Applying the C-OAR-SE Procedure to Corporate Reputation:

Defining the Construct and Clarifying Measurement

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Abstract

Researchers acknowledge the need for validity and rigour in construct definition and scale development. This article informs the development of measurement theory by exploring the application of the C-OAR-SE scale development procedure in an empirical study that seeks the definition and measurement of the corporate reputation construct; for exploring meaning and explanation by incorporating exploratory statistical analysis in order to develop propositions that are significant at the level of meaning as well as explanation and that are generalizable. The results of the study confirm the value of Rossiter's procedure and his proposition that items must be relevant to the construct and that the rater entity is an important part of construct definition. A strong sense of grounding of research procedures (in the consumer or stakeholder language, and experience), supports the usefulness of C-OAR-SE, particularly if the procedure is to satisfy the requirement of scientific rigour.

Keywords: Corporate reputation, C-OAR-SE procedure, construct, measurement.

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Introduction

Interest is keen on the concept of CR (Highhouse, Broadfoot, Yugo, & Devendorf, 2009; Walsh & Beatty, 2007; Walsh, Mitchell, Jackson, & Beatty, 2009). CR is a strategic construct that requires monitoring and management over time (Gotsi & Wilson, 2001a). Comprehensive reviews of the CR literature (Gotsi & Wilson, 2001b) make significant contributions, yet do not solve the ambiguity surrounding the CR construct. They have not, for example, clarified the interrelationship between CR and identity, and hence the management implications of the use of those concepts. The literature indicates little agreement on how reputation and its key components should be defined (Deephouse, 2002). Knowledge about how its key components should be measured is inconsistent (Bromley, 2002). Researchers have discussed the need to provide a clear conceptual definition and to clarify conceptualization issues, for example before specifying models (Baxter, 2009; Diamantopoulos, 2009). Needs exist for clarification, definition, and understanding of the CR construct; a need exists for the development of valid scale (or index) items for effective measurement.

This research uses the following working definition of the CR construct: CR is that set of values, based on an estimation of a company, which predisposes a relevant stakeholder segment to think, feel and to behave more positively or negatively towards the organization. This definition of the CR construct specifies (1) the object (company), (2) the attribute (a set of values), and (3) the rater entity (stakeholder) (Rossiter, 2008). The theoretical assumption made here is that stakeholders/raters differ about what they consider to be the characteristics of CR. A further assumption is that the attribute "set of values" is a second-order formed

attribute: a very abstract formed attribute (the main components add to form the attribute) that has formed attributes as components (Rossiter, 2002 pp. 310; 314). The working definition departs somewhat from C-OAR-SE by being context-free (makes no reference to qualitative elements, or object specifications, that can differ across firms and business settings), rather than context-specific (contains reference to specific issues that are relevant to a specific firm, business setting or industry) (Cadogan, 2003). Context-free definitions are more conducive to scientific generalizability (Diamantopoulos, Siguaw, & Cadogan, 2008). This research seeks a more effective application of the C-OAR-SE procedure (Rossiter, 2002) for a better definition of the CR construct and as a means for more valid scale development and measurement.

The focus of this research is on the need to define the CR construct and to develop scale items that have relevance for the possible variations across stakeholder segments with respect to the components of CR and stakeholder evaluations of a company's reputation. Such a focus provides an opportunity thereby to contribute to methodology by developing a stakeholder orientation to CR construct definition and measurement.

Literature review

The Definition of CR

CR needs effective definition and measurement for its strategic management. A key theoretical issue in the literature is whether CR should be evaluated holistically, or in a stakeholder-specific way (Chun & Davies, 2006a). C-OAR-SE may help address this central theoretical issue. CR has been defined variously and has been linked to a range of different attributes. CR has been seen as one dimension of corporate image (Barich and Kotler, 1991) and as synonymous with image (Greyser, 1999). Dowling (1993) has seen CR also to be synonymous with image but as representing the total impression of a company, a perspective shared by Dutton, Dukerich & Harquail (1994) who see CR as representing outsiders' perceptions of corporate image. An analogous and a differentiated school of thought, for

example, have been identified. For the analogous school CR is seen as being synonymous with corporate image. For the differentiated school CR and image are different, yet interrelated (e.g., reputation influences image). Caruana (1997) sees the lack of clear differentiation of image and reputation as a major source of ambiguity. References in the literature to the importance of stakeholders (Carter and Deephouse, 1999; Bromley, 2001; Gotsi and Wilson, 2001) suggest the need for a stakeholder perspective.

Fombrun and Shanley (1990) express the idea that CR relates to an evaluation of a company's performance. They see CR as an output measure of corporate performance, a view shared by Caruana (1997). Schultz, Hatch and Holten Larsen (2000), who suggest that definitions of CR have changed from an output measure of corporate performance to a strategic construct. Gotsi and Wilson (2001) later incorporate the idea of CR as a strategic construct that requires monitoring and management over time. Some have qualified such a definition by reference to an assessment by stakeholders (Bromley, 2001; Carter and Deephouse, 1999; Rossiter & Bellman, 2005), an assessment that may extend over time and may not be limited to a snapshot at any one given moment in time (Gotsi and Wilson, 2001). This paper suggests that CR is not a strategic construct *per se* since if it is an evaluation by stakeholders as Gotsi and Wilson (2001) suggest then all assessments would be strategic.

