

Corporate Reputation and Real Activities Management, Evidence from an Emerging Economy

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Abstract

This study examines whether reputable firms in a developing country behave differently from other firms when manipulating real activities to achieve self-interested goals. We use three different proxies for real earnings management activities: (1) abnormal discretionary expenses (2) abnormal levels of operating cash flows; (3) abnormal production costs. We proposed a scale which is formed by different scales proposed by previous researches for measuring corporate reputation. We find that reputable firms in a developing country are less likely to manipulate real activities. The results are consistent with the premise that the desire to protect reputation encourages firms and their managers to constrain socially unacceptable activities.

Keywords: Corporate reputation, measurement of corporate reputation, real activities management

1. Introduction

The boundaries of companies and their effects on society have expanded dramatically because of globalization and developments in information technologies, which has in turn raised society's expectations of companies. Consequently, financial success is no longer enough to sustain a business in today's competitive commercial world. Businesses must take note of the expectations of all stakeholders for sustainability and competitive advantage. As a result, the concept of corporate reputation has now become essential for business. There are many studies in the literature about corporate reputation and its effects on different disciplines. While definitions vary, corporate reputation, which is basically considered as a strategic business asset, is connected with corporate identity and image, representing the totality of perceptions of all internal and external stakeholders over a long period.

Within the literature, one of the more frequently researched issues concerns the relation between corporate reputation and financial performance. Many studies have demonstrated that there is a positive relationship between corporate reputation and financial performance (Brown 1997; Roberts and Dowling 1997; Srivastava, McInish, Robert A.Wood, and Capraro 1997; Black and Carnes 2000; Roberts and Dowling 2002; Rose and Thomsen 2004; Krueger, Wrolstad, and Van Dalsem 2010). This has raised the problematic question of how reputation should be measured. Especially in developed countries, reputation indices are common indicators of reputation. In many developing countries, however, research measuring corporate reputation is lacking because there is neither a long-term database nor broad samples to use for academic research. In this study we examine the concept of corporate reputation and present various measurement models. We then propose a new scale for measuring corporate reputation that can be used for developing countries and in other academic studies of corporate reputation. Corporate reputation scale is formed by many different scales which are stated in some similar academic researches (Fombrun and Shanley 1990; Aaker 1997; Davies and Chun 2002; Cravens, Oliver, and Ramamoorti 2003, Davenport 2000; Abbott and Monsen 1979), and non-financial performance or reputation indices (Dow Jones Sustainability Index (DJSI), FTSE4Good Index, KLD 400 Social Index (now MSCI), and Fortune's Most Admired Company Surveys).

We examine whether reputable firms behave appropriately to constrain real earnings management to deliver more transparent and reliable financial information to investors. We use three different proxies for real earnings management activities: (1) abnormal discretionary expenses (2) abnormal levels of operating cash flows; (3) abnormal production costs. Prior research on corporate reputation provides a theoretical background for measuring corporate reputation (Fombrun and Shanley 1990; Aaker 1997; Davies and Chun 2002; Cravens, Oliver, and Ramamoorti 2003). Consistent with the common view in the literature, in this study, corporate reputation is considered as an intangible asset, shaped by the perceptions of all internal and external stakeholders about the corporation, which can affect corporate value. In this study we measured corporate identity and corporate image, which are the main components of corporate reputation. Corporate identity is measured as the perceptions of internal stakeholders, including the criteria of employee rights, management structure and corporate social responsibility (CSR) strategies. Corporate image is measured as the perceptions of external stakeholders, including the criteria of consumers, suppliers, product quality, environment and society (CSR projects and investments).

Corporate reputation can become merely ‘window-dressing’ when if it is motivated by the pursuit of managers’ self-interest. To further their self-interest, managers may use corporate reputation to cover up the impacts of earnings manipulation. Therefore, the association between corporate reputation and earnings management is an empirical question. However, the few studies examining this relationship have produced mixed results. Using one publicly available measure, “America’s most admired Companies”, as a proxy for reputation, Luchs, Stuebs and Sun (2009) reported a significant negative relationship between the absolute value of discretionary accruals and reputation, from which they concluded that firms with a superior reputation engage in less earnings management. We find that reputable firms are less likely to engage in real activities manipulation because the desire to protect reputation encourages the firm’s managers to avoid socially unacceptable activities like real activities manipulation. The remainder of the paper is organized as follows. Section 2 reviews the literature and develops testable hypotheses. Section 3 describes the sample, measurement of corporate reputation and real activities manipulation, and reports descriptive statistics. Section 4 reports the empirical results, while section 5 provides the concluding remarks.

