Long-term marketing effectiveness in Turkey: Does it differ from that in the US and Western Europe?

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Abstract

Companies in Turkey aim to grow their market performance, but very few know how much additional sales or profits are generated by their marketing spending.
This study is the first to quantify long-term marketing effectiveness in Turkey and compare it with that in the US and Western Europe. Our results reveal that companies in Turkey receive about 8 TL in revenues for every 1 TL spent on marketing. Compared to matched companies in mature markets, their marketing efficiency is only 69%. Across industries, industrial and automobile score highest in marketing efficiency, and textile and retail the lowest. We conclude with a research agenda on measuring and improving marketing efficiency in Turkey and other emerging markets.

Keywords: *marketing efficiency, econometrics and time series, unit root, autoregressive distributed lag model, long-term, Turkey "More money is wasted in marketing than in any other human activity" Ries and Trout (2000)*

Introduction

Already in the 1920s, John Wanaker deplored that "half of my advertising is wasted, I just do not know which half". Today, companies around

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the world face the same dilemma. Measuring return on marketing investment has now moved to the top of marketers' priority list, even before such important metrics as customer satisfaction, retention and brand loyalty (Anderson Analytics, 2010). With good reason: companies that measure their marketing efficiency outperform their competitors in terms of revenue growth, market share and profitability (CMO Council, 2004). In the United States and Western Europe, long-term marketing effectiveness has been quantified for a wide range of marketing actions and industry sectors, including automobiles (Pauwels, et al., 2004; Srinivasan, et al., 2009), food (e.g. Pauwels, et al., 2002; Srinivasan, et al., 2004; Slotegraaf and Pauwels, 2008), retail (e.g. Pauwels and Neslin, 2008) and online services (e.g. Pauwels and Weiss, 2008).

In the Turkish marketing literature, authors have considered manager and consumer perceptions of sales promotion (Akyüz and Ayyıldız, 2008; Tiğli and Pirtini, 2003), advertising (Gülçubuk, 2007), mobile marketing (Akbiyik, Okutan and Altunisik, 2008) and packaging (Sütütemiz, Çiftyildiz and Konuk, 2008). These studies survey consumers and/or managers on which marketing actions are perceived to be more versus less effective and identify weaknesses and benefits of e.g. mobile marketing communication versus traditional marketing communication and sales promotion versus advertising. Unfortunately, these stop short of quantifying the actual effectiveness of marketing actions with market data. It is well documented that consumers often change their purchasing behavior in response to marketing actions, even though they do not express this in a survey.

In sum, companies doing business in Turkey currently lack hard numbers for long-term marketing effectiveness, which is crucial to making intelligent decisions on where to cut spending and where to increase it. Our research questions are:

(1) how much TL revenues do companies in Turkey get back for 1 TL spend in marketing?
(2) how does long-term marketing efficiency in Turkey compare to that in 'mature markets'?
(3) how does long-term marketing efficiency compare across Turkish industries and firms?

Answering these research questions, this paper is the first to quantify long-term marketing effectiveness in Turkey and compare it with the marketing effectiveness observed in US and Western European companies. The original contribution lies in identifying and interpreting differences in long-term marketing effectiveness for an important emerging market versus mature markets. We also explore differences among industries and companies. Finally, detailed data allow recommendations on marketing budget allocation for a Turkish company and a foreign company operating in Turkey.

Our methodology is also new to the analysis of Turkish company data. It is grounded in econometric time series analysis, which "combines the merits of econometrics, which focuses on the relationship between variables, with those of time series analysis, which specifies the dynamics in the model" (Franses, 1991, p. 240). For our quarterly datasets, we use autoregressive-distributed lag (ARDL) models to capture short-term and long-term marketing effectiveness. In answer to our research questions, we find that:

(1) companies in Turkey get back about 8 TL in revenues for every 1 TL spent on marketing,
(2) compared to companies in mature markets, marketing efficiency is only 69% in Turkey,
(3) industrial and automobile industries score highest, textile and retail lowest in efficiency.

The remainder of this paper is organized as follows. First, we provide a synthesis of relevant literature in the 'research background' section. Next, we detail the data and methodology. After presenting the results, we conclude with a discussion and avenues for future research.

Research Background

Knowledge of long-term marketing effectiveness is essential for companies wishing to make the best use of their marketing budgets to obtain long-term performance (Dekimpe and Hanssens, 1999; Wind and Rob-

ertson, 1983). Over the last decade, this knowledge has yielded empirical generalizations on return on marketing investments in mature markets in the West, mostly the United States but also Western Europe. Two conclusions stand out: (1) much of marketing spending is wasted as it is unprofitable (the profit increase does not pay back for the marketing spending or even does not yield any sales increase at all), and (2) general rules hold for the short-run and long-run effectiveness of specific marketing spending, such as advertising. We next detail these two conclusions from mature markets and discuss whether and how they may apply to Turkey.

