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Functional Antecedent of Corporate Reputation in Universities: Developing A Measurement Tool for the Corporate Reputation Attributes (CRA)*

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Abstract

It is important for universities seeking to gain a competitive advantage to focus on reputation management like all other institutions. At this point, although university rankings are helpful, each university's management of its reputation by positioning itself according to its unique characteristics will yield more effective results.

The Reputation Quotient (RQ) Scale, which is frequently used in the literature for measurement, complicates the understanding of reputation by considering the antecedents of reputation together with the structure itself. RQ has been updated as the RepTrak System Model to separate them: RepTrak Pulse covers the measurement of emotion-based pure reputation perception, and RepTrak Index covers the measurement of reputation antecedents.

Although emotions are universal, the assumption that reputation-determining driving attributes do not differ across cultures and contexts is problematic. The main objective of the present study is to develop a measurement tool for 'corporate functions and attributes', one of the experience areas that are considered critical in the formation of corporate reputation perceptions in Turkish state universities.

The study was carried out with the exploratory sequential mixed-method design. In the first study, the experience areas that determine the reputation perceptions of the academicians were revealed, while the second study focused on developing a context-specific measurement tool.

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*In this study, the second phase of the ongoing doctoral thesis is reported.

The Corporate Reputation Attributes Scale consists of five dimensions including Working Environment and Governance, Research and Education Capacity, Social Awareness, Innovation and Social Networking and Recognition, and 24 items.

It is recommended that universities include corporate reputation management in their priority areas in their strategic plans, and that they base their strategies on current situation analyzes that they will carry out with measurement tools such as **CORPORATE REPUTATION ATTRIBUTES (CRA)**.

Keywords: Corporate Reputation, Reputation in Universities, Antecedents of Corporate Reputation, Corporate Reputation Attributes

JEL Code: I23, L14, M1

1. Introduction

While the first studies on the concept of corporate reputation date back to the 14th century, the concept of corporate reputation was first introduced to the literature within the scope of public relations discipline in the United States (USA) at the end of the 1940s. Reputation Management has become increasingly critical for the business world as it creates competitive advantage by increasing the value of the products and services offered by the institutions, attracting and retaining competent employees, creating trust and credibility, etc. (Feldman et al., 2014). This interest has included educational institutions and universities in particular over time.

The project initiated by the Carnegie Commission on Higher Education, established in 1967, can be considered the pioneer of studies on reputation in higher education. Clark Kerr, the chairman of the commission, which was established to focus on the financing problem, pointed out that a study on financing could not be carried out without comprehensive research on the structure and functions of higher education. The Commission has published many reports on different subjects, taking into account the technical data. The latest report prepared by Kerr includes the most urgent policy recommendations that can be considered as guidelines to strengthen the relationship of the higher education system with all other institutions in contemporary society and to develop corporate governance policies (Douglass, 2005; Thomas, 1974). As Alessandri et al. (2006: 258) emphasized, the classification system developed by the commission for US-based colleges and universities in 1970 to advance their own research and policy analysis led higher education institutions to follow their peers and to gain awareness of the need for differentiation for competitive performance.

After this beginning, from the end of the 1980s, universities started to make efforts for reputation management in order to find a place for themselves in the rankings of magazines such as Business Week (1988) and U.S. News & World Report (1990) (Fombrun, 2018: 351). The observed studies that are known to be

carried out on the corporate reputation of universities emerged in the 1990s. Stern School's 1993 study and Fombrun's 1996 study on the corporate reputation of MBA academies in the USA can be counted among them.

In the historical process, university rankings (USNWR (U.S. News & World Report), THE (Times Higher Education), QS (Quacquarelli Symond), ARWU (Academic Ranking of World Universities), WEBOMETRICS) developed by prioritizing different quantitative and qualitative reputation dimensions have encouraged a competitive environment that is getting stronger day by day in higher education. These rankings, which can become a goal rather than a tool, are criticized in many ways, especially their objective and methodology, validity and reliability (Adler and Harzing 2009; Gioia and Corley 2002; Longden, 2011; Safón, 2013; Teichler 2011; Trank and Rynes 2003) (Anowar et al., 2015).

A strong reputation for universities is important in terms of attracting competent academicians and students, creating resources for research projects, increasing scientific output and the quality of education (Miotto et al., 2020). The performances of academics were at the forefront of reputation studies in the early days. Initially, the quantity of studies and later the citations to the publications were considered as important reputation criteria. Universities followed different strategies to work with competent academics and to attract students. In order to strengthen their reputations, they focused on improvements in identity and image, lecturer-student interaction and strengthening of the ties between graduates and the business world.

In today's competitive conditions, it is not possible for universities, like all other institutions, to remain indifferent to the area of corporate reputation management. At this point, the critical question is 'how to carry out effective reputation management'. Vidaver-Cohen (2007) recommends that higher education institutions position themselves according to their unique characteristics by adopting a strategic approach to reputation management instead of trying to manage their reputation rankings.

The reputation of universities is greatly influenced by the experiences of their stakeholders. The collective experiences, expectations of each stakeholder group and the behavior of the university towards its stakeholders are among the important determinants of reputation (Ressler and Abratt, 2009). Therefore, having a strong reputation requires effective management of corporate reputation shaped by stakeholder experiences. It is possible to measure reputation in order to manage it effectively and to create a strong reputation with continuous follow-up based on these measurements.

2. Literature Review

The Concept of Corporate Reputation

Corporate reputation is an abstract and complex phenomenon that integrates different disciplines (Chen and Otubanjo, 2013; Chun, 2005: 92; Fombrun and Van Riel, 1997). In the definition of the concept of reputation, reflections of the different theories that each discipline takes as a basis can be seen. It is seen that there is still a confusion in the definition of the concept of corporate reputation in the literature, and this confusion is also reflected in its measurement (Wartick, 2002: 371; Barnett et al. 2006; Walker, 2010; Lange et al. 2011; Ali et al., 2014; Fombrun et al., 2015; Dowling, 2016). Making an effective definition requires taking into account the development of the concept in a historical perspective (Money et al., 2017), the efforts to eliminate similar concepts (Brown et al., 2006; Dowling, 2016), and the points that different definitions of corporate reputation emphasize (Saraeva, 2017; Veh et al., 2019).

