A remarkably robust finding in consumer behavior is that consumers typically evaluate attributes relative to a standard, rather than in an absolute manner. The influence of deviations from these standards on the assessment of the attributes is commonly called a reference effect. Reference price effects in brand choice have been particularly well documented in both experimental work and in research that uses secondary (e.g., scanner panel) data. Despite this, several key areas for research remain. These include: exploration of the fundamentals of the reference price construct and its interaction with consumer expectations, operationalization and empirical testing of multiple reference price constructs, and the notion that reference effects may be important in many consumer decisions (of which brand choice is just one example). In this note, we summarize findings of recent research that seeks to answer specific questions from each of these new research domains. Specifically: how are reference prices formed, how should they be operationalized, and do they affect the purchase incidence decision?

Reference Price Formation

A considerable stream of research relies on the notion that consumers' price expectations serve as reference values. This research illustrates that reference prices help predict consumers' brand choice decisions. However, little work has attempted to more directly examine how price expectations are utilized in the formation of reference prices. Biyalogorsky and Carmon (1996) look at the reference price as an endogenous construct. In an experimental setting they obtain measures of participants' price knowledge, expectations and choices. Their research develops the following important insight: choice models can have good predictive ability despite the fact that these models provide a poor description of consumers stated price expectations. This finding has significant implications for how researchers should conceptualize and operationalize reference values.

Operationalizing Reference Prices

Even though the reference effect phenomenon is well documented, there is controversy regarding the correct way to operationalize important constructs such as reference prices. A key dichotomy concerns whether consumers hold reference prices in memory, or whether they form them at the point of purchase. Some researchers argue that consumers may not recall past prices but can remember the brand chosen on the last purchase occasion, and are therefore likely to use that brand's current price as a reference point for price judgments (see e.g. Hardie et al. 1993). However, a majority of researchers have modeled reference prices as a function of past prices with varying carryover weights (Kalyanaram and Little 1987; Raman and Bass 1988; Lattin and Bucklin 1989; Mayhew and Winer 1992; Krishnamurthi et al. 1992). Yet others have operationalized reference price as a function of not only past prices, but also other contextual factors. Examples include deal proneness of the consumer, how frequently the brand is sold on deal, store characteristics, and price trend (e.g., Winer 1986; Kalwani et al. 1990).

Briesch et al. (1996) seek to develop an exhaustive comparison of these competing ways to operationalize the reference value. They utilize scanner panel data from several different categories to conduct an empirical assessment of memory-based and point-of-purchase reference prices. Overall, the reference price modeled as the exponentially smoothed history of a brand's own prices appears to provide the best fit to the data. The results are consistent with the notion that consumers retain price information over time and utilize it in current period choices.

Reference Effects in Purchase Incidence

Much of the extant research on reference effects addresses the brand choice decision (an exception is the choice/quantity model of Krishnamurthi, Mazumdar and Raj, 1992). Bell and Bucklin (1996) show that the reference effects are also important in the purchase incidence decision. Furthermore, that the reference effect in purchase incidence arises when consumers make an intertemporal utility maximizing decision: to "buy now" or "buy later." They show that the traditional nested logit model of purchase incidence (that does not consider reference effects) is simply a special case of a more general model that allows for intertemporal effects.

The work also suggests that the tendency to exhibit reference effects varies with other aspects of consumer behavior. For example, consumers who exhibit reference effects in purchase incidence are more likely to be store switchers, and display variability in their purchase timing decisions. One rationale for this finding is that store switchers have more finely calibrated expectations than those shoppers who only see a single store environment, and furthermore that they are opportunistic with respect to purchase timing.

Conclusion

The purpose of this note was to summarize new findings on reference effects. The notion that reliance on expectations manifests itself in reference effects was made to advance three key research areas: exploring of the multi-faceted nature of reference value formation; empirical testing and validation of alternative reference price constructs; and examination of reference effects in contexts other than brand choice.

REFERENCES


