

WHAT REALLY MATTERS FOR A GOOD CORPORATE REPUTATION? A STRUCTURAL EQUATION MODELLING VIEW

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Abstract

Our study builds up a multifaceted model of corporate reputation centred around the idea that each stakeholder may perceive a slightly different dimension of the reputational phenomenon, giving the existence of a certain reference point set up by the nature of its interaction with the organization. With the methodological input provided by the structural equation method, implemented through the R software, we identify different groups of significant factors of influence, capable to explain a large degree of the reputation variance. The most relevant findings emphasize major distinctions between the impact of affective versus cognitive determinants, leading to a set of tailored recommendations for managerial practice.

Keywords: reputation measurement, latent variables, confirmatory analysis, affective and cognitive factors

JEL Classification: C38, D03, L14

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1. Introduction

The topic of (corporate) reputation can be placed with high confidence among the most vivid themes in the business literature. Even if it is tackled from the soft-narrative side, pointing out its intangibility (Rindova, Williamson & Petkova, 2010) and subjectivity, or the hard-pragmatic perspective, linking it to increased value (Halpern, 2001), performance (Bergh et al., 2010) and competitive advantage, the concept continues to inspire more and more empirical work to capture its real nature.

The paper attempts to respond to this challenge and aims to contribute to a better understanding of the drivers of corporate reputation, by addressing its highly subjective dimension through a comprehensive analysis from the perspective of structural equation modeling. The investigative tool consisted in a 46-items questionnaire, adapted in Romanian from the study of Puncheva-Michelotti (2008) and in line with the Reputation Quotient scale, considered a balanced instrument of inquiry in this area.

The main purpose was to examine the way in which the reputation of a company is perceived, given four different types of potential interaction with the respective company: from the posture of a potential buyer, from the posture of a potential investor, from the posture of a potential employee and from the posture of an individual that recommends the company to other people. The hypothesis was that answers would be significantly different depending on this particular condition.

The questionnaire was applied to a sample of 441 university students, with a business administration specialization. A confirmatory factor analysis was employed, grouping the factors in nine sets of latent variables: emotions associated to reputation or the perception on reputation work place, the customer value for the company, management and leadership, product/service differentiation, the credibility of the company, social contribution and impact on customers, ethics and social responsibility, economic performance and patriotism.

The structural equation models, explaining on average between 57% and 65% of the total variance in the reputation of the company, emphasize a different set of significant latent factors for each of the four cases: economic performance and service/product differentiation for the potential buyer case, customer value, management and leadership for the investor position, and respectively economic performance and patriotism for the last case of recommendations.

These multi-faceted results point out, first of all, to a methodological imperative of delineating a clear reference point when administering a certain reputation survey. Secondly,

they indicate the need for further exploration of the differences registered for each case and the potential cognitive biases associated with these assessments.

The paper is structured as follows: section 2 introduces the data and methodological features of our investigation, section 3 presents and discusses the main results, while section 4 concludes and sets the framework for future research.

2. Data and methodology

Data was collected by applying a questionnaire with 46 questions and answers were measured on a 5-point Likert scale. The respondents were students from the first and second year of study, within the Faculty of Business and Administration and the Faculty of Letters, University of Bucharest.

The questionnaire tested how people perceive corporate reputation according to the specific interaction they had with the company: facing a decision to buy products from that company, facing decision to invest in assets of that company, facing a decision to work for that company or a decision to promote that company to their friends. From the items, a number of latent variables were later on constructed: emotional appeal, customer value, management and leadership quality, differentiating, credibility, social contribution and customer impact, ethical and social responsibility, economic performance and patriotism. These are actually among the variables that are cited the most in the literature as the main determinants of corporate reputation (Fombrun and Gardberg, 2000; Berens and van Riel, 2004; Chun, 2005; Brammer and Pavelin, 2006; Yang et al., 2008; Radulescu, 2009; Shamma and Hassan, 2009).

The cornerstone of the research process lays on the idea that corporate reputation is determined by two types of factors: affective factors, which are assumed to be the first order latent variable and cognitive factors, which are assumed to be the second order latent variable. The baseline structural equation model presents an algorithm according to which questions were combined such as to generate the latent variables. To perform calculations for this model we will use an R package called 'lavaan' (the code sequence necessary to install the packages 'lavaan', 'semTools' and 'semPlots' is presented in appendix 1).

