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The Effect of Corporate Social Responsibilities through Brand Equity and Corporate Reputation on Brand Performance (Case Study: Abadan Petrochemical Company)

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Abstract

One of the most important goals of organizations and for-profit companies has always been improving brand performance, which is why organizations are looking for methods to improve their performance. This applied research examines whether social responsibilities through corporate reputation and brand equity significantly impact brand performance. Overall, 291 questionnaires were distributed among the purchasing managers of industrial customers of Abadan Petrochemical Company, who were chosen using the systematic random sampling method. This study uses a descriptive survey and correlational method. It employs confirmatory factor analysis and path analysis to analyze the data and test the hypotheses. The findings show that corporate reputation and brand equity positively and significantly affect brand performance. Social responsibilities and corporate reputation have a positive effect on brand equity. Finally, corporate reputation has a positive and significant effect on brand equity. However, the positive effect of social responsibility through brand equity and corporate reputation on brand performance was not confirmed.

Keywords: Corporate social responsibilities, brand performance, brand equity, corporate reputation

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Introduction

Companies have become specialized, and the competition intensity among economic enterprises has increased. As a result, companies are looking for methods and tools to increase their customers, sales, and profitability.

In recent years, corporate social responsibility (CSR) has been a sensitive and attention-grabbing issue. It is

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considered an essential factor for the survival of any organization. Leading and accountable organizations must be clear and accountable to their stakeholders about their performance. They must express their commitment to social responsibility through their values and ensure the implementation of these commitments throughout the organization. This way, social responsibility can provide mutual benefits so that, on the one hand, organizations will benefit from their more ethical and coherent approach, and, on the other hand, the society and the interested parties will have a better opinion and perception of the organization's performance and strengths [1].

Many organizations have become increasingly aware of the direct economic value of social responsibility. They have integrated it as a strategic investment with their main business strategy and management activities to positively impact society and their environment and strengthen their reputation and credibility. This way, they not only generate profit for themselves today but also stabilize their position in the future [1].

The importance and necessity of this research stem from the fact that previous research mainly has examined the effect of brand and brand equity on the consumer market. Facing the unpredictable competitive environment due to globalization and technological pressure, marketers seek to distinguish their brands from the competitors' brands. Creating a private brand reduces consumer risk and solves the challenges mentioned above. However, empirical evidence shows that consumers are influenced not only by tangible factors such as price and quality when making decisions but also by intangible factors such as trust, brand association, reputation, and brand image [2].

This research investigates whether or not the buyers' perception of the social responsibility activities of petrochemical industry companies can increase their brand equity and improve their brand performance.

This perception can lead to buyers' positive awareness of and association with the brand, improve the perceived quality of the supplier's products, enhance brand loyalty, and ultimately create satisfaction [2].

Corporate social responsibility refers to the methods organizations use in their business spaces and how they respond to society's commercial, legal, ethical, and social expectations. It is because organizations have great social, economic, and environmental responsibilities toward their employees, shareholders, customers, government, suppliers, and stakeholders. Undoubtedly, if society's individuals, groups, organizations, and institutions be responsible for various events, happenings, and crises and try to solve the problems mentioned above within their responsibility scope, many problems will be removed, and society will become healthy and peaceful. In other words, the organization's acts affect society's performance. Therefore, organizations must act in a manner that is acceptable to society and in accordance with its values. Organizations not observing these values will not succeed in practice. In other words, organizations must pay enough attention to social responsibility to maintain or improve their societal position and survive and succeed in their operations. Therefore, corporate social responsibility is an essential factor for the survival of organizations [1].

The trading volume of industrial B2B markets has an outstanding share and significant value in the world economy. For example, the trading volume of industrial B2B markets only in the United States went beyond 8 trillion dollars in 2005 [3]. However, there is little research on brands in the B2B market of Iran, which supports the necessity for the current research.

Much research on the relationship between corporate social responsibilities and brand financial performance during the past three decades has widely confirmed their relationship [2]. The first theory indicates that corporate social responsibilities improve financial performance by improving communication with its main stakeholders. Better communication increases the trust between the parties and decreases the cost of transactions and specific risks. On the other hand, improved communication with shareholders brings new customers and new investment opportunities to the company [4].

