

Product Positioning in a Two-Dimensional Market Space

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This paper examines the optimal product portfolio positioning for a monopolist firm in a market where consumers exhibit vertical differentiation for product performance and horizontal differentiation for product feature. Our key results are as follows: (i) Variable costs drive vertical differentiation. In the presence of significant volume-dependent manufacturing costs, the optimal portfolio contains a mix of vertically and horizontally differentiated products and an increase in the variable cost makes adding vertically differentiated products relatively more profitable; if fixed volume-independent design costs dominate, the portfolio exhibits solely horizontal differentiation. (ii) Horizontal differentiation is the main profit lever, and vertical differentiation brings only a marginal benefit; this is true even when most of the consumers exhibit low willingness to pay for performance, which is often used as an excuse to offer low-end products. (iii) There are more low-quality products than high-quality ones, and market coverage increases when the willingness to pay for performance increases. In summary, the model shows how portfolio composition decisions depend on the product cost structure and the consumer preferences.

Key words: product positioning; portfolio design; product line design; vertical differentiation; development intensive products
History: Received: April 2007; Accepted: September 2008, after 2 revisions.
