

NON FINANCIAL PERFORMNACE MEASURES AND FIRM VALUE IN NIGERIA: WHAT IS THE LINK?

Abstract

Financial measures have been and continued to be used for measuring and understanding the health of business organizations. These measures have been criticized as backward looking and debates on the usefulness of non financial measures have been on. This paper examined the relationship between non financial measures and firm value of quoted companies in Nigeria from 2006-2010. The non financial measures were categorized into eight classes. A regression analysis of the model revealed that non financial measures, such as new product development; strength of market position; and quality of investor communication adopted by companies in Nigeria are positively and significantly related to firm value. Results also revealed that investment decisions negatively and significantly impact on firm value owing to their long term orientation. However, it was discovered that financing decisions are positively and highly significantly related to firm value. It was recommended that companies in Nigeria should choose appropriate mix of performance measures in designing financing mix policy and corporate financial policy. Companies in Nigeria should pay special attention to issues of brand image; strength of marketing/advertising; management credibility; and research leadership. They should also adopt adhocracy and market cultures to enhance the value of the firm.

Key words: Non financial measures, financial measures, firm value, financing decisions, investment decisions.

Introduction

Firm value is an economic measure reflecting the market value of a whole business. The value of a firm is a function of performance of the organization. Decision making is a basic ingredient in determining the path set for organizations and how well such organizations achieve their set objectives. Effective decision making can be quite challenging in an organization because of the changes occurring in the environment that bring uncertainties. Appropriateness of measurement metrics/variables will affect the decision making process or quality of decision which invariably affects firm value.

Chow and Van der Stede (2006) state that the value of non financial measures and even a preference for managing by nonfinancial measures is because financial measures are after-the-

fact; so using financial measures does not fully address the issue of optimizing performance. The effects of the decisions made by managers determines the future cash flow of the firm and impacts on the value of the firm.

The value of financial statements is determined by their ability to adequately reflect a firm's value. There have been calls in the financial accounting community for greater disclosures of information from other information sources (AICPA,1994; FASB,2001; Wallman,1995). Efforts are on in seeking to devise appropriate measures that will better capture the firm's economics and lead to improved forecasting of future corporate performance.

The reliance on financial measures alone to present the true picture of organizational performance is in itself backward looking; especially as companies are confronted with increasing expectations from a variety of stakeholders. Non financial measures are leading indicators that provide information on future performance not contained in traditional accounting measures. Empirical studies; such as Banker, Potter and Srinivasan (2000); Ittner, Larcker and Rajan (1997); Ittner and Lacker (1998a); support the role of non financial measures as leading indicators of future financial results. It goes to say that non financial measures are helpful for valuation purposes.

Norton (1996) asserts that non financial measures increase firm value by assuring a balanced performance throughout the organization. Hence, this paper seeks to establish the relationship between non financial measures and firm value in Nigeria. Thus, the objective is to find out how firm value is related to non financial measures adopted by companies in Nigeria.

The concept of firm value

Firm value also referred to as enterprise value is an economic measure reflecting the market value of a whole business. It is a sum of claims of all the security holders, debt holders,

preferred shareholders and minority interest. Kaplan and Norton (1996) assert that non financial measures increase firm value by assuring a balanced performance throughout the organization. Key success factors in operating processes are represented by non financial measures such as innovation and customer satisfaction. Development of new products, technology and improvement in quality can lead to long-term growth and success. Clayton (1999) argues that growth is an important determinant of a firm's value.

Results by O'Sullivan and MaCallig (2012) showed that customer satisfaction has positive impact on firm value. Customer satisfaction they added; positively and significantly moderates the earning-firm value relationship. Bernhard, Donthu and Kennett (2000) found a positive relationship between employee satisfaction and customer satisfaction and a positive relationship between customer satisfaction and a firm's performance. Kaplan and Norton (1992) argue that improvements areas such as quality, employee satisfaction, customer satisfaction and innovation represent process improvement in firm value.