Several studies on social responsibilities have analyzed whether or not social responsibilities bring favorable financial performance to the organization. These studies provide mixed results. Margolis and Walsh believe these mixed results are due to the lack of a valid and reliable measure of financial performance and the removal of mediating and moderating variables from

the studied models. Including the concept of social responsibilities in the structure of social responsibilities performance makes unclear the relationship between social responsibilities and financial performance [5].

Corporate reputation is a significant factor in getting sustainable competitive advantages and, consequently, a higher profit [2]. Corporate reputation indicates the quality of a company's products and services. Good reputation and self-esteem of more famous companies take advantage of paying lower prices in purchases, attracting a more qualified workforce and greater employee loyalty. Greater customer loyalty results from associating with more famous brands, and they all emphasize the importance of corporate reputation [6].

Sabate and Puente (2003) used a survey and reviewed the existing research on the relationship between corporate reputation and financial performance, which indicated the positive impact of corporate reputation on financial performance [7].

After reviewing the studies, we selected and used the model below, proposed by Lai et al. (2010).

The research hypothesis

The research hypotheses are as follows:

1. Social responsibilities have a positive and significant effect on brand performance.
2. Corporate reputation has a positive and significant effect on brand performance.
3. Brand equity has a positive and significant effect on brand performance.
4. Social responsibilities have a positive and significant effect on brand equity.
5. Corporate reputation has a positive and significant effect on brand equity.
6. Social responsibilities have a positive and significant effect on corporate reputation

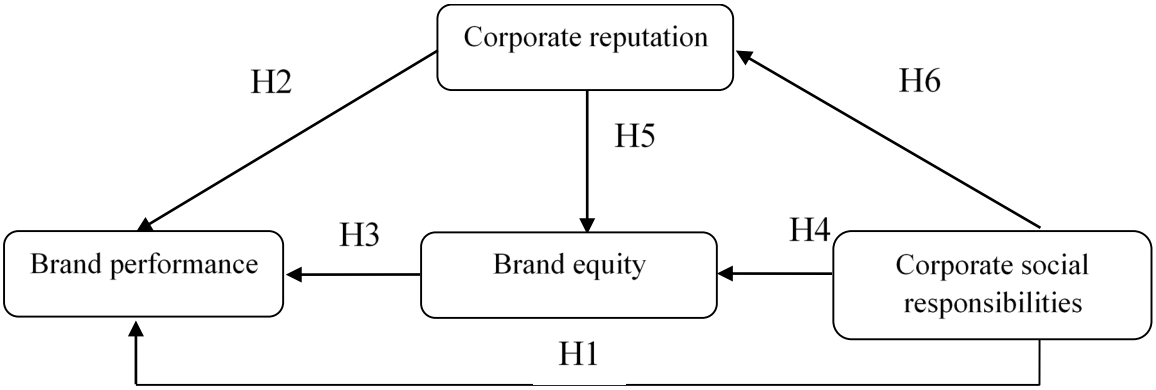

Figure. 1: The research theoretical framework

Research Methodology

This research is a descriptive survey in terms of method and applied in terms of purpose. The research population includes all customers of Abadan Petrochemical Company products. The sample size was also determined using Cochran's formula equal to 291 customers. The systematic random sampling method was applied to an available list of the company's customers.

University professors and industry experts validated the questionnaire. In addition, the factor loading analysis using orthogonal axis rotation (Varimax rotation) was used to check the questionnaire's structural validity, verify the intended factors, and obtain pure factors. For this purpose, the KMO index and Bartlett's Test of Sphericity are used. The questionnaire's reliability was measured using Cronbach's alpha and SPSS 23.

As shown in Table 1, since the KMO index is more than 0.6, the sample size (here, the same number of respondents) is sufficient for the factor analysis. In addition, the significance value (Sig) of Bartlett's test is less than 5%, indicating that factor analysis is suitable for identifying the structure of the factor model. Moreover, the Cronbach's alpha obtained for all the research variables is more than 0.7, confirming the questionnaire's reliability.

