

Does Measurement Influence Behavior – A Reassessment

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Abstract

The self-generated validity theory (Feldman and Lynch 1988) uses the following arguments: First, re-existing intentions may become more accessible in memory when the researcher asks the question. The measurement process thereby leads survey respondents to form judgments that they otherwise would not access in their memory or that they otherwise would not form. Second, higher relative accessibility of intentions, compared with other inputs for purchase decisions may make subsequent purchase behavior more consistent with prior intentions. A couple of studies provide support of the self-generated validity theory for public opinion (Simmons, Bickart, and Lynch 1993) and marketing research (Fitzsimons and Morwitz 1996; Morwitz and Fitzsimons 2004; Morwitz, Johnson, and Schmittlein 1993). While the self-generated validity theory may apply for high involvement products it does not seem to affect moderate and low involvement product categories.

Introduction

According to “best practice” marketing research theory, results from surveys are on average reliable. Stated differently, a profound marketing research study usually transforms into an appropriate forecast of developments in the marketplace. However, in some cases the association between forecast and market development may not be so straightforward.

In some cases the problem is caused by a dependence or rather a lack of independence between the research instrument and the researcher in charge of the measurement apparatus (Lyall Watson 1979).

Several marketing researchers have dedicated considerable effort at investigating this conundrum. The riddle has been called the “mere measurement effect”, “the self-erasing error of prediction” or simply “self-prophecy” (Chandon, Morwitz and Reinartz 2005). The self-generated validity effects are defined as a strengthened relationship between latent intentions and behavior due to the measurement of intentions.

Assumed that a sample of 1000 respondents (S_1) is phoned by a research agency and asked a couple of questions regarding a PC. During the interview the respondents are interrogated whether they intend to buy a new PC etc. within the next six months.

Presume that 400 respondents answer “yes”. Next, presuppose that the respondents of S_1 are called back after six months and asked if they indeed have purchased a new PC. Assume that 350 confirm that they indeed have purchased a new PC during the period.

Imagine that at a control sample of another 1000 respondents (S_2) simultaneously is asked whether they have purchased a new PC within the last six month (these persons have not been contacted before by the agency). Assume that 250 provide confirmative answers.

In the present case we can assess whether the difference in purchase between the two groups is statistically significant employing the test of difference between two population proportions regarding two large samples:

$$z = \frac{p_1 - p_2}{\sqrt{p(1-p) \times \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{0.35 - 0.25}{\sqrt{0.3 \times 0.7 \left(\frac{1}{1000} + \frac{1}{1000} \right)}} = 4.88, \text{ prob}(4.88) \cong 0$$

- where 0.3 is the pooled purchase probability.

In the present case the difference in purchase percentage between persons who have been interviewed and those who have not – *ceteris paribus* - is highly significant. We therefore conclude that the mere fact of having been interviewed impacts the purchase percent in an upwards direction. With other words, the purchase behavior of the exposed sample is invalid and upwards inflated.

Assume that the market research agency, based on their “representative” survey reports a forecast figure to the client company of 35% the result would be an error of 10%, perhaps the difference between success and mismarketing.

Why does this bias appear? Most probably because the interview itself triggers the respondents’ purchase process: The respondents are reminded about the issue and for a fraction of them (here 10%) the trigger caused by the interview is transformed into active purchase behavior which might otherwise not have been the case. The self-generated validity effects are defined as a strengthened relationship between latent intentions and behavior due to the measurement of intentions.

The problem of a contamination of the measurement scale and the measurement instrument represents a challenge for marketing researchers. Marketing Research companies are used to believe that their measurements are valid and reliable, regardless of the research context.

The comprehensive studies by Chandon, Morwitz and Reinartz (2005) deal with automobiles, personal computers and groceries (on a general level). Other studies show that simply asking consumers to predict their future behavior influences the likelihood that they will engage in that behavior (Sherman 1980; Spangenberg 1997; Spangenberg and Greenwald 1999; Sprott et al.

2003). Concentrating on socially normative behavior, these studies show that if respondents are asked to predict the probability that they will perform a given behavior at some future point of time, they are more likely to engage in collectively desirable behavior, such as voting or recycling, and less likely to engage in socially undesirable activities.

We assume that products like automobiles and personal computers incur a high involvement process within the consumers' perceptual system implying that a consumer is willing to employ comprehensive information search efforts prior to purchasing the item.

But do the same phenomena appear when it comes to grocery diaries like coffee, margarine and yoghurt? Such products are normally regarded as low involvement products. And what if is the effect supposed that one looks at fair trade coffee and ecological margarine and yoghurt?

In contrast to expensive high involvement products where the mere measurement effect may play a significant role we assume that the effect is insignificant for low involvement retail products.

Consequently, we offer the following hypothesis:

H1: Low involvement products, that is, products that are being purchased on a regularly basis and that are "affordably" will not be due to a mere measurement effect.