Atkinson, Waterhouse and Wells (1997) argue that obtaining the help of stakeholders and satisfying them should be the key issue in strategic performance measurement systems. The increase in shareholders' wealth is the primary objective of a firm. The achievement of this objective depends on the satisfaction of other stakeholders such as customers, employees and suppliers. Ittner and Larcker (1998b) examine the value-relevance of customer satisfaction in the utility industry. They provide evidence that shows that customer satisfaction is positively related to future financial performance. They also find that firm level customer satisfaction measures can be economically related to the firm's market value, but are not completely reflected in its accounting book values. Their findings suggest that non financial performance measures can be

used not only to predict a firm's future financial performance; but also to predict a firm's market value.

A firm's value reflects its ability to create economic wealth. The goal of a firm in its corporate decisions; whether investment or financing; is to maximize its total market value at whatever prices for securities it sees in the market. However, Fama (1978) states that if the capital market is perfect (where investors and firms have equal access to the capital market), then a firm's financing decisions have no effect on its market value; hence, its financing decisions are of no consequence to its security holders. The realism of the equal access assumption is an issue of concern. The general idea is that if the financing decisions of a firm affect its market value, there are arbitrage opportunities that can be used to produce costless instantaneous increases in wealth.

Some researchers; Amir and Lev (1996); Easton (1999) argue that financial information has lost its value relevance since it fails to keep track of the changing business world especially in contexts where innovation, intellectual capital and Research and Development are key value drivers. In these contexts, financial information alone is unable to completely reflect a firm's value.

The implications of non financial measures for managerial decision and control

Managerial decision making is centred on performance evaluation and perception of uncertainty. In opportunity problem, rather than viewing the decision to pursue an opportunity as one-time, static choice, it is believed that it is better characterized as a dynamic decision process in which the decision is subject to updating and revision as more information about the opportunity is gathered and learning occurs.

106 The decision making process involves continuing evaluation, which leads to significant
107 changes in both projections of financial performance and perceived uncertainty of the
108 prospective opportunity. Projections and perceived uncertainty undergo both positive and
109 negative changes as managers complete more information gathering activities. The completion of
110 these activities leads to reduction in perceived environmental uncertainty. How do managers
111 make decisions in the absence of decision rules? First, they must search for information about
112 alternative sources of action; second, they must rely on intuition and judgement to choose wisely
113 among alternatives.

114 Managerial accounting is evolving to encompass a more strategic approach that
115 emphasizes the identification, measurement and management of key financial and non-financial
116 drivers of strategic success and shareholder value. The selection of the most appropriate
117 performance indicators is however, an area with no defining boundaries; as there are a number of
118 purposes to which performance measurement can be put. Fisher (1995a); Ittner and Larcker
119 (2001); Said, HassabElnaby and Weir (2003) state that firms augment financial measures with
120 non-financial measures; such as customer satisfaction, innovation, and quality of management
121 that drive shareholder value.

122 Evidence on the importance of non-financial performance measures is also highlighted in
123 a study by Ittner *et al* (1997) which showed that many firms use non-financial measures such as
124 product quality, customer satisfaction and market share to evaluate and reward managerial
125 performance. The Balanced Score Card (BSC) is a useful structural framework to disclose a
126 firm's non-financial performance. According to Kaplan and Norton (1992), the BSC is a
127 performance measurement approach that is based on integrating leading non-financial measure,
128 with financial ones.

Eccles, Herz, Keegan and Philips (2001) state that information on a broader range of performance measures has as much relevance to analysts and investors as to managers. They believe that measures such as delivery performance, service quality and customers satisfaction are leading indicators of future earnings. Proponents of strategic performance measurement advocate two general approaches for developing Strategic Performance Measurement (SPM) systems. The simplest approach calls for firms to measure and use a diverse set of financial and non-financial measures. Advocates of this, claim that firms achieve higher performance when they place greater emphasis on a broad set of financial and non-financial performance measure (Lingle & Schiemenn, 1996).