The fact that researchers determine from which point of view they approach corporate reputation (stakeholder-centric or Company-centric), make their definitions as 'perception or asset' (Money, 2017; Saraeva, 2017) and measure reputation in accordance with the framework they have determined contributes to the literature in terms of realizing a more valid evaluation (Fombrun and Van Riel, 1997; Wartick, 2002; Berens and Van Riel, 2004; Barnett et al., 2006; Walker, 2010; Lange et al., 2011; Chen and Otubanjo, 2013; Dowling, 2016; Money, 2017; Saraeva, 2017).

In this study, reputation is considered as 'perception' from a 'stakeholder-oriented' perspective. Corporate reputation is defined as the emotions and beliefs of a stakeholder group that are formed through their observations about the institution in a certain period of time and within the scope of their interaction with the institution (Money et al., 2017; Dowling, 2016; Ponzi et al., 2011; Fombrun et al., 2015; Walker, 2010; Lange et al., 2011).

Within the scope of the study, reputation was examined in terms of academicians, one of the key internal stakeholders of universities. The reputation perception of the university where the academician works is the interpretation of the experiences he or she has had at the university. Examining these experiences will reveal how corporate reputation perceptions are shaped and which factors they are affected by.

Measurement of Corporate Reputation

There have been many efforts to measure corporate reputation. Initial evaluations of reputation were made through rankings. However, there are questions about the validity and reliability of the rankings that are still used today. The prominent criticisms are that the rankings have evaluation criteria that are affected by the size of the institution, inability to see the differences between the

units due to the fact that some of the evaluations are made over the average points and some over the best points, that universities are not differentiated according to their types and attributes, the appropriateness of the time frame of the measurement (e.g. the time interval to be selected to evaluate the effect of the citation numbers), and that it causes excessive resource allocation to only certain criteria.

Scales developed by Fombrun et al. are often used in the literature to measure reputation. Fombrun et al. (2000) developed the Reputation Quotient (RQ) Scale by referring to the items in eight different rankings (Manager Magazin (MM), Management Today (MT), Asian Business (AB), Far Eastern Economic Review (FEER), Financial Times (FT), Industry Week (IW), Fortune GMAC) based on the criticisms regarding the validity and reliability of the rankings. The structure has 6 dimensions (Emotional Appeal; Products and Services; Vision and Leadership; Workplace Environment; Social and Environmental Responsibility; Financial Performance) and includes 20 items (Fombrun et al. 2000: 253).

As Ponzi, Fombrun, and Gardberg (2011) stated, the reputation perception (the structure itself) and the antecedents of reputation (driving attributes) are not separated in the Reputation Quotient (RQ) Scale. In the literature, it is emphasized that not separating the antecedents (corporate attributes that determine or drive reputation) from the structure itself (reputation perception) makes the definition of the structure unclear. This situation complicates the understanding of how corporate reputation is formed and makes it difficult to interpret both academic and practitioner research.

Similarly, in their analysis of the Reputation Quotient (RQ) Scale on a sample of 16.054 people, Fombrun et al. determined that the items in the 'Emotional Appeal' factor were differentiated and that all other items were loaded on a single factor and named this factor as 'Rational Appeal' (Fombrun et al. 2000: 254). The pure reputation perception refers to the emotional appeal factor, while the antecedent refers to the rational appeal factor. All items of rational appeal have significant effects on emotional appeal (Fombrun, 2006: 19).

The Reputation Quotient (RQ) Scale was updated to separate the two structures and was named the RepTrak System Model (Fombrun, 2015). In the RepTrak System Model, the Emotional Appeal factor is measured by Reptrak Pulse and the rational appeal factor is measured by RepTrak Index (Vidaver-Cohen, 2007). RepTrak Pulse, which was developed by Ponzi, Fombrun and Gardberg (2011) to measure the emotional appeal factor, includes the reflective feature of reputation and explains the pure reputation perception. Naming the scale as Pulse also includes a metaphorical expression stating that it is a scale for emotions. RepTrak Index surrounds RepTrak Pulse, which represents the heart of reputation. The dimensions that make up the RepTrak Index were also updated within the scope of RQ's rational appeal and named as Products/Services, Innovation, Workplace, Governance, Citizenship, Leadership and Performance. These dimensions are

considered as functional antecedents of reputation and reveal the formative nature of reputation (Fombrun, 2015; Vidaver Cohen, 2007; 280-282; Ponzi et al. 2011: 15; Money et al. 2017:201). As it can be understood from these explanations, Reptrak System uses the RepTrak Pulse scale to measure the emotion-based general reputation perceptions of the stakeholders about the institution and uses the RepTrak Index scale to identify the antecedents (driving corporate attributes) that determine the stakeholder's reputation perception (Fombrun, 2015: 4). The RepTrak System model, which can distinguish the antecedents of reputation and results more clearly, stands out in the literature due to its applicability to different sectors and stakeholders. In this context, studies using the RepTrak Pulse scale (D'Souza et al., 2013; Newburry et al., 2014; Vidaver-Cohen and Brønn, 2013; Alloza-Losana and Carreras-Romero, 2021; Mandelli and Cantoni, 2010; Fombrun and Pan, 2006; Deephouse et al. 2016) and using the RepTrak System Model (Fombrun et al., 2015; Hoffmann et al., 2016; Sah and Abdullah, 2016) can be listed.

However, efforts to measure reputation in higher education are limited. Studies on reputation have generally been carried out by adapting Fombrun's Reputation Quotient (RQ) Scale to universities. Vidaver-Cohen (2007) discussed and suggested the use of the Reptrak System Model in a holistic manner for the first time in the university context. Unable to distinguish between reputation itself and its antecedents, RQ is open to another important problem: the assumption that reputation-determining driving attributes are consistently and similarly understood and evaluated by cross-cultural observers. This claim of universality undermines the validity of research conducted in different cultures and contexts. For this reason, it is thought that it is not appropriate to use the RQ scale (or Reptrak Index for the same reasons), which has not been developed specifically for universities, in Turkish Higher Education System that has a unique structure, especially in non-profit state universities, by being translated into Turkish. Performing measurement in this way would be to ignore the education, research and community service roles of universities and to miss the contextual perception differences regarding driving attributes. Considering the universality of emotions, it is considered that Reptrak Pulse can be used in different cultural contexts.

