted in commercial market research because of its simplicity of use and ease of understanding.

NPS is being used in multi-national corporations including eBay, American Express and Apple (Reichheld, 2006). NPS is even reported to shareholders and used to determine pay in employment contracts (Creamer, 2006).

The lack of academic support, methodological concerns and extensive commercial adoption of NPS present an increasing need to establish whether calculating the NPS from "promoters" minus "detractors" is superior to the application of additional measures to the Net-Promoter question. This paper presents the first stage of research intended to test the performance of NPS. It applies two other loyalty measures; a likelihood mean and Polarization Index, φ, to the Net-Promoter question. The three measures are compared across a variety of service brands commonly known in New Zealand; however, the data used in this research did not allow correlations with company growth rates.

2.0 Methodology

Data for this research is drawn from a survey of service brands in one category in New Zealand during 2014. Participants were recruited by a commercial panel provider across five regions in New Zealand; Northland, Auckland, Central North Island, Lower North Island and South Island. The final sample contained 1,818 respondents of mixed demographics, close to those of New Zealand's census data.

In a randomized order, participants viewed the logos of six service brands tested and were asked, "On a scale of 0-10, how likely are you to recommend 'brand X' to a friend or colleague?" A scale from 0-10 was provided with numerical descriptors at each scale point and verbal descriptors at 0 "not at all likely" and 10 "extremely likely". The six service brands tested varied in each region depending on brand presence. In total, eleven brands were evaluated across New Zealand with mixed sample sizes.

Using the eleven brands assessed, observed frequencies were generated for each Net-Promoter scale point. These frequencies allowed for a NPS, likelihood mean and Polarization Index to be calculated for each brand. The calculation of the likelihood mean is similar to that employed in assessing the variability in purchase intention scales (Wright and MacRae, 2007). The formula used for the calculation of the Polarization Index was consistent with that used by Corsi, Rungie and Casini (2011). It has been calculated as follows:

$$\varphi = \frac{1}{1 + S}$$

Once each measure was calculated, correlation coefficients were produced to assess whether the measures had any variations in assessing loyalty across brands. Potential variations in each measure were analysed across regions using the four brands that were surveyed in at least four of the five regions.

Biases common in survey data were minimized by presenting the brands in a randomized order. Internet coverage bias is unlikely as in New Zealand over 90% of the population have internet access (Gibson, Miller, Smith, Bell and Crothers, 2013). Recruitment bias in the on-line panel is unlikely as the panel size is substantial (n = 75,000).

3.0 Findings

Table 1 shows the NPS, likelihood mean and Polarization Index for each brand. NPS varied from -90% to -50% indicating that "detractors" significantly outweighed the "promoters" amongst all brands in New Zealand. The likelihood mean ranged from 0.40 to 0.59 and the Polarization Index ranged from 0.16 to 0.28, indicating that variation across brands was small. Additionally, the likelihood mean appears to show no significant discrimination beyond that offered by NPS, as brands with a higher NPS tended to also have a higher likelihood mean. The Polarization Index indicated that Brand B (φ=0.21), E (φ=0.28) and G (φ=0.24) have the greatest loyalty despite having a weaker NPS and likelihood mean compared to other brands. Each of these brands has a low market share in just one of the five regions analysed, and thus has a very small sample size. Larger sample sizes are required for accurate calculations of the Polarization Index, especially for brands with low market share (Kalwani and Morrison, 1980).

Table 1:   Comparison of measures across brands

	Sample Size, n	NPS	Likelihood mean	φ
Brand A	849	-50%	0.59	0.18
Brand B	233	-62%	0.53	0.21
Brand C	1818	-69%	0.53	0.17
Brand D	1818	-71%	0.52	0.16
Brand E	244	-74%	0.43	0.28
Brand F	736	-75%	0.50	0.17
Brand G	146	-75%	0.43	0.24
Brand H	1428	-79%	0.47	0.18
Brand I	1818	-82%	0.46	0.16
Brand J	1672	-88%	0.40	0.19
Brand K	146	-90%	0.40	0.17

Table 2 shows the correlations between the three measures across brands. The likelihood mean and NPS have a strong correlation (0.904), which demonstrates that brands with a high NPS also had a high likelihood mean. This suggests there is no significant difference between which of the two measures is used to evaluate loyalty in this service industry within New Zealand. However, the Polarization Index has a low correlation with NPS (0.100) and a negative correlation with the likelihood mean (-0.304). This indicates that the Polarization Index provides an alternative evaluation of loyalty in contrast to the two other measures. A potential reason for this could be the large mid-point bias identified in the analysis. For all eleven brands, between 23% and 32% of respondents indicated their likelihood to recommend the brand to a friend as a 5, indicated by "neutral". The Polarization index is more likely to be influenced by the size of the mid-point bias, as the uncertainty associated with 50/50 probabilities has a substantial effect on the value of the index. While the mid-point bias may be affecting these results, this preliminary examination requires further testing across countries, industries and brands before such a conclusion can be drawn.