A second approach is based on contingency theory which argues that strategic performance measures must be aligned with the firm's strategy and/or value drivers (Fisher, 1995b, Langfield-Smith, 1997). Brancato (1995), Fisher (1995a) indicate that many firms believe that financial measures are too historical and backward looking; lack predictive ability to explain future performance, reward short-term or incorrect behaviour, provide little information on root causes or solutions to problem.

Consistent with these claims, a number of accounting studies provide evidence that non-financial measures can be leading indicators of financial performance (Bankers *et al*, 2000; Behn & Riley, 1999, Ittner & Larcker, 1997, Nagar & Rajan, 2001). Similarly, Copeland, Koller and Murrin (1996); Dixon and Hedley (1997); Young and O'Byrne (2001) stress the importance of linking financial performance measures and their non-financial value drivers to achieve the benefits from economic value measurement programmes and promote value-creating behaviour in the firm.

With the advent of new competitive realities such as increased customization, flexibility and rapid response to customer expectations, as well as new management practices, many have argued that accounting-based performance measurement systems are no longer adequate. Managers therefore need a more systematic understanding of advantages/benefits and the disadvantages/costs of the new approach compared to those of traditional accounting-based systems. According to Ernst and Young (1997), non financial performance measures are grouped into eight; namely; quality of management, effectiveness of new product development, strength of market positions and strength of corporate culture. Others are effectiveness of executive compensation policies, quality of investor communication, quality of products and services; and level of customer satisfaction.

Towards more relevant and reliable financial statements

Accounting numbers as presented in traditional financial statements seem to be losing relevance for investment, credit and management decision making. A number of proposals have been made in recent years, which represents attempts to improve the usefulness of financial statements for strategic management decision. Davis (1992); Lev and Zarowin (1998); Tollington (1997); Wallman (1995), suggest the need for an improvement of the current accounting model. This seems to have led some of the world's most influential standard setting bodies to undertake efforts intended to enhance the relevance of the accounting numbers reported in financial statements, for efficient decision making.

The American Institute of Certified Public Accountants Special Committee on Financial Reporting (AICPA, 1994) suggests that corporate annual reports should include more forward-looking information and enhanced discussion of the non-financial performance factors that create longer-term value. Wallman (1995) argues that the issue is not whether we should continue to

tinker with the existing financial reporting system but whether we have the knowledge, courage and vision to evaluate and make forward looking changes in our reporting system that will make available to investors the most relevant and useful information.

Kaplan and Norton (1992, 1996a) state that the balanced scorecard (BSC) measures organizational performance across four linked perspectives; financial, customer, internal business process; and learning and growth. The BSC should present a set of cause-and-effect relationship among output measures and performance drivers. The usefulness of the BSC relies on the fact that it allows management to control short term financial result. Therefore, the most sensible approach to the enhancement of the usefulness of financial statements is to develop complementary statements within the framework of the current accounting system.

Model specification and methodology

It is an empirical investigation of the use of non financial measures by managers in the decision making process and their impacts on firm value in Nigeria; covering the period 2006 – 2010. In line with Ernst and Young (1997) study, the non financial measures were grouped into eight categories. The impact of these measures on firm value is examined. Tobin's Q ratio was proxy for firm value. Thus:

$$\text{Tobin's Q} = \frac{(\text{TA} - \text{BVE}) + \text{MVE}}{\text{TA}}$$

Where:

TA = Total Asset

BVE = Book Value of Equity

MVE = Market Value of Equity

while the use of non financial measures was captured from responses to questionnaire.