Based on these evaluations, it was evaluated that the development of new measurement tools sensitive to culture and context for the reputation-determining antecedents will contribute to the literature and practice.

3. Methodology

Research Objectives, Purpose and Significance of the Study

Corporate reputation is the perception that develops as a result of the experiences of different stakeholders about the institution. In the area of organizational behavior, corporate reputation is the way employees interpret their experiences. The reputation perceptions of academics, one of the key internal stakeholders of universities, constitute a very important framework for corporate reputation management. Being able to strengthen the reputation perceptions of the

academicians will also contribute to the development of the factors that determine the reputation in the eyes of other stakeholders.

In this context, how corporate reputation perceptions of academics are shaped is the main question of this study. In the light of this question, the main objective of the study is to reveal the determinants of corporate reputation perceptions of academics working at state universities in Turkey. The present study aimed to develop a measurement tool that focuses on the institutional functions, which constitute the most important experience area in shaping the corporate reputation perceptions of the academicians.

There are certain structural differences between state and foundation universities in Turkey. The scope of the present study focuses on state universities. Based on their familiarity with the area of corporate communication and reputation and their mastery of area-specific concepts, the population was limited to academicians in the Basic Field of Social-Humanities and Administrative Sciences working at state universities.

In the study, two studies were carried out with the exploratory sequential mixed-method design. The first study**[3] was designed as a qualitative study and aims to reveal the determinants of corporate reputation perceptions of academics working at state universities in Turkey. The second study has three stages, and in the first stage, an item pool is created by using the scales in the literature and evaluated with expert opinions; in the second stage, the dimensions of the conceptual structure are explored through the data collected from 248 samples with the trial application and item analysis is carried out; and in the third stage, construct validity and reliability are tested with confirmatory factor analysis on data collected from a different sample of 257 people.

STUDY 1

In this qualitative study, 3 focus group interviews were conducted with 23 academics. It was found that the experiences, which are the determinants of reputation perceptions, are shaped based on the functions of the institution, the relationship developed with the institution, and third-party opinions about the institution. The themes created were named as primary, secondary and tertiary experience areas according to the similarities/differences in stakeholder experiences and the power of control over the experience areas of the institution management. As we move from the primary experience area to the tertiary experience area, the perceptions of the stakeholders diversify and the control power of the institution in these dimensions decreases. As a result of Study 1, it was suggested that the dimension that should be primarily focused on in strengthening

[3] This study, titled "Corporate Reputation in Universities: A Qualitative Study on the Determinants of Academics' Perceptions of Reputation" prepared by Bilginer and Özer, was presented at the 9th Organizational Behavior Congress and published as an extended abstract.

the reputation be the institution functions related to the primary experience area, since it includes the similarity in the expectations of each stakeholder and the functions that the institution can control.

Table 1. Determinants of Academics' Reputation Perception

THEME	CATEGORY	CODE
1. Experience Area Related to Institutional Functions	Pioneer in the Field	Leadership Innovative
	Qualified Outputs	Education Research Service (Social Awareness)
	Environment	Working Environment Management
2. Experience Area Related to Relations with the Institution	Sharing	Being Proud To Be A Member Contribution Non-Discrimination Feeling of Belonging Shared Values
	Communication	Listening Giving Information Being Consistent
	Fair and Supportive	Adopting the Principle of Merit Appropriate Use of Power Standing Behind and Supporting
3. Experience Area Related to Opinions of Third Parties About the Institution	Stakeholder Evaluations	Appearance in the Media Stakeholder Evaluation on Corporate Promotion Rankings Word of Mouth Communication (External Stakeholder)

Source: Bilginer and Özer, 2022

Accordingly, the following study focuses on the first experience area.

STUDY 2

In this study, which was carried out to determine the determinants of the reputation perceptions of academics working at state universities, the first of the themes explored with Study 1, the Experience Area Related to Institutional Functions, was taken as a basis, and the other two themes were excluded from the scope of the study.

The study designed to develop a measurement tool for this dimension, which includes the corporate reputation attributes, and which is considered critical in strengthening the reputation, was carried out in 3 stages: (1) Creation of an item pool and submission to expert evaluation, (2) Exploration of dimensions and item analysis (3) Construct validity and reliability.

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Stage 1: Creation of an Item Pool

Measurement tools for Corporate Reputation in the literature are based on Fombrun's studies. Vidaver-Cohen (2007) examines the RepTrak System Measurement model hypothetically in the context of universities, the study of Verčič et al. (2016) explains the dimensions of academic reputation, and the study of Suomi (2014) on the dimensions of brand reputation in higher education takes the study of Vidaver-Cohen (2007) as a basis.

Since the scales developed by Fombrun et al. were prepared for profit-oriented institutions, especially the dimensions of performance, products and services should be re-evaluated within the scope of universities. Vidaver-Cohen (2007) examined the performance dimension with its intellectual, network and financial dimension. Although Verčič et al. (2016) did not name subdimensions like Vidaver-Cohen, unlike Fombrun, they included items about research and education within the performance dimension. Verčič et al. (2016) also added 6 new items about trust, reputation and prestige. The dimensions of the Suomi (2014) scale, unlike Vidaver-Cohen (2007) and Verčič et al. (2016), were not based on Fombrun's studies, and were directly associated with higher education, including teaching, research and interaction with the society dimensions. Differently, a dimension related to the awareness of the university is also included. While Vidaver-Cohen (2007) evaluated the competent graduate as a product, Suomi (2014) added a new dimension related to the current student.

