SUSTAINABILITY OF ADVERTISING EXPENDITURES AND ITS RELATIONS TO MARKET STRUCTURE

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ABSTRACT

Advertising has an important role in demand-generation and in market processes, and it has become a core asset of competition in developed markets. Because of this, both the amount and the growth of advertising expenditures have been significant in developed regions of the world. In consequence of the economic crisis, advertising expenditures decreased quickly and considerably, however, the recovery of advertising investments occurred in a short time. Yet the efficiency of advertising has generally declined, as there is over-advertising in many markets and only a little part of the advertisements can actually affect consumers. It is especially important to scrutinize advertising related to industrial organization. The relationship of advertising and competition is contentious. Some professionals think that advertising has an anti-competitive effect and that it makes market structure more concentrated. However, others disagree with this view. A new approach emphasizes that it is market power that affects companies' advertising expenditures. The role, the influence, and the financial investment in advertising are different in different market structures. Advertising is unnecessary in a perfectly competitive market where companies operate in oligopoly. In a monopolistic market companies spend large amount of money for advertising, as it supports product differentiation and in such a market there exists higher elasticity of demand with respect to advertising expenditure.

Keywords: advertising, advertising expenditures, market structure, competition

INTRODUCTION

Advertising is a communication activity tending to potential and actual consumers which role, characters, financial value and effect are determined considerably by the competitive environment and the market structure in which the company operates. From the approach of marketing advertising is a form of promotion, so a communication asset. In this way marketing literature dealing with advertising is basically about what advertising strategy and program are required to reach target market effectively and efficiently. In connection with this the core points of studies and analyses are that what advertising and message would be expedient to inform and persuade consumers and which medium is appropriate for this. Furthermore also the evaluation of advertising efficiency is related to this.

Companies compete by many factors and assets in the market. In industrial organization the competition by price and output levels is the basic form of market competition among companies. The importance of this is embodied for example in

the oligopoly models, Bertrand, Cournot and Stackelberg models, which are rested on different conditions.

By development of economies and markets other assets of competition have appeared and become more important. Advertising and product differentiation belong to these, furthermore such intangible assets like research and development, know-how and brand. The application of these assets is a more complex work and their effects on consumers, competitors and competition itself can be predicted, determined and modeled much more difficult. In this paper I deal only with advertising. Related to this it is important to underline that *Schmalensee* (1982) argues that the most of the publications in this topic emphasize that *advertising competition* and the other forms of non-price competition are weaker than the price competition, according to that excess profit is less uncertain. In this way it would also mean that market share is more sensitive for price differences than for differences of advertising expenditures. However, it is probably typical for many markets, in certain markets where consumers' brand choice is greatly affected by advertisements and slightly influenced by prices the price competition is prospectively weaker than the advertising competition.

Economically advertising is one of the non-price assets of competition in this way. In this paper I use the concept of advertising in this meaning and based on this approach. The purpose of my study is to underline and analyze the core of the relationship between advertising and competition, furthermore to point out the role, the characteristics, the financial value and the effects of advertising in case of the different types of market structure.

Studying advertising as a non-price asset of competition is important not only because of its determinant role in demand generating in developed markets and its extremely complex effect mechanism but also since the value and the growth of advertising expenditures are significant. Before the economic crisis started in 2008 the value of advertising expenditures increased worldwide by 7.3% in 2006 and 6.7% in 2007. In 2007 the amount of advertising expenditures came to 0.88% of GDP worldwide that made totally 482 047 million dollar. In consequence of the economic crisis the annual growth of advertising expenditures was only 0.8% worldwide in 2008 and advertising spend reduced by 10.6% in 2009. The fall of advertising investments was the strongest in Europe and in North America (ZenithOptimedia, 2008; 2009; 2010a). The importance of advertising in market processes appears in that in consequence of the economic crisis there was a relatively rapid and significant decline in advertising expenditures and that the recovery of advertising investments occurred in a short time. The annual growth of advertising expenditures rose to 4.9% in 2010 and an annual growth of 5.2% is predicted for 2012 (ZenithOptimedia, 2010b).

