Advertising Effects on Firm Performance

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Abstract

A number of studies examine the effects of advertising on firm performance using different models and methodologies. Empirical evidence on advertising influence on sales, profit and more recently on market value or returns, however, is inconclusive. Similarly, most of the evidence on advertising effects on firm performance comes from developed economies with little evidence from developing countries. Using a sample of listed firms in consumer goods sector in Pakistan, our study provides some initial evidence of a positive and statistically significant influence of advertising on sales, profit, and market value of the sample firms.

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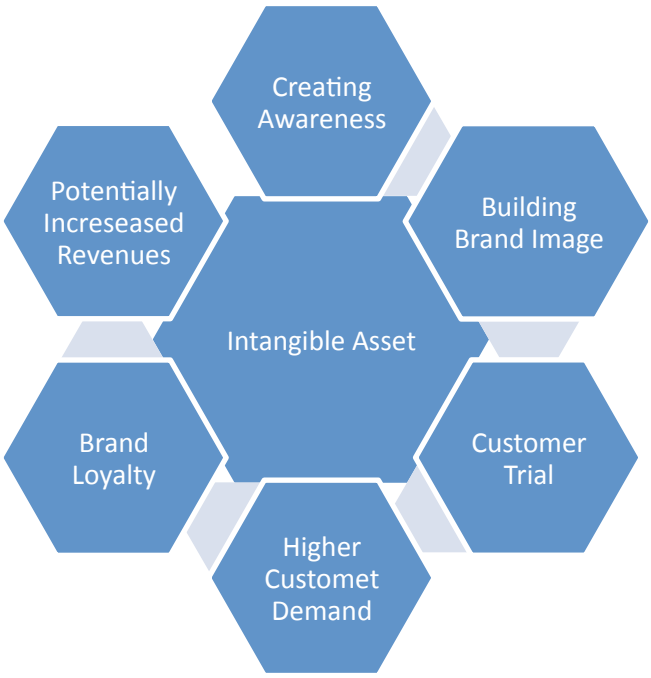
1. Introduction

Advertising not only helps firms generate awareness among customers for their products and services but also serves as a useful vehicle in promoting brand image for products and services offered in the target market. Practitioners as well as academics (e.g., Martin 1989, Shah et al. 2009, Graham and Frankenberger 2000) indicate a role for advertising in creating strong brands that ultimately can have an influence on firms' performance. Chu and Keh (2006), for instance, indicate that advertising expense contributes to brand value creation.

While it is useful for a producer to bring a new product or service to the market, it is equally important for the producer to communicate its virtues to the prospective target market. One of the primary task for the producer is to let the potential purchasers know that a specific product or service exists and to keep its brand name uppermost in the minds of consumers. Advertising helps fulfill this task for the producer. This, in turn, leads to customer trial and higher customer demand and ultimately leads to brand loyalty and facilitates possible increases in revenues in the current and future periods (Figure 1).

Figure 1

Advertising Generating an Intangible Asset



According to Borden (1942), although maintenance of brand quality is not entirely dependent upon advertising, nevertheless advertising has some influence because the advertised brand usually represents a goodwill asset which has been built at considerable expense and injury to which would represent a business loss. Similarly, Chauvin and Hirschey (1997) argue that advertising is a key strategic factor contributing to market leadership, and may be necessary to build market value. White and Miles (1996) also indicate that advertising is a strategic investment in the organization's stock or intangible assets, future cash flows, and market value.

In addition to its informative role, advertising is also viewed as conveying guarantee about the quality of the product or service advertised. This derives from the fact that most advertising products or services entail with it the identification of the sellers. Moreover, advertising subsidizes various media through sponsorship which, in turn, facilitates the provision of entertainment by these various media. Firms also rely on advertising to enter an industry and make their way into the market to compete with the already existing firms (see Kessides 1986). Advertising is viewed as one of the potentially important sources of providing needed information to prospective customers. According to Aaker and Myers (1982), advertising is part of a total marketing program and its function is usually to communicate to large audiences, and it often performs this function very efficiently.