In the first step, the researchers created an item pool (116 items) in which they brought together the items used in the studies of Fombrun et al. (2015); Vidaver-Cohen (2007); Suomi (2014); and Verčič et al. (2016). In the second step, the original items and their Turkish translations made by the phd candidate researcher were evaluated by 3 lecturers working in the Department of Management and Organization and members of the candidate's phd commission within the scope of their compatibility with the categories and codes included in the primary experience area in the Study 1 findings (see Bilginer and Özer, 2022). Four of the additional items in Verčič et al. (2016) were eliminated because they were out of scope in this step. In the third step, the items were translated from the source language (English) to the target language (Turkish) with a forward translation design. The translations were carried out by two language experts, a native lecturer working in Turkey and a lecturer from the School of Foreign Languages. In the fourth step, three management area experts were consulted again, the experts reviewed the equivalence of the versions in the source language and the target language, and gave feedback on the form and meaning of the items. Suggested corrections were made and items with the same meaning/similar meaning were combined in this step by selecting a single appropriate item. In the last step, the item pool was evaluated by 2 Turkish Language and Literature experts. There are 59 items in the final version of the item pool.

For the expert opinion step, the stages suggested by Hambleton et al. (Rovinelli and Hambleton 1976) were applied respectively: The experts on the subject (13 experts) were identified (1), the item pool was presented to the expert opinion (2), the expert opinions were taken in three grades (3), and the content validity was ensured by analysis with the Lawshe (1975) technique (4).

Within the scope of the evaluations of 13 experts, the content validity criterion is CVR= .538. 7 items with CVR value less than .538 were eliminated. The CVI value is calculated by taking the average of the remaining 52 items in the scale after 7 items deemed appropriate to be eliminated from the scale are removed, and the fact that the CVI value obtained as CVI = .828 is greater than the CVR value (CVI>CVR, CVI= .828 > CVR= .538) indicates that the content validity of the remaining items in the scale was ensured (Ayre and Scally 2014; Lawshe, 1975; Wilson et al., 2012).

The items that received suggestions from the experts that they should be corrected in terms of language and expression were reviewed again. The final version of 52 items about the measurement tool was checked by a language expert and the content validity phase of the Corporate Reputation Attributes (CRA) measurement tool was completed.

The questionnaire consisting of 52 items was structured in a five-point Likert scale format, including the evaluations of the respondents as 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree.

Stage 2: Exploration of Dimensions and Item Analysis

At this stage, the aim is to explore the dimensions of the measured structure by making a trial application and to test the suitability of the selected items for measurement.

An invitation to the application was sent to the universities determined in accordance with the population of academicians in the Basic Field of Social-Humanities and Administrative Sciences by email, and the link of the questionnaire was sent to those who gave positive answers, respectively. Since the data collection process over the same link continues uninterrupted after the date range determined for this research, the collected data were separated with time stamps.

There are different size guidelines in the literature on sampling in order to carry out factor analysis (Comrey, 1973; Gorsuch, 1983; Gorsuch, 1997). However, it is emphasized in the literature that these general guidelines can be misleading and that more detailed studies on sample size are required (MacCallum et al., 1999; Tabachnick and Fidell, 2001; Velicer & Fava, 1998). The most important factors in determining the adequacy of the sample size are the factor saturation, which depends on the number of items in the factor, and the common variance (communalities) values of the items (Guadagnoli & Velicer, 1988; MacCallum et al., 1999). The study was based on the sample size determination criteria suggested

by Worthington and Whittaker (2006). (a) A sample size of at least 300 is usually adequate in most cases. (b) A sample size of 150 to 200 will be probably adequate with datasets containing communalities greater than .50, or 10:1 items per factor with factor loadings of about .40. (c) A smaller sample size (100-150) may also be adequate if all communalities are .60 or greater, or have at least 4:1 items per factor and factor loadings greater than .60. (d) Sample sizes with participant-item ratios less than 100 or less than 3:1 are often inadequate (Reise et al., 2000; Thompson, 2004).

Between November 2022 and December 2022, analyzes were carried out on 248 of 326 questionnaires, which were reached by random sampling method and considered suitable for evaluation. A sample size of 248 is suitable for EFA since 52 items have communalities values greater than .50 (Worthington and Whittaker, 2006).

Common variance (Communalities) ratios must be above .50 (Beavers et al., 2013; Costello and Osborne, 2005; Hair et al., 2010; Kalaycı, 2010, Şencan, 2012; Worthington and Whittaker, 2006; Yaşlıoğlu 2017). The factor analysis was renewed by eliminating the two items because they were below .50.

Table 2. Exploratory Factor Analysis Sample

EFA		**248**	**100%**
Gender	Male Female	146 102	58,9% 41,1%
University Where He or She Works	Not specified Specified (TR-27 University)	59 189	23,8% 76,2%
Faculty Where He or She Works	Not specified Specified	16 232	6,5% 93,5%
Academic Title	Rsch. Assoc. Rsch. Assoc. Dr. Assoc. Prof. Dr. Dr. Faculty Member Lecturer Lecturer Dr. Prof. Dr. Not specified	21 39 48 58 15 16 51 -	8,5% 15,7% 19,4% 23,4% 6,0% 6,5% 20,6% -
Total Working Time as Academician	Less than 1 year 1-5 years 6-10 years 11-15 years 16 years and above	- - 82 66 100	- - 33,1% 26,6% 40,3%
Working Duration at the University	Less than 1 year 1-5 years 6-10 years 11-15 years 16 years and above	4 37 87 42 78	1,6% 14,9% 35,1% 16,9% 31,5%

Source: Authors' calculations

SPSS STATISTIC 25 was used in exploratory factor analysis (EFA). In the correlation matrix of the data, all values are greater than .30, and in terms of partial correlation, all values in the anti-image matrix are greater than .50 (Yaşlıoğlu 2017; Şencan, 2012; Kalaycı, 2010). KMO= .965 and Barlett test BTS= 11133.087 sd= 780 p= .000 are significant (Sharma, 1996). Based on these explanations, the data is suitable for factor analysis. Common variance (Principal Axis Factoring) was used in factor analysis and orthogonal varimax was chosen as the rotation method.