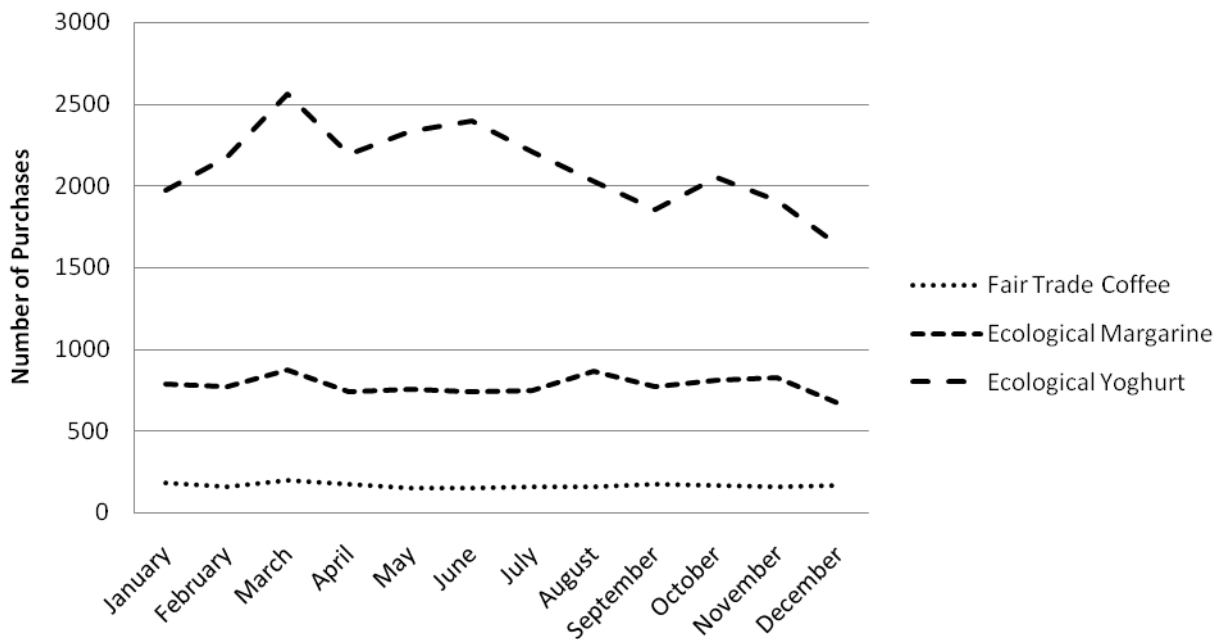
The involved statements are provided in Table 1 and results are shown in Figure 1. The first two statements refer to fair trade products while the fourteen remaining statements involve purchase of bio/eco products.

Table 1: Statements on Fair Trade and Ecological Products

(5-point Likert scale, 1 = totally agree to 5 = totally disagree)

I deliberately purchase Fair Trade products
I am willing to pay more for Fair Trade products
When purchasing food products I prefer biological/ecological versions
With regard to biological products I trust specialized stores and ecological supermarkets more than ordinary retail stores
When I purchase biological products I can provide a small contribution against the climate change
In Germany the control procedure regarding the ecological production process is tighter than in other countries
If there is a choice between alternative biological products I prefer products from Germany to products from other countries
Biological products taste better than not-biological products
Biological products are more healthy than not-biological products
I would like a bigger supply of bio-eco products
I am willing to pay more for bio-eco products
I have several times purchased products at a specialized bio-store
I expect to purchase more in a specialized bio-store in the future
There should be more information about bio-eco products

Figure 1: Purchase of Three Sustainable Product Categories During 2007 in Germany (Source: GfK's Panel of 25,000 consumers)



The questionnaire was sent to about 25,000 respondents via mail during the first week of September 2007.

Findings

We notice that there is no clear mere-measurement effect.

While there is a small rise in ecological yoghurt sales between September and October, the rise is modest and notice also that the purchase of eco yoghurt was higher in the period March-June – before the respondents were exposed to the questions of Table 1. With other words we find support for Hypothesis 1: For retail food products a mere-measurement effect does not exist.

We should stress, though that the statements displayed in Table 1 were part of a questionnaire consisting of 232 questions (mostly 1-5 scaled items from totally agree to totally disagree). It is quite possible that the mere measurement effect would have been significant assumed that one had contacted the respondents either face-to-face or by phone and if respondents were only exposed to the questions of Table 1 and to nothing else.

Implications for marketers

While the research of Morwitz and her associates raises an interesting and highly relevant issue regarding purchase of high involvement products we do not think that the methodological mere measurement effect is a serious validity issue regarding frequently purchased retail products. In our study we only focused on three sustainable products. Notice also that the statements of Table 1 are general in nature and do not ask for specific product categories. However, the panel purchase data of Figure 1 are indeed product specific. We do not think though that this methodological issue

impacts our findings. For market research companies this seems to be good news, indeed. Respondents' exposure to specific statements on sustainable topics (and perhaps also on health issues) does not appear to invalidate measurements of their subsequent purchase behavior.

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