Hence,

$$Q = \alpha_0 + \alpha_1 \text{MGMT} + \alpha_2 \text{PRODEV} + \alpha_3 \text{MKT} + \alpha_4 \text{CLTURE} + \alpha_5 \text{COMPENPL} \\ + \alpha_6 \text{COMM} + \alpha_7 \text{QLTY} + \alpha_8 \text{CONSAT} + \varepsilon_0$$

Where:

Q = Firm Value (Proxy by Tobin's Q ratio)

MGMT = Quality of Management

PRODEV = New Product Development

MKT = Strength of Market Position

CLTURE = Strength of Corporate Culture

COMPENPL = Executive Compensation Policies

COMM = Quality of Investor Communication

QLTY = Quality of Product / Service

CONSAT = Level of Customer Satisfaction

α_0 = Constant of the model

$\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6, \alpha_7, \alpha_8$ = Coefficients of the variables

ε_0 = Stochastic variable or error term

The universe of the study is all companies quoted on the first tier securities market of the Nigerian Stock Exchange (NSE) as at 31st December, 2010. It comprises of 32 industrial sectors and 199 listed companies; systematic sampling technique was used to select 16 sectors comprising of a total of 134 companies. From each of the sectors selected at least 50% of the number of companies was selected using random sampling technique. This gave a sample size of 66 companies. However, companies with incomplete data were eliminated resulting in a final sample size of 47 companies. The Ordinary Least Square (OLS) method was used to estimate the

222 regression model and F –statistic was employed to test if the model is significant at 5% level of
223 significance.

224 Data presentation and results of analysis

225 The model is

$$226 \quad Q = \alpha_0 + \alpha_1 \text{MGMT} + \alpha_2 \text{PRODEV} + \alpha_3 \text{MKT} + \alpha_4 \text{CLTURE} + \alpha_5 \text{COMPENPL} \\ 227 \quad + \alpha_6 \text{COMM} + \alpha_7 \text{QLTY} + \alpha_8 \text{CONSAT} + \varepsilon_0$$

228 **Table 1: Summary of regression results**

229	Variables	Coefficients	t-statistic	p -value
230	Constant	5.099	0.619	0.539
231	MGMT	-0.237	-0.204	0.840
232	PRODEV	0.219	0.393	0.697
233	MKT	0.240	0.2830	0.779
234	CLTURE	-0.133	-0.227	0.821
235	COMPENPL	-0.126	-0.163	0.871
236	COMM	0.226	0.266	0.791
237	QLTY	-0.392	-0.810	0.423
238	CONSAT	-0.447	-0.480	0.634

241
242 Adjusted $R^2 = 0.156$, $t_{\text{cal}} = 0.619$, $t_{\text{tab}} = 1.679$, $F_{(8,38)} = 0.225$, $F_{\text{tab}} = 2.18$,
243 DW = 1.711, s.e. = 2.623786, 5% level of significance

244 Source: Author's computation

245

Table 2: Correlations matrix

		Q	MGMT	PRODEV	MKT	CLTURE	COMPENPL	COMM	QLTY	CONSAT
Pearson	Q	1.000	-.119	.026	-.073	-.038	-.096	.057	-.161	-.034
Correlation	MGMT	-.119	1.000	-.495	.487	.224	.428	-.130	.182	-.210
	PRODEV	.026	-.495	1.000	-.157	-.341	-.137	-.392	.260	.397
	MKT	-.073	.487	-.157	1.000	.154	.520	-.159	.373	-.122
	CLTURE	-.038	.224	-.341	.154	1.000	-.070	.666	-.149	.194
	COMPENPL	-.096	.428	-.137	.520	-.070	1.000	-.253	.528	-.504
	COMM	.057	-.130	-.392	-.159	.666	-.253	1.000	-.366	.069
	QLTY	-.161	.182	.260	.373	-.149	.528	-.366	1.000	-.089
	CONSAT	-.034	-.210	.397	-.122	.194	-.504	.069	-.089	1.000

246 Source: Author's computation

The correlation matrix shows negative correlation between Q and all categories of non financial measures except X₂ (New product development = 0.026) and X₆ (Quality of investor communication = 0.057). Adjusted R² = 0.156 implies that the overall influence of non financial measures on firm value is 15.6%. This low coefficient of determination signifies the absence of autocorrelation which is further confirmed by Durbin-Watson value of 1.711.