The factor loading is determined according to the power of the sample and test. With power= .80 and alpha= .05, the factor should take values ranging from at least .30 for a sample of 350 to at least .75 for a sample of 50 (Hair, 2010). Factor loading value between .30 and .59 is considered as medium factor loading and this range can be used for item removal (Büyüköztürk, 2002). Factor loading values of .40 or higher is a good measure for selection (Şencan 2012). According to Comrey and Lee (1992), .45 is considered appropriate and .55 is considered good, while weights of .50 and above are considered quite good (Hair et al., 2010). In this study, the factor lower cut-off was determined as .50.

In the analysis, which was completed with 40 items by eliminating 10 items with cross factor loadings, factor loadings ranged from .767 to .518. Regarding the number of factors, there are 5 factors with an eigenvalue greater than 1.

Table 3. Exploratory Factor Analysis

		Working Environment and Governance	**Research and Education Capacity**	**Social Awareness**	**Social Networking and Recognition**	**Innovation**	**Communalities**
I1	The university where I work for is fair to all its stakeholders.	.754					.800
I2	The university where I work offers equal opportunities to its employees.	.752					.800
I3	The administration at the university where I work is transparent.	.745					.762
I4	The university where I work for rewards its employees fairly.	.727					.736
I5	The university where I work for cares about the well-being of its employees.	.685					.749
I6	The university where I work for has/follows ethical principles.	.665					.734
I7	There is a positive social atmosphere at the university where I work.	.622					.652
I8	There is open and sufficient communication between all stakeholders at the university where I work.	.615					.692
I9	Conflicts are managed effectively at the university where I work.	.591					.591
I10	The university where I work is a well-organized institution.	.551					.758
I11	The university I work with meets the expectations of its stakeholders.	.548					.692
I12	The university where I work pays for the educational expenses incurred.	.532					.673

I13	The sustainable scientific research capacity of the university where I work is strong.		.621				.729
I14	The research visibility of the university where I work is high.		.621				.758
I15	The university where I work employs prestigious lecturers.		.599				.681
I16	The quality of the publications of the lecturers at the university where I work is high.		.587				.660
I17	The university where I work adopts scientific research-based teaching.		.566				.754
I18	The quantity of the publications of the lecturers at the university where I work is high.		.566				.534
I19	The university where I work provides high quality education services.		.558				.760
I20	In the university where I work, the educational qualifications of the lecturers are high.		.555				.692
I21	The university where I work produces competent graduates in their field.		.520				.677
I22	The university where I work supports social responsibility activities.			.683			.713
I23	The university where I work develops new ideas in community-centered services.			.668			.804
I24	The university where I work develops community-centered research projects.			.634			.767
I25	The university where I work plays an effective role in solving regional problems.			.633			.689
I26	The university where I work acts responsibly in the protection of the environment.			.611			.620
I27	The university where I work is an institution that creates value.			.597			.785
I28	The university where I work has a positive impact on society.			.524			.678
I29	The university where I work allows students to establish connections with the business world.				.767		.801
I30	The university where I work is involved in various business communities/networks.				.700		.758
I31	The university where I work has a strong alumni network.				.667		.684
I32	The university where I work has strong ties to the business world.				.664		.684
I33	The university where I work allows students to socialize with each other during their studies.				.558		.602
I34	The corporate promotion and media relations of the university where I work are strong.				.553		.613
I35	The university where I work has international recognition.				.518		.658
I36	The university where I work has contemporary and innovative teaching programs.					.731	.873
I37	The university where I work is an innovative institution.					.721	.817
I38	The university where I work adapts quickly to change.					.720	.824
I39	The university where I work applies innovative teaching methods.					.700	.822
I4	The university where I work is a pioneer in the development of new products and services.					.691	.812
Total Explained Variance (Eigenvalue>1)		20.090	34.207	47.369	59.817	72.219	

Source: Authors' calculations

The total variance explained by the five factors is 72.219%. The first dimension, which covers the items about the structure of the university's working environment and governance, is named as 'Working Environment and Governance'.

The second dimension includes items about the evaluations of education and research quality and it is named as 'Research and Education Capacity'. In the third dimension, there are items about the services of the university that will add value to the society and it is named as 'Social Awareness'. The fourth dimension is named as 'Social Networking and Recognition' because it consists of items about the social networking capacity of the university and its recognition. In the fifth dimension, there are items about the contemporary, innovative features and pioneering position of the university. This dimension is named as 'Innovation'.

Item Analysis

Item analyzes of 40 items constituting the 5 dimensions determined by factor analysis were performed, and the suitability of the selected items for the relevant dimension and their distinctiveness in terms of the measured feature were questioned. Detailed item analysis is presented in Table 4.

Table 4. Item Analysis

Factor	Item No	N	X	Std. Deviation	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Working Environment and Governance	I1	248	3.14	1.13	.855	.960
	I2	248	2.91	1.22	.868	.959
	I3	248	3.03	1.23	.842	.960
	I4	248	2.94	1.18	.828	.961
	I5	248	3.17	1.20	.842	.960
	I6	248	3.29	1.13	.825	.961
	I7	248	3.25	1.21	.784	.962
	I8	248	2.97	1.16	.803	.961
	I9	248	3.02	1.10	.755	.963
	I10	248	3.16	1.21	.821	.961
	I11	248	3.31	1.01	.795	.962
	I12	248	3.22	1.13	.770	.962
Research and Education Capacity	I13	248	3.32	.99	.825	.942
	I14	248	3.24	1.05	.825	.942
	I15	248	3.29	1.10	.801	.943
	I16	248	3.32	.965	.791	.944
	I17	248	3.45	1.06	.844	.941
	I18	248	3.63	.986	.683	.949
	I19	248	3.32	1.06	.841	.941
	I20	248	3.48	1.04	.807	.943
	I21	248	3.31	1.06	.776	.945
Social Awareness	I22	248	3.77	.978	.809	.936
	I23	248	3.37	1.02	.868	.931
	I24	248	3.46	1.01	.849	.933
	I25	248	3.34	1.03	.799	.937
	I26	248	3.63	.956	.764	.940
	I27	248	3.40	1.13	.850	.933
	I28	248	3.62	.987	.765	.940
Social Networking and Recognition	I29	248	3.19	1.10	.833	.909
	I30	248	3.25	1.07	.789	.914
	I31	248	2.81	1.14	.778	.915
	I32	248	2.95	1.12	.794	.913
	I33	248	3.25	1.13	.715	.921
	I34	248	3.14	1.18	.749	.918
	I35	248	2.83	1.20	.727	.920
Innovation	I36	248	3.13	1.15	.909	.946
	I37	248	3.11	1.11	.879	.951

	I38	248	3.22	1.13	.882	.951
	I39	248	3.20	1.13	.889	.949
	I40	248	2.91	1.10	.870	.953

Source: Authors' calculations

For the items in Table 4, the correlation of each item with the total (item-total Statistics) is above .50 (Field, 2006). However, the inter-item correlations are above .40 (McHorney et al., 1994, Eisen et al., 1979). Table 5 shows the reliability analyzes of 5 dimensions consisting of 40 items.