The first key conclusion is that a lot of marketing spending is wasted, as it does not increase profits for the firm (Hanssens, 2009; Wiesel, et al., 2011). Some representative statistics (Copernicus Consulting, 2005) include:

1) 60% to 95% of new product introductions fail;
2) 85% of price promotions lose money for the company;
3) 50% of advertising has no sales effect at all.

The situation is Turkey might differ in all these areas, but we simply don't know. The more data-driven companies, such as Migros and Marks & Spencer, can quantify the short-term sales effects of direct marketing actions to their loyalty-card holding customers. However, with the possible exception of Turkcell, no company we talked to could quantify the long-term sales effects, let alone the return on investment of their mass marketing actions, such as new product introductions, brand building efforts, price promotions, print or TV advertising. Some managers may have been comfortable with such ignorance during high economic growth times, but the current recession has forced companies to analyze more closely where marketing spending can be reduced, and where it should be increased to exploit opportunities for achieving a long-term competitive advantage. Turkcell offers an interesting example in this regard: quantifying return on marketing investment became a top priority in 2009, and the company now reports being relatively satisfied with its ability to measure the short-run revenue impact of major marketing actions. Still, long-run performance remains a mystery.

As for publicly available research, the academic study of long-term marketing effectiveness has exploded in the United States over the last decade, as summarized in Pauwels, et al. (2004) and Hanssens (2009). However, no researcher has adapted this approach to work in emerging markets like Turkey. After the internal crisis of 2001, many Turkish managers realized that high quality and low costs are not sufficient to face global competition; Turkish companies need to build and leverage their brands in the domestic and foreign markets. To aid in these brand building and other marketing efforts, managers started to gather time series data to gain insights into the effectiveness of their marketing efforts. Ten years later, sufficient data are becoming available in Turkey to obtain reliable model estimates through recession and boom times, and to develop Turkey-specific guidelines and rules to compare with those obtained in mature markets.

The second main conclusion from academic research is indeed that certain rules or guidelines apply across company situations and market conditions. In mature markets such as the U.S. and Western Europe, such rules or "empirical generalizations" have aided managers in their decision making for several years now. For example, empirical generalization about advertising effectiveness in the United States (Tellis, 2009; Hanssens, 2009) include:

1) The average short-term elasticity of sales to advertising (i.e. the % of sales increase for a 1% increase in advertising spending) is around 0.05 for existing products.
2) Advertising new products can yield elasticities up to 9 times higher, e.g. 0.45.
3) The average long-term elasticity of advertising is twice the short-term elasticity.
4) A specific advertising campaign either works within weeks, or it does not work at all.

This means that when managers decide to double advertising spending (+ 100%) for an existing product, they can expect to increase revenues by about 5% in the short run. When the product is new to the market, expected revenues are much higher (45%), as observed in the automobile

industry (Srinivasan, et al., 2009). In the long-run, they can expect to increase revenues by 10% for existing products, and 90% for new products. However, these results only hold on average; a specific ad campaign can be much more successful or a lot less successful in the short run. Thanks to the empirical generalization, successful campaigns stand out more. For instance, if a company obtains a sales elasticity of 0.53 with a clever online word-of-mouth campaign, it knows that this campaign is about 10 times more effective than an average ad campaign (Trusov, et al., 2009). On the downside, if a specific campaign is not successful in the short run, it is unlikely to suddenly become successful in the long run. This insight helps managers to cut back on marketing campaigns that are unlikely to ever become profitable, and to reinvest the money in other campaigns or other areas in the firm (e.g. product quality, human resources, etc).

How will Turkish companies and researchers benefit from empirical generalizations in Turkey; i.e. publicly available insights based on other companies? Often, a specific company or manager will have to make decisions without the data or the time to quantify marketing benefits in their own situation. For instance, a small-and-medium (SME) enterprise in the durable goods category may consider having its first national TV advertising campaign for TL 100,000. Because it has never engaged in this marketing activity, it does not know how much revenue the TV campaign will yield. However, the manager knows its own contribution margin of 40% (i.e. the company earns 40 TL for every 100 TL in revenues) and can look up the empirical generalization for advertising durable goods in Turkey. In scenario A, the empirical generalization is that 100,000TL spent on TV yields 200,000 TL in revenues on average. In this scenario, the manager can only expect to gain 200,000 x 40% = 80,000 TL in profits, which is less than the 100,000 TL of TV investment. In contrast, in scenario B, the empirical generalization is that 100,000 TL spent on TV yields 800,000 TL revenues on average. Therefore, the manager can expect to gain 800,000 x 40% = 320,000 TL in profits, for a return on investment of 2.2 ([320,000 – 100,000]/100,000). This return on investment can also be compared with other options to spend the 100,000 TL, such as enlarging the factory, hiring more employees or building more stores. Of course, the exact after-the-fact increase in revenues may differ from the expected one – there is

no success guarantee. Thanks to the empirical generalization though, the manager has some a priori expectations and can compare the actual gains with those expected. Such diagnosis may pinpoint specific problems with the campaign (e.g. wrong message, or wrong TV channel), which helps the manager to fix such issues and improve forecast precision for the future.

