Creative Consumers: Awareness, Attitude & Action - Instrument & Preliminary Results

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Abstract

This paper reports on construction of a scale to measure a firm’s stance towards creative consumers – those adapting, modifying or transforming a proprietary offering. The instrument assesses an organization’s awareness of its creative customers, its attitude towards its creative customers, and finally the action taken in response. Tests of reliability and validity resulted in three clearly defined factors or dimensions, which correspond to the three constructs of awareness, attitude and action. The relationship between the scales’ prediction of stances and a manager’s self-typing of the organization is assessed, and the relationship between firm stance, environmental turbulence, and performance explored.

Keywords: Creative consumers, measurement scale, engagement
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The Rise of Creative Consumers

Traditionally, marketers have viewed customers as passive recipients and users of products and technologies, who consume and utilize finished offerings with little or no further adaptation or modification. Where customers did modify or “misuse” products, such as in the case of farmers employing their Model T Fords to perform a range of agricultural and mechanical tasks, the retribution of companies was usually swift. Ford Motor Company refused to honor warranties on vehicles that they suspected had been adapted for alternative farming applications. Nowadays however, the advent of technologies such as the internet permits the rapid propagation and communication of customer driven innovations. The fascinating list of simply clever, hugely useful, merely amusing, sometimes pointless, and downright stupid innovations by customers continues to grow (Berthon et al. 2007; Mollick, 2005; The Economist 2005;). Like most important social phenomena this is not simply a “bad” or “good” thing. The adaptation by customers (not by the firm itself) of Apple’s iPod for podcasting has led to a whole new form of media broadcasting. On the other hand, when customers tinker with certain pharmaceutical products, or with safety features on vehicles, the potential for danger is immense. The “clever customers” phenomenon can no longer be ignored by firms, for it can affect them in a range of important ways. It can present significant opportunities for the identification of new products that can be very profitable. Simultaneously it presents public relations nightmares when the firm appears to be an insensitive bully, threatens litigation when products do harm in the hands of meddling customers, and also represents a serious hazard to the firm’s intellectual property. Whether it is aware of it or not, a firm will have a stance toward the customer innovation phenomenon, which can range from positive to negative and from passive to active, and it is likely that this stance will impact on a number of outcomes, including the firm’s performance. In this research note we report on the development of an instrument designed to measure the three dimensions of a firm’s stance towards creative consumers, namely awareness, attitude and action. Abbreviated to the 3As Questionnaire (awareness, attitude and action), the instrument shows robust psychometric properties, with good reliability and validity.

Firm Stances Toward Creative Customers

Berthon et al. (2007) developed a parsimonious model for the identification of stances towards creative consumers. The model and the stances are now discussed in greater detail. Although the model uses the two dimensions of attitude towards creative consumers and action towards creative consumers, Berthon et al. identify a third precursor dimension – awareness of the phenomenon (Berthon et al., 2007, p. 45): obviously one cannot have an attitude or take action on a phenomenon unless one is aware of it. As we have already alluded to, many companies may be blissfully ignorant of their own creative consumers. A firm with a discourage stance has a negative attitude towards consumer innovation, but its actions are de facto passive. While it may verbally berate consumer innovation, it takes no overt action – it may just ignore, or reluctantly tolerate, or merely be unresponsive. In the case of the resist stance, while the firm’s attitude towards consumer innovation is still negative, its responses are active. Thus firms not only verbally berate consumer innovation; they also follow up their espoused position with punitive action. The firm actively seeks to minimize or eliminate
consumer innovations. A long established embodiment of resistance is invalidation of warranty. The third stance is the encourage position. The firm’s attitude towards consumer innovation is primarily positive, but the firm’s actions are again de facto passive. Finally, there is the enable stance, where the firm’s attitude towards consumer innovation is positive, but in contrast to the previous encourage stance, the firm’s posture is overtly active. The firm praises consumer innovation and backs words with deeds to actively help consumers innovate with their products. This is very much a ‘hands-on’, positive approach to the phenomenon.

Berthon et al. (2007) and Mollick (2005) provide a range of examples of firms and well-known products that typify the four stances defined above.

