

# The factors responsible with corporate reputation: A structural equation modelling – approach

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*Abstract:* In recent years, the concept of corporate reputation has gained wide consideration in the academic field as well as in the business world. Companies are very careful with their corporate reputation because it is the item that can determine competitive advantage and establishes good relations with stakeholders. This study examines the elements that are responsible for corporate reputation. Data used in this study were collected from the responses of people regarding the perceptions about corporate reputation. Structural modelling analysis is used to analyze data and to test hypothesis concerning the factors that are responsible for corporate reputation.

*Key words:* corporate reputation, emotional appeal, confirmatory factor analysis, structural equation modelling

*JEL Classification:* C01, C12, C15

## 1. Introduction:

Corporate reputation has become a more and more important asset for companies. It is a sensitive intangible asset that is very difficult to measure. However, researchers have tried to develop methods and models to measure this important asset, but this challenge is not so easy to meet.

Structural equation modelling (SEM) has become a more popular statistical method used to measure the underlying latent construct identified by the factor

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analysis. Also, it is used to assess the path of the hypothesized relationship between the variables (Nasir and Hua, 2010). Helm says that the SEM contains two models which are inter-related: the measurement model, which defines the latent variables and assigns observed variables to them, and the structural model, which defines the causal relationship between the latent variables (Konecny, 2014). The SEM analysis has two steps: confirmatory factor analysis and structural model.

The attributes of corporate reputation can be divided into two factors – emotional and cognitive components (Schweiger, 2004; Ponzi, 2011; Fombrun, 2000). We can assume that non-emotional items determine emotional items. In this case we can say that emotional items can be first-order latent variable which are determined by cognitive second-order latent variables. In this paper we try to determine a structural model for emotional appeal (the first-order latent variable) that is shaped by: ethical and social responsibility, management, leadership, patriotism, customer's value and economic performance (second-order latent variables). For every latent variable we have more than three elements that shape them.

The aim of this paper is to develop a theoretical model that could be used to measure the corporate reputation from the perspective of the local community. For this, we use structural equation modelling; corporate reputation will be understood as a formative construct and its indicators will be inputs for reputation. At the beginning we will make a short literature review about corporate reputation and methods to measure it. Then, we will develop this model based on a Likert scale questionnaire about perception on corporate reputation.

## **2. Corporate reputation**

Corporate reputation is a very important intangible asset as it provides a sustainable competitive advantage in the market (Boyd, Bergh, Ketchen, 2010). Corporate reputation represents the image of the company constructed in time and with significant effort. It affects the way in which people see the company (Chun, 2005).

According to Fombrun (Fombrun, 1996) corporate reputation is determined by three characteristics: credibility, reliability and responsibility. Argenti and Druckenmiller (Argenti and Druckenmiller, 2004) define corporate reputation as a collective presentation made by all persons that participate in building the image in time based on a corporate identity, performance and consumer's perceptions.

They say that corporate reputation helps the company to achieve its objectives and have the role to maintain competitive advantage.

Benjamin Franklin said that people and companies have to do a lot of positive things to build a good corporate reputation, but is enough to do only a bad one to destroy it. (ERC, 2011) Warren Buffet said that a good reputation can be built even in 20 years but can be destroyed in only five minutes. So, corporate reputation is built in time, with noteworthy efforts and can be destroyed in few minutes. It is the result of memories, perceptions and opinions, determined by every event, contact, public statement, media reference, and rumour or company information leakage. It is rather related to impressions, feelings and reviews than experiences and knowledge (Turner, 2004).

Corporate reputation is the reason why people and companies choose to make business with you. It is the factor that determines company to choose the best business partners, to attract well trained employees and investors. It can affect the relation with the regulatory body, pressure groups, media and local community. It is the key to success in business. Corporate reputation can be the result of a long period of financial investment in adverts, public relations and marketing. It can also be the result of investment in intangible assets as quality, innovation, stakeholder's relationships and corporate standards (Davies, 2007).