There exist a large number of studies that examine advertising effects on sales (Magna and Mueller 1991, Duffy 1999, Yiannaka *et al*. 2002), earnings (Abraham and Lodish 1990, Lev and Sougiannis 1996, Graham and Frankenberger 2000), and more recently on market value or returns of firms (e.g., Hirschey and Weygandt 1985, Graham and Frankenberger 2000, Shah and Akbar 2010, Shah et al. 2009, Joshi and Hanssens, 2010).

Theoretically, advertising can have a direct influence on firm performance through its impact on market value or generating high returns for the advertising firms. Similarly, advertising can also have an indirect influence on firm performance by virtue of its ability to influence sales and profitability of a firm (Srinivasan and Hanssens 2009; Joshi and Hanssens, 2010). Empirical evidence on advertising influence on firm performance, however, is largely mixed

and inconclusive (see e.g., Bublitz and Ettredge, 1989, Chauvin and Hirschey 1997, Graham and Frankenberger 2000, Shah et al. 2009, Core et al. 2003).

Similarly, studies of advertising effects on sales, earnings or market value largely come from developed countries with little such evidence in developing economies. Our study contribute to the extant literature by providing some initial empirical evidence of a positive and statistically significant influence of advertising on sales, earnings, and market value of a sample of listed firms in consumer goods sector in Pakistan. We do so using a pooled sample of consumer goods firms listed on Karachi Stock Exchange (KSE) for the period 2004-2007.

2. Literature Review

A large variety of approaches and models are used to get insights into the nature of the impact of advertising on firm performance. Early studies typically examine advertising influence on sales of firms or industry (e.g., Palda 1965, Abdel-Khalik 1975, Magna and Mueller 1991). Palda (1965), for instance, provides a unique analysis of effects of advertising on sales. Results in Palda (1965) indicate that advertising is an intangible asset that is subject to amortization and that, on the average, 95 percent of the advertising expenditures were amortized during a period of almost seven years. Picconi (1977), however, finds no significant correlation between advertising expenditures and increased future benefits as measured by subsequent sales.

Similarly, Abbott *et al.* (1997) analyse the significance of long-run advertising investment in the UK brewing industry and report that both main media and below the line advertising have no significant impact on the total barrelage sales in the UK. Using unbalanced panel data of 34 meat-processing firms in Greece, Yiannaka *et al.* (2002) report total advertising by the firms of the sector as a very important determinant of their sales. Using Chinease data, Zhou *et al.* (2003) show that advertising has a long-term effect on sales of consumer durables, but find no long-term effects on sales of consumer nondurables. More recently, Osinga et al. (2010) report that in general, direct to consumer advertising has only a modest sales impact.

Studies relating advertising influence on profitability of the firm or industry (e.g., Abraham and Lodish 1990, Lev and Sougiannis 1996, Graham and Frankenberger 2000) also report mixed evidence. Paton and Williams (1999), for instance, report a positive link between advertising and profitability for those firms operating mainly in consumer goods industries. Similarly, Notta and Oustapassidis (2001), examining the influence of various media advertising on profitability, find that only TV advertising has an influence on profitability in the Greek food manufacturing sector. Eng and Keh (2007) indicate that advertising expense leads to higher return on assets and the effects last up to four years.

An increasingly popular approach recently used is to relate advertising to the market value of firms (e.g., Graham and Frankenberger 2000, Shah et al. 2008, Shah et al. 2009, Shah and Akbar 2010, Joshi and Hanssens 2010). Shah and Akbar (2008), for instance, argue that the use of market value is a superior proxy in examining the nature of advertising as it captures both current and future profitability effects of advertising. Results from advertising value

relevance studies are also not conclusive. While some studies report of a positive influence of advertising on market value (e.g., Shah et al. 2009, Joshi and Hanssens 2010), other have found no relationship (e.g., Core et al. 2003) and in some cases a negative influence of advertising on firm value (Han and Manry 2004) is reported. Using a pooled sample of UK firms, Shah et al. (2009), for instance, report a positive and significant influence of advertising on market value of sample firms in the non-manufacturing sector and only for large size firms. Han and Manry (2004), however, report a negative relation between advertising and firm value for a sample of Korean firms.

