Effects of complete products on consumer judgments

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Abstract
Purpose – The aim of this paper is to seek to understand better how consumers judge multiattribute products that are perceived as either more or less complete in terms of feature coverage in a category. Complete products are used to reduce the need of developing and managing expansive and expensive line-extension portfolios.

Design/methodology/approach – The research used an experimental method and conducted two studies to test hypotheses derived from the marketing literature.

Findings – It is found that more complete multiattribute products are preferred to less complete alternatives. This preference for more complete products remains under larger competitive product assortment, but is reduced under smaller assortment. With a higher price level and larger assortment, the preference is substantial. However, under the conditions of lower price level/larger assortment, higher price level/smaller assortment, and lower price level/smaller assortment, the preference is again reduced.

Research limitations/implications – More positive evaluations and higher product utility accrue from adding new features to multiattribute products prior to purchase. Moreover, more complete information causes more positive evaluations and cognitive responses. Larger assortment strains cognitive resources, and more complete multiattribute products are easier to understand than less complete multiattribute products. This processing facilitation generates positive affect leads to greater use of information that can shorten processing.

Practical implications – Brand managers can have a better understanding of how consumers judge more and less complete products, and under which circumstances more complete products are preferred.

Originality/value – The study of perceived product completeness is novel.

Keywords Product completeness, Product management, Product assortment, Price inferences, Consumer behaviour, Individual perception

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this article.

Complete products, such as Colgate Total, the new iMac desktop (“all-in-one for everyone” on the product webpage), or Sprint Mobile’s Simply Everything Plan, are positioned to include every significant feature in the category and be attractive to many feasible customer segments. Until recently, managers responded to the increasing fragmentation of customers by expanding portfolios with specialized products targeting well-defined segments. However, managing such large portfolios can be unprofitable due to high expense and cannibalization (Dodes, 2007; Mason and Milne, 1994). Therefore, many marketers are retracting portfolios by launching a smaller number of more complete products to replace a larger number of specialized alternatives (Kang, 2007). Fully complete products are the ultimate representation of this trend.

Despite the increased use of complete products, surprisingly little research has directly examined their effectiveness. The work that does exist presents conflicting conclusions. Some research suggests adding features to multiattribute products enhance product utility (Bertini et al., 2009; Mukherjee and Hoyer, 2001; Nowlis and Simonson, 1996), even if the features are trivial (Brown and Carpenter, 2000). In contrast, other work has found potential drawbacks. Converged (multi-category) technological products, which contain multiple functions across multiple categories (e.g., cellphones containing digital cameras), were assessed less positively than dedicated (single-category) alternatives at high levels of technology performance (Han et al., 2009). Increasing a product’s attribute quantity can lead to “feature fatigue,” especially in a usage context (Thompson et al., 2005). Similarly, an attribute in an all-in-one (two-attribute) product that was shared with a specialized (single-attribute) alternative was devalued when the two products were in the same choice set (Chernev, 2007). This work establishes the importance and topicality of investigating multiattribute products, and also points to the need of better understanding how consumers judge them. However, this research does not directly manipulate perceived completeness. This is an important omission, as perceptions of completeness start becoming germane as products accumulate larger numbers of attributes, and may alter judgments of otherwise identical products. Moreover, the increased use of complete products by marketers points to the high degree of managerial topicality.

Therefore, the objective of this research is to try to resolve some of these conflicts and address the gap in the literature by
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manipulating product completeness. Moreover, we extend the understanding of completeness by examining which contexts may alter its effects. In Study 1, we investigate product completeness and assortment. In Study 2, we use a different stimulus set to enhance generalizability, and aim to replicate and extend Study 1 by additionally studying the effects of price level.

1. Conceptual framework

For two products with an identical number of features, a perception that one multiairtribute product is in fact more complete would lead to a more positive attitude pre-purchase (Thompson et al., 2005), and higher product utility (Bertini et al., 2009; Mukherjee and Hoyer, 2001; Nowlis and Simonson, 1996). Moreover, the more complete the information, the better its quality when all other variables such as relevance, recency, and accuracy are held constant (Dutta-Bergman, 2004; Eysenbach et al., 2002). Greater information completeness also increases argument strength, which in turn influences persuasiveness and source credibility judgments (Dutta-Bergman, 2004). These findings suggest more complete multiairtribute products will be preferred over less complete ones given an identical feature set:

H1. More complete multiairtribute products will be preferred over less complete multiairtribute products.