Table 2:   Correlation coefficients across brands

Correlation	*NPS*	*Likelihood Mean*	*φ*
NPS	1		
Likelihood mean	0.904	1	
φ	0.100	-0.304	1

The three measures were also analysed to assess variation across regions. Four prominent brands, surveyed in at least four out of the five regions, were selected for the analysis. Figure 1-3 displays the variation across regions for the NPS, likelihood mean and Polarization Index respectively. As shown below, the variation in all three measures is relatively minimal across regions for each brand. However, visual inspection suggests that the Polarization Index shows less variation and so may be a more stable measure. However, the lack of variation could be due to other reasons. The next stage of this research will test other data sets to determine whether the Polarization Index is a more stable measure.
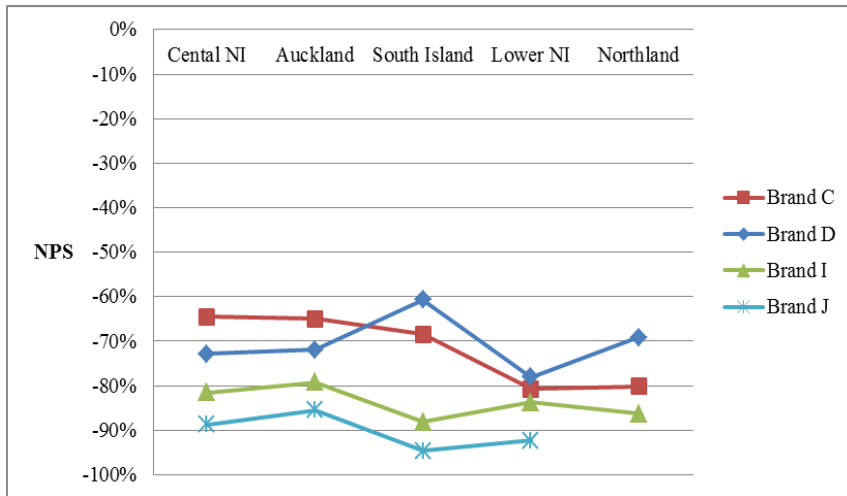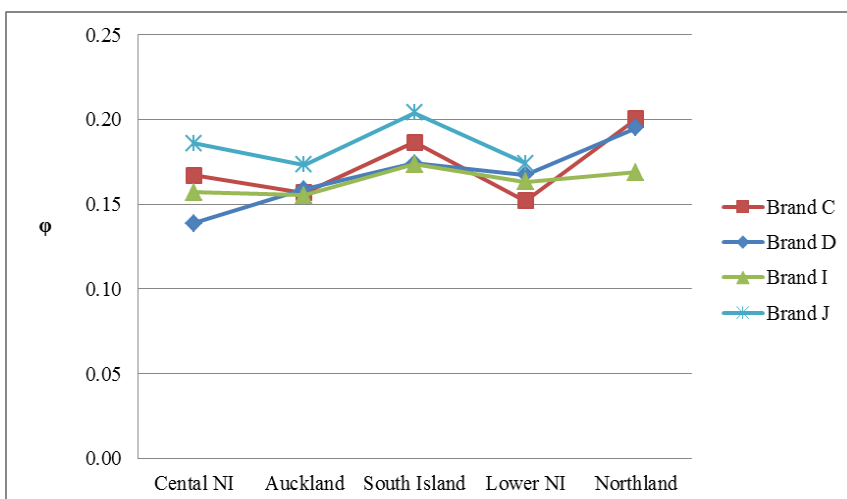
Figure 1:   NPS across regions

Figure 2:   Likelihood mean across regions

Figure 3:   Polarization Index across regions

4.0 Conclusion

This research determined that when comparing brands across a service industry in New Zealand, no measure applied to the Net-Promoter question is superior at identifying variability in loyalty across brands. It also found that there is little variation in each measure across regions, with visual inspections of the Polarization Index showing slightly more stability. Additionally, the NPS and likelihood mean are highly correlated. This indicates that when conducting a comparative analysis of service brands, there is little difference in reported loyalty levels between the two measures used to evaluate the Net-Promoter question. However, the Polarization Index appears to assess loyalty differently to the NPS and the likelihood mean. As growth rates were not collected, this research was unable to correlate the three measures with growth to assess whether the contrasting Polarization Index is superior to NPS and a likelihood mean.

Further research will consider assessing the measures in alternative industries and countries. The additional research will investigate which measure is more accurate at predicting brand growth. Calculating correlations between the three measures and drivers of growth will establish which measure is superior when applied to the Net-Promoter question.

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