The Cronbach's Alpha coefficient was .964 for the 12 items under the 'Working Environment and Governance' factor; the Cronbach's Alpha coefficient was .949 for the 9 items under the 'Research and Education Capacity' factor; the Cronbach's Alpha coefficient was .933 for 7 items under the 'Social Awareness' factor; the Cronbach's Alpha coefficient was .927 for 7 items under the 'Social Networking and Recognition' factor, and the Cronbach's Alpha coefficient was .960 for 5 items under the 'Innovation' factor.

Table 5. Reliability Analysis of Explored Factors

	Number of Items	**Cronbach's Alpha**	**Item-Total Statistics>0.5**	**Inter-Item Correlation Matrix>0.4**
Working Environment and Governance	12	.964	.755-.868	All Items>.592
Research and Education Capacity	9	.949	.683-.844	All Items>.514
Social Awareness	7	.945	.764-.868	All Items>.612
Social Networking and Recognition	7	.927	.715-.833	All Items>.526
Innovation	5	.960	.870-.909	All Items>.794

Source: Authors' calculations

Stage 3: Construct Validity and Reliability

At this stage, confirmatory factor analysis was performed with SPSS AMOS 24 software by collecting data again (CFA) in order to question the construct validity of the developed measurement tool.

The questionnaire in the link, which was sent to those who gave positive answers from the universities determined in accordance with the universe consisting of lecturers in the Basic Field of Social-Humanities and Administrative Sciences, was revised according to the results obtained in the second stage, and the answers to the updated form were evaluated at this stage.

The criteria taken as a basis in the exploratory factor analysis stage for the sample size are also valid at this stage. Between January 2023 and February 2023,

the random sampling method was carried out on 257 questionnaires. In the 40-item CFA analysis, which is the first level multi-factor model, a sample of 100-150 is considered adequate because the communalities values are greater than .60.

Table 5. Confirmatory Factor Analysis Sample

CFA		**257**	**%100**
Gender	Male	157	%61,1
	Female	100	%38,9
University Where He or She Works	Not specified	54	%21,8
	Specified (TR-27 University)	203	%78,2
Faculty Where He or She Works	Not specified	19	%7,4
	Specified	238	%92,6
Academic Title	Rsch. Assoc.	25	%9,7
	Rsch. Assoc. Dr.	40	%15,6
	Assoc. Prof. Dr.	54	%21
	Dr. Faculty Member	66	%25,7
	Lecturer	3	%1,2
	Lecturer Dr.	7	%2,7
	Prof. Dr.	51	%23,7
	Not specified	1	%0,4
Total Working Time as Academician	Less than 1 year	3	%1,27
	1-5 years	29	%11,3
	6-10 years	61	%23,7
	11-15 years	63	%24,5
	16 years and above	101	%39,3
Working Duration at the University	Less than 1 year	3	%1,27
	1-5 years	54	%21,0
	6-10 years	64	%24,9
	11-15 years	56	%21,8
	16 years and above	80	%31,1

Source: Authors' calculations

Skewness-Kurtosis values range from -1 to +1 and the data has a normal distribution (Hair et al., 2010). The analysis was carried out by determining the indices of modification suggestions as 10 with the maximum likelihood estimation method in the Amos software.

In the second dimension, the item "The quantity of the publications of the lecturers at the university where I work is high" was removed because the factor loading was low according to Hair et al. (2010), and the analysis was repeated. The analysis was repeated by removing a total of 15 items, including 5 items in the 'Working Environment and Governance' dimension, 4 items in the 'Research and Education Capacity' dimension, and 2 items in each of the "Social Awareness", "Social Networking and Recognition" and "Innovation" dimensions with cross factor loading.

The measurement model to which the suggested modifications were applied is shown in Graph 1.