Table 1. Operational definitions of the research variables and the questionnaire's validity and reliability

Row	Variable	Factor	Cronbach's alpha (Pre-test)	Reference	The Cronbach's alpha reported in the reference
1	Social responsibilities	Considering local communities	0.846	Lai et al. (2010), Hsu (2011)	0.86, 0.894
2		Considering the benefit of buyers		Lai et al. (2010)	0.86
3		Active participation in social activities		Lai et al. (2010), Hsu (2011)	0.86, 0.894
4		Considering environmental protection issues		Lai et al. (2010), Hsu (2011)	0.86, 0.894
5		Considering the rights of disabled and elderly people		Lai et al. (2010), Hsu (2011)	0.86, 0.894
6		Helping non-profit organizations		Hsu (2011)	0.894
7	Brand equity (brand loyalty)	The brand to be the first choice	0.732	Lai et al. (2010)	0.89
8		Brand loyalty		Lai et al. (2010)	
9		Being the first choice despite having many choices		Lai et al. (2010)	
10	Brand equity (perceived quality)	Products' quality		Lai et al. (2010)	0.89
11		Good brand performance		Lai et al. (2010)	
12		Brand reliability		Lai et al. (2010)	
13	Brand equity (brand association/brand awareness)	Differentiation from competitors		Lai et al. (2010), Hsu (2011)	0.89, 0.829
14		Associating some brand features in mind		Hsu (2011)	0.829
15		Remembering the company's symbol or logo		Hsu (2011)	0.829
16		Corporate reputation in the industry		Lai et al. (2010)	0.89
17		Being ahead of competitors		Lai et al. (2010)	0.89
18		The reminder of some brand specifications		Lai et al. (2010)	0.89
19	Brand equity (brand satisfaction)	Fulfilling expectations by brand		Lai et al. (2010)	0.89
20		The desirability of brand products and services		Lai et al. (2010)	
21		Brand satisfaction		Lai et al. (2010)	
22		Satisfaction with brand products and services		Lai et al. (2010)	
23	Corporate reputation	Customers' relatively good brand perception	0.720	Lai et al. (2010)	0.86
24		Customers' good relative perception compared to competitors		Lai et al. (2010)	
25		Believing in the good long-term future of the company		Lai et al. (2010)	
26		Corporate reputation		Lai et al. (2010), Hsu (2011)	

27	Brand performance	Improving the sales growth	0.762	Lai et al. (2010)	0.89
28		Increasing the market share		Lai et al. (2010)	
29		Increasing the profit margin		Lai et al. (2010)	
30		Increasing the company's overall performance		Lai et al. (2010)	

Findings

Various analyses are used to analyze the research data. The demographic characteristics of the research sample were determined and used in the inferential analysis. For the inferential statistical analysis, the normality of the data was first investigated using the Kolmogorov-Smirnov test and the Pearson correlation coefficient between the research variables. Then, the construct validity of the research variables and indices resulting from them were examined using the confirmatory factor analysis test. Finally, the path analysis was used to test the research hypotheses. The analysis started by describing the studied sample's demographic characteristics (Table 2).

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Table 2. Demographic characteristics of the sample

Variable	Level	Percentage	Variable	Level	Percentage
Gender	Not answered	4	Age	Not answered	3.0
	Male	83.4		20-29	19.1
				30-39	42.2
	Female	12.6		40-49	31.7
				50-59	4.0
Education	Not answered	4.0	Customer experience	Not answered	3.6
	Under diploma	7.3		< 5	16.2
	Diploma	22.1		5-10	23.1
	Associate degree	31.4		10-15	29.4
	Bachelor's degree	33.7		> 15	27.7
	Master's degree	1.7			
Experience in industry	Not answered	4.3	No. of personals	Not answered	5.9
	> 5	9.2		< 50	17.8
	5-10	17.2		50-100	24.4
	10-15	30.4		100-150	27.7
	> 15	38.9		> 150	24.1

Prior to testing the hypotheses, it is necessary to determine the normality of the data, as the outcome will be used in tests. For this purpose, we performed the Kolmogorov-Smirnov test on the research variables and concluded that the collected data came from a normal population.

Table 4 presents the matrix of Pearson correlation coefficients between variables. It should be mentioned that when testing the relationship between two variables, if the correlation coefficient between the two variables is less than 0.25, their relationship is considered weak; if it is between 0.6 and 0.25, their relationship is average; and if it is more than 0.6, it means that there is a strong relationship between the two variables.