This paper develops a working definition that is consistent with the orientation towards defining CR as an evaluation based on objective and subjective criteria (Bromley, 2001; Caruana, 1997; Fombrun & Shanley, 1990; Gotsi & Wilson, 2001a).

This paper asks the following research questions based on the discussion above:

RQ1: Can the C-OAR-SE procedure (Rossiter, 2002) provide a better definition of the CR construct?

RQ2: Can C-OAR-SE provide more valid scale development and measurement?

RQ3: Should CR be evaluated holistically, or in a stakeholder-specific way? A stakeholder perspective would expect to see differences between the drivers of CR for various stakeholders (Donaldson & Preston, 1995; Dowling, 2004); that CR is rater-defined.

A focus on these questions will provide an opportunity to contribute to methodology by developing a stakeholder orientation to CR construct definition and measurement and thereby to make gains in a stakeholder theory of CR.

An holistic versus a stakeholder specific approach

The point of departure for this research is a debate in the literature about whether CR should be evaluated holistically, or in a stakeholder-specific way. Two perspectives have been identified: an alignment perspective and a stakeholder perspective (Chun & Davies, 2006b). An alignment perspective sees, for example, strong congruence between external (e.g., customer) image and internal (e.g., employee) identity and values (de Chernatony, 1999; Gray & Balmer, 1998; Hatch & Schultz, 2001). A stakeholder perspective expects to see differences between the drivers of CR for various stakeholders (Donaldson & Preston, 1995; Dowling, 2004); that CR is rater-defined. What is needed therefore is to evaluate a firm's reputation, not across all its stakeholders, *en masse*, but among each of its stakeholder segments. Only by focusing the research effort on each relevant stakeholder segment will a more realistic assessment of a company's reputation be made. The theoretical role of the construct, therefore, is to ensure the relevance of measurement items; to ensure greater content validity as a result of greater correspondence between the definition of the construct and measurement. The theoretical role of measurement in the case of CR is to understand and to explain the relative assessments of value by the company's various stakeholders and to ensure greater congruence between the company's actions and stakeholder evaluations. Continuous monitoring of stakeholder evaluations in terms of their subjectively meaningful

content (affective) and objective performance criteria (rational) can help ensure the legitimacy of a company's actions (Weber, 1978).

Method

The C-OAR-SE procedure emphasizes causal theoretical justification and provides the structure for scale development in this study. The procedure emphasizes the need to ensure that a measure represents the construct in a valid way. C-OAR-SE offers a six-step approach to classification of measures and allows for reflective as well as for formative perspectives, and for single- as well as multi-item scales or indexes. The six steps are: (a) object measurement; (b) attribute measurement; (c) rater entity type, which affects the way that the precision of a score (reliability) is estimated; (d) item "stem" content (question format); (e) item "leaf" content (answer format); and (f) reporting of scores (Rossiter, 2005). The procedure, its background and development, and its relevance for this study will now be discussed in the context of the various stages of the research which include text analysis of relevant academic articles (experts), the nominal group technique (NGT) among groups of stakeholders (sample raters) and a stakeholder survey among rater/stakeholder samples relevant to a specific company. The use of exploratory factor analysis and of multiple linear regression analysis in the development of reliable, generalizable propositions is a departure from C-OAR-SE. In this study exploratory factor analysis is used for each stakeholder segment, to confirm the independence of the factors and to ensure they are suitable for subsequent regression analysis. Results of exploratory factor analysis would be predictable and unhelpful if all stakeholders are grouped together rather than looked at as distinct groups. Additionally, the study seeks to address the possibility that C-OAR-SE may create a gap by advocating against empirical validation of constructs (Finn & Kayande, 2005). The study explores the possibility that multivariate generalizability theory can integrate the Churchill and Rossiter perspectives by combining conceptual rigor and the empirical validation of

measures. Generalizability theory was developed originally (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) to liberalize classic test theory by the application of analysis of variance procedures that focus on variance components. More recently (Brennan, 2001) refinements to the definition have been provided. According to Brennan (2001 p. 267), in multivariate geralizability theory each object of measurement has multiple universal scores. Each score is associated with a condition of one or more fixed facets; a random-effects variance components design is associated with each fixed condition,

The present study, which uses text analysis within a content analysis framework, and the NGT for CR construct definition and for the identification of the core components of the construct, adopts C-OAR-SE as the theoretical base for the development and classification of measures. Table 1 shows how the C-OAR-SE procedure is integrated into the research method in such a way as to ensure rigorous critical evaluation is used to define the construct at the earlier stages in construct definition and

Table 1 here.

statistical analysis is used, not to define the construct (Rossiter, 2005) but to confirm its relevance to specific stakeholder (rater) entities.