A Strategic framework for Understanding Long-Term Marketing Effectiveness

A strategic perspective on marketing decisions requires a dynamic understanding of the conditions for performance growth and of the role marketing actions play in this process. To achieve such understanding, we have to address two main questions:

1) Is company sales performance stationary (mean-reverting) or evolving?
2) How much does marketing spending affect sales in Turkey versus mature markets?

Is company sales performance stationary or evolving?

Marketing's potential to induce permanent effects directly depends on evolution in performance. Unit root tests allow us to classify performance change as either temporary or permanent. The study of temporary fluctuations is mostly tactical in nature, whereas the study of permanent changes has great strategic relevance. A typical marketing example is the performance impact of price promotions, which are tactical tools to temporarily boost sales (Akyüz and Ayyıldız, 2008; Blattberg and Neslin, 1990; Tiğli and Pirtini, 2003). However, managers worry that promotional activity permanently damages market performance by reducing baseline sales (Pauwels, et al., 2002). Knowing whether performance is evolving or stationary provides direct insight into this dilemma. If stationary, performance fluctuates around deterministic components (mean, trend and seasonality) and price promotions do not cause permanent damage. In contrast, evolving performance calls for strategic managerial actions to counteract permanent damage and/or create permanent benefits.

In mature markets, such as fast moving consumer goods in the US and Western Europe, less than 5% of the studied brands and companies experience evolving performance (Nijs, et al., 2001; Pauwels, et al., 2002; Hanssens, 2009). In contrast, emerging markets such as Turkey are characterized by consumer learning, government deregulations and product technology diffusion. The attraction of new customers typically leads to repeat or replacement purchases. Therefore, temporary performance gains are expected to persist in the future. Of course, such diffusion growth does not last forever as consumer market potential and full retail distribution provide natural ceilings (Bass, 1969; Bronnenberg, et al., 2000). Thus, Turkish markets in which performance was previously evolving, may now enter a period of stationary performance, which has profound implications for managers on how to grow and allocate marketing resources.

How much does marketing spending affect sales in Turkey versus mature markets?

Given the above discussion on performance evolution, it appears that companies in Turkey have a great opportunity for high marketing effectiveness: consumers are eager to learn and spend their growing income; markets are being deregulated and technologies are diffusing in various sectors. Of course, companies in Turkey still need the marketing skills to exploit these opportunities. The presence of such marketing skills may vary substantially across industries and across companies within each industry. Moreover, companies in Turkey differ from those in mature markets in their short-term versus long-term orientation. The combination of these dimensions leads to different predictions for the highest versus average marketing efficiency companies in the short and the long run.

Our first hypothesis is that the *best companies in Turkey earn higher short-term marketing effectiveness than even the best companies in mature markets (H1a)*. They have the marketing skills to exploit consumer learning and deregulating markets, which present better sales growth opportunities in an emerging market like Turkey versus mature markets. However, this does not mean that their long-term marketing effectiveness is higher as well. Indeed, changing consumer tastes and regulations present important

challenges for companies to hold on to their marketing gains, in contrast to companies operating in the relative stability of mature markets. These opposing forces of growth opportunities and threats are expected to cancel each other out, so our second hypothesis is that the *best companies in Turkey have similar long-term marketing effectiveness to the best companies in mature markets (H1b).*

In contrast, the *average* Turkish company has traditionally focused on leveraging the lower labor costs, deepening operation efficiencies and improving quality. As a result, most Turkish companies are ISO-certified and offer competitive value-for-money in domestic and international markets. However, many Turkish companies have discovered that a great value offer alone is not sufficient to succeed in many markets: perceived appeal to consumers also depends on marketing communication and brand building. Companies in mature markets have had plenty of time to act on this realization, and often store data on sales and marketing actions to quantify marketing effectiveness and derive insights from this analysis to improve marketing effectiveness. Relative to companies in mature markets, the average Turkish company is lacking in such marketing skills, and this is reflected in current Turkish marketing literature. Authors have considered manager and consumer perception of sales promotion (Akyüz and Ayyıldız, 2008; Tiğli and Pirtini, 2003), advertising (Gülçubuk, 2007), mobile marketing (Akbiyik, Okutan and Altunisik, 2008) and packaging (Sütütemiz, Çiftyildiz and Konuk, 2008). These studies survey consumers and/or managers on which marketing actions are perceived to be more versus less effective and identify weaknesses and benefits of e.g. mobile marketing communication versus traditional marketing communication and sales promotion versus advertising. Unfortunately, these studies stop short of quantifying the actual effectiveness of marketing actions with market data. It is well documented that consumers often change their purchasing behavior in response to marketing actions, even though they do not express this in a survey. If the average Turkish company does not have data on the effectiveness of its marketing actions, it lacks the information to cut back on ineffective actions, improve on mildly effective actions and exploit effective actions. As a result, we hypothesize that the *average Turkish company has lower marketing effectiveness, in the short run and the long run, compared to the average company in a mature market (H2a, H2b).*

In sum, we expect the best companies in Turkey to have higher short-term marketing effectiveness, but similar long-term marketing effectiveness compared to companies in mature markets. This implies that high marketing efficiency is not a characteristic of mature markets: the Turkish situation is ripe for companies to exploit growth opportunities with skilful marketing. However, the average Turkish company is expected to have lower marketing effectiveness than that found in mature markets, which we refer to as the 'marketing effectiveness deficit' (MED). Quantifying this marketing effectiveness deficit across industries will help us to map key areas for improvement.