DISCUSSION

Some important relations of advertising and market competition

The authors of the early economical publications about advertising (Kaldor, 1950; 1951; Bain, 1965) considered advertising and market competition inconsistent. Those scholars who argued that advertising has anticompetitive effect stated that the main reason

for this is that consumers perceive the real or apparent differences among goods in consequence of advertising. In this way brand loyalty can begin and it can constitute barrier to entry, so it can deter potential entrants. Thus, the competition becomes less vigorous, those firms that could develop strong brand grow by the increase of sale and realize market power. In consequence of these a more concentrated market structure arises (*Pearce et al.*, 1971 cited in *Lambin*, 1976, *Pepall et al.*, 2008). However, the information content of advertisements connected to price, quality and place of shops makes the competition more vigorous (*Pepall et al.*, 2008). It is also confirmed by the results of empirical surveys (*Benham*, 1972). It can be explained by that in consequence of information provided by advertisements the consumers have more information about the goods and thus, the character of market structure approaches perfectly competitive market.

It has been argued that advertising can be a barrier to entry. Since those firms which have operated for a longer time in the market become widely known by the effect of advertising. Further they can achieve product differentiation and a certain degree of information and persuasion of the consumers. However, a potential entrant that appears as a new firm in the market needs time to realize these (Chiplin and Sturgess, 1981; Pepall et al., 2008). According to Spence (1980) advertising can contribute to entry barrier by influencing the degree of economies of scale. However, Spence emphasizes that it is difficult to catch the economies of scale in case of advertising, in contrast with in the field of production. In this way firms that have operated in the market for a longer time have competitive advantage from a certain approach and to a certain degree contrary to a company enters into the market.

However, *Schamlensee* (1974) underlines that if a company operating in the market can not gain competitive advantage compared to a newly appeared firm then advertising can not mean entry barrier. *Carlton and Perloff* (2003) add to this that if the potential entrant thinks that its advertising would be at least so effective than those companies' advertising which have operated in the market for a longer time, the potential entrant will not reject entering in the market because of this form of the competition. Thus, advertising can not consider entry barrier in this case.

A company which introduces a new product or an innovation in the market often has higher advertising investments than those firms which enter later in the market. As the innovative company has to acquaint consumers with the new product and as it has to persuade them of the usefulness of the new good. Opinions vary about that potential entrants can be deterred from entering the market by intensive advertising and overadvertising (*Dixit*, 1980) or by slight advertising (*Bagwell*, 2001).

Sutton (1991) emphasizes some important relations. In those industries where advertising has an important role in product and brand differentiation, the value of advertising expenditures is significant and market concentration is high. According to Sutton the connection between intensive advertising and high market concentration is the strongest in that case when there is a vigorous price competition in the market. He explains it by that high advertising expenditure can be regarded as sunk costs and if price competition is vigorous at the same time, it will deter potential entrants even more. However, empirical surveys do not prove that advertising can take effect as an entry barrier (Greuner et al., 2000).

In most of the publications that were published in 1950s and 1960s (Kaldor, 1950/1951, Galbraith, 1958) the conclusion was that advertising has an unfavourable effect on consumers. Professionals thought that the goal of advertising is to change consumers' taste and to make them aware of the uniqueness of the good and the brand so that consumers realize that the advertised product does not have close substitutes, or has only a few one in the market. If a certain proportion of potential consumers purchase by the effect of the company advertising, the market power of the company increases, the demand becomes more inelastic and its cross-price elasticity reduces. The representatives of this view underline that, however, advertising generates additional revenue for the company, it touches the consumers negatively. On the one hand as the monopoly power of the company rises, and in consequence of this deadweight-loss arises. On the other hand because it is argued that companies would like to achieve that consumers perceive differences among the goods. It means that they execute an artificial product differentiation. In this way there is a sort of wasting and advertising expenditures could be spent on the production of useful goods (Comanor and Wilson, 1979; Pepall et al., 2008).

Telser (1964) has an opposed view. He disputes in his path-breaker article that the monopoly power of a company increases by the effect of advertising. Based on his empirical survey of three industries Telser concludes that the more intensive the advertising in the industry, the more volatile the amount of the market share of the companies. This conclusion contrasts with that theory which states that by the influence of advertising the probability of consumers' brand switching is smaller or brand loyalty can develop and in this way the amount of the market share of the companies can stabile in a long run. Telser emphasizes based on the results of his research that consumers are less attached to a product or a brand in consequence of the influencing effect of advertising. Therefore advertising makes competition more vigorous. It is confirmed also by empirical surveys (Greuner et al., 2000; Nayaradou, 2006).