As a consequence, we employ three types of models linking advertising with sales, profit, and market values of a sample of consumer goods firms listed at KSE for the period 2004-2007. We aim to contribute to the literature in a number of ways. First, we provide one of the initial evidence of advertising influence on various performance metrics in a developing economy. Second, we use a homogeneous sample of firms in the consumer goods industry. Third, rather than using a single performance metric largely used in the existing studies, we employ three performance metrics (sales, earnings, and market value) predominantly used in the extant literature to gain an insight into the nature of advertising. Finally, our results can provide a good starting point for initiating further empirical studies on the influence of advertising on firm performance in the developing markets where there is limited existing evidence.

3. Research Strategy

We employ a pooled sample of consumer goods firms listed at KSE for the period 2004-2007. Given the absence of any readily available databases in Pakistan, all data, except share price, is hand collected from published annual reports. Share price information is collected from business recorder. For a company to be included in any cross sectional analysis, it must fulfil the following conditions for the particular year:

1. It should remain listed at KSE for the data period
2. It should belong to consumer goods industry
3. Annual report and share price information should be available

First, we employ a simple sales model (1) relating advertising and book value with sales of the firm. Second, we estimate an earnings model (2) linking advertising and firms' book value with profit of the firm. Finally, we use a valuation model (3) that is theoretically based on Ohlson (1995) who demonstrates that market value can be expressed as a linear function of earnings, book value and net dividends. Empirically model (3) is similar to those used and Shah et al. (2009), and Shah and Akbar (2010).

$$\textit{Model 1: } SALES = \alpha_0 + \alpha_1 ADV + \alpha_2 BV + \varepsilon$$

$$\textit{Model 2: } PROFIT = \alpha_0 + \alpha_1 ADV + \alpha_2 BV + \varepsilon$$

$$\textit{Model 3: } MV = \alpha_0 + \alpha_1 ADV + \alpha_2 EAR + \alpha_3 BV + \alpha_4 DIV + \alpha_5 CC + \varepsilon$$

Where, *SALES* represent firm level sales, *ADV* is advertising expenditure as reported in firm's financial statements, *PROFIT* is firm level earnings, *MV* is market value of the firm, *BV* is book value of equity, *D* is dividends, and *CC* is capital contributions.

Following Shah et al. (2009), all variables (including the constant) in model 1, 2 and 3 above are estimated in deflated form, using *BV* as a deflator. We use ordinary least squares (*OLS*) techniques to estimate the coefficients of our regression equations and adopt White (1980) standard error approach to estimate coefficient standard errors. All these measures are employed to reduce coefficient biases and to mitigate any potential problems caused by heteroscedasticity.

4. Results

Table (1) provides some descriptive statistic for the variables used in the study. The mean and median values of variables depict the characteristics of firms included in our sample. Table (2) provides correlation matrix among all the variables used in the study.

Insert Table 1 Here

Insert Table 2 Here

Tables (3) and (4) give the estimated results for model 1 and 2, with probability values derived from heteroscedasticity adjusted standard error, using White (1980) procedure. In contrast to previous studies that found mixed evidence on advertising influence on sales and/or earnings, we find a positive and statistically significant influence of advertising on both sales and profit of the sample firms. Similarly, Table (5) presents results for the valuation model 3. Consistent with some of the empirical evidence in the developed markets (see Shah et al. 2009, Shah and Akbar 2010, Joshi and Hanssens 2010) advertising has a strong, positive, and statistically significant influence on market values of the sample firms.

5. Conclusion

While the existing studies on advertising provide mixed evidence of advertising role in influencing sales, profitability and/or market values of firms in the developed economies, results in our study find consistently positive influence of advertising on all three performance metrics used in the study. Given the difficulty in hand collecting the relevant data and the preference to achieve a homogeneous sample of firms, our study is confined to a small sample of firms in the consumer goods industry. It would be interesting for future research to further explore the nature of advertising in employing bigger samples and carrying out a more detailed analysis of firms. This would, in turn, help us get more insight into the nature of advertising and informing the various stakeholders on the benefits or otherwise of spending large sums of money on advertising.

