A Characterization for Optimal Bundling of Products with Non-Additive Values

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This paper studies optimal bundling of products with non-additive values. Under monotonic preferences and single-peaked profits, I show a monopolist finds pure bundling optimal if and only if the optimal sales volume for the grand bundle is larger than the optimal sales volume for any smaller bundle.

I then detail how my analysis relates to "ratio monotonicity" results on bundling. I show that the famous under my monotonicity and single-peaked-profits assumptions, the ratio-monotonicity conditions for optimality of pure bundling reduce from a global to a local requirement, which is exactly what allows my conditions to be if and only if.

Additionally, I explore the relation between my result and theoretical characterizations on nonlinear pricing such as [1] and [2]. The literature tends to posit that it is always optimal for a monopolist to offer the full range of quantity/quality possible to consumers. This has been argued on the grounds that "it is optimal to serve different segments of the market with their specific needs." I show, however, that it may be optimal to no offer intermediate quality/quantity levels between $q$ and $\overline{q}$ if it will induce sufficiently many consumers to "upgrade to $\overline{q}$" as opposed to "downgrade to $q$". In other words, I argue that cutting the market's access to intermediate quality/quantity levels may be optimal for the same economic reasons that make pure bundling of products optimal.

Additional Key Words and Phrases: Bundling, Price Discrimination

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