1. Literature Review And Hypothesis Development

The Concept of Corporate Reputation

Although the issue of corporate reputation has been widely examined in the literature, there is no common definition of the concept, with different views on what corporate reputation really is. One reason for this confusion is that various disciplines define the concept from their own perspectives (Chun 2005). In addition, corporate reputation has a multi-dimensional structure which creates confusion in describing these dimensions, although image and identity are two generally accepted key elements of the concept.

Reputation is often used synonymously with image, especially in marketing (Chun 2005). The most common definition of image is “[the] summary of the impressions or perceptions held by external stakeholders” (Bromley 1993; Davies and Miles 1998 cited in Chun 2005). On the other hand, within organizational behavior research, image refers to “the way organization members believe others see their organization” (Dutton and Dukerich 1991); that is, “an organization’s views about external stakeholders’ perceptions” (Davies, Chun, and Da Silva 2001). Identity is examined in the organizational literature in terms of “organizational identity” whereas the marketing literature considers it as corporate identity (Hatch and Schultz 1997). Whetten and Mackey (1985) describe organizational identity as “[the] most central, enduring, and distinctive about an organization” (Walker 2010). Similarly, Fombrun (1996) describes it as “the features of the company that appear to be central and enduring to employees”. Balmer (2005) argues that organizational identity consists of both desired identity and actual identity, where the former refers to what the organization wants internal stakeholders to know or think about the firm while the latter refers to what internal stakeholders actually know or think about the firm (Walker 2010). Davies and Miles (1998) argue that reputation consists of personality, identity and image. Within this framework, personality is seen as equivalent to actual identity while identity is refers to desired identity. Overall, identity is usually considered in the literature as being sum of the perceptions (desired or actual) of internal stakeholders while image generally refers to external stakeholder perceptions and impressions (Fombrun and Shanley 1990; Davies and Miles 1998; Davis et al., 2001; Brown, Dacin, Pratt, and Whetten 2006).

The most frequently cited definition of corporate reputation is “a perceptual representation of a company’s past actions and future prospects that describe the firm’s appeal to all of its key constituents compared to other leading rivals” (Fombrun 1996). Fombrun (1996) considers corporate reputation as a function of corporate identity and corporate image. Like Fombrun, Saxton (1998) defines corporate reputation as “a reflection of a stakeholder’s views about an organization over time” (cited in Shamma 2012). In Chun’s (2005) review of the corporate reputation literature, corporate reputation is considered as an umbrella construct referring to the cumulative impressions of internal and external stakeholders (Chun 2005). Wartick (2002) proposes the following equation:

$Reputation = f(Image + Identity)$ In this study, we also consider corporate reputation as the sum of corporate image (perceptions of external stakeholders) and corporate identity (perceptions of internal stakeholder).

Measurement of Corporate Reputation

One of the most common measure of reputation is Fortune’s Most Admired Company Surveys. This annual survey ranks large corporations according to the following eight qualitative attributes: quality of management, quality of products or services, value as a long-term investment, innovativeness, soundness of financial position, ability to attract, develop and keep talented people, responsibility to the community and environment, and wise use of corporate assets (Brown and Perry 1994). Although widely used, the validity of the Fortune survey is still criticized, primarily because the survey is based only on financial performance criteria and heavily influenced by previous financial results (Fombrun and Shanley 1990; Brown and Perry 1994; Fryxell and Wang 1994; Formbrun 1996; Deephouse 1997). Brown and Perry (1994), who demonstrated that the weight of financial performance criteria in the ratings creates halo effects, argue that this halo must be removed before the data can be used for academic research.

A second challenge to the Fortune survey data concerns evaluations by industry experts (Flanagan, O’Shaughnessy and Palmer 2011). Since 1984, Fortune has surveyed CEOs and analysts on their views about Fortune 500 companies, and for Fortune 1000 companies since 1995 (Chun 2005). However, this data is criticized for only representing particular views. In addition to the Fortune ratings, various magazine surveys are also used for measuring reputation worldwide. Although such journalistic ratings are criticized, they are still used due to the lack of other sources of long-term data. Besides magazine ratings, a number of measurement approaches are also used in the reputation literature. For example, Fombrun and Shanley (1990) developed a model based on their “signal theory” notion. This model assumes that because firms compete for reputation in a market characterized by incomplete information, corporate audiences attend to market, accounting, institutional and strategic information. Some measurement approaches focus on the views of single stakeholders, or simply use single, unidimensional measurement items like image or identity. Many of these studies borrow their approaches from existing scales, such as brand equity, corporate image or identity measurement (Chun 2006). Aaker (1997), for example, used a brand equity scale and metaphor method for measuring reputation while Davies, et al. (2001) integrated identity variables into Aaker’s (1997) scale and metaphor method. Davies and Chun (2002) proposed a new scale, the Corporate Personality Scale, using image and identity variables adapted from an earlier model of Davies, Chun and Da Silva (2001), alongside a metaphor method.