The first step consisted in defining a baseline model for attributing the items to the corresponding latent variable (table 1).

Table 1: R code for the baseline model

```
myModel<- "
emotional_appeal =~ v1 + v2 + v3
workplace =~ v4 + v5 + v6
customer_value =~ v8 + v9 + v10 + v11 + v12
management_leadership =~ v7 + v13 + v14 + v15 + v16 + v17 + v18 + v19 + v20
differentiating =~ v21 + v22 + v23
credibility =~ v24 + v25 + v26
social_contribution_customer_impact =~ v27 + v28 + v29 + v30
ethical_social_responsibility =~ v31 + v32 + v33 + v34 + v35 + v36 + v37
economical_performance =~ v38 + v39 + v40 + v41 + v42
patriotism =~ v43 + v44 + v45 + v46"
```

The graphical representation of the baseline model is also presented in figure 1. Further along the analysis we will treat separately the fourth types of the questionnaire: buying from a company, working for a company, investing in a company and promoting a company.

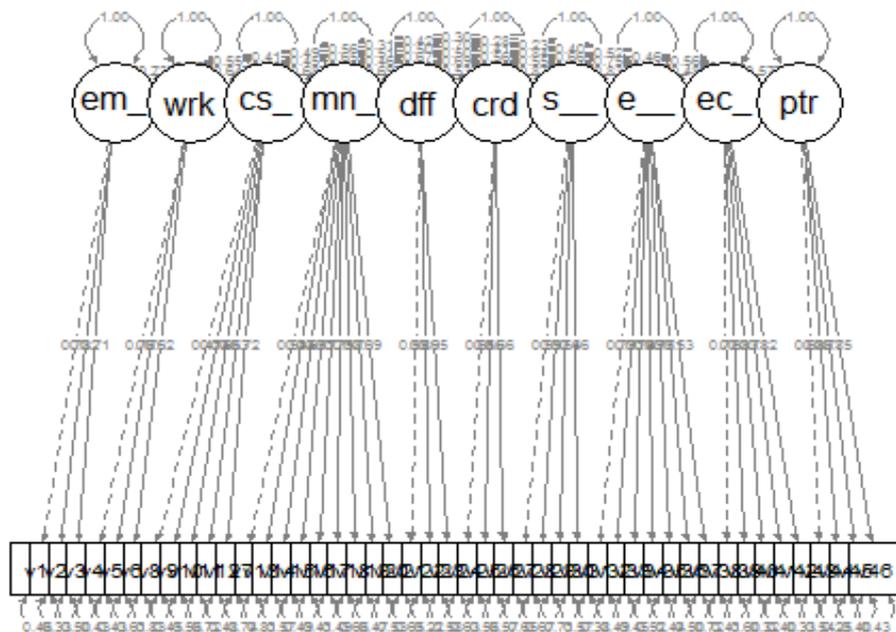


Figure 1: The graphic for the infant model for all types of questionnaire

2.1. Confirmatory factor analysis

Following the standard path of structural modelling, we start with the confirmatory analysis, using the *cfa()* function, which is used for fitting the models. The first argument of *cfa* is the model that we use in our study. The second argument is the dataset that contains the measurable (observed) variables. After we fit the model, we use the function *summary()* to determine the summary of the model.

The output of CFA consists of three parts:

- The first six lines form the header, which contains information about the normal convergence of ‘lavaan’ and the number of iterations, the number of observations used in the model, the estimator used to obtain the parameter values, the model test statistics, the degrees of freedom and p-value;
- The second part contains additional fit measures; this part begins with “Model test baseline model” and ends with the value of SRMR;
- The third part contains the parameter estimates: information about standard errors, information about the parameters included in the model – “Estimate” column which contains the parameter value, “Std. Err” column which contains the standard error for each estimated parameter, “z-value” column and “P>|z|” which contains the p-value for testing the null hypothesis (parameter is equal to zero).

In table 2 we can see the expected and obtained indicator fitting values for the four models that we test.

