

**ON BRAND EXTENSION AS A SIGNAL OF PRODUCT QUALITY**

By

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May 8, 2012

Let me start by applauding Sridhar for writing another great paper and the field for its continued quest to use rigorous analysis to understand important phenomena such as umbrella branding. (Though I left the area many years ago, a lot of very strong people, some of whom are cited in Sridhar's paper, have contributed since then.) I will add three comments to the discussion: A specific point about the cost of umbrella branding, a general observation about signaling models, and a note about "data" in this area. All three points reflect my belief that intentions to signal play a major role in the use of umbrella branding.

1. Sridhar's paper is based on the premise that it is cheaper to introduce a product that is umbrella branded than one that is not. This is very appealing and commonly asserted by practitioners. While my paper (Wernerfelt, 1988) made the opposite assumption, I have never liked it. However, as I pointed out at the time (pp. 459-60), the costs associated with the new product are not the only ones that matter. For the firm, costs borne by the old product and cost borne post-introduction are equally important. It is hard to believe that a product manager of an old product would be happy to see an umbrella branded extension. Not just because it may expose the old product to risk, but also because it blurs its horizontal position and causes it to lose future flexibility on other parts of the marketing mix (perhaps mostly prices). In addition, the new product will suffer the same problems down the road. It is hard to judge the magnitude of these indirect costs. However, if we accept Sridhar's finding that it is hard for umbrella branding to serve as a signal when umbrella branding is cheap; then one possible interpretation of his results is that umbrella branding does serve as a signal and that the indirect costs of it thus must be substantial.<sup>1</sup>
2. The signaling effects of umbrella branding can be analyzed in a large number of ways and it is hard to get strong negative results. First, there is a sea of possible extensive forms with different types of players, orders of moves, information structures, and so on. While some formulations are simpler and may seem more natural, it is hard to put a bound on the possibilities. Second, signaling models are notorious for having multiple equilibria and many refinements have been suggested, including some

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<sup>1</sup> Another thought-provoking counterfactual is that not all new products are umbrella branded, Tab being an example.

that do not work off the out-of-equilibrium beliefs (the most efficient equilibrium, the equilibrium preferred by the strongest player, etc.). The refinements can generally not be ordered from weaker to stronger, and different refinements may pick out different equilibria. The literature, and Sridhar's paper in particular, has investigated a number of (extensive form, refinement) pairs, but one could look at many more.<sup>2</sup>

3. Quite a lot of data suggests that some version of the signaling story is correct. In the academic literature there is the work by Sullivan (cited in Sridhar's paper), but also the stream starting with Erdem (1998) and continuing today. More anecdotally, but perhaps also more telling, I have discussed umbrella branding with numerous marketing managers in the twenty five years since I wrote the original paper. As the Coca Cola executive quoted by Guyon and Long (1982, cited in Wernerfelt, 1988), they very often describe their intentions in ways that are hard to interpret by anything other than signaling arguments.

Sridhar's results are surprisingly strong and I read his paper as telling us that we have more work to do before we can establish the signaling role of umbrella branding.

More generally, beyond the merits of signaling as a rationale for umbrella branding, I believe that signaling models will play an important role in the marketing literature. To the extent that marketing is about communicating information, many aspects of it, in all four P's, can be interpreted through the lens of signaling models. Most signaling models to date have been concerned with pricing and advertising, and there are further opportunities in those areas. However, we have not even explored signals sent by the design of products and stores, return policies, and many other decisions.

## REFERENCES

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<sup>2</sup> As an aside, one can sometimes get negative results by exploiting that the equilibrium correspondence can be discontinuous in the probability of very unlikely events (as in Aghion et al., 2012). While this is true in a model with standard rational agents, it is less clear that it will hold in a game with "real" people.

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