Chapter 6

Consumer Preference for the Latest Technological Offering: The Impact of Chasing Technology on Consumer Purchase Behavior

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ABSTRACT

Prior research has shown that when making high tech purchase decisions, consumers consider not only the relative advantage afforded by currently available products, but also the relative advantage expected from future generation products. Additionally, empirical evidence suggests that prices for high tech products often decline faster than the technology advances. This chapter takes both these findings into account and investigates the antecedents of expectation formation and how consumer purchase decisions for high- and low-tech products are impacted by asymmetrical rates of technological advance and price decline. Although consumers generally prefer the latest technological generation of a product, level of technological sophistication (high- vs. low-tech), rate of technological change and price decline, and expectations regarding future product introductions, based on familiarity with past product introductions, were found to moderate the effect of technological generation on preference.

INTRODUCTION

Suppose John is the product manager for CyberTrac (CTrx.x), a software package used by small businesses to track client accounts. As such, John’s responsibilities include determining when to release each successive generation of CyberTrac, the level of intergenerational improvement that should be offered with each release, and how each release should be priced. Additional decisions John must make include whether or not to take prior generations of CyberTrac off the market when new versions are introduced, and if not, how to price them relative to the latest release.

Given that technology generally increases over time while prices decline, the decisions faced by John are identical to those faced by real world high-tech product managers. 1,2 For example, when

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should Apple introduce the iPhone 6, the next generation of its popular smart phone? What level of improvement and features should the iPhone 6 afford over the iPhone 5 before it is released? How should the iPhone 6 be priced relative to the iPhone 5, and when/should support for the iPhone 5 and previous generations be withdrawn after the iPhone 6 is introduced?

In order to make such product introduction decisions, managers need to understand how their product management strategies, both current, past, and future, may impact current and future consumer purchase behavior. That is, managers need to know how their introductory decisions for prior generation products (e.g., intergenerational improvement, time of introduction, price) may have induced consumer expectations regarding current and future generation products, and how such expectations of technological advance, price decline, and time of introduction may impact consumers’ purchase decisions.

In the next section, the literature relevant to technological purchase decisions is reviewed. Following the literature review, a theoretical model of consumer purchase behavior is presented. The studies used to test the model are then described. Finally, conclusions and future research directions are offered.

LITERATURE REVIEW

Of the five characteristics Rogers (1995) suggests influence purchase decisions, relative advantage has received by far the most research attention (Gatignon & Robertson, 1991; Harmancioglu, Droge, & Calantone, 2009; Holak, Lehmann, & Sultan, 1987; Olshavsky & Spreng, 1996). Relative advantage reflects the perceived superiority of a product over an incumbent state and is often based on new and/or improved capabilities and features, lower economic costs (price advantage), or the enhanced social prestige garnered from owning the product. For example, all else being equal a consumer is more likely to purchase a PlayStation 4 videogame console than a PlayStation 3 because doing so will afford her a greater relative advantage (better graphics, faster processing speed, etc.).

Such purchase actions are at odds with other researchers who claim that the relative advantage expected from future products also influences consumers’ purchase decisions (Bechwati & Qualls, 2001; Boone, Staelin, & Lemon, 2001; Dhar, 1997; 1996; Dhebar, 1994, 1996; Greenleaf & Lehman, 1995; Grenadier & Weiss, 1997; Holak, Lehman, & Sultan, 1987; Kunz, Schmitt, & Meyer, 2011; Lowery, 1991; Ozer, 2011; Song & Chintagunta, 2003; Winer, 1985). Levinthal and Purohit (1989) and Bridges, Yim, and Briesch (1995) offer analytical and empirical support, respectively, that expectations regarding future product introductions influence current purchase behavior (Banerjee & Sarvary, 2009; Decker & Ghibba-Yukawa, 2010; Roy, Chan, & Cheema, 2007). Guiltinan (2010) combines prior research on economic- and behavioral-based research to model consumer purchase decisions for durable goods that incorporates both rational and irrational consumer behavior (e.g., price and expectations, respectively; Shih & Schau, 2011).

Importantly, Lowery (1991) and Greenleaf and Lehman (1995) find that expectations regarding a next generation product are often cited as reasons for not buying the current generation product (Grenadier & Weiss, 1997; Winer, 1985). Similarly, Holak, Lehman, and Sultan (1987) suggest that consumers who expect higher levels of technological improvement are more likely to defer purchase of the latest technological offering (Dhebar, 1994; 1996; Gatignon & Robertson, 1991).

Boone, Lemon, and Staelin (2001) reconcile these findings with those from the relative advantage literature and find that expectations can influence purchase decisions over and above relative advantage, depending on which is more salient (Auh & Shih, 2009; Sweeney, McFarlin, & Inderrieden, 1990; Yitzhaki, 1982; Ziamou &