Item Development and Analysis

The items were developed deductively from the original definitions set forth by Berthon et al. (2007). A pool of twelve items for each construct (awareness, attitude and action) were developed, these were then given to a sample of 41 managers on an executive development program who rated each for relevance to the provided definition of each construct; the managers were also asked to suggest word modifications where necessary. Based on the feedback from the managers, the pool of twelve items was whittled down to eight for each of the constructs. Specifically, the top eight items rated as most relevant by managers were included for each of the three constructs. To these 24 items, an additional number of control questions were added. These asked the respondent to identify their primary business, rate the turbulence of their business environment (on a 7-point scale ranging from 1 = not turbulent at all, through 7 = extremely turbulent), and rate their firm’s performance (on a 7-point scale ranging from 1 = far inferior to competitors, through 7 = far superior to competitors). A further question described the four stances (as defined above) toward creative consumers and asked the respondent which description best matched that of their firm.

To test the instrument, a convenience sample of Executive MBA students was used, drawing on two pools of students from North American universities. Unlike most convenience student samples used in management research, these individuals were all in full-time employment in organizations; the average age was 37 years; the average annual income was $87,000; and all could be classified as being in middle- to senior management positions (many held the title of CEO). 178 usable questionnaires were returned. As a precursor, t-tests were used to explore whether there were significant differences between the two samples on each of the items – none were found, so the two samples were pooled.

The items were subjected to an exploratory factor analysis (principle components with varimax rotation), with no restriction on the number of factors. Three factors emerged with eigenvalues greater than one, each factor accounting for approximately 51%, 21% and 9% of the total variance respectively, and explaining approximately 81% of the total variance. The associated scree plot showed a clear step after the third factor, and all ensuing factors had eigenvalues less than one. Three clear factors emerged, with the action items all loading on factor 1, the awareness items loading on factor 2 and the attitude items on factor 3. The item loadings ranged from a low of .739 to a high of .911.

The reliability of the scales using Cronbach’s alpha as a measure of internal consistency was encouraging, with all the scales adequately meeting standards for such research (e.g. Nunnally, 1978). The Awareness scale achieved an alpha of .917, the Attitude scale an alpha of .920, and the Action scale an alpha of .939. Inspection of the item-to-total correlation
scores and the alpha-if-item-deleted figures suggested that all items were beneficial to each of
the scales’ reliability, so in each case all items were retained.

To test for convergent validity, the stance predicted by the attitude and action scales was
compared with the respondents’ self-typing of their firm’s stance. To do this, the midpoint for
each summated scale was used to as the categorization cut-off point. Thus, if a respondent
scored below 32 (8 items times the midpoint of 4) on Attitude and below 32 on Action they
would be categorized as a Discourage stance, above and including 32 on Attitude and Action
they would be classified as Enable, and so on. Each stance was then labeled, with Discourage
being 1, Resist 2, Encourage 3, and Enable 4. The predicted stance and the self-type stance
were then compared in a cross-tabulation. Visual inspection suggested fair agreement between
the two types of classification and thus a reasonable degree of convergent validity.

Stance, Turbulence and Performance

To explore the relationship between a firm’s stance towards its creative customers and its
business performance a univariate analysis of variance procedure was used. As other research
suggests that turbulence can be a significant factor in such instances (e.g. Jaworski and Kohli,
1993) turbulence was included as a moderating categorical factor, of high and low turbulence
based on a median divide. The model was set up in the following way: Awareness (the level
of a firm’s awareness of its creative consumers) was entered into the model as a continuous
first order control variable; firm stance and turbulence were entered as categorical, fixed
factor variables, each as main effects, and their product as a first order interaction effect.
Performance was the dependent variable. The results of the analysis are shown in Table 1.