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Table 1

Descriptive Statistics

	MV	*ADV*	*EAR*	*DIV*	*CC*	*SALES*
Mean	2.061	0.024	0.189	0.055	0.293	3.467
Median	1.280	0.001	0.145	0.023	0.121	2.309
Std. Dev.	2.915	0.168	0.222	0.089	0.513	4.651
Observations	185	185	185	185	185	185

Notes:

All the variables are deflated by *BV*; book value. Dependent variable is *MV*; which is market value of the firm; measured as the closing share price at the end of the year, *ADV* represents total advertising expenditure for the firm as reported in the annual report, *EAR* are earnings for the firm as reported by the firm in its annual report, *BV* is book value for firm; measured as total value of shareholders' equity at the end of financial year, *DIV* is firm's total annual dividend, and *CC* is firm's capital contribution; measured as the sum of equity raised for cash and acquisition.

Table 2

Correlation Matrix

	MV	*ADV*	*EAR*	*BV*	*DIV*	*CC*	*SALES*
MV	1.000						
ADV	0.658	1.000					
EAR	0.567	0.648	1.000				
BV	0.378	0.715	0.545	1.000			
DIV	0.555	0.389	0.513	0.161	1.000		
CC	0.156	0.187	0.352	0.334	0.010	1.000	
SALES	0.378	0.603	0.571	0.729	0.215	0.285	1.000

Notes:

All the variables are deflated by *BV*; book value. Dependent variable is *MV*; which is market value of the firm; measured as the closing share price at the end of the year, *ADV* represents total advertising expenditure for the firm as reported in the annual report, *EAR* are earnings for the firm as reported by the firm in its annual report, *BV* is book value for firm; measured as total value of shareholders' equity at the end of financial year, *DIV* is firm's total annual dividend, and *CC* is firm's capital contribution; measured as the sum of equity raised for cash and acquisition.

Table 3

Model 1: Advertising-Sales Relationship

White Heteroskedasticity-Consistent Standard Errors & Covariance

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
ADV	4.642	1.919	2.419	0.017
BV	1.923	0.236	8.133	0.000
R-squared	0.545	Mean dependent var		3.467
Adjusted R-squared	0.540	S.D. dependent var		4.651

Notes:

All the variables are deflated by *BV*; book value. Dependent variable is *SALES. ADV* represents total advertising expenditure for the firm as reported in the annual report, *BV* is book value for firm; measured as total value of shareholders' equity at the end of financial year.

Table 4

Model 2: Advertising-Profit Relationship

White Heteroskedasticity-Consistent Standard Errors & Covariance

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
ADV	0.701	0.183	3.828	0.000
BV	0.154	0.013	12.168	0.000
R-squared	0.434	Mean dependent var		0.189
Adjusted R-squared	0.428	S.D. dependent var		0.222

Notes:

All the variables are deflated by *BV*; book value. Dependent variable is *PROFIT. ADV* represents total advertising expenditure for the firm as reported in the annual report, *BV* is book value for firm; measured as total value of shareholders' equity at the end of financial year.

Table 5

Model 3: Advertising-Market Value Relationship

White Heteroskedasticity-Consistent Standard Errors & Covariance

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
ADV	9.996	1.107	9.028	0.000
EAR	1.345	0.672	2.002	0.047
BV	1.152	0.238	4.842	0.000
DIV	9.909	1.809	5.477	0.000
CC	0.354	0.157	2.260	0.025
R-squared	0.554	Mean dependent var		2.061
Adjusted R-squared	0.542	S.D. dependent var		2.915

Notes:

All the variables are deflated by *BV*; book value. Dependent variable is *MV*; which is market value of the firm; measured as the closing share price at the end of the year, *ADV* represents total advertising expenditure for the firm as reported in the annual report, *EAR* are earnings for the firm as reported by the firm in its annual report, *BV* is book value for firm; measured as total value of shareholders' equity at the end of financial year, *DIV* is firm's total annual dividend, and *CC* is firm's capital contribution; measured as the sum of equity raised for cash and acquisition.