Table 2: CFA fitting values for baseline model

Indicator	Expected value	Value in the model(buy from a company)	Value in the model(invest in a company)	Value in the model(work for a company)	Value in the model(promote in a company)
Convergence & number of iteration		Yes, 151 iterations	Yes, 172 iterations	Yes, 139 iterations	Yes, 164 iterations
Observations	As big as possible	105	102	108	99
Chi-square	> 0.05	0.000	0.000	0.000	0.000
CFI	> 0.95	0.677	0.707	0.736	0.741
TLI	> 0.95	0.646	0.679	0.710	0.716
RMSEA	< 0.07	0.099	0.097	0.079	0.086
90% Confident Interval	(0; 1)	(0.092; 0.105)	(0.090; 0.103)	(0.072; 0.086)	(0.079; 0.093)
SRMR	< 0.08	0.098	0.098	0.087	0.086
AIC	As small as possible	11148.333	8599.412	10704.875	8624.821

An immediate observation is that the conditions are not satisfied, thus the models need additional improvements. One potential way to enhance the model is by eliminating those variables that are not significantly statistic, according to different criteria: the variables with an R-squared value smaller than 0.4 or even 0.5, the latent variables with less than three measurable variables, measurable variables that have modification indices too big etc. The resulted new models are illustrated below. In Appendix 2 we can see the values for parameter estimates in the case of baseline model. These values are written on the arrows from figure 1, too.

2.2. Structural equation modeling

In the second part of the study we will use another function from lavaan, respectively *sem()*, for fitting the full structural equation model. The internal logical of this function is similar to the *cfa()* function. In the output we obtain only the basic chi-square test statistic. In the second part of the output we can see two extra columns: “Std. lv” column where only latent variables are standardized and “Std. all” column where the latent and observed variables are standardized.

To perform *sem()* first we will complete the code for the baseline model with the following syntax (only with that variable that remain after *cfa()* fitting) for the regression for this model:

```
emotional_appeal ~ workplace + customer_value + management_leadership + differentiating
+ credibility + social_contribution_customer_impact + ethical_social_responsibility +
economical_performance + patriotism
```

We said before performing *sem()* that we improve our baseline models for all the fourth type of the questionnaire applied. For this purpose we have eliminated variables that had an R-squared value smaller than 0.5. Another way to improve the model and to eliminate those variables that does not fit is calculating modification indices and eliminating those with too big values. The R code used in this case is the following: *modindices(fit)*

The values for parameter estimates in the final model for those four types of questionnaire are written in table 3. We can see that all the conditions are satisfied so the models are well fitted.

Table 3: values of the indicators that show us the fitting of the final model for the data we have

Indicator	Expected value	Value in the model (buy from a company)	Value in the model (invest in a company)	Value in the model (work for a company)	Value in the model (promote in a company)
Observations	As big as possible	105	102	108	99
Chi-square	> 0.05	0.298	0.084	0.063	0.148
CFI	> 0.95	0.992	0.981	0.969	0.979
TLI	> 0.95	0.989	0.968	0.957	0.974
RMSEA	< 0.07	0.033	0.070	0.061	0.037
90% Confident Interval	(0; 1)	(0; 0.082)	(0; 0.123)	(0; 0.100)	(0; 0.064)
SRMR	< 0.08	0.046	0.051	0.056	0.067
AIC	As small as possible	2434.637	1329.810	2172.685	3395.625

To have a good image about our model we can construct some graphs. The R code for the SEM graphs is the following:

```
# plot resulted using semPaths function in qplots
semPaths(fit,"std",edge.label.cex = 0.5, curvePivot= TRUE, layout="tree")
# or
semPaths(fit, what='path', whatLabels='std')
```