According to Reekie (1981) the effect of advertising improves competition because by advertising consumers have more information about the products supplied in the market and the awareness of their purchasing decision making increases. If advertising becomes the determinant form of market competition, the advertising expenditures can reach a significant value and a sort of wasting competition can occur as a result of which the profit of the companies do not rise (Pepall et al., 2008). According to results of Coyte and Landon's (1989) empirical survey the more intensive the market competition, the more the firm spends on advertising. The relative volume of advertising expenditures has been comparatively stabile in the various sectors in the last sixty years (Pepall et al., 2008). For a profit-maximizing company the optimal volume of advertising is where marginal cost of advertising and marginal revenue of advertising equal.

According to the modern approach of industrial organization advertising is a significant asset of competition among companies supplying different brands. In a sector the intensive advertising refers to vigorous market activity. Thus modern approach states that it is not the effect of advertising in consequence of which the market power of a company gets stronger but it is actually the market power that encourages advertising (Pepall et al., 2008).

Many researches were done on the relationship between advertising intensity and market concentration, however, the results vary. According to *Mann et al.* (1967), *Orstein et al.* (1973) and *Strickland and Weiss* (1976) advertising makes market more concentrated but *Telser* (1964; 1969) and *Ekelund and Maurice* (1969) conclude that advertising does not influence or reduces market concentration. Summarizing the papers that study this relation it can be stated that *it can not be determined certainly what relationship between advertising and market concentration exist.* It is also important to highlight that *cause and effect relationship between advertising and market concentration is not clarified.* According to certain opinions (*Reekie*, 1981) the relationship between advertising and competition is not a one-way one.

It is very important to realize that in majority of economical publications about the role and effect of advertising it is assumed implicitly that advertising generates demand certainly and effectively. It means that researchers do not take into consideration that potential consumers do not perceive all advertisements and that not each caught advertisement results desire for a brand or a product or generates real purchase. The reason for these could be that earlier there were much smaller amount of products in the market, in this way there were fewer amount of advertisements and consequently consumers paid more attention to the advertisements. However, by the evolvement of developed markets, mass production, expansion of product range and more vigorous competition among companies the role of advertising has become more important and its amount has increased significantly. In consequence of the dynamical rising of the quantity of advertisements the demand generating effect of advertising has began to decrease. According to this it would be essential to integrate the declining efficiency of advertising into the relations and models of industrial organization and considering this to study the connections between advertising and market structure and advertising and competition.

Relationship between advertising and market structure

Advertising and perfectly competitive market

In consequence of the core characteristics of perfectly competitive market *advertising is an unnecessary asset* in case of this market structure. According to this the company which invests in advertising can not realize higher profits than its competitors (*Braithwaite*, 1928; *Harvey and Jonsey*, 2007). Thus, market competition is limited to price competition (*Lambin*, 1976).

However, there are some views which contrast with the basic, above-mentioned advertising theory in perfectly competitive markets. One part of them argues that also price-taker companies can require advertising so that they can inform (potential) consumers about the place of its shops. Based on this approach advertising is not inconsistent with this market structure (*Carlton and Perloff*, 2003). *Telser* (1964) emphasizes that advertisements which provide information about product and seller have role and importance in a perfectly competitive market. As consumers would not know about the products and brands without the advertising of firms. In case of this market structure companies can not influence the price, however, it should be so high so that it can cover the costs of advertising. Furthermore, *Telser* points out that as companies provide the same information by

their advertisements, in consequence of homogeneous goods and price taking, neither of them can realize competitive advantage by communication to consumers. In this way advertising does not diminish competition.

In a perfectly competitive market if a company advertises, the whole market demand will increase as firms supply homogeneous goods, and in consequence of this all the companies operating in the market will realize additional revenue. The company which advertises, however, comes to a less beneficial financial situation than its competitors. Since it bears the costs of advertising and in this way it can realize only lower amount of profits than its competitors and as if it had not advertised but another company would have. In consequence of this firms are not motivated for advertising by themselves, because it would put them at a disadvantage. The larger the number of the companies operates in the market, the less the firms are interested in advertising. So there is probable a low degree advertising in perfectly competitive market (*Pepall et al.*, 2008).