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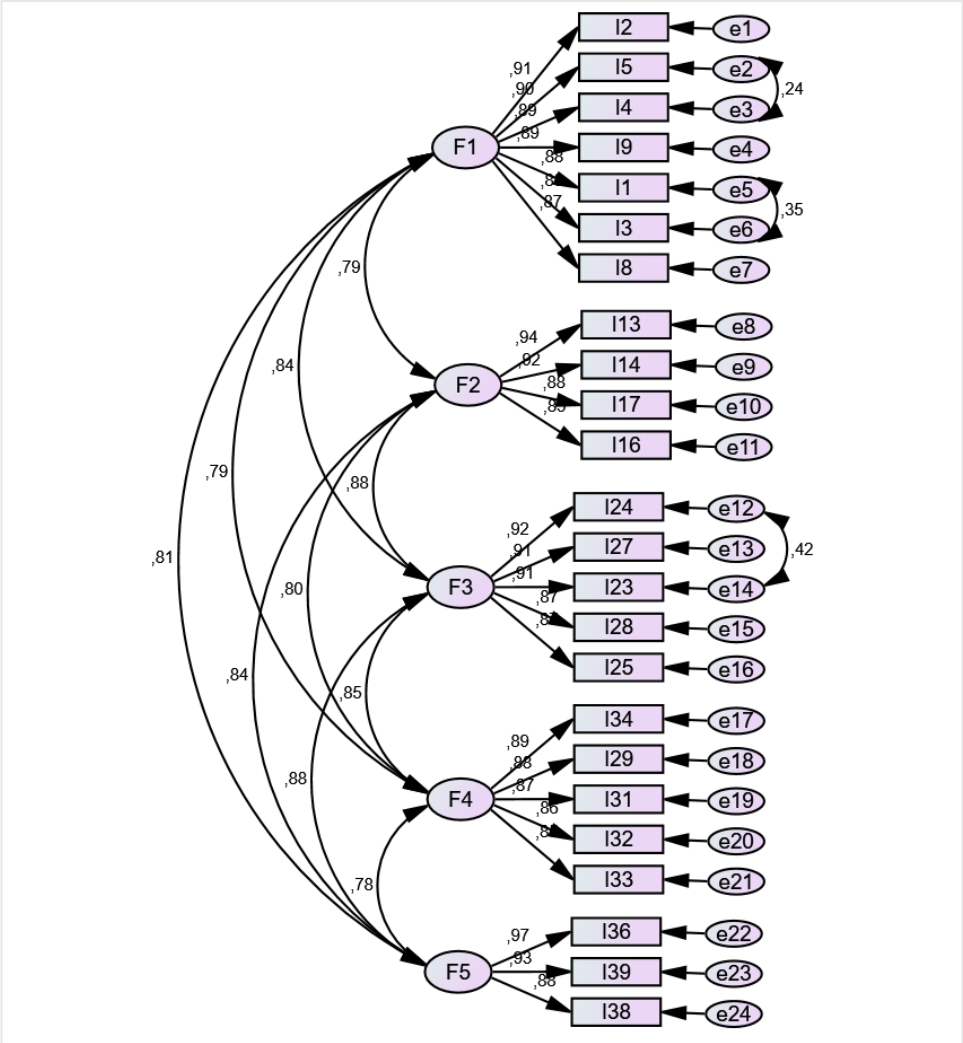
Graph 1. Corporate Reputation Attributes (CRA) Measurement Tool Model



Source: Authors' calculations

The detailed factor loadings of the items in the measurement model are shown in Table 6.

Table 6. Corporate Reputation Attributes (CRA) Factor Loadings

	Item No	β_0	β_1	S.E.	C.R.	P
Working Environment and Governance	I2	.909	1			
	I5	.898	1	.043	23.116	<.001
	I4	.891	.967	.043	22.677	<.001

	I9	.890	.954	.042	22.66	<.001
	I1	.881	.882	.040	22.034	<.001
	I3	.877	.959	.044	21.763	<.001
	I8	.870	.911	.043	21.405	<.001
Research and Education Capacity	I13	.935	1.051	.045	23.133	<.001
	I14	.919	1.056	.048	22.217	<.001
	I17	.877	1			
	I16	.855	.988	.052	19	<.001
Social Awareness	I24	.922	.932	.037	25.281	<.001
	I27	.914	1			
	I23	.908	.941	.039	24.136	<.001
	I28	.874	.884	.040	21.847	<.001
	I25	.869	.920	.043	21.538	<.001
Social Networking and Recognition	I34	.890	1			
	I29	.879	.954	.046	20.538	<.001
	I31	.865	.977	.049	19.845	<.001
	I32	.855	.958	.049	19.369	<.001
	I33	.854	.956	.050	19.294	<.001
Innovation	I36	.968	1.057	.032	32.713	<.001
	I39	.935	1			
	I38	.882	1.014	.043	23.83	<.001

Source: Authors' calculations

After the modifications, the corporate reputation attributes measurement model complies with the absolute fit and comparative fit criteria (Hair et al., 2010). The fit indices are shown in Table 7.

Table 7. Corporate Reputation Attributes (CRA) Fit Indices

The Basics of Goodness-of-Fit			
CMIN	572.37		
CMIN/df	2.39	CMIN/df < 5	**Good Fit**
Absolute Fit Indices			
RMSEA	0.07	RMSEA ≤ 0.07	**Good Fit**
GFI	0.85	0.80≤ GFI ≤0.97	**Acceptable Fit**
SRMR	0.02	SRMR ≤ 0.05	**Good Fit**
RMR	0.03	0.01≤ RMR ≤0.08	**Good Fit**
Progressive Fit Indices			
CFI	0.95	CFI ≥ 0.92	**Good Fit**
NFI	0.92	NFI ≥ 0.90	**Good Fit**
TLI	0.95	TLI ≥ 0.90	**Good Fit**
Parsimony Fit Indices			
AGFI	0.81	0.80≤ AGFI ≤0.97	**Acceptable Fit**

Source: Authors' calculations

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Convergent validity refers to the state of the constructs that should theoretically be related to each other, that is, the items within each factor that are related to each other and to the factor, while discriminant validity, on the other hand, means that there is less or no correlation between the factors in which the items, that is, the structures that should not be related theoretically, are included and the factors in which they are not included (Dowling, 2016; Yaşlıoğlu 2017).

For convergent validity, all CR values for the scale are expected to be greater than the AVE values and the AVE value to be greater than 0.5. All CR values are greater than AVE values. In addition, all AVE values are above 0.5. Therefore, the measurement tool has convergent validity. However, for discriminant validity, the square roots of the AVE values are higher than the inter-factor correlations, and all AVE values must be higher than the MSV values. Therefore, the measurement tool has discriminant validity. Analysis of the reliability of the scale shows that the scale of corporate reputation attributes is reliable. In Table 8, the findings of the validity and reliability analysis of the Corporate Reputation Attributes (CRA) measurement tool are presented.