We now examine the implications of factors designed to alter the difficulty of processing and understanding multiairtribute products that may moderate this effect. Larger product assortments represent a complex decision environment, which is characterized by greater product confusion and longer choice delays (Jacoby et al., 1974; Lurie, 2004; Malhotra, 1982; Nelson, 2002). In this manner, cognitive resources are strained, which leads consumers to more active seek processing heuristics (Scammon, 1977). If a consumer judges a multiairtribute product as more complete, then less processing is necessary. Consumers can make an immediate assessment that the product contains all of the important category features. Evidence suggests processing facilitation generates positive affect. This should augment the positive benefits of more completeness delineated above.

Conversely, if a multiairtribute product is less complete, then consumers have to form product attitudes by assessing each attribute individually. With a larger assortment, such feature-level processing would be difficult. This would eliminate the benefits of both processing facilitation and completeness, and therefore lead to less favorable judgments about multiairtribute products. With a smaller assortment, cognitive resources are more available at information processing. Consumers can more readily make relationships among multiple features. Equivalent multiairtribute products should be judged similarly regardless of the perceived level of completeness:

H2a. More complete multiairtribute products will be preferred over less complete multiairtribute products with a larger assortment.

H2b. This preference for more complete multiairtribute products will be reduced with a smaller assortment.

We also expect price level to be a moderator. With a large assortment, the preference for more complete products should remain strong at a higher price level. With large assortments, consumers seek information structure as a means of simplifying the decision process (Lurie, 2004). In this context, price level can serve as a central feature in a product processing frame (Lawson and Bhagat, 2002). Frames are used to organize, categorize, and process information. The features that organize a frame influence the interpretation of all other relevant attributes (e.g., Barsalou, 1992). Therefore, price level should be a central feature in processing multiairtribute products under a large assortment, and influence the interpretation of other product attributes. Higher prices lead to higher quality inferences (Rao and Monroe, 1989), which should augment the benefits of processing facilitation and completeness with a larger assortment. Moreover, all-in-one products overcome attribute devaluation when compared with specialized alternatives at higher price levels, but demonstrated devaluation at lower price levels (Chernev, 2007). Similarly, lower quality inferences from lower prices can offset other perceived product benefits (e.g., Hansen, 2005; Gamilel, 2010). This suggests, even with a larger assortment, the benefits of product completeness would be reduced at a lower price level:

H3a. More complete multiairtribute products will be strongly preferred over less complete multiairtribute products with a larger assortment and a higher price level.

H3b. The preference for more complete multiairtribute products will be reduced with a larger assortment and a lower price level.

With a smaller assortment, we again expect the benefits of completeness to be reduced regardless of price level. With smaller assortment, consumers can more readily interpret multiple features. In this environment, price level is a feature that is weighted against those of other product features in a compensatory manner (e.g., Chernev and Carpenter, 2001) instead of a central feature in a product processing frame. Therefore, the influence of price level should be reduced, as should the preference for completeness compared with the larger assortment/higher price level condition:

H3c. The preference for more complete multiairtribute products will be reduced with a smaller assortment regardless of price level.

2. Study 1

2.1 Overview

In Study 1, we test H1-H2b.

2.2 Pretest

We conducted a pretest to understand perceptions about complete products, and determine research stimuli. Participants (n = 39) were asked several open-ended and scaled questions about a complete products (these and all participants in the three studies were upper-level undergraduates at a large New England university who received extra course credit for their involvement). In response to the question “When you see a product labeled as ‘complete,’ what do you think this means?”, 59 percent answered “everything I need” while 64 percent responded “contained more features.” Most participants thought computer protection software (73 percent), multivitamins (71 percent), laptops (68 percent) and cold medicine (65 percent) offered complete products. We selected software and multivitamins as stimuli for Study 1, and laptops and cold medicine for Study 2 to enhance generalizability.
2.3 Design, participants, and manipulations
We used a 2 (product completeness: more and less) × 2 (assortment: larger and smaller) between-subjects design, and a within-subjects category replicate. Participants (n = 72) were upper-level undergraduate students at a large northeastern state university. They took the online survey in groups of about fifteen in a computer lab monitored by one of the co-authors. For both categories, product completeness was manipulated by using two positioning options for an identical multiattribute product: complete and effective. The effective positioning was intended to represent a less complete perception. Information quantity of both positionings was identical (one word), and all other product information was the same. Assortment was manipulated by presenting two different choice sets: larger (eight alternatives) and smaller (two alternatives). This is consistent with previous research on assortment that found consumers can optimally process a maximum of six alternatives (Chernev, 2003; Malhotra, 1982). Category order was counterbalanced (no order effects for any dependent measures).

