Testing the asymmetric dominance effect and its explanations

Extended abstract

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The asymmetric dominance effect is one of the most studied topics in the consumer behaviour and marketing literatures. It refers to the situation in which adding an option C to the choice between A and B, when C is dominated by A but not by B, increases the probability of choosing A. Since its discovery by Huber et al. (1982), researchers have observed this effect in a large variety of settings. Despite the research going back to more than 30 years it is very much alive, as illustrated by the recent debate within the pages of the *Journal of Marketing Research* in which Frederick et al. (2014) and Yang and Lynn (2014) failed to replicate the asymmetric dominance effect, which sparked replies from Huber et al. (2014) and Simonson (2014). To quote Huber et al. (2014), "the attraction effect [a superset of the asymmetric dominance effect] may be the one biggest exports from marketing research to other fields in the social sciences precisely because of its theoretical implications".

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Yet, the export has not fully reached economics: Herne (1999) is the only empirical study in economics which investigates asymmetric dominance. This scarcity is surprising given that the effect violates one of the basic assumptions of standard economic theory. If the choice between two options changes when one adds an irrelevant option, then the independence of irrelevant alternatives does not hold and most theories, if not all, will fail to accurately model behaviour.

The asymmetric dominance effect has real-world implications, too: In a field experiment conducted in a local grocery store in the UK, Doyle et al. (1999) managed to increase the sales of the least-often-brought brand of baked beans thanks to an aptly-chosen third alternative, as predicted by the asymmetric dominance effect. Ok et al. (2011) show how a monopolist aware of the effect in a model of vertical product differentiation is able to extract all the surplus from the consumers.

In this paper, I stress test the experimental results results from Herne (1999) and pull apart some explanations of the asymmetric dominance effect using novel manipulations. Compared to her experiment, I use incentives about twice as high, a physical randomisation device to play out the gambles, and a new and more transparent incentive mechanism (PRINCE, Johnson et al., 2015). The results generally replicate, but I find a much lower asymmetric dominance effect. Especially, I find that the effect depends on the type of gamble targeted: low-payoff, high-probability gambles are affected; riskier high-payoff, low-probability gambles are less so. I also find evidence of a range effect that runs against the asymmetric dominance effect. This range effect causes subjects to put more weight on an attribute when its range increases. It is left to operate alone when the asymmetric-dominance characteristic of the added option is removed.

Thanks to a model taking into account preference heterogeneity, I am able to show that the asymmetric dominance effect is modulated by the proneness of subjects to this range effect.

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