Methodology

Our methodology is grounded in econometric time series analysis, which "combines the merits of econometrics, which focuses on the relationship between variables, with those of time series analysis, which specifies the dynamics in the model" Franses (1991, p. 240). This approach follows 2 steps: (1) unit roots tests reveal the sustainable versus temporary advantage nature of marketing actions, and (2) econometric models quantify the short-term and long-term marketing effectiveness (Dekimpe and Hanssens, 1999).

First, unit root tests reveal whether a variable is mean-reverting (reverts back to a stable mean after being shocked) or evolving (altered permanently by shocks). Such tests have been applied in economics to Turkish datasets, e.g. to study the economic convergence of regions and provinces (Erlat, 2005; Erlat and Ozkan, 2006) and the relation between international tourism and economic development (Yurtseven, 2012). We use two different unit root tests: the Augmented Dickey Fuller test, which has evolution as the null hypothesis and the KPSS-test, which has stationarity as the null hypothesis (Kwiatkowski, et al., 1992).

Second, econometric models establish the dynamic relation between marketing and sales performance (Pauwels, et al., 2002). The econometric time series model depends on the nature of the dataset. When more than 50 observations are present (Hanssens, et al., 2001), we can reliably estimate vector-autoregressive models (Sims, 1980; Yurtseven, 2012). The key

disadvantage of VAR-models is the need for a relatively long time series. When fewer than 50 time series observations are available, we instead estimate *autoregressive-distributed lag (ARDL) models* (Hanssens, et al., 2001). These models regress sales performance on its own lag and the current and lagged realizations of the marketing variables. These features make it similar to a VAR, but the ARDL model does not explain the marketing variables and thus excludes feedback effects. The ARDL model does efficiently capture immediate and lagged effects of marketing expenses, and performance carryover (e.g. customers gained in this period partially stick with the company in the following quarters). For instance, a performance carryover of 0.5 ($\delta = 0.5$) means that any performance gain this period (e.g. by marketing actions) will have a long-run effect of [1/(1-0.5)] = 2 times the immediate effect. A performance carryover of 0.9 means that the long-run effect will be [1/(1-0.9)] = 10 times the immediate effect. We control for seasonality by adding dummy variables (SD) for second, third and fourth quarter (using the first quarter as our benchmark). Finally, we add step dummy variables for major acquisitions (ACQ). We estimate this model both in additive and in multiplicative functional form (i.e. in levels and in logarithms). In the model output, we focus on the short-run (same-quarter) effect of marketing on performance (β), and on the long-term effect, computed as the sum of current and lagged marketing divided by [1-performance carryover]. Equation (1) shows the ARDL model and equation (2) calculates long-term marketing effectiveness.

$$Sales_{i,t} = \alpha_i + \beta Marketing_{i,t} + \gamma Marketing_{i,t-1} + \delta Sales_{i\,t-1} + \Sigma SD_t + ACQ_{i\,t} + \varepsilon_{i\,t} \quad (1)$$

$$Long\text{-}term\ marketing\ effectiveness = (\beta + \gamma)/(1 - \delta) \quad (2)$$

Data

To assess our hypotheses, we need a broad sample of companies in Turkey and in mature markets. Despite our sustained efforts to collect private data from dozens of Turkish companies, we only obtained usable internal data for two companies; Silverline and Sony Eurasia. For both of these companies, the long time series of monthly data allows us to perform unit root tests to address our first research question on the presence of

evolution for companies in the Turkish market versus US and EU markets. While both companies operation in the durable goods sector in Turkey, their identity and historical situation represents the two sides of brand equity: a young domestic firm that only started marketing under its current brand name at the start of the dataset (Silverline in 2001) versus an established multinational with high brand equity (Sony Eurasia). We briefly review their history and refer to the company websites for details.

Silverline is an award-wining Turkish supplier of built-in appliances for cooking, cooling and dishwashing (http://www.silverlineappliances.com/tr/). Established in 1994 as "Gumusfon Metal Endustri ve Ticaret A.S." for the domestic market, the company renamed itself 'Silverline' and expanded into international markets in 2001. Our data are at the company level, monthly from January 2001 to December 2008.

Sony is a multinational founded in 1946 in Japan, with currently over 165,000 employees all over the world. Sony Eurasia (http://www.sony.com.tr/section/ana-sayfa) represents Sony in Turkey in several electronics categories. We obtained usable data on seven major product categories, including VPE (TV and video recorders), Home Video Equipment (DVDs), HFE (Hi-Fi equipment), PAE (Personal Audio: mini/micro/headphones), eVE (in-car entertainment), camcorders and Walkman. Our data are monthly from 2002 to 2007.