2.4 Procedure
Participants were first exposed to a page of instructions, which indicated, “Please take a look at these computer protection software (multivitamin) products. All the software (multivitamin) products are from the same brand – Norton from Symantec Corp (GNC). Please do not touch anything during the presentation, slides will pass automatically. Once you see all the products, you will see a slide that will have a link for the questionnaire. Click on that link and follow the instructions.” Then, they were exposed to one of the two assortments for 20 seconds per product. The final product was the stimulus, and contained seven features (for both categories, with information quantity kept the same) and the completeness manipulation (i.e., either complete or effective positioning). Please see Appendix 1 Table AI for the four stimuli. The other non-stimuli products were simply attribute-positioned, and contained features supporting that positioning. In the larger assortment condition, the final product contained one feature from each of the preceding seven ones. In the smaller assortment condition, the final product contained the identical feature set as in the larger assortment condition. Note that the manipulated product in terms of completeness always occurred at the end in all experimental conditions, thus eliminating a potential order-effect bias. Moreover, participants were not notified prior to product exposures that they would only be evaluating only the final product.

After being exposed to the product set, participants then filled out the dependent measures only about the final product. Thus, the task was memory-based, and ensured that the assortment manipulation would be manifested in the processing of the stimulus product. After they finished these measures, participants were exposed to the alternatives in the second category, and again completed the dependent measures for the final multiattribute product only in the choice set. Finally, participants were thanked for their time and dismissed.

2.5 Dependent measures
Dependent variables were purchase intentions, beliefs, and choice. Purchase intentions (see Table I for observed variables and source) were measured by four items (this and all non-choice measures used seven-point semantic differential scales with approximately 25 percent reverse-scored), beliefs were measured individually, and choice was measured by a statement asking which of the alternatives participants would select. Choice is a common and highly diagnostic dependent variable in decision-making contexts (see Chernev, 2007).

2.6 Results
All constructs were reliable across both categories (0.80 < α < 0.90). A factor analysis with Varimax rotation for purchase intentions and beliefs indicated a two-factor model based on the criteria of factor loadings > 0.40 and eigenvalues > 1. Therefore, we averaged all items across each factor. Manipulation checks showed completeness was manipulated successfully. Complete positioning was judged more complete than the effective alternative with identical features (multivitamin F_{1,71} = 160.5, \(p < 0.0001\), M_{(MoreComplete)} = 5.81 vs M_{(LessComplete)} = 3.69; software F_{1,69} = 133.9, \(p < 0.0001\), M_{(MoreComplete)} = 5.95 vs M_{(LessComplete)} = 3.64).

As we used two categories, we measured category expertise (Mitchell and Dacin, 1996), but it was not a significant covariate with any dependent variable (each \(p > 0.05\)). Moreover, there were no differences between the two categories on any dependent measures (each \(p > 0.05\)) so the data were aggregated across the categories.

Purchase intentions and beliefs were evaluated using 2 (product completeness) × 2 (assortment) MANOVA. The results show a main effect of completeness (F_{2,141} = 21.73, \(p < 0.0001\); Pillai’s Trace = 0.24), and a completeness × assortment interaction (F_{2,141} = 13.89; \(p < 0.0001\); Pillai’s Trace = 0.17). We then ran individual ANOVAs to test the hypotheses. Supporting H1, completeness displayed a main effect for each dependent measure. The more complete product (M = 5.07) displayed higher purchase intentions than the less complete (M = 4.92; F_{1,143} = 5.12; \(p < 0.0001\)), and more positive beliefs (M = 5.77 versus M = 4.68; F_{1,143} = 38.41; \(p < 0.0001\)). This effect was conditioned by the product completeness × assortment interaction. Supporting H2a, under larger assortment, more complete products (M = 5.37) exhibited higher purchase intentions than less complete (M = 3.52; t_{1,72} = 5.65; \(p < 0.0001\)), and substantially more positive beliefs (M = 5.82 versus M = 4.04; t_{1,72} = 7.31; \(p < 0.0001\)). In contrast, and supporting H2b, under smaller assortment, more complete products displayed the same purchase intentions (\(p > 0.60\)) and beliefs (\(p > 0.10\) as less complete (see Figure 1).