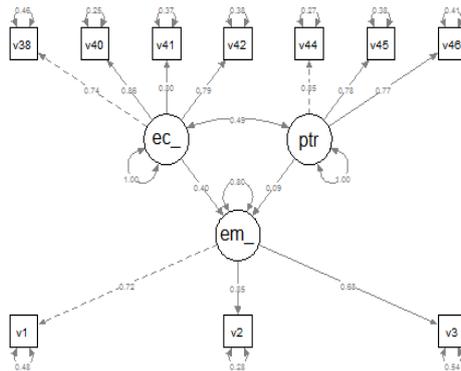


Figure 2a. Model for the 'buy from a company' case

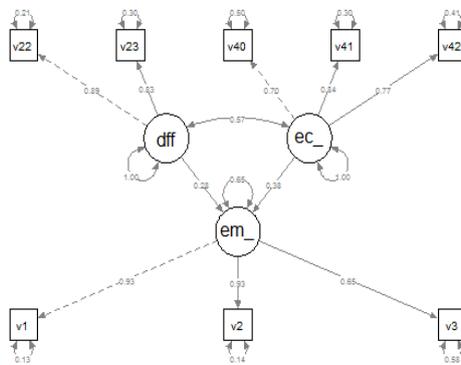


Figure 2b. Model for the 'invest in a company' case

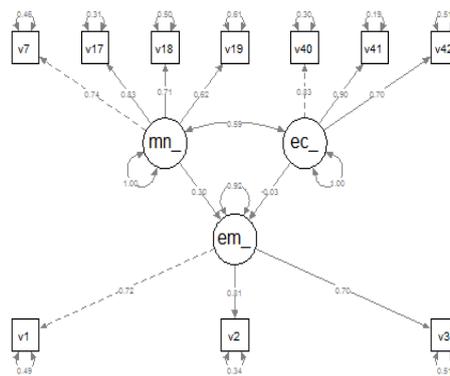


Figure 2c. Model for the 'work for a company' case

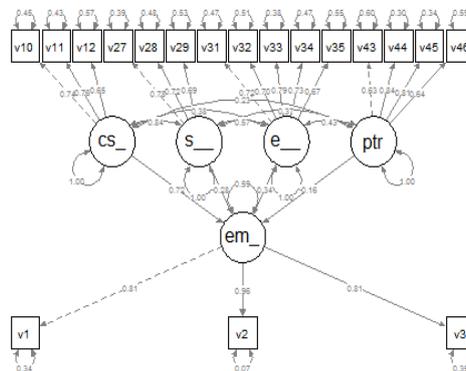


Figure 2d. Model for the 'promoting a company' case

Figure 2: Final model for the four cases: buy from a company, invest in a company, work for a company and promoting a company

3. Results and discussions

For our questionnaire and four types of interacting with a company, according to the SEM analysis we have obtained the following results:

- i. For the decision to buy from a company, emotional appeal is determined by the economic performance of the company and the patriotism;

While the first factor is a clear marker of standard economic rationality, the second one is a bit more intriguing, but not completely out of context. The idea of consumer patriotism can be understood in relation to certain campaigns promoted by the state in the last years, especially since Romania has entered the European Union, and also in light of the last financial crisis – ‘buy more Romanian products in order to help stimulate the economy’. The general phenomenon is captured under the label ‘country of origin effect’ (Dinnie, 2004),

with the related concepts of ‘made-in image’ and nationality bias. Furthermore, Chattalas et al. (2008) decompose the idea of national stereotype under two dimensions used for evaluation: competence and warmth. We believe that the results of our study may fit their envisaged framework by offering an exploring justification that reveals a significant potential for tailoring a ‘national branding’ strategy (either from the point of view of the government, thus having public policy implications, or from the managerial perspective of corporations).

- ii. For the decision to invest in a company, emotional appeal is determined by differentiating and economic performance;

This second case brings a new factor to our attention, depicting an intuitive relationship in economics: the action of investing is associated with the process of differentiation, or at least with the signal transmitted by the firms on the market. The retrieval and processing of this type of information by the consumers opens the door to numerous biases and cognitive heuristics documented by the experimental literature (Svenson, 1992; Schwarz, 2004), thus to a completely new line of research needed to assess the economic rationality of these determinants. One dimension of differentiation that was found in under studies can be traced through the link to innovation. For example, Henard and Dacin (2010) have defined the very specific concept of ‘a corporate reputation for product innovation’, which is put in play with the help of a mediating variable – consumer involvement. This argument is a perfect match with the investment action assumed in this scenario, with the logical expected results from the consumer side: paying price premiums, showing loyalty to the firm and even tolerance to failure (if the differentiation/innovation process is perceived as a real one).

- iii. For the decision to work for a company, emotional appeal is determined by management & leadership and economic performance;

The third framework is the most intuitive of all, with unchallenging results in the perception of a desirable place to work: good economic performance and good management. Even if not very new in the literature, the presence of the leadership ‘variable’ is noteworthy in relation with the decision to work for a company (Rotemberg and Saloner, 1993). This is particularly interesting since the sample is composed of students, thus ‘millennial generation’ or ‘generation Y’. Most recent studies focus on the organizational attributes that may attract this group on the labor market, mentioning features like “care about their employees as individuals” (Terjesen et al., 2007) and ‘forward-looking approach to their business’, that can be associated with a certain leadership style.

- iv. For the decision to promote a company, emotional appeal is determined by customer value, social contribution & customer impact, ethical & social responsibility and patriotism.