Arguing that unidimensional measures do not completely explain reputation, Charles Fombrun and the research company Harris Interactive (HI) developed the Reputation Quotient (RQ), which has a multidimensional structure to measure stakeholder perceptions. It is one of the most common tools used in recent studies to measure reputation (Shamma 2012). For instance, Ponzi, Fombrun and Gardberg (2011) used a new model developed from the RQ while one of the most recent measurement methods is the RepTrack Model, developed by the Reputation Institute (RI) established by Charles Fombrun in 1997. During the 2000s, research measuring corporate reputation systematically by including the perceptions of all stakeholders has developed rapidly, particularly studies of the relationship between corporate reputation and financial performance or competitiveness. This led to the RepTrack Model being revised and renamed as the Global Reprak™ Pulse (RI, 2013). Another approach to measuring corporate reputation focusing on its intangible structure was proposed by Cravens, Oliver, and Ramamoorti (2003).

Earning Management Literature

The earnings management literature can be grouped into two broad categories: motives behind earnings management and factors restricting earnings management.

The incentives which motivate managers to manipulate earnings opportunistically are grouped into the following four broad categories: earnings management for bonus purposes (Healy 1985; Holthausen, Larcker and Sloan 1995; Gaver, Gaver and Austin 1995; Guidry, Leon and Rock 1999; Cheng and Warfield 2005; Shuto 2007); earnings management to meet investors' earnings expectations (Kasznik 1999; Bartov, Givoly, and Hayn 2000; Matsunaga and Park 2001; Kasznik and McNichols 2002; Matsumoto 2002; Barua, Legoria, and Moffitt 2006; Burgstahler and Eames 2006; Choi and Lin 2006); earnings management for debt contract motivations (Bartov 1993; DeFond and Jiambalvo 1994; Sweeney 1994; Iatridis and Kadorinis 2009); and motivations during initial public offerings (IPOs) and seasoned equity offerings (SEOs) (Friedlan 1994; Teoh, Welch, and Wong 1998; Shivakumar 2000; Jackson, Wilcox, and Strong 2002; Aharoni, Wang, and Yuan 2010; Cohen and Zarowin 2010).

Another factor affecting managers' earnings management that is extensively examined in the literature is corporate governance (Chtourou, Bedard, and Courteau 2001; Klein 2002; Xie, Davidson, and DaDalt 2003; Davidson, Goodwin-Stewart, and Kent 2005; Peasnell, Pope, and Young 2005; Bradbury, Mak, and Tan 2006; Larcker, Richardson, and Tuna 2007; Saleh, Iskandar, and Rahmat 2007; Siregar and Utama 2008; Jiang, Lee, and Anandarajan 2008; Baxter and Cotter 2009; Jaggi, Leung, and Gul 2009; Rusmin 2010; Chang and Sun 2010; Prencipe and Bar-Yosef 2011). Finally, capital structure has also been examined for its effects on firms' earnings management behavior (Zang 2012).

Hypothesis Development

In the literature, corporate reputation is commonly considered as an intangible asset shaped by the perceptions of all internal and external stakeholders about the corporation which can affect corporate value. These perceptions are influenced by the socially responsible corporate behaviors of the companies (corporate social responsibility – CSR) over a period of time.

The International Business Leaders Forum (IBLF) currently defines CSR as “open and transparent business practices that are based on ethical values and respect for employees, communities and the environment. It is designed to deliver sustainable value to society at large, as well as to shareholders” (Shamma 2012). Alongside this extension of the concept, empirical studies have examined the relations between the CSR and corporate reputation (Lewis 2003; Camana, Cohen, and Krentler 2006) since CSR is also considered as a key dimension of corporate reputation in many studies (Fombrun and Shanley 1990; Brown and Dacin 1997; Chun 2005; Fombrun 2005; Walker 2010; Bear, Rahman and Post 2010; Shamma 2012).

Corporate reputation has been discussed and analyzed in different disciplines. Most studies consider corporate reputation as a strategic asset, claiming that it leads to sustainable profitability, growth and competitive advantage. Such studies have therefore mostly focused on the effects of corporate reputation on financial performance (Brown 1997; Roberts and Dowling 1997; Srivastava, et al. 1997; Roberts and Dowling 2002; Black and Carnes 2000; Rose and Thomsen 2004; Krueger, et al. 2010). Other studies consider financial performance as part of corporate reputation (Fombrun and Shanley 1990; Cravens, et al. 2003) similarly to well-known reputation rankings like Fortune, Reputation Quotient and Global Repruck Pulse. Besides these studies focusing on the effect of corporate reputation on financial performance, others have demonstrated the effect of financial performance on corporate reputation (Fombrun and Shanley 1990; Dunbar and Schwalbach 2000; Roberts and Dowling 2002; Rose and Thomsen 2004; Love and Kraatz 2009). In short, now that many studies have demonstrated a relationship between reputation and financial performance, the latter is now widely considered as part of corporate reputation while corporate reputation is in turn generally accepted as affecting financial performance.