For product choice, we compared the percentage of participants who selected the final product when it was more versus less complete, and analyzed the data using linear regression. Product completeness again exhibited a main effect. Choice was higher with more complete products (M = 67.5 percent) than less complete (M = 38.7 percent; \(\chi^2_{1,145} = 14.86; \(p < 0.0001\); \(\beta = 1.33\); Wald = 13.05). As with purchase intentions and beliefs, assortment moderated this effect (\(\chi^2_{1,145} = 4.01; \(p < 0.05\); \(\beta = 2.03\); Wald = 6.55). Under larger assortment, choice for more complete products was significantly higher (M = 69.4 percent) than less complete (M = 16.0 percent; \(\chi^2_{1,71} = 18.89; \(p < 0.0001\)). However, this choice advantage was eliminated under smaller assortment (\(p > 0.30\)).

2.7 Additional results
We also measured expected price as a dependent variable to test Chernev’s (2007) finding that consumers would view all-in-one products as pricier than specialized alternatives. Expected price data would also be useful for setting up price-based extensions in Study 2. It was a categorical variable measured with a single-item measure: “Which one of these products is likely to be the most expensive?” (Chernev, 2007).
This product is “complete” in terms of features

Disagree/agree Sujan and Bettman (1989)

Figure 1

Study 1 – completeness and assortment interaction

Price expectations were higher with complete products ($M = 70.7$ percent) than non-complete ($M = 59.7$ percent; $\chi^2_{1,445} = 11.23; p < 0.05; \beta = 3.33$; Wald = 6.06).

2.8 Discussion

The data in Study 1 support the hypotheses. For otherwise identical multiattribute products, more complete was preferred to less complete. More complete products were preferred with a larger product assortment, but this preference was eliminated with a smaller assortment.

3. Study 2

3.1 Overview

The objective of Study 2 is to replicate Study 1 using a different stimulus set to enhance generalizability, and extend it by manipulating price level. Therefore, we test $H1$-$H3c$.

3.2 Design, participants, and manipulations

A 2 (product completeness: more and less) × 2 (assortment: larger and smaller) × 2 (price level: higher and lower) between-subjects design was employed. Again, we employed two product categories within-subjects to further enhance generalizability, which were counterbalanced (order effect). From the Study 1 pretest, notebook computers and cold medicine were used. Product completeness and assortment were manipulated as in Study 1 (see Appendix 2Table AII for stimuli with completeness manipulation). On an initial slide, participants ($n = 133$) were informed that the notebooks (cold medicine) were offered by HP (Tylenol). The price level of the last (multiattribute) product was manipulated by moving up and down by two standard deviations from the average market price at the time the study was conducted. High prices of notebook and cold medicine were $2,279 and $12.29 respectively, and low prices were $679 and $2.29.

3.3 Procedure and dependent measures

Participants followed the same procedure and filled out similar measures as in Study 1 except where noted. We used product evaluations (see Table I) and beliefs as dependent measures.

3.4 Results

An exploratory factor analysis indicated a two-factor model for both stimuli based on the criteria detailed in Study 1. For notebooks, four of the product belief items loaded with the product evaluations items but three of them loaded as an orthogonal factor. We analyzed and averaged only these latter three items. All aggregate measures were reliable across both categories ($0.70 < \alpha < 0.91$). Confirming the manipulation, the complete positioning was viewed as more complete for both notebooks ($F_{1,131} = 19.65; p < 0.001$) and cold medicine ($F_{1,129} = 14.81; p < 0.001$). As we used two categories, we measured category expertise (Mitchell and Dacin, 1996), but it was not a significant covariate with any dependent variable (each $p > 0.05$). Moreover, there were no differences between the two categories on any dependent measures (each $p > 0.05$) so data were again aggregated across the categories.