Even if corporate reputation is an intangible asset, researchers tried to measure it. So they developed some models and methods for this. *Fortune's* survey about American's most admired companies, which was developed from 1983 until the present, analyzes corporate reputation according to the following elements: management quality, product quality, long-term investments, ability to attract and retain well-trained employees, social and environmental responsibility, efficient use of resources (Fombrun, 1998). In time, some similar studies were made by *Store Manager* in Germany, *Management Today* in Great Britain, *Asian Business* and *Far Eastern Economic Review* in Asia, *Financial Times* in Europe, *Industry Week*. All of these studies took into consideration almost the same indices as *Fortune* did.

There is also the Reputation Institute in USA which measures corporate reputation. In order to determine a reputational coefficient, called RepTrackPulse, the Reputation Institute took into consideration the public opinion regarding corporate performance, products/ services, innovation, leadership, social responsibility, management and responsibility towards its employees. The Harris Interactive is another institute concerned by corporate reputation. The study is based on a series of 20 items grouped into six categories as follows: emotional feedback (a good

opinion on the company, admiration, respect and trust), products and services (high quality, innovative products, good price quality ratio, superior products than others), work place (rewards for employees, nice work place, competent employees), financial performance (company exceeds the competitors' financial performance, the company recorded profit, low-risk investment, growth prospects for the company), vision and leadership (market opportunities, excellent leadership, clear vision for the future) and social responsibility (support social cases, environmental responsibility, responsibility to the community).

### **3. Research methods**

#### **3.1. Sample and sampling**

Based on literature about corporate reputation and the Puncheva Michelotti Petya (Puncheva, 2008) study, a questionnaire was developed about corporate reputation, which was distributed to 441 people.

The questionnaire contained 46 questions with answers on the Likert scale (5 = strongly agree, 4 = agree, 3 = indifferent, 2 = disagree and 1 = strongly disagree) and information about respondents. The questions could be grouped into 10 drivers of reputation: management quality, feelings/ emotions about the company, work place, corporate value as it is seen through the customer's eyes, differentiate the company's credibility, social contribution and impact on customers, social and ethical responsibility, economic performance and patriotism.

An exploratory analysis of this questionnaire was made in a previous study (Sandu, 2015). People that answered the questionnaire were students from the first and second years of study at the Faculty of Letters and at the Faculty of Business and Administration. According to the sample, 78.91% were females and 21.09% were males; the age of the respondents varied between 18 and 25 years as follows: 1.81% of them were 18 years old, 54.65% were 19 years old, 31.08% were 20 years old, 8.84% were 21 years old, 1.81% were 22 years old and the rest 1.81% were 25 years old.

#### **3.2. Confirmatory exploratory analysis**

We first develop the exploratory analysis for the questionnaire applied. We obtained that the KMO coefficient is 0.943 and we can say that is very good from the statistical point of view. Then we developed the Total Variance Explained. We observed that 9 factors explain 55.589% from the Total Variance Explained. In this step, the table called "pattern matrix" shows that it is recommended to delete some of the questions. After this procedure, we have eliminated some variables and we

found that 6 factors explain 56.223% of the Total Variance Explained (more than it was in the beginning). The value of KMO is still very good, 0.922.

**Table 1 – KMO, Bartlett's Test and Total Variance Explained**

	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity			Total Variance Explained
		Approx. Chi-Square	df	Sig.	
9 factors	0.943	11327.186	1035	.000	55.589
6 factors	0.922	6766.185	406	.000	56.223

We can observe that the Total Variance Explained increased and the KMO is still significant. In this case we can say that the model with 6 factors is a relevant one. The next step is to determine the „pattern matrix” that will help us to develop the confirmatory factor analysis (Table 2).

**Table 2 – Pattern Matrix**

	Factor					
	1	2	3	4	5	6
VAR00035	0.828					
VAR00037	0.730					
VAR00036	0.730					
VAR00032	0.709					
VAR00033	0.706					
VAR00034	0.693					
VAR00031	0.586					
VAR00026	0.507					
VAR00019		0.873				
VAR00017		0.828				
VAR00018		0.694				
VAR00020		0.654				
VAR00015		0.514				
VAR00024		0.485				
VAR00016		0.483				
VAR00045			0.802			
VAR00044			0.801			
VAR00046			0.739			
VAR00043			0.580			
VAR00002				0.866		
VAR00001				0.832		
VAR00003				0.696		
VAR00009					0.751	
VAR00010					0.732	
VAR00008					0.558	

	Factor					
	1	2	3	4	5	6
VAR00021					0.328	
VAR00041						0.697
VAR00040						0.644
VAR00042						0.471

In Table 2 we can observe there are some values are greater than 0.3, as it is recommended in general to be when we have a sample larger than 300. This tells us that the “pattern matrix” determined above can be used to develop the confirmatory factor analysis.