This last case has the richest set of influences, delineating a distinctive difference between the action of promoting a company and the previous behaviours. The results strengthen many highlights from the current literature. For example, Simcic (2007) has found a significant correlation between one of the proxies for customer value – how the firm treats its clients – and reputation. The study has a particular focus on the dynamic attributes of the determinant factors, captured in the form of different relationships. This is an argument in line with the view of Gruning and Hung (2002) that puts an equal sign between reputation management and relationship management. Further along, the fundamental role of social reputation has become undeniable (Lewis, 2003) but what strikes again as a colourful factor is patriotism. Puncheva-Michelotti and her colleagues (2014) discuss the issue in extenso by defining the concept of ‘corporate patriotism’ and examine how this acts as a source of corporate reputation. For the Romanian case, there are opinions stating that advertising may employ this factor as a mean to recover national identity (Moraru, 2013).

4. Conclusions and further research

While the spectrum of definitions for reputation is a large one, with multiple insertions especially in the last decade, we have chosen a more classical starting point for our inquiry: “reputation is a representation in the mind. It affects attitudes, which in turn affect behavior” (Bernstein, 1986). Bernstein’s point of view is simple but in the same time remains accurate and crucial for the practical implications: we may discuss a multitude of factors but the bottom line rests on how they were initially perceived by the individual, respectively how they fit into her mental model.

Summing up the results, we notice that economic performance is present in three of the four analyzed cases, suggesting the dominance of economic rationality for the formation of corporate reputation. However, the fourth case, which surpasses the paradigm of individual preferences (buy, invest and work), appears to bring a distinctive note. The action of promoting a company implies a different level of interaction with others, thus it moves the focus from the self to the social. And by doing so, the significance of economic performance drops and it is replaced by more intrinsic attributes: customer values, social contribution, and ethical aspects.

A perspective that takes into consideration the proven emphasis on context-specific factor, and thus context-specific reputations, has the clear advantage of being able to impose

more precise levers for controlling the firm's image. This is an empowering point of view for managers, compared to the very random process of building a general corporate reputation.

Certain choice architecture structures (and corresponding nudging strategies from the realm of behavioral economics) can be more easily created for smaller and better-defined environments, thus leading to better results and finally, better economic performances.

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Appendix 1. Installation sequence

```
install.packages("lavaan", dependencies = TRUE)
install.packages("semTools")
install.packages("semPlots")
library(lavaan)
library(semPlots)
library(semTools)
```

Appendix 2: CFA parameter estimates values for baseline model

Indicator	Value in the model (buy from a company)	Value in the model (invest in a company)	Value in the model (work for a company)	Value in the model (promote in a company)
Latent variable:				
emotional_appeal =~				
v1	0.733	0.930	0.715	0.824
v2	0.820	0.924	0.765	0.947
v3	0.707	0.661	0.746	0.819
workplace =~				
v4	0.756	0.810	0.553	0.868
v5	0.753	0.752	0.520	0.828
v6	0.621	0.649	0.557	0.576
customer_value =~				
v8	0.413	0.632	0.640	0.600
v9	0.744	0.735	0.756	0.752
v10	0.661	0.777	0.577	0.748
v11	0.533	0.627	0.653	0.719
v12	0.721	0.617	0.548	0.645
management_leadership =~				
v7	0.511	0.584	0.700	0.493
v13	0.435	0.676	0.360	0.467
v14	0.654	0.778	0.499	0.575
v15	0.715	0.689	0.697	0.757
v16	0.771	0.764	0.543	0.839
v17	0.713	0.650	0.761	0.721
v18	0.582	0.617	0.624	0.576
v19	0.725	0.672	0.683	0.655
v20	0.686	0.708	0.549	0.571
differentiating =~				
v21	0.593	0.763	0.651	0.601
v22	0.886	0.841	0.801	0.822
v23	0.646	0.810	0.657	0.808
credibility =~				
v24	0.610	0.705	0.612	0.684
v25	0.665	0.487	0.507	0.657
v26	0.658	0.736	0.612	0.523
social_contribution_cust omer_impact =~				
v27	0.589	0.588	0.590	0.730
v28	0.573	0.675	0.731	0.706
v29	0.540	0.683	0.745	0.701
v30	0.658	0.644	0.532	0.529