3.4.1 Testing hypotheses $H1$-$H3c$

Product evaluations and beliefs were evaluated using 2 (product completeness) × 2 (assortment) × 2 (price level) MANOVA. The results show a main effect of product completeness ($F_{2,263} = 22.17; p < .0001$; Pillai’s Trace = 0.21), and a product completeness × assortment interaction ($F_{2,263} = 2.99; p < 0.05$; Pillai’s Trace = 0.04). We then ran individual ANOVAs to test the hypotheses. Supporting $H1$, product completeness displayed a main effect for each dependent measure. More complete products ($M = 5.56$) displayed higher product evaluations than less complete ($M = 4.77$; $F_{1,263} = 38.64; p < 0.0001$), and more positive beliefs ($M = 5.10$ versus $M = 4.26$; $F_{1,263} = 59.42; p < .0001$). Again, there was a product
completeness × assortment interaction. Supporting \(H2a\), under larger assortment, more complete products \((M = 5.79)\) exhibited higher product evaluations than less complete \((M = 4.61; t_{1129} = 6.13; p < 0.0001)\), and more positive beliefs \((M = 5.26\) versus \(M = 4.23; t_{1129} = 6.32; p < 0.0001)\). In contrast, and supporting \(H2b\), under smaller assortment, more complete products displayed the same product evaluations \((p > 0.05)\) and beliefs \((p > 0.05)\) as less complete (see Figure 2).

\(H3a\) stated that more complete multiflavor products would be strongly preferred over less complete ones with a larger assortment and higher price level. \(H3a\) was confirmed, with more complete products displaying higher product evaluations \((M = 5.72)\) than less complete \((4.49; t_{1.63} = 4.70; p < 0.0001; \text{Cohen's } d = 1.18)\), and more positive beliefs \((M = 5.30\) versus \(4.06; t_{1.63} = 5.24; p < 0.0001; \text{Cohen's } d = 1.32)\). \(H3b\) predicted that the preference for more complete products would be reduced with a larger assortment and lower price level. \(H3b\) was confirmed. Although more complete products displayed higher product evaluations \((M = 5.77)\) than less complete \((M = 4.71; t_{1.63} = 3.82; p < 0.01; \text{Cohen's } d = 0.96)\), and more positive beliefs \((M = 5.21\) versus \(4.40; t_{1.63} = 3.62; p < 0.01; \text{Cohen's } d = 0.91)\), the magnitude of the preference was reduced via the Cohen's \(d\) statistic. \(H3c\) specified that the preference for more complete products would again be reduced, this time with a smaller assortment regardless of price level. Confirmmg \(H3c\), product evaluations of more and less complete products were the same with a higher price \((p > 0.05)\) and lower price \((p > 0.20)\). Here, the preference for more complete products was eliminated entirely. More complete products did display more positive beliefs than less complete with both a higher price \((M = 5.17\) versus \(4.50; t_{1.64} = 3.31; p < 0.01; \text{Cohen's } d = 0.83)\) and lower price \((M = 4.71\) versus \(4.09; t_{1.65} = 2.97; p < 0.01; \text{Cohen's } d = 0.74)\), but again the Cohen's \(d\) exhibited a reduced magnitude of the preference versus the larger assortment/ higher price condition. In fact, these Cohen's \(d\) results are either just above or even below the 0.80 threshold separating large from medium effect sizes.

3.5 Discussion

In Study 2, we replicate \(H1-H2b\) from Study 1 with a different stimulus set and dependent variable to enhance generalizability. Again, we found more complete products were preferred to less complete. This preference was maintained with a larger assortment, but eliminated with a smaller assortment. We extend Study 1 by investigating price effects, and confirmed \(H3a-H3c\). More complete products were strongly preferred with larger assortment/higher price, but this preference was either reduced or eliminated with larger assortment/lower price, and smaller assortment regardless of price level.