However, the most important reason for increased interest in corporate reputation is that it is seen as a strategic asset, with many studies claiming that it leads to sustainable profitability, growth and competitive advantage (Fombrun and Shanley 1990; Hall 1992; Hall 1993; Fombrun 1996; Roberts and Dowling 1997; Fombrun and Van Riel 1998; Chun 2005; Bamett, Jermier and Lafferfy 2006; Shamma 2012; Adeosun and Ganiyu 2013;). Even though reputation may not be identified as an asset on balance sheets, it affects investor confidence, staff recruitment, supplier attitudes and a myriad of other stakeholders in its capacity as relationship capital (Adeosun and Ganiyu 2013). One common idea in literature is that if the market value of a firm exceeds its book value, it indicates the existence of intangible or intellectual capital (Hall 1993; Harvey and Lusch 1999; Roberts and Dowling 2002).

Given the value of reputation, the desire to protect it may encourage a firm and its managers to constrain socially unacceptable activities like real activities manipulation. We therefore expect a negative relationship between corporate reputation and real activities manipulation, as in the following hypothesis:

H₁: A reputable firm is less likely to engage in real activities management

On the other hand, corporate reputation may increase stakeholder confidence in a firm and its managers, leading to decreased monitoring by stakeholders, which could make it easier for managers to manipulate earnings for their own benefits. This leads to the following competing hypothesis on the relationship between corporate reputation and real activities manipulation:

H₂: A reputable firm is more likely to engage in real activities management

2. Research Design

Data and Sample Selection

We collected financial data for 2007- 2013 from the Bloomberg Database while corporate reputation data was extracted from firms' annual reports. Real activities management data was collected for all firms listed on the Istanbul Stock Exchange between 2007 and 2013 with sufficient data available in the Bloomberg Database. The sample was restricted to post-2006 data to eliminate IFRS adoption after the fiscal year ending 2005. Sector classifications were made according to the Global Industry Classification Standards (GICS).¹ Financial industry firms were excluded because this sector is governed by different regulations. The full sample included 1,645 firm years for the real activities management measures while the subsample with available corporate reputation data included 700 firm-years.

Measurement of Corporate Reputation, Real Activities Management and Other Variables

Corporate Reputation Score

We measured corporate identity and corporate image, which are the main components of corporate reputation, through 57 variables. Corporate identity was operationalized as the perceptions of internal stakeholders, including the criteria of employee rights, management structure and CSR strategies. Corporate image was measured as the perceptions of external stakeholders, including the criteria of consumers, suppliers, product quality, environment and society (CSR projects and investments). We gave 0 to 2 points to each criterion with the total score for each firm normalized before inclusion in the model. We conducted content analyses on the data from annual reports, non-financial reports, corporate governance reports and firms' press releases. Following prior studies (Hall 1993; Harvey and Lusch 1999; Roberts and Dowling 2002), we included the ratio of firm market value to book value in the model as a control variable and indicator of intangible assets, while return on asset (ROA) was added to indicate financial performance.

Real Activities Management

Following prior studies (Roychowdhury 2006; Cohen and Zarowin 2010; Gunny 2010), we relied on the following proxies for real earnings management activities: (1) abnormal discretionary expenses ($RM_{SG\&A}$); (2) abnormal levels of operating cash flows (RM_{CFO}); and (3) abnormal production costs (RM_{PROD}). We first measured normal levels of the first three real activities manipulation measures from the relevant models estimated by year and industry before calculating abnormal levels as the difference between actual and normal values of the measures. *Abnormal discretionary expenses* ($RM_{SG\&A}$): Following Gunny (2010), normal levels of discretionary expenses was estimated using the following cross-sectional regression for each industry and year:

$$SG \& A_{it} / A_{it-1} = \alpha_0 + \alpha_1(1/A_{it-1}) + \beta_1 (Sales_{it-1} / A_{it-1}) + \beta_2(\Delta Sales_{it} / A_{it-1}) + DD + \epsilon_{it} \quad (1)$$

SG & A = sales, general and administrative expenses (including R&D expenses)

A = total assets

Sales = total net sales

DD = indicator variable equal to 1 when total sales decrease between t-1 and t, otherwise zero

¹ Firms were classified as operating in Consumer Discretionary, Consumer Staples, Industrials, Energy, Information technology and Materials Industry.