ethical_social_responsibility =~				
v31	0.790	0.594	0.637	0.673
v32	0.714	0.835	0.813	0.713
v33	0.742	0.756	0.724	0.762
v34	0.695	0.735	0.714	0.664
v35	0.749	0.704	0.876	0.746
v36	0.705	0.629	0.661	0.581
v37	0.532	0.630	0.739	0.598
economic_performance =~				
v38	0.768	0.690	0.573	0.699
v39	0.629	0.614	0.535	0.599
v40	0.827	0.687	0.820	0.759
v41	0.776	0.772	0.862	0.709
v42	0.818	0.792	0.732	0.748
patriotism =~				
v43	0.678	0.533	0.578	0.650
v44	0.865	0.682	0.811	0.816
v45	0.777	0.816	0.563	0.803
v46	0.755	0.770	0.718	0.662
Covariances:				
emotional_appeal ~~				
workplace	0.730	0.657	0.724	0.680
customer_value	0.471	0.557	0.400	0.599
mangmnt_ldrshp	0.550	0.567	0.378	0.619
differentiatng	0.413	0.528	0.069	0.413
credibility	0.494	0.505	0.415	0.549
scl_ctrbtn_c_	0.559	0.466	0.232	0.493
ethcl_scl_rspn	0.306	0.361	0.169	0.444
ecnmcl_prfrmnc	0.419	0.494	0.159	0.557
patriotism	0.296	0.140	-0.130	0.065
workplace ~~				
customer_value	0.643	0.635	0.617	0.605
mangmnt_ldrshp	0.831	0.776	0.625	0.783
differentiatng	0.454	0.561	0.298	0.544
credibility	0.655	0.675	0.703	0.652
scl_ctrbtn_c_	0.514	0.506	0.469	0.513
ethcl_scl_rspn	0.498	0.527	0.407	0.431
ecnmcl_prfrmnc	0.704	0.611	0.405	0.657
patriotism	0.276	0.191	-0.179	0.117
customer_value ~~				
mangmnt_ldrshp	0.679	0.827	0.816	0.835
differentiatng	0.628	0.773	0.419	0.693
credibility	0.465	0.711	0.566	0.733
scl_ctrbtn_c_	0.669	0.781	0.494	0.788
ethcl_scl_rspn	0.501	0.438	0.345	0.493
ecnmcl_prfrmnc	0.411	0.585	0.486	0.674
patriotism	0.228	0.390	-0.052	0.234
management_leadership ~~				
differentiatng	0.691	0.772	0.552	0.767
credibility	0.699	0.877	0.624	0.714

scl_cnrbtn_c_	0.685	0.753	0.541	0.700
ethcl_scl_rspn	0.561	0.558	0.480	0.542
ecmcl_prfrmnc	0.844	0.847	0.646	0.863
patriotism	0.396	0.321	0.068	0.330
differentiating ~~				
credibility	0.529	0.707	0.760	0.638
scl_cnrbtn_c_	0.622	0.793	0.755	0.705
ethcl_scl_rspn	0.546	0.449	0.523	0.427
ecmcl_prfrmnc	0.660	0.651	0.684	0.651
patriotism	0.522	0.453	0.564	0.393
credibility ~~				
scl_cnrbtn_c_	0.872	0.936	0.992	0.793
ethcl_scl_rspn	0.811	0.763	0.783	0.535
ecmcl_prfrmnc	0.748	0.790	0.796	0.621
patriotism	0.461	0.515	0.396	0.524
social_contribution_cust omer_impact ~~				
ethcl_scl_rspn	0.827	0.738	0.573	0.686
ecmcl_prfrmnc	0.736	0.829	0.817	0.750
patriotism	0.563	0.600	0.375	0.460
ethical_social_responsib ility ~~				
ecmcl_prfrmnc	0.478	0.599	0.563	0.553
patriotism	0.387	0.443	0.316	0.403
economic_performance ~~				
patriotism	0.565	0.284	0.386	0.396
Variances:				
v1	0.463	0.135	0.489	0.321
v2	0.327	0.146	0.415	0.104
v3	0.501	0.563	0.444	0.330
v4	0.428	0.344	0.695	0.247
v5	0.434	0.435	0.730	0.314
v6	0.615	0.579	0.689	0.668
v8	0.829	0.601	0.591	0.640
v9	0.447	0.459	0.428	0.434
v10	0.563	0.396	0.667	0.440
v11	0.716	0.607	0.574	0.482
v12	0.480	0.620	0.699	0.584
v7	0.739	0.659	0.510	0.757
v13	0.811	0.543	0.870	0.782
v14	0.572	0.395	0.751	0.669
v15	0.489	0.526	0.514	0.428
v16	0.405	0.416	0.705	0.296
v17	0.492	0.578	0.421	0.481
v18	0.662	0.619	0.611	0.668
v19	0.474	0.549	0.534	0.571
v20	0.529	0.499	0.699	0.674
v21	0.648	0.419	0.576	0.638
v22	0.215	0.292	0.358	0.324
v23	0.583	0.344	0.569	0.347
v24	0.627	0.503	0.625	0.532
v25	0.558	0.762	0.743	0.569