To assess our hypotheses on Turkish versus mature market marketing effectiveness, we use publicly available data in quarterly earnings reports. We consider all publicly available data on Turkish companies since 2002 and analyze those companies for which we have at least 12 continuous observations (12 quarters = 3 years). Given the absence of previous marketing action information, we ended up with operating expenses as the closest proxy for marketing expenses. Our final sample consists of 30 Turkish companies and 30 companies from the US and Western Europe that operate in the same industries. Table 1 below lists the analysed companies.

Table 1: List of analysed companies by industry

Sector	Turkey	Mature Market	Sector	Turkey	Mature Market
Automotive	Koc automotive	Toyota	Industrial	Alarko Industry	3M
Automotive	Sabancı Automotive	Nissan	Industrial	Alarko Energy	Honeywell
Automotive	Tofas	Bmw	Industrial	Enka Construct	Aeom
Automotive	Otokar	Daimler	Industrial	Enka Trade	
Automotive	Ford Turkiye		Industrial	Sabancı Tire	
Durables	Vestel	Sony	Retail	Enka Retail	Macy's
Durables	Arcelik	Whirlpool	Retail	Sabancı Retail	Nordstrom
Durables	Yatas	Canon	Retail		Abercombie & Fitch
Durables		Hp	Retail		Ann Taylor
Durables		Apple	Retail		Ralph Lauren
Food	Alarko Food	Campbell	Retail		Barnes & Noble
Food	Koc Food	Coke	Telecom	Turkcell	
Food	Tat	Hersheys	Textile	Sabancı Textile	Quicksilver
Food	Banvit	Pepsi	Textile	Altınyıldız	
Food		Kraft	Textile	Vakko	
Food		Sarah lee	Other Consumer	Alarko Tourism	Avon
Food		Nestle	Other Consumer		Colgate
Food	Bim	Costco	Conglomerate Holding	Enka Total Koc Total Sabancı Total	
Food	Migros	Wholefoods			

The advantage of this dataset is that it includes at least 2 major companies in 6 important Turkish industries: automotive, durables (without automotive), food (manufacturing and retailing), industrial, retail and textile. For each industry, we were also able to collect quarterly revenues and marketing expenses of companies operating in mature markets. Moreover, our data include the total sales revenues and marketing spending of the major holdings (conglomerates) Koc, Sabanci and Enka. Thus, the company sample represents a large part of Turkish economic activity. However, disadvantages include that we miss out on firms that do not publish quarterly earnings, that we can not distinguish among marketing actions and that we are not able to perfectly match each company to a similar company in mature markets.

Results

Unit root test results: evolution in 87.5% of Turkish versus 60% of mature market cases

For Silverline and Sony Eurasia, we have enough time series observations to obtain reliable unit root test results. In the case of Silverline sales revenues, both the Augmented Dickey-Fuller tests (with evolution as the null hypothesis) and the KPSS-test (with stationary as the null hypothesis) show that Silverline sales are evolving. In the case of Sony, 6 out of 7 categories show evolution in Sony sales revenues. Thus, we find evolution in 7 out of 8 sales series of companies operating in Turkey. While we do not have a direct comparison in the analyzed time period, this 87.5% of evolution is higher than the 60% of evolution cases in sales revenues observed in over 200 cases in mature markets (Dekimpe and Hanssens, 1995). Moreover, our percentage of evolution for electronics brands in Turkey is similar to that of 80% (8 out of 10 brands) for durable goods in China (Ouyang, Zhou and Zhou, 2002) and to that of 83% (5 out of 6 brands) of personal care brands in Brazil (Pauwels, et al., 2012). Of course, neither our study nor the studies in China and Brazil include enough brands to calculate the statistical significance of the difference with mature markets. However, the three studies in emerging markets consistently find evolution in over 80% of brand sales.

Econometric model fit

The Autoregressive Distributed Lag (ARDL) model fits well for the 30 analyzed Turkish companies, explaining on average *91% of the variation in revenues*, with an average adjusted R^2 of 0.82. We checked the robustness of our model results against different forms of seasonality and acquisitions, and obtain similar findings across specifications.

How much do companies in Turkey get back from 1 TL in marketing spent?

