

Consumer Evaluation of Product Improvements: An Investigation

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BY

ABHIJEET KUMAR GAURAV

THESIS ADVISORY COMMITTEE

PROF. SUDIPTA MANDAL (CHAIRPERSON)

PROF. SANJEEV TRIPATHI

(MEMBER)

PROF. SARIPALLI BHAVANI SHANKAR

(MEMBER)

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[Abhijeet Kumar Gaurav]

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Abstract

Consumers frequently face an "upgrade decision" when choosing between a standard product and a more expensive, enhanced version with superior quality or features (Kim et al., 2022). However, while brands frequently release "new and improved" versions of their existing products to increase profitability and retain customers, with some intensifying innovation efforts to stay competitive (Griffin, 2002; Mohammed, 2018; Okada, 2006), the main challenge for marketers is how to make these product improvements more attractive and effectively motivate upgrades (Dagogo-Jack & Forehand, 2018). The two essays focus on what types of product upgrades result in higher consumer acceptance. Specifically, we investigate a product upgrade decision where the product upgrade shows an improvement in multiple attributes. The first essay demonstrates that equal (vs. unequal) relative improvements in product attributes with respect to the base product result in a feeling that the upgraded product has improved in a balanced manner. The second essay is in the realm of attribute desirability (making one of the attributes more focal); it elucidates the role of attribute desirability in impacting product upgrade evaluations.

In *Essay 1*, titled "Making it (Relatively) Equal: The Role of Balanced Improvement in Product Upgrades," we argue and demonstrate that while consumers should remain indifferent between options with identical aggregate or average values (Ajzen & Fishbein, 1975; Ross & Creyer, 1992; Troutman & Shanteau, 1976; Weaver et al., 2012), they exhibit a preference for equal rather than unequal relative improvements in product attributes when evaluating upgrades. This preference arises because equal improvements create a perception that the upgraded product has improved in a balanced manner (Jiang et al., 2020; Larson & Billeter, 2013), which positively influences adoption and purchase likelihood. Further, we identify a key boundary condition that the proposed effect will strengthen (vs. weaken) when improvements in product

attributes are communicated in percentage (vs. number) format.

In *Essay 2*, titled “The Role of Attribute Desirability in Evaluation of Product Improvement and Consumers’ Purchase Intent,” we examine the influence of attribute desirability on consumer evaluations of product upgrades. While consumers should favor upgrades with higher improvements in focal attributes over non-focal ones (Brechan, 2006; Evangelidis & Levav, 2013), we argue that consumers prefer product upgrades that offer a relatively lower improvement on the focal attribute than an improvement on the non-focal attributes. This happens because the improvement on the focal attribute acts as an anchor (Stickgold & Walker, 2013; Thomas & Morwitz, 2005; Yadav, 1994), and the improvement on the non-focal attribute is evaluated relative to this anchor. The product upgrade is viewed more positively when the non-focal attribute's improvement surpasses the focal attribute marginally. Further, as a boundary condition of the proposed effect, we demonstrate that this effect is weakened when the difference in improvement between focal and non-focal attributes is significantly high.

The findings of both essays provide substantial theoretical and managerial implications. *Essay 1* results suggest the firm highlights the balanced improvement in their upgrades as it positively influences the adoption and purchase likelihood. It contributes to balance and product upgrade decision literature. *Essay 2* findings explain how relatively higher improvement on non-focal attributes over focal attributes can impact consumer preference for upgrades, thus adding to the anchoring and the influence of non-focal attribute literature. Taken together, both essays' findings have implications for marketers to guide product upgrade decisions, product upgrade evaluation, and effectively communicate the improvements to the consumers.

As firms often cannot emphasize improvements across all attributes of a product upgrade in

their marketing communication and typically focus on highlighting improvements across two attributes (Web Appendix A), our research was constrained to two attributes. However, in Essay 1, upgrades featuring more than two attributes might also foster a perception of balance. Future research could explore how such multi-attribute upgrade contexts influence consumers' purchasing behaviors and examine how equal improvements across more than two attributes shape perceptions of balance and purchase decisions. Similarly, in Essay 2, upgrades encompassing more than one focal or non-focal attribute may also affect evaluations of non-focal attributes. Future research could investigate how these product upgrades impact consumer evaluation of upgrades with multiple focal or non-focal attributes.