v26	0.568	0.458	0.625	0.726
v27	0.653	0.654	0.652	0.467
v28	0.672	0.544	0.466	0.502
v29	0.708	0.533	0.445	0.508
v30	0.566	0.585	0.717	0.720
v31	0.375	0.647	0.594	0.547
v32	0.491	0.302	0.339	0.492
v33	0.449	0.428	0.475	0.420
v34	0.517	0.459	0.490	0.559
v35	0.439	0.505	0.232	0.444
v36	0.503	0.604	0.564	0.662
v37	0.717	0.603	0.454	0.642
v38	0.410	0.524	0.672	0.512
v39	0.605	0.623	0.713	0.641
v40	0.316	0.527	0.328	0.424
v41	0.398	0.404	0.256	0.498
v42	0.331	0.373	0.465	0.440
v43	0.540	0.716	0.666	0.577
v44	0.252	0.535	0.343	0.334
v45	0.397	0.334	0.683	0.354
v46	0.430	0.406	0.484	0.562
emotional_appl	1.000	1.000	1.000	1.000
workplace	1.000	1.000	1.000	1.000
customer_value	1.000	1.000	1.000	1.000
mangmnt_ldrshp	1.000	1.000	1.000	1.000
differentiatng	1.000	1.000	1.000	1.000
credibility	1.000	1.000	1.000	1.000
scl_cntrbtn_c_	1.000	1.000	1.000	1.000
ethcl_scl_rspn	1.000	1.000	1.000	1.000
ecnmcl_prfrmnc	1.000	1.000	1.000	1.000
patriotism	1.000	1.000	1.000	1.000
R Square:				
v1	0.537	0.865	0.511	0.679
v2	0.673	0.854	0.585	0.896
v3	0.499	0.437	0.556	0.670
v4	0.572	0.656	0.305	0.753
v5	0.566	0.565	0.270	0.686
v6	0.385	0.421	0.311	0.332
v8	0.171	0.399	0.409	0.360
v9	0.553	0.541	0.572	0.566
v10	0.437	0.604	0.333	0.560
v11	0.284	0.393	0.426	0.518
v12	0.520	0.380	0.301	0.416
v7	0.261	0.341	0.490	0.243
v13	0.189	0.457	0.130	0.218
v14	0.428	0.605	0.249	0.331
v15	0.511	0.474	0.486	0.572
v16	0.595	0.584	0.295	0.704
v17	0.508	0.422	0.579	0.519
v18	0.338	0.381	0.389	0.332
v19	0.526	0.451	0.466	0.429
v20	0.471	0.501	0.301	0.326
v21	0.352	0.581	0.424	0.362

v22	0.785	0.708	0.642	0.676
v23	0.417	0.656	0.431	0.653
v24	0.373	0.497	0.375	0.468
v25	0.442	0.238	0.257	0.431
v26	0.432	0.542	0.375	0.274
v27	0.347	0.346	0.348	0.533
v28	0.328	0.456	0.534	0.498
v29	0.292	0.467	0.555	0.492
v30	0.434	0.415	0.283	0.280
v31	0.625	0.353	0.406	0.453
v32	0.509	0.698	0.661	0.508
v33	0.551	0.572	0.525	0.580
v34	0.483	0.541	0.510	0.441
v35	0.561	0.495	0.768	0.556
v36	0.497	0.396	0.436	0.338
v37	0.283	0.397	0.546	0.358
v38	0.590	0.476	0.328	0.488
v39	0.395	0.377	0.287	0.359
v40	0.684	0.473	0.672	0.576
v41	0.602	0.596	0.744	0.502
v42	0.669	0.627	0.535	0.560
v43	0.460	0.284	0.334	0.423
v44	0.748	0.465	0.657	0.666
v45	0.603	0.666	0.317	0.646
v46	0.570	0.594	0.516	0.438