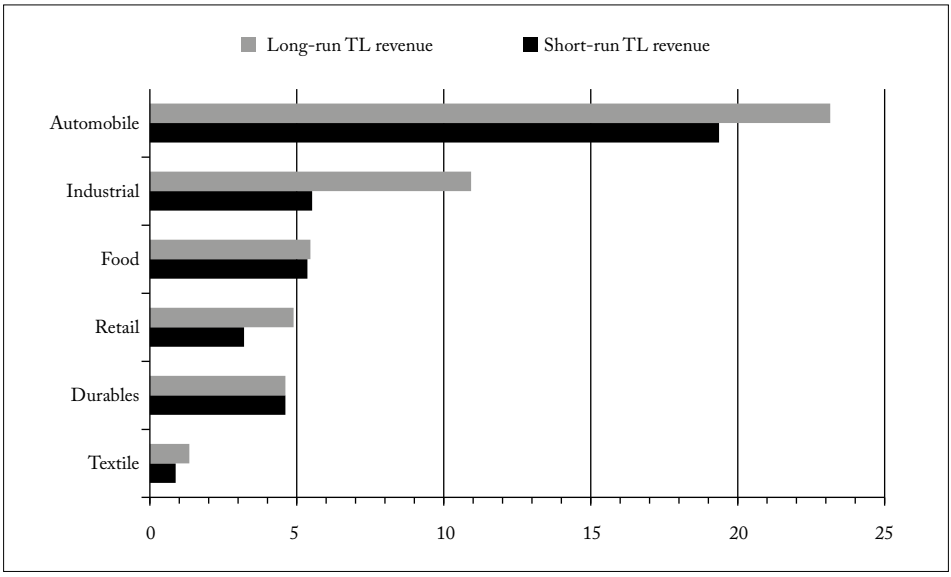
We next address our research question: how much TL do companies in Turkey get back from 1TL spent in marketing. To answer this question, we base ourselves on the estimates of the linear (additive) model on the broad sample of companies operating in Turkey. The company-specific estimates are presented in columns 3-4 of Table 2.

Table 2: Company marketing efficiency, organized by sector and by long-run elasticity

Company	Sector	Short run TL	Long run TL	Short run %	Long run %
Otokar	Automotive	8.75	20.11	72%	166%
Ford	Automotive	30.60	30.60	87%	87%
Sabancı Automotive	Automotive	6.79	6.79	55%	55%
Tofas	Automotive	18.74	18.74	53%	53%
Koc Automotive	Automotive	5.45	5.45	22%	22%
Yatas	Durable	4.50	4.50	83%	83%
Vestel	Durable	7.48	7.48	56%	56%
Arcelik	Durable	1.86	1.86	25%	25%
Banvit	Food	14.16	14.16	127%	127%
Bim	Food	9.75	9.75	119%	119%
Migros	Food	3.28	3.28	59%	59%
Alarko Seafood	Food	2.86	2.86	27%	27%
Tat	Food	1.32	1.32	20%	20%
Koc food	Food	0.81	1.41	11%	14%
Alarko Total	Holding	10.30	10.30	93%	93%
Koc Total	Holding	1.65	3.67	25%	63%
Enka Total	Holding	2.92	9.82	9%	35%
Sabancı Total	Holding	2.09	5.27	6%	14%
Alarko Energy	Industrial	10.55	10.55	116%	116%
Enka construction	Industrial	4.35	24.50	16%	110%
Alarko Industry	Industrial	5.22	5.22	104%	104%
Enka Trade	Industrial	1.96	3.46	34%	54%
Sabancı Tire	Industrial	5.89	5.89	21%	51%
Enka Retail	Retail	2.97	2.97	88%	88%
Sabancı Retail	Retail	3.44	6.81	29%	62%
Alarko Tourism	Service	5.27	5.27	236%	236%
Turkcell	Telecom	5.30	5.30	62%	62%
Sabancı Textile	Textile	3.21	7.29	40%	59%
Vakko	Textile	1.10	1.10	48%	48%
Altınyıldız	Textile	0.65	1.59	33%	46%

The average Turkish company gets 7.91 TL revenue increase in the long run for a 1 TL increase in the marketing budget. The variation in this number is very substantial: from a low of 1.10 TL (Vakko) to a high of 30.60 (Ford). As for industries, **automotive** (23.15) and industrial (10.93) get the most TLs for 1 TL spent on marketing, while **Textile** (1.35) gets the lowest. Importantly, this does not mean that companies and industries with low marketing effectiveness are doing anything wrong. Instead, they either face a market that is rather insensitive to marketing, or they have spent a lot on marketing in the past, up to the point that they now face small returns for additional spending in marketing. Indeed, Textile, Durables, Retail and Food are all Business-to-Consumer (B-t-C) industries with heavy past marketing investments. On the other hand, our results suggest that *automotive and industrial companies currently under-invest in marketing*, and thus are advised to consider *increasing marketing spending*. Figure 1 compares TL returns across industries.

Figure 1: How much TL do companies in Turkey get back for 1 TL spent in marketing?