Table 1 - Univariate Analysis: Stance, Turbulence and Awareness on Performance

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>154.67 (4)</td>
<td>8</td>
<td>19.336</td>
<td>17.177</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>177.264</td>
<td>1</td>
<td>177.264</td>
<td>157.404</td>
<td>.000</td>
</tr>
<tr>
<td>Awareness</td>
<td>17.201</td>
<td>1</td>
<td>17.201</td>
<td>12.622</td>
<td>.000</td>
</tr>
<tr>
<td>TURB</td>
<td>30.089</td>
<td>1</td>
<td>30.089</td>
<td>26.731</td>
<td>.000</td>
</tr>
<tr>
<td>TYP_RES * TURB</td>
<td>76.931</td>
<td>3</td>
<td>25.644</td>
<td>22.782</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>109.227</td>
<td>169</td>
<td>1.126</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4656.000</td>
<td>178</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>384.899</td>
<td>177</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be observed, all variables in the model had a significant impact on performance.
Indeed the overall model yielded an $R^2$ of .422. To visually inspect the relationship between
the main-effect of stance on performance a plot of the model estimated marginal means of
firm performance is conducted for each of the firm stances. As can be observed from Figure 1
below, the Discourage stance is associated with the highest performance, and the Enable
stance with the lowest; Resist and Encourage stances fall in between. To inspect the impact of
turbulence on the relationship between stance and business performance the plots of the
relationship for high and low turbulence are shown in Figure 2. As can be seen under high
turbulence the difference between stances is significantly reduced.
The present paper develops an original scale to characterize a firm’s stance toward creative consumers. The final instrument considers three dimensions of stance – awareness, attitude, and action – and demonstrates sound psychometric properties. Taken in conjunction with further questions related to business environment turbulence, firm performance, and self-declared stance, the initial results from use of the instrument pose interesting questions. Different stances appear related to differing levels of firm performance; however, these results are moderated considerably by turbulence in the business environment. In reasonably stable business environments, it may be desirable to discourage customer creativity. However, this strategy might have less of an impact in cases of high turbulence. Overall, the instrument provides a useful starting point for further exploration of how companies can orient themselves with respect to creative consumers.

As with any piece of research there are limitations that can possibility affect results. In this case the most obvious is that a convenience sample was employed and this could affect the generalizability of findings. Given the background and current occupations of our respondents, however, we do not feel that use of a convenience sample was detrimental, given the exploratory nature of this research. Another issue relevant to our sample is the threat of common methods bias. Only one respondent from each firm rated all measures, which included both firm stance and performance. Further research should eliminate this possibility. In addition, we used subjective measure of firm performance rather than hard indicators (e.g. from financial statements). There is good evidence to suggest that managerial perceptions of performance are generally as good as, and often superior to harder measures (Dess and Robinson, 1984), but future research could consider the use of independent, objective measures.

These limitations aside, the scale has a variety of possible uses for managers. As a start, companies concerned with building greater understanding of how their firm deals with creative consumers can use the scale on a management team basis. Doing so not only opens discussion centered on differences discovered between individual managers, but is a useful way of articulating what a firm’s stance currently is and what a firm may want it to become. Perhaps an organization discovers that it is unknowingly harsh towards creative consumers
but realizes that in the future it must adopt a more collaborative stance. For example, encyclopedia companies are now suddenly struggling to compete with user-created content such as Wikipedia. Conversely, a firm may wish to tighten its stance where the modification of its technologies is potentially dangerous, and leads to possible legal liability.

A number of avenues for potential further research emerge from this note. Obviously, the scale is in its preliminary stages of development – while the existing items may capture a significant portion of the customer creativity construct, further work is required. In addition, empirical work beyond a convenience sample is needed, and this should include a wide range of industries, markets and technology applications. The preliminary work has been conducted in North America, and there is obvious potential to extend this in other cultures and countries. It would also be worthwhile to link the customer creativity construct to other organizational measures beyond simple indicators of financial performance and environmental turbulence. For example, it would be important to establish whether the stance toward customer creativity is in any way determined by the culture of the organization, using similar tools to those deployed by researchers such as Deshpande, Farley and Webster (1993). Likewise, it would be useful to link stances toward customer creativity to performance of new product development in organizations (e.g. Capon, Farley, Lehmann and Hultbert, 1992; Clark and Fujimoto, 1991) or to the level of a firm’s market orientation (Jaworski and Kohli, 1993).

Creative consumers are becoming a major force in the business world. From open source (Pit et al., 2006) to proprietary, lock down systems, consumers are adapting, modifying, and creating. Their nature and motivation are not as simple as the notion of ‘lead users’ (von Hippel, 1986), for they do not necessarily have current strong needs that will become general in a marketplace some time in the future. Unlike lead users, many firms are unaware of the extent of the phenomenon, and there are few guidelines on how to assess and manage these creative consumers. This is more than just rhetoric – creative consumers unless managed appropriately can cripple a company’s source of revenues. It is noteworthy that the digital rights system which is the bed-rock of Netflix’s online distribution of films was recently hacked by creative consumers (Gilbertson, 2007). In contrast Lego’s management of creative consumers has provided a source of product development and cost savings as well as product champions and opinion leads in the community (Keoner, 2006). The instrument described in this paper is one step towards helping managers to identify, assess and strategically plan a coherent response to creative consumers. The instrument describes possesses fair psychometric properties and initial results suggest a rich vein of future research possibilities.
References


The rise of the creative consumer; The future of innovation, 2005. The Economist 75 (March 12).