**Table 3 – Factor Correlation Matrix**

Factor	1	2	3	4	5
1	1.000	0.552	0.413	0.498	0.511
2	0.552	1.000	0.362	0.355	0.366
3	0.413	0.362	1.000	0.118	0.093
4	0.498	0.355	0.118	1.000	0.518
5	0.511	0.366	0.093	0.518	1.000

The “factor correlation matrix” for the 5 elements which determine emotional appeal can be found in Table 3. We can see that values are smaller than 0.7, which means that the variables are correlated.

The next step in our study is to test the reliability. For this we develop the “Cronbach alpha coefficient” for each of the 6 factors.

**Table 4 – Cronbach alpha coefficient**

Factor	1	2	3	4	5	6
Cronbach alpha	0.886	0.870	0.816	0.837	0.751	0.846
Sample size	8	7	4	3	4	3

We observe in Table 4 that values of Cronbach alpha coefficients are bigger than 0.75 so we can say, in this case, that the internal consistency of the six factors is good.

### Variables used in this model

As we saw above, according to “pattern matrix” developed in Table 2, six factors remain in this model: emotional appeal, ethical and social responsibility, management and leadership, patriotism, customer value and economic performance. These six factors are shaped by 29 elements, which are presented in Table 5.

Table 5 – Variables used in this model

Emotional appeal	Ethical and social responsibility	Management & Leadership	Patriotism	Customer value	Economical performance
I have a good feeling about the company (VAR00001)	The company is honest and straightforward in its communication (VAR00026)	The company has extensive resources to base on (VAR00015)	The company employs local staff (VAR00043)	The company offers high quality products and services (VAR00008)	It looks like a company with strong prospects for future growth (VAR00040)
I admire and respect the company (VAR00002)	The company helps to make the world a better place (VAR00031)	The company has a clear vision of the future (VAR00016)	The company's profits remain in Romania (VAR00044)	The company develops innovative products and services (VAR00009)	The company tends to outperform competitors (VAR00041)
I trust the company (VAR00003)	The company cares about its employees (VAR00032)	The company is very powerful (VAR00017)	The company's products are made in Romania (VAR00045)	The company offers products and services that are good value for money (VAR00010)	The company makes good use of its corporate assets (VAR00042)
	The company supports good causes (VAR00033)	The company is a leader in industry (VAR00018)	It is a Romanian company (VAR00046)	The company offers unique products and services (VAR00021)	
	The company is environmentally responsible (VAR00034)	The company has excellent leadership (VAR00019)			
	The company maintains high standards in the way it treats people (VAR00035)	The company communicates its values clearly (VAR00020)			
	The company behaves ethically and responsibly (VAR00036)	I would like to be associated with the company (VAR00024)			
	The company cares about the safety of its customers and employees (VAR00037)				

Starting from the “pattern matrix” developed in Table 2 and using AMOS (an extension of SPSS) the next step in our paper is to develop the confirmatory exploratory analysis. We have the following hypothesis (Table 6):

