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ADVERTISING EFFECTS ON FIRM ECONOMIC PERFORMANCE

A number of studies examine the effects of advertising on firm economic 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 economic performance comes from developed economies with little evidence from developing countries. Using a sample of the 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.

Keywords: *advertising, firm economic performance, developing countries, profit, market value.*

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ВПЛИВ РЕКЛАМИ НА ЕКОНОМІЧНІ ПОКАЗНИКИ ФІРМИ

У статті показано результати дослідження за допомогою різних моделей і методологій впливу реклами на успішність роботи підприємства. Емпіричні дані наявних досліджень про вплив реклами на продажі, прибуток, ринкову вартість або доходи не дозволили зробити однозначних висновків, а більша частина досліджень стосувалася розвинених країн і оминала увагою країни, що розвиваються. На основі вибірки пакистанських підприємств, що виробляють товари масового вжитку та мають акції на біржі, продемонстровано позитивний і значний вплив реклами на продажі, доходи і ринкову вартість даних фірм.

Ключові слова: *реклама, успішність роботи підприємства, країни, що розвиваються, дохід, ринкова вартість.*

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ВЛИЯНИЕ РЕКЛАМЫ НА ЭКОНОМИЧЕСКИЕ ПОКАЗАТЕЛИ ФИРМЫ

В статье показаны результаты исследования с помощью различных моделей и методологий влияния рекламы на успешность работы предприятия. Эмпирические данные имеющихся исследований о влиянии рекламы на продажи, прибыль, рыночную стоимость или доходы не позволили сделать однозначные выводы, а большая часть исследований касалась развитых стран и обходила вниманием развивающиеся. На основе выборки пакистанских предприятий, производящих товары массового потребления и котирующихся на бирже, продемонстрировано положительное и значительное влияние рекламы на продажи, доходы и рыночную стоимость данных фирм.

Ключевые слова: *реклама, успешность работы предприятия, развивающиеся страны, доход, рыночная стоимость.*

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 of products and services offered at the target market. Practitioners as well as academics (e.g., Martin, 1989; Shah et al., 2009; Graham and Frankenberger,

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2000) indicate the role of advertising in creating strong brands that ultimately can have influence upon 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 a market, it is equally important for a producer to communicate its virtues to a prospective target market. One of the primary tasks for a producer is to let potential purchasers know that a specific product or service exists and to keep its brand name uppermost in the minds of consumers. Advertising helps to fulfill this task for producers. This, in turn, leads to customer trial and higher customer demand and ultimately leads to brand loyalty and facilitates possible increase in revenues in the current and future periods.

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 organization's stock or intangible assets, future cash flows, and market value.

In addition to its informative role, advertising is also viewed as a conveying guarantee of the quality of the product or service advertised. This derives from the fact that most advertising products or services entail the identification with 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 (Kessides, 1986). Advertising is viewed as one of potentially important sources of providing needed information to prospective customers. According to Aaker and Myers (1982), advertising is a part of a total marketing program and its function usually is to communicate with 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 (Hirschey and Weygandt, 1985; Graham and Frankenberger, 2000; Shah and Akbar, 2010; Shah et al., 2009; Joshi and Hanssens, 2010).

Theoretically, advertising can have direct influence on firm performance through its impact on market value or generating high returns for advertising firms. Similarly, advertising can also have 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 economic performance, however, is largely mixed and inconclusive (Bublitz and Ettredge, 1989; Chauvin and Hirschey, 1997; Graham and Frankenberger, 2000; Shah et al., 2009; Core et al., 2003).

Similarly, studies on advertising effects on sales, earnings or market value largely come from developed countries with little evidence on 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 the listed firms from the 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.

Literature Review. A large variety of approaches and models are used to get insights into the nature of the impact of advertising on firm economic performance. Early studies typically examined advertising influence on sales of firms or industry (e.g., Palda, 1965; Abdel-Khalik, 1975; Magna and Mueller, 1991). Palda (1965), for instance, provided a unique analysis of effects of advertising on sales. Results in Palda (1965) indicated that advertising is an intangible asset that is subject to amortization and that, on the average, 95% of the advertising expenditures were amortized during a period of almost 7 years. Picconi (1977), however, found no significant correlation between advertising expenditures and increased future benefits as measured by subsequent sales.

Similarly, Abbott et al. (1997) analysed 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) reported total advertising by the firms of the sector as a very important determinant of their sales. Using Chinese data, Zhou et al. (2003) showed 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) reported that in general, direct advertising has only a modest sales impact.

Studies relating advertising influence on profitability of a firm or industry (e.g., Abraham and Lodish, 1990; Lev and Sougiannis, 1996; Graham and Frankenberger, 2000) also reported mixed evidence. Paton and Williams (1999), for instance, reported 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, found that only TV advertising has influence on profitability in Greek food manufacturing. Eng and Keh (2007) indicated that advertising expense leads to higher return on assets and the effects last up to 4 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, argued 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 reported a positive influence of advertising on market value (e.g., Shah et al., 2009; Joshi and Hanssens, 2010), other 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 the UK firms, Shah et al. (2009), for instance, reported 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, reported a negative relation between advertising and firm value for a sample of Korean firms.

As a consequence, we employ 3 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 on 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 3 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 developing markets where there is limited evidence.

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 the 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 fulfill the following conditions for a 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 by Shah et al. (2009) and Shah and Akbar (2010):

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

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

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

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 a firm; *BV* is book value of equity; *DIV* is dividends; *CC* is capital contributions.

Following Shah et al. (2009), all the variables (including the constant) in models 1, 2 and 3 are estimated in deflated form, using *BV* as a deflator. We use the 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.

Results. Table 1 provides some descriptive statistics 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.

Tables 3 and 4 give the estimated results for models 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 the results for the valuation model 3. Consistent with some of the empirical evidence at developed markets (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.

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 the 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.

Conclusion. While the existing studies on advertising provide mixed evidence of advertising role in influencing sales, profitability and/or market values of firms in developed economies, the results in our study find consistently positive influence of advertising on all 3 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 various stakeholders on the benefits or otherwise of spending large sums of money on advertising.

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