Keywords: *Product Upgrade, Product Enhancements, New Version, Updated Version, Balance, Attributes, Anchoring.*

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Chapter 4: Conclusion

Across ten experiments with over 2,100 participants, we demonstrate how individuals evaluate product improvement information in their product upgrade decisions in the domain of consumer behavior and decision-making. The two essays in this thesis study what types of product upgrades result in higher consumer acceptance. Specifically, the thesis explores how consumers evaluate upgrades that involve alignable improvements and investigates strategies to enhance the appeal of such upgrades. This thesis builds on the literature by contributing to the product upgrade literature, literature on balance, improvement format, numerical anchors, non-focal attribute benefits, and numerical cognition. The thesis testifies that firms' marketing communication highlighting improvements over product attributes influences the perception of balance in the upgraded product and their evaluation of the non-focal attribute, which in turn influences the acceptance of upgraded products.

The first essay explores how equal versus unequal relative improvements in product attributes influence the perception of balance and the evaluation of the upgraded product. The second essay shows that attribute desirability shapes consumer evaluations and decision-making. It demonstrates that when evaluating an upgrade that offers improvement on primary and non-focal attributes, the improvement on the non-focal attribute is evaluated relative to the improvement on the primary attribute (reference point). This research provides evidence that the more favorable evaluation of the non-focal attribute leads to an overall more positive assessment of the product upgrade. This influences consumer acceptance of product upgrades.

Essay 1: This research contributes to the extant literature on product upgrade evaluation and decision in multiple ways. First, equal relative improvements in product attributes are identified as a novel factor, and the perception of balance in the upgraded product as its underlying

mechanism is documented. Since equal relative improvements in product attributes with respect to the base product result in a feeling that the upgraded product has improved in a balanced manner, equal relative improvements positively affect adoption and purchase likelihood for the upgraded product. Unequal improvements do not evoke a feeling of balanced improvement; hence, there is no such effect. Further, a key boundary condition—improvement format is demonstrated. As the perception of balance is linked to relative rather than absolute performance and a relative format offers a more effective means of evaluating the degree of enhancement provided by the product upgrades compared to the absolute format, equal relative (vs. absolute) improvement will lead to the perception of balance in a product upgrade.

This research can help marketers guide their decisions on product upgrades. The current findings are relevant for marketers looking for a strategy to make product upgrades more appealing, to motivate the acceptance of upgraded products, and to highlight product improvement in their marketing communication. Our findings show that simple marketing communication, i.e., equal relative improvement, can make consumer perceive the upgraded product has improved in a balanced manner, which may impact their adoption and purchase likelihood for the upgraded product. Communicating unequal relative improvements does not evoke a feeling of balanced improvement. This phenomenon may also be applied when deciding on an upgraded variant's configuration and marketing communication for better consumer acceptance. Further, as the research suggests, communicating the equal attribute improvements in relative (percentage) format might be a good idea.

Essay 2: This research contributes to the literature on product upgrade decisions, attribute desirability, numerical anchoring, and numerical cognition. Prior literature shows that consumers should prefer product upgrades with higher improvements on focal attributes and

lower on non-focal ones. However, we demonstrate a contrary effect. We show that consumers prefer product upgrades that offer a relatively lower improvement on the focal attribute than an improvement on the non-focal attribute. Next, we show the mechanism underlying the effect: evaluation of non-focal attribute. We show that this happens because the improvement on the focal attribute acts as an anchor, and the improvement on the non-focal attribute is evaluated relative to this anchor. When the non-focal attribute is improved ‘more than’ the primary attribute, the overall evaluation is higher than when the improvement on the non-focal attribute is ‘less than’ the primary attribute. Further, a key boundary condition – the magnitude of the difference is demonstrated. As the magnitude of the relative difference is linked to the evaluation of the non-focal attribute, the high (vs. low) relative difference between the improvement activates relative thinking, and consumers assess the relative improvement between primary and non-focal attributes without considering any reference value. Specifically, we demonstrate that in case of a high relative difference between the improvements, consumers are more likely to prefer product upgrades with higher improvements on focal attributes and lower on non-focal ones.

This research can be helpful for marketers in guiding their decisions on product upgrades. The current findings are relevant for marketers looking for a strategy to make product upgrades more appealing, to motivate the acceptance of upgraded products, and to highlight product improvement in their marketing communication. Our findings show that simple marketing communication, i.e., a relatively higher improvement on the non-focal attribute, can make consumer perceive that the non-focal attribute is improved ‘more than’ the primary attribute, which may impact their overall evaluation of the upgraded product. Communicating relatively higher improvements on the primary attribute evokes the perception that the improvement on the non-focal attribute is ‘less than’ the primary attribute. This phenomenon may also be

applied when deciding on an upgraded variant's configuration and marketing communication for better consumer acceptance. Further, as the research suggests, communicating the relatively higher improvement on the primary attribute might be a good idea when the relative difference is high (vs. low).