**Table 6 – Confirmatory factor analysis hypothesis**

<b>Hypothesis for CFA</b>	
<b>Emotional appeal</b>	
<b>H1a</b>	I have a good feeling about the company (VAR00001) variable has a positive impact on Emotional appeal
<b>H1b</b>	I admire and respect the company (VAR00002) variable has a positive impact on Emotional appeal
<b>H1c</b>	I trust the company (VAR00003) variable has a positive impact on Emotional appeal
<b>Ethical and social responsibility</b>	
<b>H2a</b>	The company is honest and straightforward in its communication (VAR00026) variable has a positive impact on ethical and social responsibility
<b>H2b</b>	The company helps to make the world a better place (VAR00031) variable has a positive impact on Ethical and social responsibility
<b>H2c</b>	The company cares about its employees (VAR00032) variable has a positive impact on Ethical and social responsibility
<b>H2d</b>	The company supports good causes (VAR00033) variable has a positive impact on Ethical and social responsibility
<b>H2e</b>	The company is environmentally responsible (VAR00034) variable has a positive impact on Ethical and social responsibility
<b>H2f</b>	The company maintains high standards in the way it treats people (VAR00035) variable has a positive impact on Ethical and social responsibility
<b>H2g</b>	The company behaves ethically and responsibly (VAR00036) variable has a positive impact on Ethical and social responsibility
<b>H2h</b>	The company cares about the safety of its customers and employees (VAR00037) variable has a positive impact on Ethical and social responsibility
<b>Management &amp; Leadership</b>	
<b>H3a</b>	The company has extensive resources to dawn on (VAR00015) variable has a positive impact on Management and leadership
<b>H3b</b>	The company has a clear vision for the future (VAR00016) variable has a positive impact on Management and leadership
<b>H3c</b>	The company is very powerful (VAR00017) variable has a positive impact on Management and leadership
<b>H3d</b>	The company is a leader in its industry (VAR00018) variable has a positive impact on Management and leadership
<b>H3e</b>	The company has excellent leadership (VAR00019) variable has a positive impact on Management and leadership
<b>H3f</b>	The company communicate its values clearly (VAR00020) variable has a



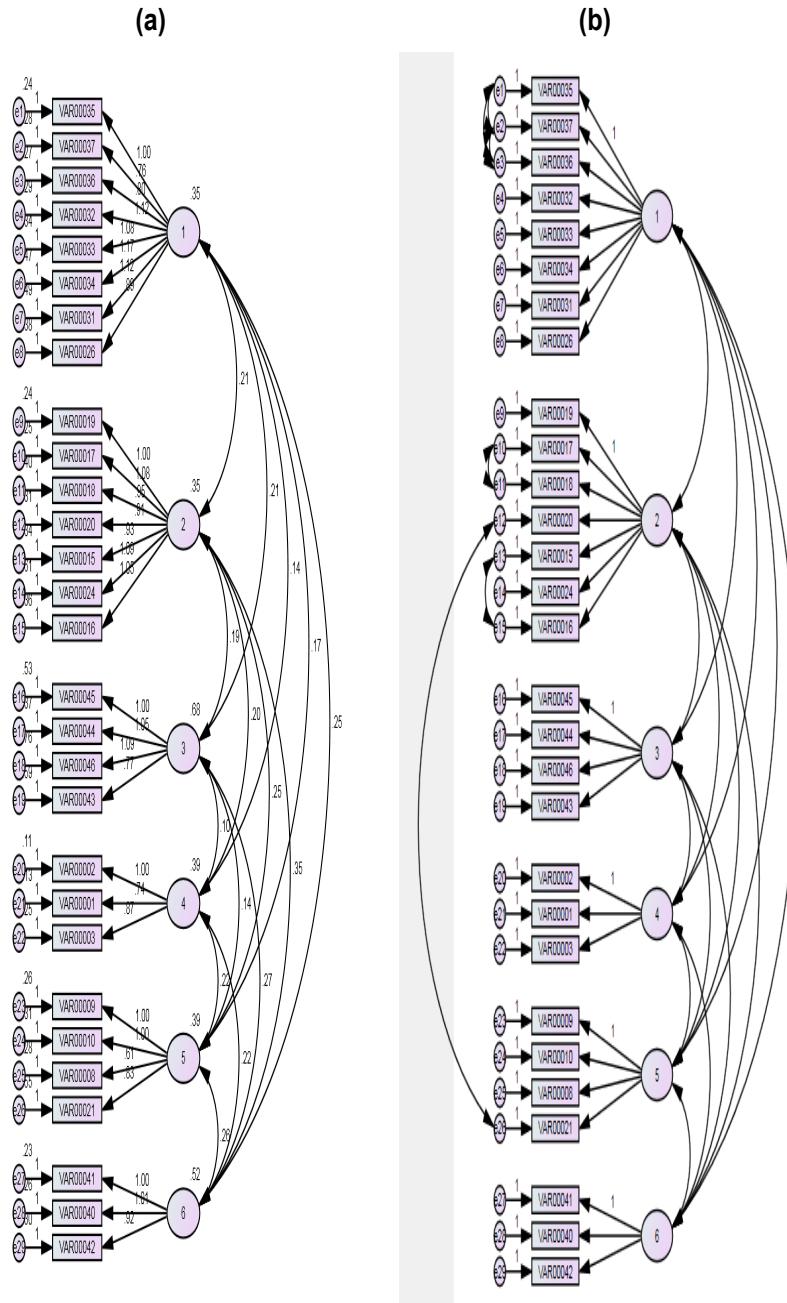
<b>Hypothesis for CFA</b>	
	positive impact on Management and leadership
<b>H3g</b>	I would like to be associated with the company (VAR00024) variable has a positive impact on Management and leadership
<b>Patriotism</b>	
<b>H4a</b>	The company employs local staff (VAR00043) variable has a positive impact on Patriotism
<b>H4b</b>	The company's profits remain in Romania (VAR00044) variable has a positive impact on Patriotism
<b>H4c</b>	The company's products are made in Romania (VAR00045) variable has a positive impact on Patriotism
<b>H4d</b>	It is a Romanian company (VAR00046) variable has a positive impact on Patriotism
<b>Customer value</b>	
<b>H5a</b>	The company offers high quality products and services (VAR00008) variable has a positive impact on Customer value
<b>H5b</b>	The company develops innovative products and services (VAR00009) variable has a positive impact on Customer value
<b>H5c</b>	The company offers products and services that are good value for money (VAR00010) variable has a positive impact on Customer value
<b>H5d</b>	The company offers unique products and services (VAR00021) variable has a positive impact on Customer value
<b>Economical performance</b>	
<b>H6a</b>	It looks like a company with strong prospects for future growth (VAR00040) variable has a positive impact on Economical performance
<b>H6b</b>	The company tends to outperform competitors (VAR00041) variable has a positive impact on Economical performance
<b>H6c</b>	The company makes good use of its corporate assets (VAR00042) variable has a positive impact on Economical performance