Abnormal SG & A was calculated as the difference between actual SG&A and normal level of SG&A, using estimated coefficients from the above equation. Negative values of abnormal SG&A indicate higher earnings management.

Abnormal levels of operating cash flows (RM_{CFO}): Following Roychowdhury (2006) and Cohen and Zarowin (2010), we estimated normal cash flow from operations by running the following cross-sectional regression for each industry and year:

$$CFO_{it}/A_{it-1} = \alpha_0 + \alpha_1(1/A_{it-1}) + \beta_1(Sales_{it}/A_{it-1}) + \beta_2(\Delta Sales_{it}/A_{it-1}) + \epsilon_{it} \quad (2)$$

CFO = cash flow from operations

A = total assets

Sales = total net sales

Abnormal CFO was calculated as the difference between actual CFO and normal level of CFO using the estimated coefficients from the above equation. Negative values of abnormal CFO indicate higher earnings management.

Abnormal production costs (RM_{PROD}): Following Roychowdhury (2006) and Cohen and Zarowin (2010), the normal level of production costs was estimated as a linear function of sales, change in sales and lagged change in sales:

$$PROD_{it}/A_{it-1} = \alpha_0 + \alpha_1(1/A_{it-1}) + \beta_1(Sales_{it-1}/A_{it-1}) + \beta_2(\Delta Sales_{it}/A_{it-1}) + \beta_3(\Delta Sales_{it-1}/A_{it-1}) + \epsilon_{it} \quad (3)$$

PROD = COGS plus change in inventory

A = total assets

Sales = total net sales

Abnormal PROD was calculated as the difference between actual PROD and normal level of PROD using estimated coefficients from the above equation. Positive values of abnormal PROD indicate higher earnings management.

Descriptive Statistics

Table 1 reports the estimation results for the measures of real activities management. Equations are estimated cross-sectionally for each industry-year for more than 9 firms for 2007-2013.

Table 1: Estimation Results for Earnings Management Models					
	Mean	STDEV	Median	Minimum	Maximum
Model A: Coefficient estimates of normal level of SG&A expense					
Intercept	0.0827	0.0636	0.0677	-0.0241	0.1987
1/A _{it-1}	687.25	1977.1	534.38	-3535	7759.2
Sales _{it-1} /A _{it-1}	0.0675	0.0591	0.0711	-0.0397	0.1882
(ΔSales _{it-1} /A _{it-1}). DD	0.1322	0.4517	0.1384	-1.6231	2.2759
Adj. R-squared	0.2991	0.2061	0.2822	-0.1409	0.8475
Total Industry-Years	1,645				
Model B: Coefficient estimates of normal level of Cash Flow From Operations					
Intercept	0.0557	0.0989	0.0645	-0.2267	0.3512
1/A _{it-1}	-893.82	2541.4	-1007.9	-4813.5	6302
Sales _{it-1} /A _{it-1}	0.0250	0.0994	0.0157	-0.2732	0.3981
ΔSales _{it-1} /A _{it-1}	-0.0195	0.4596	0.0083	-2.0974	1.5522
Adj. R-squared	0.1765	0.2479	0.1191	-0.3271	0.8008
Total Industry-Years	1,640				
Model C: Coefficient estimates of normal level of Production costs					
Intercept	-0.1153	0.0855	-0.1087	-0.2706	0.0615
1/A _{it-1}	-2663.6	15959.	439.5	-91334	4888
Sales _{it-1} /A _{it-1}	0.9273	0.0855	0.9236	0.7816	1.1271
ΔSales _{it-1} /A _{it-1}	-0.1263	0.3629	-0.0262	-1.3367	0.2769
ΔSales _{it-1-1} /A _{it-1}	-0.0325	0.2351	-0.0489	-0.9462	0.5151
Adj. R-squared	0.9424	0.0539	0.9653	0.8054	0.9978
Total Industry-Years	1,393				

Notes:

The following regressions are estimated cross-sectionally for every industry-year, for more than 9 firms from 2007 to 2013 for CFO and SG&A, and from 2008 to 2013 for PROD.²

$$SG\&A_{it} / A_{it-1} = \alpha_0 + \alpha_1(1/A_{it-1}) + \beta_1(Sales_{it-1} / A_{it-1}) + \beta_2(\Delta Sales_{it} / A_{it-1}) \cdot DD + \epsilon_{it} \quad (1)$$

$$CFO_{it} / A_{it-1} = \alpha_0 + \alpha_1(1/A_{it-1}) + \beta_1(Sales_{it-1} / A_{it-1}) + \beta_2(\Delta Sales_{it} / A_{it-1}) + \epsilon_{it} \quad (2)$$

$$PROD_{it} / A_{it-1} = \alpha_0 + \alpha_1(1/A_{it-1}) + \beta_1(Sales_{it-1} / A_{it-1}) + \beta_2(\Delta Sales_{it} / A_{it-1}) + \beta_3(\Delta Sales_{it-1} / A_{it-1}) + \epsilon_{it} \quad (3)$$

Industries are classified according to the Global Industry Classification Standard (GICS). The table reports mean and median values of coefficients across industry-years.

