Advertising Reading

Tirole, 1988, Ch. 2

- If advertising were primarily "informative", in that it communicates only "hard" information about product existence, price, and characteristics, rather than persuasive, we would expect advertising expenditure to be greater for search goods (whose quality can be discerned before purchase) than experience goods (whose quality can only be discerned after purchase). This is because more information about search goods than about experience goods can be communicated through advertising and the communication of this information through advertising is generally more costly. Nelson (1974) finds that advertising expenditure is greater for experience goods than for search goods, this suggests that advertising is not primarily "informative".
- Nelson (1974) argued that wasteful advertising expenditures may signal quality. Because high-quality products generate repeat purchases while low-quality products do not, the future profits from reaching an additional consumer through advertising are greater for high-quality products than for low-quality products. Some level of advertising expenditure may therefore be profitable for a high-quality monopolist but not for a low-quality monopolist, hence serve as a credible signal of quality.
  - A monopolist produces a good of quality $s \in \{0, 1\}$ which is known to the monopolist but not (initially) to consumers, at cost c^L if $s = 0$ and $c^H \geq c^L$ if $s = 1$, in each of two periods 1 and 2, and chooses prices p_1, p_2 and advertising expenditures a_1, a_2 to maximise discounted sum of profits $\Pi = \pi_1 + \delta\pi_2$ where δ is the discount factor. Profit in period t, $\pi_t = (p_t - c)q_t - a_t$, where q_t is the number of units sold in period t.
  - Each consumer, in each period enjoys surplus equal to $vs - p$ if he buys a product of quality s at price p, where v is the common valuation of the high-value product, and 0 if he does not buy. The number of consumers is normalised to 1. Consumers observe a_1.
  - (Individual) consumer surplus is negative if a consumer buys a low-quality product, hence no consumer knowingly buys a low quality product.
  - Suppose that by choosing some a_1, a high-quality monopolist successfully signals that its product is high-quality. Then, all consumers buy in both periods and the monopolist maximises period 2 profit by choosing $p_2 = v$ and $a_2 = 0$. $\Pi = (p_1 - a_1 - c^H) + \delta(v - c^H)$. If a low-quality monopolist were to replicate this strategy, it would all consumers buy in period 1 but non buy again in period 2, hence the low-quality monopolist receives $\Pi = (p_1 - a_1 - c^L)$. The strategy is unprofitable for the low-quality monopolist iff $p_1 - a_1 \leq c^L$, i.e. if the high-quality monopolist chooses a sufficiently large advertising expenditure and/or low price in the first period. By choosing such an advertising expenditure and/or price, the high-quality monopolist can successfully signal that its product is high-quality. If the a priori probability that the monopolist is high-quality is sufficiently low, such that no consumer buys without such a credible signal, and if the high-quality monopolist can profitably signal its quality (i.e. $\Pi = (c^L - c^H) + \delta(v - c^H)$, a separating equilibrium exists under which only the high-quality monopolist advertises, and must advertise if it is to sell any product.
  - The greater the value of repeat purchases (the "Nelson effect") and the smaller the cost differential between the high-quality and the low-quality monopolist (the "Schmalensee effect"), the greater the profit for the high-quality firm if it were to signal high-quality, hence the more likely a separating equilibrium.
  - Since any low-quality monopolist sells for at most one period, a high-quality monopolist can only reveal its type by a sufficiently high advertising expenditure/low price such that it would be unprofitable for the low-quality firm in the short-run to replicate.

Tirole, 1988, Ch. 7.3

- [Integrated in Rough Notes]

Belleflamme and Peitz, 2010, Ch. 6

- In the case where (differentiated) oligopolists are able to spend on persuasive advertising which increases consumers' valuations of each firms' product, equilibrium advertising expenditure is non-zero, whereas socially optimal equilibrium expenditure is zero. Firms are worse off in equilibrium and would welcome an increase in advertising cost or a decrease in the effectiveness of advertising.
- In the case where oligopolists are able to spend on persuasive advertising which biases the distribution of consumers in product space in their favour, equilibrium advertising is non-zero, whereas socially optimal equilibrium expenditure is zero.

Firms are worse off, as above, and are trapped in a prisoner's dilemma. Advertising expenditures are a form of wasteful competition, and firms would choose not to advertise if they could cooperate.

- In the case where oligopolists are able to spend on persuasive advertising which increases perceived differences between products (modeled as an increase in the unit transport cost), firms are better off in equilibrium and would be even better off if they cooperated to increase advertising further. Advertising softens price competition, decreasing price-elasticity of demand for each firm, hence increases profits. Advertising by one firm benefits the other, and this positive externality is not accounted for in each firm's advertising decisions, each firm free-rides on the other and equilibrium levels of advertising fail to maximise joint profits.

Bagwell, 2007

- [in Armstrong and Porter, 2007]
- [Integrated in Rough Notes]

Dixit and Norman, 1978

- [Deferred to Cowan, 2002]

Butters, 1977

- [Deferred to Cowan, 2002]

Grossman and Shapiro, 1984

- [Deferred to Cowan, 2002]

Milgrom and Roberts, 1986

- [Deferred to Tirole, 1998]

Kwoka, 1984

- Professional services are examples of credence goods, whose quality cannot be ascertained by consumers even after purchase. Such services are complex, subjective, and their effects are either delayed or stochastically indeterminate. "The feedback effects on which the market usually depends are impeded". "In addition, the quality of the service is not predetermined, but instead the provider can choose or vary the quality supplied". Given such asymmetric information, it is alleged that advertising will focus on price, toughen price competition, drive down prices, leading firms to accommodate greater volume by reducing quality. Increases advertising, it is alleged, punishes high-quality firms and rewards low-quality firms.

Ackerberg, 2001

- Ackerberg argues that advertisements that give consumers product information should primarily affect consumers who have never tried the brand, whereas advertisements that create prestige or image effects should affect both inexperienced and experienced users.