The highest simple correlation coefficient among the explanatory variables is 0.666; between X₆ (Quality of investor communication) and X₄ (Strength of corporate culture). This is lesser than the critical value of 0.8 suggested by Hauser (1974); hence, multicollinearity does not constitute a serious problem affecting the regression analysis.

Thus, the estimated model is:

$$Q = 5.099 - 0.237MGMT + 0.219PRODEV + 0.240MKT - 0.133CLTURE \\ - 0.126COMPENPL + 0.226COMM - 0.392QLTY - 0.447CONSATSAT + \epsilon_0$$

The coefficient of the non financial measures shows the effect of the variables on firm value. It indicates the degree of influence of the independent variables on firm value. The model shows a positive impact of PRODEV (New product development) of 21.9%, MKT (Strength of market position) 24% and COMM (Quality of investor communication) 22.6% on firm value. CONSATSAT (Level of customer satisfaction) has the highest influence of 44.7%. It was however negative.

Discussion of findings

Evaluation of the model shows that non financial measures have 15.6% association with firm value of companies in Nigeria. New product development and quality of investor communication were positively correlated to firm value at $p \leq 0.05$ with 21.9% and 22.6% degree of influence respectively. The strength of market position was 24%.

The result showed a negative relationship between all the explanatory variables and Tobin's Q (firm value) except PRODEV (new product development) and COMM (quality of investor communication). The relationship however showed an overall 15.6% association,

(significant at $p \leq 0.05$). CONSAT (level of customer satisfaction) and QLTY (quality of product/service) showed negative impact of 44.7% and 39.2% respectively on firm value. Several reasons may explain the positive impact of the use of non financial measures. Firstly, investors and analysts consider non financial measures highly significant when performing the company valuation. The strength of market position (MKT) is necessary in determining how well the company is positioned to expand the value in future. Also, non financial performance measures are meant to be long term oriented, so their impact on firm value is positive. Thirdly, companies might be struggling with implementation issues considering the identified barriers to incorporating non financial measures in corporate decision making in Nigeria, hence the negative correlation between firm value and the non financial measures except New product development and Quality of investor communication.

The results are in line with the results of a similar study conducted by Ittner *et al* (2003). They found that the use of measurement diversity is negatively related to measure of future performance; and the regression coefficient was not significant. The results contradicts previous agency research conducted by Feltham and Xie (1994) and Hemmer (1996) that the use of non congruent performance measure (profit) will induce sub-optimal effort across task and that this non congruity can be reduced with the use of additional measures of performance (non financial measures); but support Holmstrom and Milgrom (1991) model which suggests that when multiple measures of performance are used agents will focus their efforts on those that are easier to achieve at the expense of others that are harder to reach, hence, the negative relationship to firm valuation.

295 This study showed that there is a high degree of influence (99.8%) of investment
296 decisions (however negative) on firm value. Firms that invest have long term orientation and
297 may be superior to others. However, the long term orientation of investment may take sometime
298 to be reflected in the value of the firm; hence not reflected in the hypothesized relationship
299 between investment decisions and the creation of firm value.

300 On the relationship between financing decisions and firm value the degree of influence on
301 firm value was 247.7%. The study revealed that these financing decisions measures which
302 include; determining retained earnings, issue of shares/debentures, repayment of bonds, optimum
303 financing mix and designing corporate financing policy have significant positive impact on firm
304 value of Nigerian companies.

305 For decision making and determining the long term health of the organization, it was
306 discovered that the Level of customer satisfaction was significant. This aligns with the view of
307 Banker *et al* (2000) that non financial measure of customer satisfaction is significantly associated
308 with future performance and contains additional information not reflected in the past financial
309 measures. According to Holmstrom (1997), the informativeness principle implies that the
310 customer satisfaction performance measure will always lead to incremental value.