4. General discussion

4.1 Conceptual implications

In this research, we examined the role of product completeness, assortment, and price level on judgments about multiflavor products. The results extend understanding of multiflavor products. Recent research has been contradictory in that some work finds multiflavor products offer benefits to marketers, while other work finds the opposite. However, multiflavor-product research in marketing did not explore or directly manipulate product completeness. Our research adds to this literature by finding different perceptions about completeness did indeed alter assessments about multiflavor products. The finding that multiflavor products perceived as more complete were judged more positively stemmed from two primary influences. The first was the more positive evaluations and higher product utility that accrued from adding new features to multiflavor products prior to purchase (Thompson et al., 2005; Bertini et al., 2009; Mukherjee and Hoyer, 2001; Nowlis and Simonson, 1996; Brown and Carpenter, 2000). The second was the more positive evaluations and cognitive implications of more complete information (Dutta-Bergman, 2004; Eysenbach et al., 2002).

Our findings also extend Chernev's (2007) work on all-in-one products. Like his work, we affirm that identical features can be assessed differently as a function of the evaluation context. However, unlike his work, we do not find evidence of attribute devaluation of “all-in-one” products. In fact, we find the opposite — more complete products display more positive beliefs. This represents attribute enhancement. There are several reasons for this difference between our results and those of Chernev (2007). Chernev (2007) presented the all-in-one product in the same choice set as the specialized alternative, thus investigating compensatory judgments. His all-in-one products had two attributes, whereas our products were full-featured with five to seven attributes. Our procedure was quite different in that we established products with identical feature sets, but different perceptions of completeness, in contexts varying in assortment and price level. Our products were evaluated separately not as part of a two-product choice set. This allowed us to directly compare the effects of more and less completeness on product judgments, as conditioned by assortment and price. Therefore, product completeness per se was assessed, as opposed to Chernev (2007) who investigated the implications of different choice sets on judgments of all-in-one products.

With a large assortment, there was a strong preference for more complete products. Large assortment represents a complex decision environment, characterized by greater product confusion and longer choice delays (Jacoby et al., 1974; Lurie, 2004; Malhotra, 1982). Cognitive resources are strained, and thus consumers more actively seek easier comprehension (Scammon, 1977). A more complete perception can be processed more easily and rapidly than a less complete judgment, especially with a more complex multiflavor product in a more challenging decision environment. This bolstered judgments about complete
products, as easy comprehension and rapid processing generates positive affect.

In contrast, with a small assortment, the preference for more complete products was eliminated. When the multiattribute product was less complete, consumers had to form product attitudes by assessing each attribute individually. With a larger assortment, such feature-level processing was difficult. However, with a smaller assortment, such attribute-level processing becomes feasible because cognitive resources are more available at information processing. Consumers can more readily make relationships among multiple features. Thus, equivalent multiattribute products were judged similarly regardless of the perceived level of completeness.

Price level was a central component of processing multiattribute products with larger assortment. Evaluation followed price level, with more complete products strongly preferred over less complete at higher price level but a reduction in this preference at lower price levels. Price level appeared to be a central feature that framed judgments (Lawson and Bhagat, 2002), with consumers following well-established price-quality inferences (e.g., Rao and Monroe, 1989). This extends Chernev (2007), who found all-in-one products were judged as more expensive than specialized alternatives, and high price mitigated attribute devaluation for all-in-one products. With smaller assortment, the preference for more complete multiattribute products was again reduced, regardless of price level. In this context, price level was a feature weighted against the other product features in a compensatory manner (e.g., Chernev and Carpenter, 2001) instead of a central feature in a product processing frame. Therefore, the influence of price level was reduced, leading to a smaller magnitude price-quality inference than with a larger assortment.

4.2 Managerial implications

Most importantly, these data give managers confidence that, especially in the right contexts, complete products can be a potent strategic approach with a large feature set. The perception of completeness may mitigate potential judgments about relative feature ineffectiveness versus specialized products, thus providing a strong competitive advantage. For example, when Colgate Total was launched in 1997 (the first time a complete positioning was used in the toothpaste category), it took the long-lasting market leadership from Crest for the first time since 1997 (historic market share leadership for the first time since 1997). This extends Chernev (2007), who found all-in-one products were judged as more expensive than specialized alternatives, and high price mitigated attribute devaluation for all-in-one products. With smaller assortment, the preference for more complete multiattribute products was again reduced, regardless of price level. In this context, price level was a feature weighted against the other product features in a compensatory manner (e.g., Chernev and Carpenter, 2001) instead of a central feature in a product processing frame. Therefore, the influence of price level was reduced, leading to a smaller magnitude price-quality inference than with a larger assortment.