The variables are defined as follows:

A = total assets

Sales = total net sales

DD = indicator variable equal to 1 when total sales decrease between t-1 and t, otherwise zero

Table 2 reports the descriptive statistics. The mean values of RM_{CFO} , $RM_{SG\&A}$, and RM_{PROD} are 0.009, -0.0147, and 0.0311, respectively, suggesting that, on average, firms do not seem to engage in real activities manipulation through sales manipulation (negative values of RM_{CFO} and $RM_{SG\&A}$, and positive values of RM_{PROD} indicate real activities manipulation). However, firms do seem to engage in real activities manipulation by reducing discretionary expenses and overproduction.

Table 2: Descriptive Statistics

Variable	Mean	Median	Standard Deviation	Minimum	Maximum	Skewness	Kurtosis
RM_{CFO}	0.0090	0.0091	0.2141	-1.0140	3.8237	8.6108	161.02
$RM_{SG\&A}$	-0.0147	-0.0144	0.0862	-0.2733	0.4846	0.6457	6.5940
RM_{PROD}	0.0311	0.0142	0.2052	-0.4028	2.2479	5.1727	48.839
CR_Score	43.191	40.579	16.093	7.2463	85.507	0.2083	2.4681
$AbsDAC$	0.0958	0.0598	0.1741	0.0000	3.4280	12.156	216.38
Leverage	0.6039	0.5334	0.7663	0.0080	17.567	17.477	380.11
Size	5.9805	5.8966	0.5408	4.0326	7.2731	0.1836	3.4062
ROA	0.0571	0.0521	0.1006	-0.6400	0.7030	-0.3865	13.973
MB	1.8613	1.2768	2.0187	0.1643	16.6386	3.9583	22.682

Table 3 presents Pearson correlation coefficients for all variables. The CR_Score is significantly and negatively correlated with $AbsDAC$, indicating that reputable firms are less likely to engage in accrual management. In addition, CR_Score is significantly and positively correlated with firm size, suggesting that larger firms have better reputations. We can also observe that $Size$ is negatively correlated with $AbsDAC$ while positively correlated with leverage.

Table 3: Pearson Correlations

	CR_Score_t	$AbsDAC$	Leverage	Size	ROA	MB
CR_Score	1.0000					
$AbsDAC$	-0.1281*	1.0000				
Leverage	0.0618	0.1325*	1.0000			
Size	0.5366*	-0.1662*	0.0975*	1.0000		
ROA	0.0712	-0.0065	0.0394	0.1300*	1.0000	
MB	-0.0142	0.0402	-0.0678	-0.0079	0.1305*	1.0000

* significant at 0.05 level

3. Empirical Model And Results

To test the association between the reputation of firms and real activities manipulation (Hypotheses 1 and 2), the following equation was estimated.

² Abnormal production residuals were estimated from the following regression: $PROD_{it} / A_{it-1} = \alpha_0 + \alpha_1(1/A_{it-1}) + \beta_1(Sales_{it-1} / A_{it-1}) + \beta_2(\Delta Sales_{it} / A_{it-1}) + \beta_3(\Delta Sales_{it-1} / A_{it-1}) + \epsilon_{it}$. To calculate $(\Delta Sales_{it-1})$ data for 2007, I needed sales data for 2005. In Turkey, listed companies began to use IFRS after 2005 fiscal year so to eliminate the effects of IFRS adoption, data was included from 2006 onwards. Thus, RM_{PROD} data begins from 2008.

$$RM_t = \alpha_0 + \beta_1 CR_Score_t + \beta_2 AbsDAC_t + \beta_3 Leverage_t + \beta_4 Size_t + \beta_5 ROA_t + \beta_6 MB_t + \varepsilon_t \quad (4)$$

Where:

RM_t = abnormal *CFO* (RM_{CFO}), abnormal *SG&A* ($RM_{SG\&A}$) and abnormal *PROD* (RM_{PROD}), scaled by lag total assets

CR_Score_t = score of corporate reputation, measured as the sum of corporate identity and corporate image

$AbsDAC_t$ = absolute value of discretionary accruals scaled by lag total assets, where accruals are computed through the performance adjusted modified Jones model of Kothari et al. (2005).