311 It was discovered that non financial measure categories of New product development and
312 Strength of corporate culture were the least significantly used in decision making and for
313 determining long term health of the organizations. The implication is that most Nigerian
314 companies lack innovations, lack strategic focus and have weak corporate culture.

315 According to Sorensen (2002), firm with strong corporate cultures tend to have lower
316 performance variability and less likely to suffer from under-investment. Other researchers have

found that strong corporate cultures enhance goal alignment (Cremer, 1993; Kreps, 1990) and also enhance employee motivation (O'Reilly, 1989; O'Reilly & Chatman, 1996).

It was discovered that non financial measures are not free from external influences; however, the greatest barrier to incorporating them in firm valuation and corporate decisions is lack of tools and systems to account for them. In the Nigerian business environment, non financial measures are mostly used for insourcing/ outsourcing decisions. The Breweries industrial sector ranked the highest in this respect.

Conclusion and recommendations

Based on the findings from this study, the following recommendations are made:

(i) Organizations in Nigeria should pay close attention to the use of non financial measures in their performance measurement systems. Much attention is not given to the strength of corporate culture and new product development by the companies in their decision making processes. The implications of a weak corporate culture are very clear; high variability in performance and problem of under-investment. It is therefore recommended that Nigerian organizations should adopt adhocracy culture; which is dynamic, entrepreneurial and the leaders are innovators and encourage individual initiative and freedom and also market culture; which is competitive and goal-oriented.

(ii) Nigerian companies should pay close attention to measures of new product development, quality of investor communication and strength of market position; as they positively and significantly impact on firm value. Some specific issues of concern should be brand image, strength of marketing/advertising, research leadership, management credibility and quality of published materials.

(iii) The extent of use of non financial measures in firm valuation may have resulted from the identified barriers to incorporating non financial measures in valuation decisions. It is therefore recommended that organizations should build teams to identify problems, causes and possible solutions. This will start with the identification of the appropriate metric to use to measure firm value.

(iv) It was identified that Level of customer satisfaction has positive and significant influence on the long term health of the organizations. Nigerian companies should always remember that they operate in an era of globalization and increased intensity of competition is the order of the day; hence, they should focus on becoming market leaders in the provision of goods/services through competitive actions such as pricing and achievement of measurable goals and targets using appropriately non financial measures in their decision making processes. Adequate attention should also be given to firm value drivers both in the short term and strategic plans. This will promote commitment to experimentation and innovation which will give the organizations a leading edge.

(v)

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Appendix

Table 3 : Average values for firm value and non financial performance measures for 2006-2010