We want to see which of the hypothesis from Table 6 are accepted and which are rejected. For this we will develop the CFA. The values wrote on the arrows (Figure 1, a) from latent variable to model variables are bigger than 0.6, also a good result. The covariance values are lower than 0.8 which is very good as well.

**Table 7 – CFA indices**

	<b>CMIN/DF</b>	<b>CFI</b>	<b>PCLOSE</b>	<b>RMSEA</b>	<b>LO90</b>
CFA1	3.057	0,886	0,000	0,068	0,064
CFA2	2,338	0,927	0,043	0,055	0,050
SEM1	2,338	0,927	1,000	0,028	0,026
SEM2	1,979	0,975	1,000	0,024	0,021

Figure 1. Confirmatory factor analysis



We know that CMIN/DF should be between 1 and 3, CFI should be about 0.95, PCLOSE should be not significant, RMSEA should be less than 0.6 and LO90 should be less than 0.5. So, in our study, the first step in CFA (Figure 1, a) has shown that not all the values are significant, as we can see on the first line (CFA1) in Table 7. In accordance with the indices, we can covariate e1 with e2, e2 with e3, e1 with e3, e10 with e11, e13 with e15 and e12 with e 26, as we can see in Figure 1, b. After this, for the second step in CFA (Figure 1, b, and CFA2 from Table 7) we have significant values for all indices. This means that we can go further and develop the structural equation modelling.

### 3.3. Structural equation modelling

In order to determine a structural equation model, we will start from 5 hypotheses (H7, H8, H9, H10, H11 from Table 8) that we intend to verify. We want to determine which of the 5 factors established above – ethical and social responsibility, management and leadership, patriotism, customer value and economical performance influence emotional appeal.