$Leverage_t$ = total liabilities divided by common equity

$Size_t$ = natural log of lag total assets

ROA_t = net income divided by lag total assets

MB_t = total price of the shares divided by the total book value of shares

The independent variables are measures of real activities manipulation: abnormal *CFO* (RM_{CFO}), abnormal *SG&A* ($RM_{SG\&A}$), abnormal *PROD* (RM_{PROD}). Lower values of *SG&A* and *CFO* and higher values of *PROD* indicate real earnings management.

Zang (2012) argues that the accrual earnings management and real activities manipulation methods represent direct alternatives because of their sequential nature caused by the costs and timing of each method. Some studies also provide evidence that managers use both earnings management strategies simultaneously during a fiscal year (Barton 2001; Pincus and Rajgopal 2002). Adıgüzel (2015) found that accrual management and real activities management methods are use as alternatives by debtless firms but simultaneously by indebted firms. In our model, we use the absolute value of discretionary accruals as a control variable to control for the effects of accrual manipulation over real activities management. We estimated discretionary accruals from the performance-adjusted cross-sectional variation in a modified John's model (Kothari et al. 2005). For each year and for each industry group, total accruals are modeled as a function of change in revenues adjusted for change in receivables, level of plant, property and equipment, and Return on Asset, using the following cross-sectional OLS regression model:

$$TA_{it} / A_{it-1} = \beta_0 + \alpha_i [1/A_{it-1}] + \beta_{1i} [(\Delta Sales_{it} - \Delta AR_{it}) / A_{it-1}] + \beta_{2i} [PPE_{it} / A_{it-1}] + \beta_{3i} ROA_{it(or it-1)} + \varepsilon_{it} \quad (5)$$

Firm-specific growth opportunity, firm size and current performance can potentially explain variations in real activities management. We included the following control variables which could potentially impact our measures of reputation and real activities manipulation. To control for growth opportunities, we used market to book ratio. *Size* was measured as the natural log of lag total assets in order to control for systematic variations in real management measures related to firm size. *ROA* was measured as net income divided by lag total assets to control for issues related to current firm performance. *Leverage* was measured as total liabilities divided by common equity.³

Table 4 presents correlations for the variables in model 5. The coefficient estimate for $RM_{SG\&A}$ is significant and positive for CR_Score , indicating that reputation is negatively related to real activities manipulation through reductions in discretionary expenditures (negative values of $RM_{SG\&A}$ indicate higher real activities manipulation). This finding confirms Hypothesis 1, which predicted that a reputable firm is less likely to engage in real activities management. The coefficient estimate for RM_{CFO} is also positive for CR_Score although not significant, which provides weak support for the negative relationship between reputation and real activities management through sales manipulation by accelerating the timing of sales through price discounts or more lenient credit terms (negative values of RM_{CFO} indicate higher real activities manipulation). The coefficient estimate for RM_{PROD} is negative for CR_Score although not significant. This insignificant negative relationship between reputation and real activities management through overproducing to cut prices or to decrease COGS (RM_{PROD}) also supports Hypothesis 1 (positive values of RM_{PROD} indicate higher real activities manipulation).

³ Leverage was also measured as "total liabilities divided by lag total assets", but this produced a high correlation (0.7073) with *AbsDAC* variable.

Table 4: Reputation and Real Activities Management

	$RM_{SG\&A}$	RM_{CFO}	RM_{PROD}
Intercept	0.1019	-0.1400	0.0415
CR_Score_t	0.0009***	0.0002	-0.0010
$AbsDAC$	-0.0187*	0.5737***	0.2058***
Leverage	0.0003***	0.0001	-0.0026***
Size	-0.0265**	0.0093	-0.0002
ROA	-0.0482**	0.3998***	-0.1166*
MB	0.0020	0.0026	0.0107**
R ² overall	0.0059	0.2459	0.2093
Number of Observations	637	637	552
Firm Fixed Effects	Included	Excluded	Included

*, ** and *** represent statistical significance at 10 percent, 5 percent, and 1 percent levels, respectively. Samples for RM_{CFO} and $RM_{SG\&A}$ consist of firm-years from 2007 to 2013, while sample for RM_{PROD} consist of firm-years from 2008 to 2013. The following regression was estimated:

$$RM_t = \alpha_0 + \beta_1 CR_Score_t + \beta_2 AbsDAC_t + \beta_3 Leverage_t + \beta_4 Size_t + \beta_5 ROA_t + \beta_6 MB_t + \epsilon_t \quad (4)$$

RM = abnormal CFO (RM_{CFO}), abnormal $SG\&A$ ($RM_{SG\&A}$), abnormal $PROD$ (RM_{PROD}), which are the residuals obtained from models 1-3.