As it can be assumed that the companies which operate in a perfectly competitive market aim at profit-maximizing, the optimal level of advertising will be by that level where marginal cost of advertising equals marginal revenue of advertising. However, *Saleh and Mualla* (2001) point out by the economical demonstration related to the optimization of advertising expenditures that the optimal advertising investment of a company is zero in a perfectly competitive market. This can be explained basically by the perfectly elastic demand curve and the market actors' perfect information. In this way we get back to the initial view that in perfectly competitive market advertising is an unnecessary asset of competition.

Advertising and monopoly

As in case of monopoly only one company operates in the market and in this way there is no competition, advertising can not be considered an asset of competition, if only not in an implicit way so that it deters potential entrants from entering the market. Persuasive advertising has a little different role in this market structure than in a competitive environment. The monopoly firm has to highlight not the uniqueness of the good by the advertising but its objective should be to generate consumer need for the good.

In a monopoly market the quantity demanded of a good depends not only on its price level but also on the advertising of the company. The monopoly firm advertises with the purpose of increasing demand. However, it can be also possible that in consequence of advertising the new demand curve will be so inelastic that the optimal output level of the monopoly firm will be smaller than before advertising (*Dixit and Norman*, 1978).

According to *Dorfman–Steiner* (1954) condition the optimal advertising level of the monopoly firm is that where the ratio of advertising expenditures and turnover equals the ratio of advertising elasticity of demand and price elasticity of demand. It can be expressed as

$$\frac{a \times c_a}{P \times Q} = \frac{\varepsilon_a}{\varepsilon_P} \tag{1}$$

Where:

a is amount of advertising messages which can be determined for example by seconds in case of radio and television advertisements,

 c_a is unit cost of advertisement for the company,

P is the price of the good,

Q the quantity demanded of the good,

 ε_a is advertising elasticity of demand,

 ε_P is price elasticity of demand.

Thus, it means that it is optimal for the company to increase its advertising level until the ratio of advertising investments and turnover becomes equal with the ratio of advertising elasticity of demand and price elasticity of demand. According to this relation the more price inelastic the demand is, that is the lower the value of ε_P is, the higher the advertising investment the firm needs. On the other hand the larger the advertising elasticity of demand, that is the higher the value of ε_a is, the higher the amount that the company has to spend on advertising.

It results from Dorfman–Steiner condition that if the price elasticity of demand is low, the company operates in the market will spend relatively much money on advertising. Furthermore, the larger the monopoly power a company has, the higher amount it spends on advertising. This connection expresses that it is not the effect of advertising in consequence of which the market power of a company rises but it is actually the market power because of which the advertising expenditure level of the company becomes significant (*Pepall et al.*, 2008).

It is important to emphasize the relationship between the degree of product differentiation and the level of advertising expenditures which also related to the above-mentioned connection. If homogeneous or very similar goods are supplied in the market, the price elasticity of demand will infinity or very high. However, the higher the degree of product differentiation is, the higher the slope of the demand curve becomes. As the monopoly firm supplies unique or highly differentiated good in the market, its demand curve is relatively steep. It means at the same time that the price elasticity of demand is low which related to that the supplied good does not have close substitutes. In this case it is easier to reach the consumers by advertising as there are not any similar products or competitors in the market. According to this by the effect of advertising the quantity demanded of goods rises significantly, so the advertising elasticity of demand is high and in consequence of this the advertising expenditures of the monopoly firm is relatively high. However, monopoly firm chooses the advertising investment level by which it can maximize its profit level.

Advertising and oligopoly

In an oligopoly market structure advertising has a significant role as an asset of competition, especially when companies supply differentiated products for the consumers. If the products introduced by the companies are not homogeneous but they have unique characters, the information content of advertisements can support significantly the differentiation of products from competitors. Furthermore, if a company applies persuasive

advertising, it will have even larger effect on brand choice and the development of brand loyalty. Thus, companies operating in oligopoly market inclined to spend relatively much money on advertising investment. In consequence of this oligopoly is primarily that market structure in case of which the level of advertising expenditures is exceptionally high and its growth rate is considerable. Since if a company extends its advertising and its competitor does not react to this with a more intensive advertising, it can lose in competition.