COYS	TOBIN'S Q	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈
1	6.622	5.60	5.25	4.60	3.71	3.67	2.40	5.33	5.50
2	0.915	5.20	5.50	4.00	4.00	2.67	2.60	4.67	6.00
3	0.578	5.60	4.25	4.80	3.29	4.33	1.80	5.50	5.00
4	1.288	5.60	2.75	4.60	5.00	3.67	3.40	3.50	5.00
5	1.948	5.20	3.00	4.00	5.29	2.67	3.60	2.83	5.50
6	0.614	5.20	6.00	5.20	3.57	3.33	2.40	4.83	5.25
7	8.324	5.60	5.00	5.40	3.14	4.00	1.80	5.00	4.75
8	0.678	4.60	5.75	4.60	3.43	3.00	2.60	5.00	5.25
9	0.32	4.20	6.00	4.00	3.71	2.00	2.80	4.33	5.75
10	0.338	4.60	5.00	4.20	3.29	2.67	2.20	4.50	5.25
11	1.5	3.60	6.25	3.40	4.00	2.33	3.00	3.67	5.50
12	1.2	4.60	5.50	3.60	3.43	3.67	2.00	4.83	4.50
13	1.072	5.00	4.50	3.80	3.00	4.33	1.40	5.00	4.00
14	2.674	4.20	5.75	3.20	3.71	2.67	3.20	3.00	6.00
15	0.36	4.60	4.75	3.40	3.29	3.33	2.60	3.17	5.50
16	0.588	5.80	2.00	4.40	4.57	2.33	2.60	2.50	4.75
17	0.748	5.40	2.25	3.80	4.86	2.33	2.80	1.83	5.25
18	0.57	5.00	6.25	5.20	4.14	3.33	1.80	3.50	5.50
19	0.64	4.60	6.50	4.60	3.86	2.67	2.00	2.83	6.00
20	4.344	5.00	5.50	4.80	3.43	3.33	1.40	3.00	5.50
21	0.736	5.40	5.25	5.40	3.71	4.00	1.20	3.67	5.00
22	0.222	4.60	5.75	4.20	3.71	2.33	1.60	2.33	6.00
23	0.996	5.00	5.50	5.00	4.14	3.33	2.40	4.67	5.25
24	0.338	4.60	5.75	4.40	4.43	2.33	2.60	4.00	5.75
25	0.362	5.40	4.75	5.20	3.71	4.00	1.80	4.17	4.75
26	0.286	5.00	5.00	4.60	2.00	3.00	2.00	3.50	5.25
27	4.109	4.60	5.25	4.00	2.29	2.00	2.20	2.83	5.75
28	1.452	4.60	5.50	4.60	2.57	4.00	1.80	4.83	4.75
29	2.044	5.00	4.50	4.80	2.14	4.67	1.40	4.67	4.25
30	0.834	5.40	3.50	5.00	1.71	5.33	1.60	4.50	3.75
31	0.614	4.20	5.75	4.00	2.00	3.00	2.00	2.17	5.25
32	3.744	4.60	4.75	4.20	1.57	2.33	1.40	2.33	4.75
33	3.33	5.00	4.25	4.20	1.86	2.67	2.00	3.00	5.25
34	1.066	4.60	4.50	3.60	2.14	2.00	2.20	2.50	4.50
35	3.374	4.00	5.75	4.00	2.00	2.67	2.40	3.33	4.00
36	2.582	4.40	6.00	3.40	2.29	3.67	2.00	3.67	4.25
37	0.718	5.00	6.25	3.00	2.57	2.67	2.60	2.33	5.00
38	8.321	4.60	5.00	3.60	2.29	2.00	2.20	1.50	5.25
39	3.524	4.80	3.25	4.60	4.71	3.33	3.20	3.00	4.25
40	5.184	4.40	4.25	4.80	5.14	4.00	3.80	2.83	4.75
41	7.602	4.00	4.50	4.20	5.00	3.00	4.00	2.17	5.25
42	1.34	4.40	3.75	4.60	4.14	2.33	4.20	3.00	5.00
43	0.294	4.80	2.75	4.80	3.71	3.00	3.60	3.17	4.50
44	0.436	5.40	4.25	4.40	5.29	3.33	4.20	2.00	4.75
45	0.77	5.80	3.25	4.60	4.86	4.00	3.60	2.17	4.25
46	0.336	5.20	4.75	4.20	4.57	2.67	2.40	3.33	4.25
47	9.542	4.80	5.00	3.60	4.29	2.00	2.60	2.67	4.75

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Regression

Descriptive Statistics

	Mean	Std. Deviation	N
FIRM VALUE	2.11653	2.440653	47
MGMT	4.868085	.5078113	47
PRODEV	4.8191	1.11646	47
MKT	4.3106	.59536	47
CLTURE	3.5226	1.05711	47
COMPENPL	3.1062	.79271	47
COMM	2.4553191	.78097167	47
QLTY	3.4714894	1.05718037	47
CONSAT	5.0265957	.57868395	47