Long-term Marketing efficiency in Turkey companies is 69% of that of mature markets

While individual companies can draw conclusions from the average TL returns to their marketing spending, researchers need a basis for

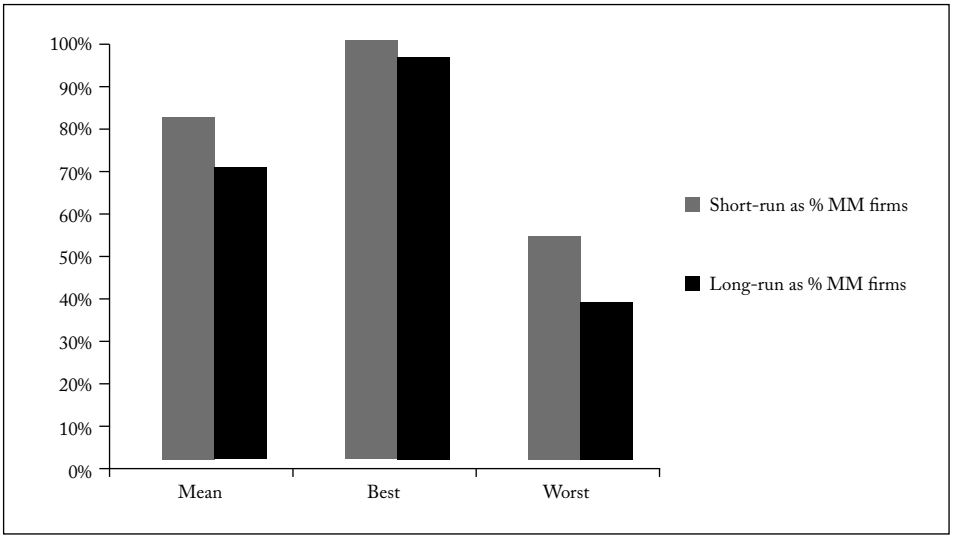
comparison, which is found in mature markets. To this end, we consider elasticities, i.e. by how much % do sales revenues increase for a 1% increase in marketing spending. Unit effects (in TL, dollars or euros) do not truly express the marketing sensitivity. For instance, suppose a US and a Turkish company with a marketing budget of $ 2M add a $ 1M advertising campaign. The US company may obtain more $ revenues (e.g. revenues increase $ 5M, from $ 50M to $ 55M) than a Turkish company (e.g. revenues increase by $ 4M, from $ 20 M to $ 24 M) simply because the US has a larger population than Turkey. We derive a better measure of marketing efficiency by calculating the % returns increase from a % increase in marketing spending. In our example, the US company obtains 10% revenue increase from a 50% increase in marketing spending (elasticity = 0.2), while the Turkish company obtains a 20% revenue increase from the same 50% increase in marketing spending (elasticity = 0.4). Elasticities thus offer a value-free, comparable unit of measurement. From our comparison of the Turkish market with mature markets, we also exclude the three Turkish conglomerates, as we have no comparable holding in mature markets – the low marketing efficiency found for such conglomerates may explain why companies of that size in mature markets prefer to break up in smaller parts. Note e.g. the recent Kraft split into a North-American snack business and a global business in remaining industries.

Table 3 display our results on long-term marketing efficiency in Turkey versus mature markets, while Figure 2 visualizes these differences across the full sample of companies (irrespective of industry).

Table 3: Marketing efficiency of firms in Turkey versus in mature markets (MM)

Matched firms Turkey vs. US/EU	**Short-run Elasticity Turkish Companies**	**Long-run Elasticity Turkish Companies**	**Short-run as % of MM firms**	**Long-run as a % of MM firms**
Average company	0.63	0.73	81%	69%
Highest case	2.36	2.36	99%	95%
Lowest case	0.06	0.14	53%	37%

Figure 2: Marketing Efficiency Deficit of companies in Turkey versus mature markets



Key insights include:

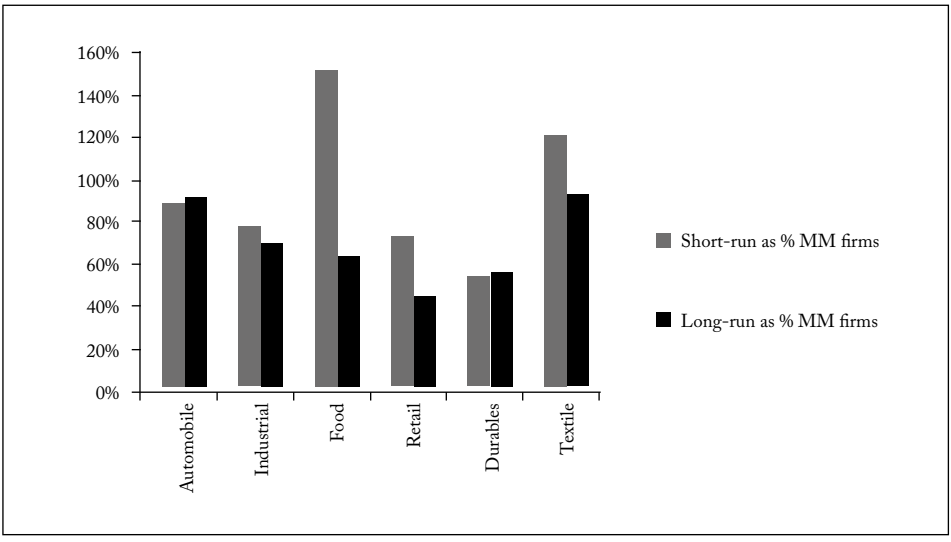
1) The short-run elasticity (marketing increasing sales *in the same quarter*) of Turkish companies is *81%* of that of their mature market counterparts.
2) In the long run, this effectiveness deficit becomes more pronounced: *69%*
3) The *top Turkish companies are on par* with the top mature market companies: the maximum efficiency deficit is only 99% short-run, 95% long run. So, *it is not true that high efficiency is not possible to achieve in the Turkish market*.
4) Adding conglomerates to the Turkish firms (eg Koc, Sabanci, Alarko, Enka) further reduces the average efficiency to 77% short term, 67% long term. This indicates *spending inefficiencies in large conglomerates.*

Deeper insights may be obtained by comparing companies in Turkey with mature market companies in the same industry, as depicted in Table 4 and Figure 3.

