How Much Is a Like Worth? a Field Experiment of Facebook Pages

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EXTENDED ABSTRACT

In the current project we examine customers’ willingness to like a company’s Facebook page, the factors that influence customers’ propensity to like a page, and whether likes translate into improved customer value for the firm. Our results suggest that Facebook likes are easy to acquire and that small changes in message framing can have an important impact on liking propensity. Importantly, we find that page likes translate into measurable real world changes in consumer behavior. However, these effects are conditional on reaching a sufficiently large percentage of page likers, which has implications for the mechanism by which likes affect behavior. To our knowledge, this is the first demonstration of a causal effect of Facebook likes on real consumer choices and behavior.

In this field experiment, customers of Discovery Vitality (a health wellness program) were invited to complete an online survey. The 4,054 survey responders who indicated that they had a Facebook account and currently did not like the Vitality Facebook page were randomly assigned to one of five conditions that manipulated whether they were invited to like the Vitality Facebook page, as well as the invitation message. Participants in the control condition were not invited to like the Vitality Facebook page. Participants in the other four conditions (which we will jointly refer to as the ‘treatment’ condition) were invited to like the Vitality Facebook page. By randomizing participants into either liking (treatment) or not liking (control) the page, we are able to test for the causal effect of a like on consumer behavior.

Within the treatment condition, we randomized the framing of the invitation based on a 2X2 between-subjects design. For half of the participants, the focus of the invitation was improving their health. For the other half of the participants the invitation focused on the peripheral rewards that could be obtained by accumulating many points in the Vitality program. The second factor manipulated whether the value of the page was framed in terms of gains, or avoiding losses.

Following this initial manipulation, there was no further direct contact between Vitality and the study participants via email. Participants who liked the page were exposed to Vitality content whenever they logged in to Facebook in the same way (i.e., organically) that any liked page’s content would appear on their newsfeed. As per normal business activity, all participants’ involvement in the Vitality program was recorded for the following six months. During the last two months of this period, Vitality paid to promote two posts per week to increase the reach of their Facebook page.

We first examine customers’ propensity to accept an invitation to like a company’s Facebook page, as well as the factors that may influence this. Out of the 3,236 participants who were assigned to one of the four invitation conditions, 2,245 (69%) agreed to like the Facebook page. We confirmed that these were real likes by matching this behavior to actual likes on Facebook Insights for Vitality’s Facebook page.

We next examine the effect of the experimentally manipulated invitation framing. We find that participants were more likely to accept the invitation when it focused on the peripheral rewards of the Vitality program rather than on the central health benefits (β=.54, SE=.11, p<.01), as well as when the invitation was framed in terms of gains (β=.27, SE=.11, p<.05). Interestingly, there was a significant interaction between these two factors (β=.46, SE=.15, p<.01). For the central health benefits focus, the gain frame was more effective, while for the peripheral rewards focus, the loss frame was more effective. These results suggest that while there is an overall high response rate to the invitation, small changes in message framing can have a large impact on whether people go on to like the page.

We next test whether Facebook likes translate into actual changes in customer behavior. We focus on the Vitality points accumulation data, which measures the total amount of involvement in the Vitality program. Since this measure is positively skewed in the population, we focus on log number of points. Participants in the treatment condition accumulated more points (i.e. were more engaged) than those in the control condition. However, this difference was not statistically significant under parametric \((t(4052)=.88, p=.38)\) or non-parametric tests \((\text{Mann-Whitney } Z=1.19, p=.23)\).

One concern with this test is that Facebook has a very stringent filter, which only allows a small percentage of followers to be organically exposed to a particular post. Therefore, this small effect could be the result of poor power to detect differences brought on by the filter, rather than an indicator that Facebook posts do not influence behavior. We next split the intervention period into the first four months where there were no promoted posts, and therefore their reach was purely organic (limited by the Facebook algorithm), and the last two months where Vitality had promoted (paid) posts that reached most of the page likers in the treatment condition. This allows us to simulate what would happen if Facebook did not impose such a stringent filter on brand page content, or alternatively if companies more regularly paid to promote their content. The results show no effect of the intervention during the organic period \((t(4052)=.93, p=.38)\) or non-parametric tests \((\text{Mann-Whitney } Z=0.60, p=.55)\), but significantly higher levels of engagement for the treatment group during the promoted posts period \((t(4052)=2.03, p<.05; \text{Mann-Whitney } Z=2.01, p<.05)\). These results suggest that conditional on reaching your customers, Facebook posts can influence actual behavior. These results also provide some evidence for the mechanism by which Facebook pages affect customer behavior. If Facebook likes affected behavior through self-perception (Bem 1972), then we would expect the largest effect to occur immediately after liking the page, when the self-signal is strongest. However, we observed no effect during this period. We only observed an effect when the firm paid to increase the reach of the message, suggesting that the effect is driven more by the exposure to the message itself (Grossman and Shapiro 1984).

REFERENCES