Chen et al. (1993) emphasize that in an oligopoly market the advertising of the companies generate externalities. Negative externality arises when the advertising company realizes additional turnover to the disadvantage of the other companies operating in the sector. Positive externality occurs if the advertising of a company increases not only its turnover but also the other companies' sale of goods. Furthermore, they underline that according some researchers in oligopoly market the advertising of the companies does not raise the aggregate consumption but it only contributes to the redistribution of market share. However, others' opinion is that also the aggregate advertising increases by the rise of aggregate advertising level.

Chiplin and Sturgess (1981) base their view on Dorfman-Steiner condition and they expand it with that in oligopoly market the company also has to take its competitors' reaction for its advertising into consideration. According to their model they come to the following conclusion.

- If the competitors do not change their advertising expenditure level in consequence of the change of the advertising expenditure of a company, the original Dorfman-Steiner condition occurs and companies make decision as in Cournot model.
- However, if competitors increase the level of their advertising expenditures in consequence of the increase of advertising investment of the company, then due to this the quantity demanded of the good supplied by the company will decrease on current price level ceteris paribus. In this way the lower the expected growth of the advertising expenditure of the competitors, the higher the optimal advertising expenditure-sale ratio of the company.

Simon (1970) argues that in a duopoly market if one of the companies overadvertises, it will decrease the efficiency of advertising of the other company. Since there will be more communication about products and brands aims consumers. Furthermore, the larger the difference between the amounts of the advertising expenditures of the two companies, the less effective relatively the advertising of that company which spends more money on advertising in consequence of principle of diminishing returns. According to my assumption the effects arising from these connections are valid at a certain degree also in an oligopoly market where more than two firms operate. Consequently they can be considered an important reason of decreasing advertising efficiency nowadays.

Advertising and monopolistic competition

As in monopolistic competition the goods of the firms are close substitutes, however not homogeneous, advertising has a very important role in product differentiation, so that the consumers can perceive what unique characteristics the

product has and what those features are that distinguish the product from its competitors. Thus, advertising is a considerable asset of competition also in case of this market structure, however, the amount of advertising expenditures of the companies is much lower than in an oligopoly market. As many companies with small market power operate in the market the advertising elasticity of demand is low. It is important to mention that in economic literature the role and effect of advertising are studied and analyzed the least in relation to monopolistic competition.

Chamberlin (1933), cited in Bagwell (2001, 2. p.), was the first researcher who analyzed profoundly the role and effect of advertising in monopolistic competition. His theory is determinant also nowadays. He considered the advertising expenditures of the companies operating in this market structure 'costs of sale'. He emphasized that the net effect of advertising on prices can not be determined in a theoretical way, because the whole effect is influenced by the informative character or the persuasive power of advertising and the degree of economies of scale arising in the field of production and advertising.

CONCLUSION

In this paper I studied and analyzed the industrial organizational aspects of advertising as an asset of competition, providing a literature review. According to my research I concluded that researchers' opinion vary considerably about how advertising and market competition affect each other. Especially, the early researchers of this field argued that advertising of the companies can be a barrier to entry, makes the competition less vigorous and in consequence of these a more concentrated market structure begins. Those scholars who have an opposite view state that advertising makes competition among companies more vigorous, furthermore if advertising is intensive in a sector, the ratio of the market shares of the companies will be unstable. According to a modern approach it is not the advertising, in consequence of which market power develops, but firms advertise so that they can inform and persuade consumers. In this way, the cause and effect relation between advertising and market concentration is not solved. I also emphasized that it would be important to integrate the fact of decreasing advertising efficiency into the industrial organizational analysis of advertising.

I studied the role, features, financial value and effect of advertising in case of the main types of market structure. In a perfectly competitive market advertising is not relevant. However, the advertising expenditure of a monopoly firm is high. This is essentially because of the inelastic demand of its unique product and the high advertising elasticity of demand. In monopolistic competition and oligopoly market advertising has significant role in competition since it assists distinction of the different products from competitors. Companies operating in oligopoly market spend more on advertising as in this case there are fewer firms and advertising elasticity of demand is higher. It might be that market structure which primarily contributes to the worldwide growth of advertising expenditures.

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