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Consumption Self-Control by Rationing Purchase Quantities of Virtue and Vice

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Abstract

Consumers' attempts to control their unwanted consumption impulses influence many everyday purchases with broad implications for marketers' pricing policies. Addressing theoreticians and practitioners alike, this paper uses multiple empirical methods to show that consumers voluntarily and strategically ration their purchase quantities of goods that are likely to be consumed on impulse and that therefore may pose self-control problems. For example, many regular smokers buy their cigarettes by the pack, although they could easily afford to buy 10-pack cartons. These smokers knowingly forgo sizable per-unit savings from quantity discounts, which they could realize if they bought cartons; by rationing their purchase quantities, they also self-impose additional transactions costs on marginal consumption, which makes excessive smoking overly difficult and costly.

Such strategic self-imposition of constraints is intuitively appealing yet theoretically problematic. The marketing literature lacks operationalizations and empirical tests of such consumption self-control strategies and of their managerial implications. This paper provides experimental evidence of the operation of consumer self-control and empirically illustrates its direct implications for the pricing of consumer goods. Moreover, the paper develops a conceptual framework for the design of empirical tests of such self-imposed constraints on consumption in consumer goods markets. Within matched pairs of products, we distinguish relative "virtue" and "vice" goods whose preference ordering changes with whether consumers evaluate immediate or delayed consumption consequences. For example, ignoring long-term health effects, many smokers prefer regular (relative vice) to light (relative virtue) cigarettes, because they prefer the taste of the former. However, ignoring these short-term taste differences, the same smokers prefer light to regular cigarettes when they consider the long-term health effects of smoking. These preference orders can lead to dynamically inconsistent consumption choices by consumers whose tradeoffs between the immediate and delayed consequences of consumption depend on the time lag between purchase and consumption. This creates a potential self-control problem, because these consumers will be tempted to overconsume the vices they have in stock at home. Purchase quantity rationing helps them solve the self-control problem by limiting their stock and hence their consumption opportunities. Such rationing implies that, per purchase oc-

casion, vice consumers will be less likely than virtue consumers to buy larger quantities in response to unit price reductions such as quantity discounts.

We first test this prediction in two laboratory experiments. We then examine the external validity of the results at the retail level with a field survey of quantity discounts and with a scanner data analysis of chain-wide store-level demand across a variety of different pairs of matched vice (regular) and virtue (reduced fat, calorie, or caffeine, etc.) product categories. The analyses of these experimental, field, and scanner data provide strong convergent evidence of a characteristic crossover in demand schedules for relative vices and virtues for categories as diverse as, among others, potato chips, chocolate chip cookies, cream cheese, beer, soft drinks, ice cream and frozen yogurt, chewing gum, coffee, and beef and turkey bologna. Vice consumers' demand increases less in response to price reductions than virtue consumers' demand, although their preferences are not generally weaker for vices than for virtues. Constraints on vice purchases are self-imposed and strategic rather than driven by simple preferences. We suggest that rationing their vice inventories at the point of purchase allows consumers to limit subsequent consumption. As a result of purchase quantity rationing, however, vice buyers forgo savings from price reductions through quantity discounts, effectively paying price premiums for the opportunity to engage in self-control. Thus, purchase quantity rationing vice consumers are relatively price insensitive.

From a managerial and public policy perspective, our findings should offer marketing practitioners in many consumer goods industries new opportunities to increase profits through segmentation and price discrimination based on consumer self-control. They can charge premium prices for small sizes of vices, relative to the corresponding quantity discounts for virtues. Virtue consumers, on the other hand, will buy larger amounts even when quantity discounts are relatively shallow. A key conceptual contribution of this paper lies in showing how marketing researchers can investigate a whole class of strategic self-constraining consumer behaviors empirically. Moreover, this research is the first to extend previous, theoretical work on impulse control by empirically demonstrating its broader implications for marketing decision making.

(Intertemporal Choice; Pricing Policy; Product Policy; Segmentation; Self-Control)