Table 3. Correlation matrix of the research variables

The research variables	1	2	3	4
Corporate social responsibilities	1.00			
Brand equity	0.366**	1.00		

Corporate reputation	0.323**	0.603**	1.00	
Brand performance	0.315**	0.779**	0.572**	1.00
*p < 0.05, **p < 0.01				

The Pearson correlation coefficient results indicated a significant relationship between the research variables at the confidence level of 99%. The confirmatory factor analysis was used to analyze the questionnaire's internal structure and discover the constituent factors of each construct or the latent variable. In addition, the measured equations of each structure (latent variable) are extracted and interpreted using confirmatory factor analysis in this section. Tables 4 and 5 show the confirmatory factor analysis results of the research variables.

Table 4. The factor loadings and the significant levels of the variables

Status	T-test	Factor loadings	Index	Variable
Suitable	12.15	0.67	1	Social responsibilities
Suitable	9.21	0.54	2	
Suitable	13.82	0.74	3	
Suitable	12.70	0.70	4	
Suitable	12.82	0.71	5	
Suitable	11.58	0.67	6	
Suitable	4.31	0.41	23	Corporate reputation
Suitable	4.09	0.36	24	
Suitable	5.16	0.94	25	
Suitable	3.76	0.30	26	
Suitable	13.39	0.71	27	Brand performance
Suitable	16.11	0.81	28	
Suitable	13.59	0.72	29	
Suitable	16.83	0.84	30	

Table 5. The factor loading and significant levels of the research variables (brand equity)

Status	T- test	Factor loadings	Index	Dimensions	Variable
Suitable	14.51	0.78	7	Brand loyalty	Brand equity
Suitable	1.46	0.60	8		
Suitable	14.95	0.79	9		
Suitable	12.22	0.67	10	Perceived quality	
Suitable	12.98	0.71	11		
Suitable	13.66	0.74	12		
Suitable	7.39	0.44	13	Brand association/ brand awareness	
Suitable	12.15	0.67	14		
Suitable	11.03	0.62	15		
Suitable	9.21	0.53	16		
Suitable	10.02	0.57	17		
Suitable	12.25	0.67	18		
Suitable	10.97	0.61	19	Brand satisfaction	
Suitable	10.70	0.60	20		
Suitable	12.08	0.66	21		
Suitable	9.47	0.54	22		

Since the t-test is more than 1.96 and the factor loading is more than 0.4, the indicators present suitable values for the research variables. The factor analysis results in Tables 4 and 5 show that all the indicators relating to the research variables have acceptable t values and the factor loadings and are considered suitable for the research variables.

Finally, the path analysis method is used to test the hypotheses. Figures 2 and 3 show the standard estimation and significance levels of the coefficients of the research conceptual model.