Table 4: Industry breakdown of Marketing Efficiency in Turkey and its deficit (MED) as a % of the marketing efficiency by a matched sample of mature market companies

	Short-run elasticity Turkish companies	**Long-run elasticity Turkish companies**	**Short-run as % of MM firms**	**Long-run as a % of MM firms**
Average company	0.63	0.73	**81%**	**69%**
Highest case	2.36	2.36	99%	95%
Lowest case	0.06	0.14	53%	37%
Automobile	0.71	1.02	87%	90%
Food	0.55	0.56	76%	68%
Durables (-car)	0.55	0.55	150%	62%
Textile	0.41	0.47	71%	43%
Retail	0.59	0.75	52%	54%
Industrial	0.68	0.96	119%	91%
Conglomerates	0.33	0.51		

Figure 3: Short-run and long-run Marketing Efficiency Deficit across industries



Interestingly, short-*term marketing efficiency ratios* are sometimes *higher for Turkey* versus the mature markets: 150% for durables (Vestel, Arcelik and Yatas versus Whirlpool, Canon, Sony and HP) and 119% for

industrial (Alarko, Enka and Sabanci Tires versus 3M, Honeywell and AOM). Thus, Turkish companies are able to create effective campaigns for short-term benefits, *it is the long term which is the key challenge*.

In sum, our *findings are consistent with our hypotheses:* the best companies in Turkey obtain short-term marketing efficiencies up to 150% of those by same-industry companies in mature markets (H1a). However, in support of H1b, the best Turkish companies do not score better than the best mature market companies (short-run MED 99%), especially in the long run (long-run MED = 95%). The average Turkish company scores worse as compared to its mature market counterparts: short-run MED is 81% (H2a) and long-run MED is 69% (H2b). These scores become even lower when conglomerates are included.

Conclusion: An agenda for improving marketing effectiveness in Turkey

Having made great strides in product quality and operational efficiency, companies in Turkey are ready to take on the next challenge of improving marketing effectiveness and building strong brands in consumers' hearts and in retail stores. Measurement is a necessary step in this process, and this paper provides important benchmarks for long-term marketing efficiency in Turkey.

Based on a broad sample of publicly available information, and detailed marketing-performance time series for two companies, we have quantified short-term and long-term marketing effectiveness in Turkey and compared it with the marketing effectiveness observed in mature markets. The good fit of our econometric & time series models enabled us to successfully test our hypotheses. First, best practice in Turkey is indeed close to that in mature markets (99% in the short term and 95% in the long term). In the durables and industrial sectors, Turkish companies even outshine their mature market counterparts in short-term marketing effectiveness. Second, average Turkish companies obtain a short-term marketing efficiency that is 81% of that in mature markets and they get back about 8 TL for every 1TL spend in marketing. However, the long-term is a key challenge: the average Turkish company has a long term marketing efficiency that is only 69% of that in mature markets.

What can be done to bridge this long term 'marketing efficiency deficit' in Turkey? First, companies need to start measuring the performance effects of their own marketing actions. Gathering continuous data on sales performance and different marketing actions is an important first step. Second, companies need to draw actionable insights from these data, including which marketing actions to stop, which to reduce, which to maintain and which to expand. Far from extinguishing creativity, quantifying marketing effectiveness actually allows the most creative and impactful campaigns to shine. Once senior management trusts the fair and objective nature of such calculations, marketing budgets can be set and adjusted based on scientific measurement instead of on the whims of the business cycle or a particular manager's pet peeves. Third, while building company-specific databases, managers should start thinking about easy-to-use dashboard systems that inform decision makers about the likely performance effect of their proposed marketing actions (Pauwels, et al., 2007). Initially, these likely effects may be derived from empirical generalizations such as those reported in this study. For instance, lower-equity brands tend to obtain higher benefits from above-the-line advertising to build brand equity, while higher-equity brands should spend more money on below-the-line dealer efforts to monetize brand equity. As data come in on company-specific performance and campaigns, these benchmarks can gradually be replaced by insights into their own successes and failures. Ideally, these insights should be both quantitative (what are the numbers?) and qualitative (what is the story?) and should be shared in a database for the benefit of managers in other locations and departments. Such a database can serve as an 'ISO-certification' ensuring that marketing effectiveness, like product quality, does not dip below acceptable levels but instead grows over time. Marrying these tools with the great opportunities in Turkey, the future of marketing looks bright indeed.

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