Table 8. Corporate Reputation Attributes (CRA) Validity and Reliability

	Cronbach's Alpha	CR	AVE	MSV	MaxR(H)	Working Environment and Governance	Research and Education Capacity	Social Awareness	Social Networking and Recognition	Innovation
Working Environment and Governance	.964	.963	.789	.711	.964	**.888**				
Research and Education Capacity	.942	.943	.805	.781	.949	.791	**.897**			
Social Awareness	.955	.954	.806	.781	.956	.843	.884	**.898**		
Social Networking and Recognition	.939	.939	.755	.729	.940	.786	.798	.854	**.869**	
Innovation	.948	.950	.863	.781	.962	.807	.841	.884	.780	**.929**

Source: Authors' calculations

4. Conclusions

Corporate reputation should be made visible as one of the strategic areas in the strategic plans of universities and reputation management should be one of the corporate priorities. When corporate reputation is defined as perception and evaluated from a stakeholder-based perspective, it is accepted that reputation develops as a result of stakeholders' experiences with the institution and their interpretation. Being able to manage reputation effectively requires primarily measuring the antecedents that determine the reputation and the stakeholder evaluations related to them. Culture and context suitability of measurement tools

will provide a valid starting point. The measurement tools to be used in the evaluations may differ depending on the experience areas of the stakeholders. Academics are a critical internal stakeholder that universities should focus on when managing their reputation.

Based on these starting points, it was questioned through a qualitative study what are the experience areas that determine the reputation of academicians in state universities within the framework of the Turkish Higher Education System, and it was determined that reputation perceptions are shaped based on the functions of the institution, the relationship developed with the institution, and third-party opinions about the institution. Due to the similarity in the expectations of the lecturers and the functions that the institution can control, the primary dimension to be focused on is considered to be the primary experience area.

The scale development process focused on determining the reputation perception antecedents (Corporate Reputation Attributes -CRA-) related to the primary experience area was carried out in a process that included the creation of an item pool, content validity, exploration of dimensions and construct validity and calculation of scale reliability.

The item pool was created to include the items (116 items) in the studies of Fombrun et al. (2015); Vidaver-Cohen (2007); Suomi (2014); and Verčič et al. (2016), and at the end of a five-step process, it took its final form consisting of 59 items, and in the next step, expert opinions were analyzed according to the Lawshe technique. The items that received the suggestion for correction were rearranged and 52 items that were valid in terms of content were checked by language experts.

In the trial application where the dimensions were explored, the scale was arranged in a 5-point likert format. As a result of the EFA, the Corporate Reputation Attributes (CRA) measurement tool was explored as reliable five dimensions and a total of 40 items, explaining a total of 72.219% of the variance. The evaluations of the academics regarding the structure of the working environment and governance, which explain 20.90% of the variance, constitute the content of the first dimension (12 items); their evaluations regarding the education and research quality, which explains 14.117% of the variance, constitute the content of the second dimension (9 items); their evaluations regarding the social value-creating activities, which explains 13.162% of the variance, constitutes the content of the third dimension (7 items); their evaluations regarding the social networking capacity and recognition, which explains 12.447% of the variance, constitute the content of the fourth dimension (7 items); and their evaluations regarding contemporary, innovative and pioneering features, which explain 12.403% of the variance, constitute the content of the last dimension (5 items).

Corporate Reputation Attributes (CRA) measurement tool, as a result of the CFA analyzes carried out to confirm the explored structure, consists of 5 dimensions and 24 items, namely Working Environment and Governance (7 items), Research and Educational Capacity (4 items), Social Awareness (5 items), Social

Networking and Recognition (5 items), and Innovation (3 items). According to the model fit indices, it is seen that the model is suitable, has convergent and discriminant validity, and is reliable.

Items in the *Working Environment and Governance* dimension are consistent with the workplace, governance and leadership dimensions of Fombrun et al. (2015), the workplace climate governance and leadership dimensions of Vidaver-Cohen (2007), the workplace climate, governance and leadership dimensions of Verčič et al. (2016) and the workplace climate, leadership and governance dimensions of Suomi (2014). This dimension was explored as 12 items and confirmed by eliminating 5 items.

Items in the *Research and Education Capacity* dimension are consistent with the performance dimension in the studies of Fombrun et al. (2015) and Verčič et al. (2016). On the other hand, Vidaver-Cohen (2007) grouped the performance dimension as financial, intellectual and network. This dimension is expressed as intellectual performance in the study of Vidaver-Cohen (2007). The dimension also corresponds to the Education and Research dimensions in Suomi (2014)'s study. The Research and Education Capacity dimension was explored as 9 items and confirmed by eliminating 5 items.

Items in the *Social Awareness* dimension are consistent with the corporate citizenship dimensions of Fombrun et al. (2015), Vidaver-Cohen (2007) and Verčič et al. (2016) and the interaction with the society dimension of Suomi (2014). The Social Awareness dimension was explored as 7 items and confirmed by eliminating 2 items.

Items in the *Social Networking and Recognition* dimension are consistent with the network performance dimension of Vidaver-Cohen (2007), and the relations and co-branding and visibility dimensions of Suomi (2014). The Social Networking and Recognition dimension was explored as 7 items and confirmed by eliminating 2 items.

Items in the *Innovation* dimension are consistent with the innovation dimension of the studies of Fombrun et al. (2015), Verčič et al. (2016), Vidaver-Cohen (2007) and the uniqueness dimension of Suomi (2014). The Innovation dimension was explored as 5 items and confirmed by eliminating 2 items.

The first step in strengthening the reputation is the determination of the current situation. The application of the Corporate Reputation Attributes (**K**uruma **A**tfedilen **N**itelikler **KAN**) (KAN- *the abbreviation in Turkish language means blood*) scale can be metaphorically evaluated as a “blood analysis” used in the diagnosis phase of medical processes to determine the roadmap (treatment) by making the necessary determinations in the planning of priorities, strategies and actions in improving reputation. Based on the findings of the analysis, the

perception of the university's reputation and its place in the rankings will be able to be improved as a result of improvements such as improving the working environment and governance in accordance with stakeholder expectations, producing competent graduates and scientific contributions that create added value by increasing the education and research quality, and strengthening visible social contributions and innovative practices.

In future studies, testing the developed scale in samples representing academics from different fields of expertise and developing tools to measure academics' perceptions regarding other experience areas will contribute to completing the holistic model. It is recommended that similar studies be carried out for other stakeholder groups.

NOTES

*In this study, the second phase of the ongoing doctoral thesis is reported.

**This study, titled "Corporate Reputation in Universities: A Qualitative Study on the Determinants of Academics' Perceptions of Reputation" prepared by Bilginer and Özer, was presented at the 9th Organizational Behavior Congress and published as an extended abstract.

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