CR_Score_t = score of corporate reputation, measured as the sum of corporate identity and corporate image

$AbsDAC$ = absolute value of discretionary accruals scaled by lag total assets, where accruals are computed through the performance adjusted modified Jones model of Kothari et al. (2005). Discretionary accruals were estimated from the following model for each industry and year;

$$TA_{it} / A_{it-1} = \beta_0 + \alpha_i [1/A_{it-1}] + \beta_{1i} [(\Delta Sales_{it} - \Delta AR_{it}) / A_{it-1}] + \beta_{2i} [PPE_{it} / A_{it-1}] + \beta_{3i} ROA_{it(or\ it-1)} + \epsilon_{it} \quad (5)$$

TA_{it} = total accruals
 $\Delta Sales_{it}$ = revenues in year t less revenues in year t-1
 ΔREC_{it} = net receivables in year t less net receivables in year t-1
 PPE_{it} = gross property, plant, and equipment in year t
 ROA_{it} = return on asset in year t
 A_{it-1} = lag total assets

Leverage = Total liabilities divided by common equity
Size = Log of lag total assets
ROA = Net income divided by lag total assets
MB = total price of the shares divided by the total book value of shares

4. Conclusions

In today's business world, previous expectations of high profitability have been replaced by seeking the advantage of sustainable competition. Organizations now have to offer social benefits for all external and internal stakeholders to sustain growth and gain competitive advantage. Companies that integrate corporate social responsibility, corporate ethics and corporate governance practices into their corporate culture are expected to be considered reputable by both internal and external stakeholders. Accordingly, the concept of corporate reputation has become critical, and has been examined by many different studies.

Most consider corporate reputation as a strategic asset shaped around corporate behaviors, policies and decisions over a certain time period, and claim that it leads to sustainable profitability, growth and competitive advantage, with many studies demonstrating a positive relationship between corporate reputation and financial performance. In contrast, the few studies examining the relationship between corporate reputation and earnings management have produced mixed results. This study examined whether reputable firms take different accounting and operating decisions to deliver more transparent financial information to decision makers. We hypothesized first that the desire to protect reputation may firms and their managers to constrain socially unacceptable activities like real activities manipulation.

However, we also hypothesized that because high corporate reputation may increase stakeholder confidence in a firm and its managers, leading to decreased monitoring by stakeholders, it may become easier for managers to manipulate earnings for their own benefits. We measured real activities manipulation via the following proxies: (1) abnormal discretionary expenses ($RM_{SG\&A}$); (2) abnormal levels of operating cash flows (RM_{CFO}); and (3) abnormal production costs (RM_{PROD}).

We measured corporate reputation as a function of corporate identity and image, corporate identity as the perceptions of internal stakeholders, including the criteria of employee rights, management structure and corporate social responsibility (CSR) strategies, and corporate image as the perceptions of external stakeholders, including the criteria of consumers, suppliers, product quality, environment and society (CSR projects and investments). Our findings confirmed our first hypothesis that reputable firms are less likely to engage in real activities manipulation. That is, the desire to protect reputation constrains the real activities manipulation behaviors of managers linked to the pursuit of manager's self-interest.

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APPENDIX A: Corporate Reputation Score Criteria

Employee Criteria	Environmental criteria	Social Criteria	Products criteria
1. Wages policy	1. Greenhouse gas emission	1. CSR projects	1. Quality management systems
2. Wage supplements	2. Energy usage	A. Family and society	2. Quality certificates
3. Working conditions	3. Water usage	B. Environment	3. Quality awards
4. Private insurance	4. Carbon disclosure project	C. Educations	Customers criteria
4. Positive discrimination	5. Environmental management system	D. Culture and art	1. Customer satisfaction survey
5. Females in top management	6. Environmentally friendly practices	E. Sports	2. Using survey for decisions
6. Social activities	7. Renewable energy usage	F. Sports	3. Customer complaint system
7. Codetermination of labor	8. Environmental impact	2. Social investments	4. After sales service
8. Job satisfaction survey	9. Environmental awards	A. Family and society	5. Customer awards
9. Performance system		B. Environment	Supplier criteria
10. Child labor	Non-financial strategy	C. Educations	1. Equality
11. Discharge	1. Social responsibility strategies	D. Culture and art	2. Availability for social policy
12. Disabled labor	2. Non-financial reports	E. Sports	3. Quality of (raw) materials
13. Equality	3. Global associations	3. Grants and Aids	Corporate Governance (CG) applications
14. Vocational training	4. CSR department	4. Fight against corruption and Bribery	1. CG compliance report
15. Unionization opportunity		5. CSR awards	2. Corporate governance rating
16. Human resources awards			3. Independent audit report