4.3 Limitations and future research

A clear limitation is the use of convenience samples. However, pretests were conducted to make the stimuli were germane to the participant population. Another limitation is that we did not take cognitive response or response latency data. Future work should obtain this information to better understand exactly what a complete perception connotes and the extent to which a complete perception may in fact represent a processing heuristic. A third limitation is we did not present a competitive context. A complete product may be less beneficial if it is not differentiated. For example, Crest finally launched a toothpaste line called Pro Health positioned on complete benefits in response to Colgate Total, and re-took its historic market share leadership for the first time since 1997 in the first quarter of 2007.

References


**Further reading**


Appendix 1

Table AI  Study 1 – attributes of the stimuli

<table>
<thead>
<tr>
<th>Multivitamin</th>
<th>Computer protection software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contains gingko for continuing dynamism</td>
<td>Provides real-time anti-spyware protection against viruses, spyware, adware and Trojan horses</td>
</tr>
<tr>
<td>Has calcium for bone and tooth protection</td>
<td>Aggressive pop-up blocking capabilities</td>
</tr>
<tr>
<td>Supports healthy brain and heart functions and memory retention</td>
<td>The embedded Trojan-wall increases your protection against password theft</td>
</tr>
<tr>
<td>Features digestive enzymes that facilitate normal digestion</td>
<td>Provides automatic e-mail forwarding, e-mail/Chat/IM blocking</td>
</tr>
<tr>
<td>Has lutein and bilberry for eye and skin</td>
<td>Clears complete history of your Internet actions</td>
</tr>
<tr>
<td>Includes B6, B12 and folic acid for heart</td>
<td>Safeguards you against online identity and fraud</td>
</tr>
<tr>
<td>Includes antioxidants for immune system</td>
<td>Provides a strong firewall to controls the network traffic</td>
</tr>
</tbody>
</table>

Appendix 2

Table AII  Study 2 – attributes of the stimuli

<table>
<thead>
<tr>
<th>Cold medicine</th>
<th>Notebook</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 mg pseudoephedrine for nasal decongestion</td>
<td>Features the Intel® Core™ Duo T2500 processor (2.0 GHz) and 1 GB of PC2-4200 DDR2 memory for gaming and demanding applications</td>
</tr>
<tr>
<td>220 mg naproxen sodium for relief of muscle and body aches</td>
<td>NVIDIA® GeForce™ Go 7600 GT graphics and 256 MB of dedicated GDDR3 video memory</td>
</tr>
<tr>
<td>500 mg acetaminophen for headache relief</td>
<td>80 GB hard drive (5,400 rpm)</td>
</tr>
<tr>
<td>100 mg calcium carbonate to relieve acid indigestion</td>
<td>Connectable to TVs, cameras and other peripherals. Features integrated Bluetooth™ technology and support for 802.11a, b and g</td>
</tr>
<tr>
<td>10 mg dextromethorphan to suppress coughs</td>
<td>Features an HD-DVD ROM to enjoy and create DVDs and CDs to share your files</td>
</tr>
<tr>
<td>30 mg pseudoephedrine for nasal decongestion</td>
<td>Built-in web camera with microphone</td>
</tr>
<tr>
<td></td>
<td>Extended battery life</td>
</tr>
<tr>
<td></td>
<td>Supports ExpressCard™/54 for transfers of video and large files</td>
</tr>
<tr>
<td></td>
<td>Sleek design with three different color options</td>
</tr>
<tr>
<td></td>
<td>Spill resistant keyboard and corrosion protected electronics</td>
</tr>
</tbody>
</table>

About the authors

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Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of the article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefit of the material present.

The introduction of complete products is a strategy adopted by some businesses targeting new customer segments. These products are described as such because they incorporate all the features that the product category identifies as being important. Many scholars advocate this approach as it essentially involves a manageable portfolio of relevant products.
Other firms choose a more targeted strategy whereby a range of different segment-specific offerings are developed. However, this option appears more risky and ultimately unviable. More products equals more costs and cannibalization is considered a likelihood as well.