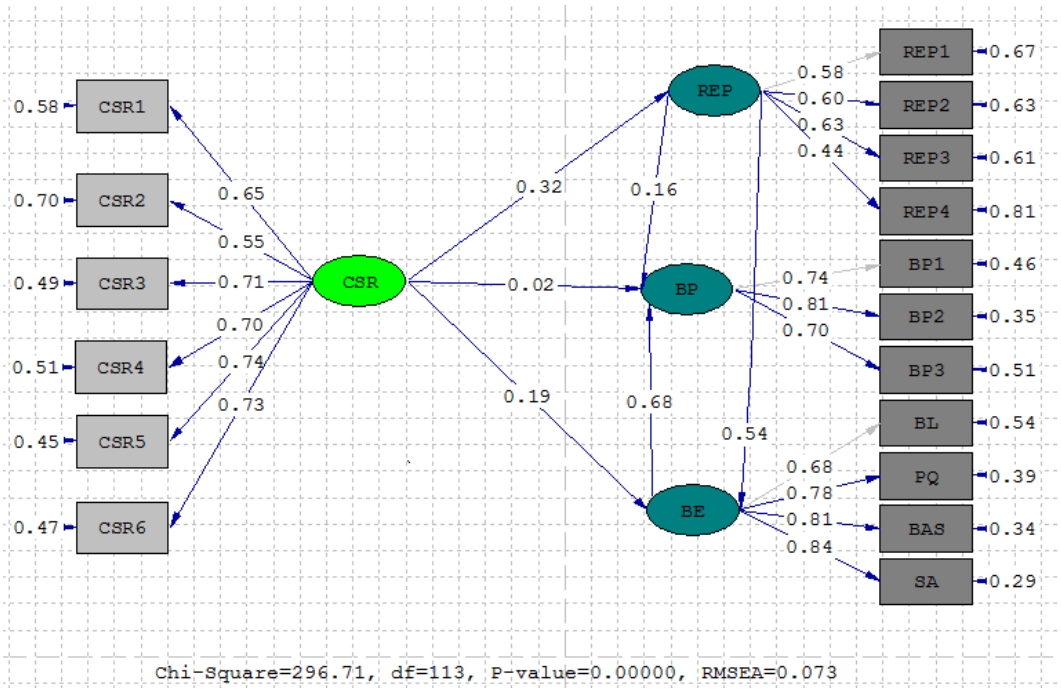

Figure 2. The path analysis of the research conceptual model (standard estimate)

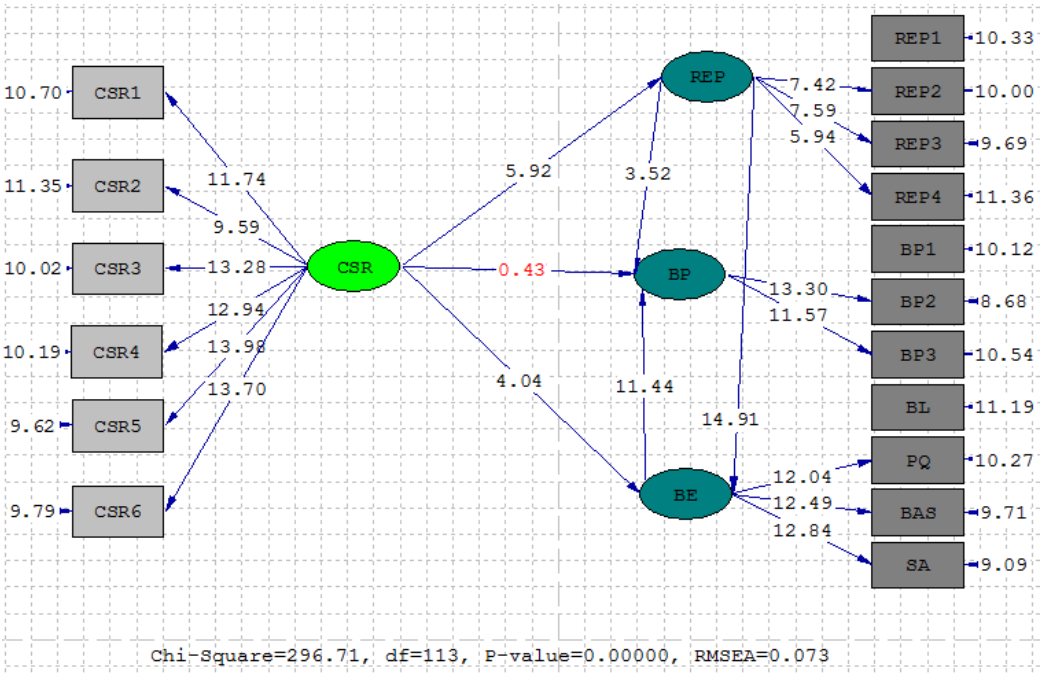

Figure 3. The path analysis of the research conceptual model (the significance of the coefficients)

Table 6. The model fit indices

Statistic	Acceptable value	Value
Chi-square/degree of freedom ($\frac{\chi^2}{df}$)	< 3	1.9
The goodness of fit (GFI)	> 0.9	0.93
Root Mean Squared Error of Approximation (RMSEA)	< 0.08	0.068
comparative fit index (CFI)	> 0.9	0.95
Adjusted Goodness of Fit Index (AGFI)	> 0.9	0.92
Normed fit index (NFI)	> 0.9	0.93
Non-normed fit index (NNFI)	> 0.9	0.92

This section explains the results of the tested hypotheses separately.