**Table 8 – Structural equation modelling hypothesis**

Hypothesis for SEM	
H7	Ethical and social responsibility variable has a positive impact on Emotional appeal
H8	Management and Leadership variable has a positive impact on Emotional appeal
H9	Patriotism variable has a positive impact on Emotional appeal
H10	Customer value variable has a positive impact on Emotional appeal
H11	Economical performance variable has a positive impact on Emotional appeal

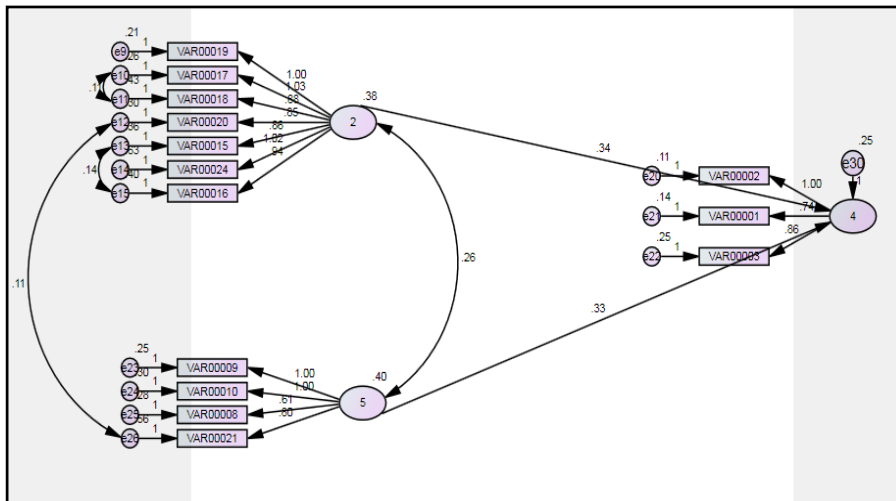
What we want in this step is to see if the hypotheses from Table 8 are accepted or rejected and after this we can develop the structural equation model. For this we will see if indices from table 9 are significant or not.

**Table 9 – SEM indices**

Hypothesis	Estimate	S.E.	C.R.	P	Decision
H7	0,021	0,078	0,270	0,787	Reject
H8	0,308	0,131	2,353	0,019	Accept
H9	-0,032	0,044	-0,723	0,470	Reject
H10	0,326	0,076	4,282	0,0001	Accept
H11	0,054	0,094	0,571	0,568	Reject

In Table 9 we determined that the probability of getting a critical ratio as large as 0.27 in absolute value is 0.787. In other words, the regression weight for the ethical and social responsibility variable in the prediction of emotional appeal is not significantly different from zero at the 0.05 level (two-tailed). The probability of getting a critical ratio as large as 2.353 in absolute value is 0.019. So, the regression weight for management and leadership in the prediction of emotional appeal is significantly different from zero at the 0.05 level (two-tailed). The probability of getting a critical ratio as large as 0.723 in absolute value is 0.470. We can say that the regression weight for patriotism in the prediction of emotional appeal is not significantly different from zero at the 0.05 level (two-tailed). The probability of getting a critical ratio as large as 4.282 in absolute value is less than 0.001. In this case, the regression weight for customer value in the prediction of emotional appeal is significantly different from zero at the 0.001 level (two-tailed). The probability of getting a critical ratio as large as 0.571 in absolute value is 0.568. In other words, the regression weight for economical performance in the prediction of emotional appeal is not significantly different from zero at the 0.05 level (two-tailed).

Figure 2. Structural equation model



According to values from Table 9 we will accept hypothesis 8 and 10 and we will reject hypothesis 7, 9 and 11. So, management and leadership variable has a positive impact on emotional appeal and also customer value variable has a

positive impact on emotional appeal. Figure 2 shows the results for the structural equation model. The figure shows that all of three variables have a positive relationship. Also, a structural equation has an error term on the dependent variables but the values are acceptable for this model.

#### 4. Conclusions

The study was aimed to investigate the potential factors that determine corporate reputation. We started from the idea that corporate reputation could be divided into two factors – emotional and cognitive components of corporate reputation. We saw that non-emotional items determined emotional items. We used in this paper emotional items as a first-order latent variable which were determined by cognitive second-order latent variables.

We started our research with 10 factors: management quality, feelings/ emotions about the company, work place, corporate value seen through the customer's eyes, differentiation, corporate credibility, social contribution and customer's impact, ethical and social responsibility, economic performance and patriotism. After the confirmatory analysis we were left with only 6 factors: ethical and social responsibility, management and leadership, patriotism, customer value, economical performance and emotional appeal. Using structural equation model we determined that emotional appeal is influenced by two factors: management & leadership and customer value.

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