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Correlations

		FRIM VALUE	MGMT	PRODEV	MKT	CLTURE	COMPENPL	COMM	QLTY	CONSAT
Pearson Correlation	FIRM VALUE	1.000	-.119	.026	-.073	-.038	-.096	.057	-.161	-.034
	MGMT	-.119	1.000	-.495	.487	.224	.428	-.130	.182	-.210
	PRODEV	.026	-.495	1.000	-.157	-.341	-.137	-.392	.260	.397
	MKT	-.073	.487	-.157	1.000	.154	.520	-.159	.373	-.122
	CLTURE	-.038	.224	-.341	.154	1.000	-.070	.666	-.149	.194
	COMPENPL	-.096	.428	-.137	.520	-.070	1.000	-.253	.528	-.504
	COMM	.057	-.130	-.392	-.159	.666	-.253	1.000	-.366	.069
	QLTY	-.161	.182	.260	.373	-.149	.528	-.366	1.000	-.089
	CONSAT	-.034	-.210	.397	-.122	.194	-.504	.069	-.089	1.000
Sig. (1-tailed)	FIRM VALUE	.	.213	.432	.312	.400	.261	.352	.140	.411
	MGMT	.213	.	.000	.000	.065	.001	.191	.111	.079
	PRODEV	.432	.000	.	.145	.010	.179	.003	.039	.003
	MKT	.312	.000	.145	.	.151	.000	.142	.005	.206
	CLTURE	.400	.065	.010	.151	.	.320	.000	.159	.095
	COMPENPL	.261	.001	.179	.000	.320	.	.043	.000	.000
	COMM	.352	.191	.003	.142	.000	.043	.	.006	.323

	QLTY	.140	.111	.039	.005	.159	.000	.006	.	.275
	CONSAT	.411	.079	.003	.206	.095	.000	.323	.275	.
N	FIRM VALUE	47	47	47	47	47	47	47	47	47
	MGMT	47	47	47	47	47	47	47	47	47
	PRODEV	47	47	47	47	47	47	47	47	47
	MKT	47	47	47	47	47	47	47	47	47
	CLTURE	47	47	47	47	47	47	47	47	47
	COMPENPL	47	47	47	47	47	47	47	47	47
	COMM	47	47	47	47	47	47	47	47	47
	QLTY	47	47	47	47	47	47	47	47	47
	CONSAT	47	47	47	47	47	47	47	47	47

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Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.213 ^a	.045	-.156	2.623786	.045	.225	8	38	.984	1.711

a. Predictors: (Constant),CONSAT, COMM, MKT, QLTY, MGMT, COMPENPL, CLTURE, PRODEV

b. Dependent Variable :FIRM VALUE

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ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.411	8	1.551	.225	.984 ^a
	Residual	261.602	38	6.884		
	Total	274.012	46			

a. Predictors: (Constant), CONSAT, COMM, MKT, QLTY, MGMT, COMPENPL, CLTURE, P RODEV

b. Dependent Variable: FRIM VALUE

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Coefficients^a

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	5.099	8.234		.619	.539	-11.570	21.769					
MGMT	-.237	1.165	-.049	-.204	.840	-2.596	2.122	-.119	-.033	-.032	.427	2.340
PRODEV	.219	.556	.100	.393	.697	-.907	1.344	.026	.064	.062	.388	2.576
MKT	.240	.846	.058	.283	.779	-1.473	1.953	-.073	.046	.045	.590	1.696
CLTURE	-.133	.585	-.058	-.227	.821	-1.317	1.051	-.038	-.037	-.036	.392	2.554
COMPENPL	-.126	.774	-.041	-.163	.871	-1.693	1.441	-.096	-.026	-.026	.397	2.517
COMM	.226	.849	.072	.266	.791	-1.492	1.945	.057	.043	.042	.340	2.937
QLTY	-.392	.484	-.170	-.810	.423	-1.371	.587	-.161	-.130	-.128	.573	1.747
CONSAT	-.447	.933	-.106	-.480	.634	-2.335	1.441	-.034	-.078	-.076	.514	1.946

a. Dependent Variable: FIRM VALUE

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