Table 7. The research results

Result	T-test	Path coefficient	Hypotheses	Row
Rejected	0.43	0.02	Social responsibilities have a positive and significant effect on brand performance.	1
Confirmed	3.52	0.16	Corporate reputation has a positive and significant effect on brand performance.	2
Confirmed	14.91	0.68	Brand equity has a positive and significant effect on brand performance.	3
Confirmed	4.04	0.19	Social responsibilities have a positive and significant effect on brand equity.	4
Confirmed	11.44	0.54	Corporate reputation has a positive and significant effect on brand equity.	5
Confirmed	5.92	0.32	Social responsibilities have a positive and significant effect on Corporate reputation.	6

Table 8. Direct and indirect effects of variables on the dependent variable of brand performance

Variable	Using modifier variable	Direct effect	Indirect effect	Total
Social responsibilities	-	0.02	-	0.31
	Corporate reputation	-	0.05	
	Brand equity	-	0.13	
	Corporate reputation, Brand equity	-	0.11	
Corporate reputation	-	0.16	-	0.52
	Brand equity	-	0.36	
Brand equity	-	0.68	-	0.68

Discussion

In today's competitive world, organizations are looking for methods to increase their profitability and reduce costs. This research mainly examines the effect of social responsibilities through brand equity and corporate reputation on brand performance. Since brand performance in this research refers to the brand's financial performance, this research aims to examine the effect of social responsibilities on profitability. The research results are as follows.

The first hypothesis of the research examines the effect of corporate social responsibilities through brand equity and corporate reputation on brand performance. However, the results do not confirm this hypothesis. In other words, corporate social responsibilities through brand equity and corporate reputation do not significantly positively affect brand performance, and increasing the company's social activities through brand equity and corporate reputation does not increase brand performance. Our results, consistent with previous research, did not find a clear connection between social responsibilities and the brand's financial performance [7-10].

The second hypothesis examines the effect of corporate reputation on brand performance, which is confirmed according to the results. Therefore, increasing the corporate reputation as a strategic and unique asset increases the brand's financial performance, consistent with [11] and [12]. The third hypothesis examines the effect of brand equity on brand performance, which is confirmed according to the results. Therefore, consistent with previous research [13, 14], there is a positive relationship between brand equity and company performance. The fourth hypothesis examines the effect of social responsibilities on brand equity, which is confirmed according to the results. Therefore, consistent with previous research [15, 16], there is a positive relationship between corporate social responsibility and brand equity. The fifth hypothesis examines the effect of corporate reputation on brand equity, which is confirmed according to the results. Therefore, consistent with previous research [17, 18], a better corporate reputation increases brand equity. Finally, the sixth hypothesis examines the possible positive and significant effect of social responsibility activities on corporate reputation, which is confirmed according to the results. Therefore, consistent with previous research [13-16], a good corporate reputation can result from responsible societal actions.

The mentioned results suggest that factors like providing quality products, lower prices, a variety of products, wider presence in foreign markets, preserving the environment, continuous advertisement, customer orientation, strong public relations, and the like can help business owners to improve the corporate reputation and, as a result, financial performance. In addition, factors like increasing advertising, increasing the quality of products and services, reducing the price, and promotion can increase brand performance and consequently improve brand equity.

Increasing corporate reputation is another factor that increases brand equity. The research's fifth hypothesis states that corporate reputation, as a sustainable competitive advantage, can improve brand equity. Social responsibility is another factor affecting brand equity. The research's fourth hypothesis confirms that the buyer's perception of the company's social responsibility activities can increase brand equity.

Finally, the research's sixth hypothesis confirms the positive role effect of social responsibilities on corporate reputation. Therefore, business owners are suggested to increase their corporate reputation and

brand equity by increasing their social responsibility activities.

Conclusion

Business owners are suggested to involve in social responsibility activities like considering environmental issues, complying with standards and rules related to this area, respecting the rights of the disabled and older people, considering the buyers' benefit, membership in charity associations, allocating a percentage of annual profit to non-profit organizations and institutions, and so on. Organizations can respond to the multiple goals of the beneficiaries by increasing their social responsibility activities towards society and shareholders. In addition, if they can see consider the benefit of the beneficiaries as their benefit, then they can reach their main goals, which are growth, survival, and profit making. In this way, not only do they fulfill their responsibility towards the society in which they operate, but they also achieve more fame, better brand equity, and ultimately more profit.

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