Few researchers have explored complete products and contradictory findings currently prevail. For instance, it is claimed that product efficiency can be improved through the inclusion of additional features. But the danger of overkill is the counter argument put forward by others. In their view, too many features increase product complexity to an unacceptable degree. Consumers might then become disillusioned and negative towards the products concerned. The likelihood of this response is even greater for hi-tech offerings that are linked to various categories. Evidence suggests that category-specific products are generally preferred.

Situations will frequently arise where consumers are faced with choosing between two products identical in the number of features offered. The one considered to be more complete could have greater appeal though, some sources claim. Perceived superiority in terms of both quality and utility is a common outcome in these contexts. Easier processing of information is another assumption consumers make about more complete products. And when a higher number of alternative choices are available, this simplification of the decision-making process becomes even more advantageous.

Certain academics believe that products which contain multiple attributes while being regarded as less complete are much more difficult to evaluate. The prospect of assessing the importance of each individual attribute is a daunting one that tempers consumer enthusiasm. Only with a smaller sample of products does the task aid the selection process.

The association between price and quality is widely acknowledged in the research community. As price increases, consumers typically assume that quality does likewise. When a sizeable number of potential alternatives exists, this cue can be even more significant. Other product attributes might be evaluated more highly when price is high, helping the consumer to differentiate between the various complete products available. The impact of price could be less profound though in situations when fewer options are possible, meaning that other variables are afforded greater importance.

In the present work, complete products are explored further within two studies carried out in the USA. University undergraduates were recruited as subjects and a pretest ascertained their knowledge of complete products. For the first study, Ozcan and Sheinin chose multivitamins and computer protection software as stimuli. Laptops and medicine for colds were the products considered in the second study.

The scenario created for study one involved two contrasting levels of product completeness and either two or eight alternative product choices. Separate experiments were carried out for computer software and multivitamins and instructions were provided to the 72 participants. A memory-based task required evaluation of the stimulus product, which was controlled to appear last in each case.

Analysis of the data indicated that:

- purchase intention was higher for the completed products than for the non complete, or effective, option;
- for the completed products, belief was more positive and stronger in the condition where more alternatives were considered;
- when few alternatives were possible, little difference was evident for complete and effective products in terms of purchase intention and beliefs;
- product completeness positively impacted on product choice when more alternatives were available; and
- in the two alternatives condition, it was more difficult to predict choice between complete and less complete products.

In general, subjects expected that complete products would cost more than their effective counterparts. These price anticipations were subsequently used for study two involving the laptops and medicine.

Complete and less complete products were again combined with the two different levels of available choice. This study also introduced an additional factor in the shape of two price levels that were above and below the current average market price. The authors used the same procedure to explore product evaluations and beliefs.

Results mirrored those in the first study. Evaluation and positive belief were again highest in the completed products condition and a similar impact of both alternative choice levels was evident too. Ozcan and Sheinin also found that:

- evaluation and positive beliefs were greater for complete than for effective products when price levels were high;
- preference for complete products was less apparent when price was low and number of alternatives high; and
- price had no effect on consumer evaluation of complete and effective products when few alternatives were available.

Evidence shows that product completeness can provide firms with a competitive edge. A prime example is Colgate Total, market leading brand in the toothpaste category less than a year after its launch. Completeness seems particularly influential when prices are high and alternative options plentiful. It simplifies consumer decision making in such scenarios, possibly because the construct is often thought synonymous with quality. Higher price is often also assumed to indicate that quality and competence can be extended to a broader attribute range. Focusing on completeness when many alternative choices are available is not recommended though.

Concerns expressed about the inclusion of too many features prompts the authors to highlight the importance of product user-friendliness. Provision for consumers to trial the products is also suggested. Consistent high quality is also regarded as imperative. A single attribute that is found substandard has the potential to negatively impact performance and lead to unfavorable product evaluations and consumer discontentment.

Further research into consumer perceptions of completeness might explore its impact on processing. Comparing the impact on consumer choice of differentiated completed products is another avenue to explore.

(A précis of the article “Effects of complete products on consumer judgments”. Supplied by Marketing Consultants for Emerald.)