## WHICH DIMENSIONS OF PRODUCT DESIGN DRIVE SHAREHOLDER VALUE? THE ROLE OF AESTHETIC, ERGONOMIC, AND SYMBOLIC VALUE

Christian Homburg, University of Mannheim, Germany Torsten Bornemann, University of Mannheim, Germany Lisa Schöler, Goethe University Frankfurt, Germany

## **ABSTRACT**

"Good design keeps the user happy, the manufacturer in the black, and the esthete unoffended." This artistic creed of Raymond Loewy, creator of the famous Coca Cola bottle and founder of the industrial design movement, never went out of date (Artzybasheff 1949, p. 5). Quite the contrary, in times of convergence with regard to product functionality and performance, the appearance of a new product emerges as a potential source of competitive advantage and superior value. Astonishingly, only a few studies have attempted to empirically prove Loewy's statement and to examine the contribution of product design to company performance. Moreover, these studies predominantly use accounting-based and/or subjective performance measures. Yet, the question whether 'good' design is also related to firm value still remains to be answered.

In order to increase the market value of a firm, the design of a product needs to influence consumer product evaluation and choice. As our focus is on the parts of the product which are visible to both, target group consumers and investors, we refer to product design as product appearance. The value provided by product appearance itself mainly arises from the product's aesthetic, ergonomic, and symbolic value. Aesthetic value refers to the pleasure attained from the sensory perception of the product form without considering its utility. Ergonomic value refers to how logically a product is to operate and how well it communicates its utilitarian functions. Finally, symbolic value is derived from the degree to which product appearance enables target group consumers to express their self-image.

The present work examines the contribution of these product design dimensions to the creation of firm value. In order to do so, we examine stock market reactions to the unveiling of a new product's appearance to the public using event study methodology. Following previous research in marketing, we combine perceptual data from the consumer level with stock market data to examine how target consumers' perceptions of the aforementioned design dimensions are related to stock market reactions to the unveiling of a new product. The dates of the unveilings were identified on the basis of companies' press releases and were validated with data from Dow Jones Factiva. Information regarding daily stock returns from DataStream provided the basis for the estimation of the market model parameters and for the calculation of the abnormal returns. To determine consumers' perceptions of aesthetic, ergonomic, and symbolic value of the respective products, consumers who were in the market for the respective products were surveyed, using a standardized set of product stimuli that included pictorial as well as verbal information. Moreover, we consider contingency effects arising from brand familiarity, product functionality, and product innovativeness.

Abnormal returns for our event window around the day of the unveiling of the respective products are highly significant. Regression analyses reveal that aesthetic value exerts a significant positive effect on these abnormal returns, providing evidence that the market positively values the degree to which a product is visually appealing. Ergonomic value, however, is not significantly related to abnormal returns and symbolic value even exerts a negative influence on stock market reactions. Although surprising, this finding is in line with Crilly, Moultrie, and Clarkson (2004, p. 563), who argue that "the symbolic associations evoked by a product may be less dependent on product appearance than aesthetic impressions (...) are." We also found that product functionality positively moderates the influence of aesthetic value on stock market reactions. Thus, to be valued by the market, visually appealing products should also exhibit a certain degree of functionality.

These findings provide valuable implications for managers. The appearance of a product determines consumers' first product impression, and the stock market anticipates this first reaction. Our results reveal that companies will gain most from their investments in design when they focus on the visual appeal of the product. The positive effect of aesthetic value will be even stronger when the product also exhibits a high degree of functionality. A focus on the creation of a symbolically-charged product, on the other hand, seems less promising.

References Available on Request.