Text Analysis

Text analysis of a large body of the academic literature on CR is used to shed light on the meaning of CR and its components. This is done through the application of the rigor of content analysis and the utilization of an algorithm designed to conduct word by word analysis of a large number of academic papers on CR.

Method

After an initial review of the CR, identity, image and brand literature, impact rankings of academic journals (Starbuck, 2005) are used for journal selection. Focused selection of

relevant peer-reviewed articles is conducted. On-line journal databases are searched to provide a bibliography of the literature published during the period 1985-2008. A total of 575 journal articles are reviewed for a specific focus on the concepts under review and 492 of those articles are text analyzed using the rigour and sensitivity of content analysis. Word-by-word analysis of academic articles is conducted and a matrix based on the frequency of key words developed. Social network software is used to provide visualization.

Results

The network employed in this calculation was the verified information network per the text analysis procedure outlined above. Flow betweenness is computed in UCINET 6 social network software (Borgatti, Everett, & Freeman, 2002). Betweenness centrality is used given its ability to account for direct and indirect ties (Cross & Cummings, 2004). Network analysis using NetDraw 1.0 (Borgatti, 2002) a specialized graphical mapping procedure is applied to the data to facilitate visualization of the relationship networks across the word-to-word community of concepts. NetDraw1.0 shows nodes to represent concepts and lines to represent ties or relations. In social network mapping the network map depicts a particular dynamic in the community by showing who goes to whom for specific information (Smith, 2005). In the Figure 1 the direction of the relationship is represented by an arrow from the chooser to each of the chosen. This directed graph connects nodes with lines that have arrowheads, indicating who is directing the tie toward whom. These are the concepts that appear to have the strongest

Figure 1 here.

relationship with CR and which are explored further in the NGT. The node ‘corporate’, for example, represents a central concept with the greatest network of relationships, while the ‘value’ node is dependent in its relationships with corporate and reputation, but does not emerge as a ‘chosen’ node. The next research step is conducted among stakeholders, using the NGT, to

explore the perspective of each stakeholder group member on the key components of CR and to provide a fuller definition of the CR construct.

Nominal Group Technique (NGT)

A theoretical assumption made earlier is that stakeholders/raters differ about what they consider to be the characteristics of CR. The contribution of the NGT is directed towards: identifying from various stakeholder groups the components of CR; clarification of these components; examining the fit between and confirming the importance of the components identified in the text analysis; definition of the CR construct, and the development of items for use in scale development. The NGT provides insights into the perceptions and constructs individuals use (Hussey & Hussey, 1997) and is more appropriate for construct definition and item development than techniques such as the Delphi Procedure and focus groups (Delbecq, Van de Ven, & Gustafson, 1975).

Method

Stakeholders are people or groups with a disposition to buy an organization's products and services, to work, invest or trade with the company (Baker & Balmer, 1997). They can include employees, customers, government regulators (Fombrun, Gardberg, & Sever, 2000) as well as managers, directors, market analysts whose assessments are important in an analysis of financial performance plus others whose evaluations of a company are likely to have implications for its financial performance (Roberts & Dowling, 2002) and its right to be in business (Ahlstrom & Bruton, 2001). Nominal group discussions are conducted and data collected cross-sectionally among eight stakeholders groups appropriate to the general nature of this stage of the investigation. Details of the samples and product/service categories used are shown in Table 2.

Table 2 here.

Group sizes satisfy established norms for nominal groups (Dunham, 1998). The study follows an accepted NGT protocol (Delbecq et al., 1975). Each stakeholder is asked for ideas on what are the components of CR. After the NGT sessions eight expert judges are provided with coding sheets and asked, for each of the specific ingredients/components of CR collected from the NGT sessions, to select the descriptor (the result of the text analysis) that best classifies that particular component.

Results

The NGT builds on text analysis by yielding lists of key components of CR thought important by each stakeholder group. The network of relationships between CR and other key concepts identified in the text analysis is further refined and identifies the following as components of CR: identity, image, brand, ethical management and leadership, performance, financial performance, products and services, corporate management and management leadership. Sixty-five target raters are interviewed in NGT sessions about the attribute (CR), and components have been identified. Eight expert judges are then asked to classify constituents/items according to the nine components (see Figure 2 below). The potential problem of some items being linked and not orthogal is thereby addressed. The perceived dimensionality of the components is not relevant; all that is needed is confirmation of a set of distinct components as decided by expert judgment (Rossiter 2002 p. 315). These main components are present in the scale for each stakeholder group because the items representing them are the defining items for the attribute. Content validity is established in that, according to expert judges (Hardesty & Bearden, 2004; Smith, Milberg, & Burke, 1996), the items are a good representation of the construct. Content validity established per the C-OAR-SE procedure is sufficient for use of the scale (Rossiter 2002 p. 311). These procedures and the conceptualization of the CR construct ensure that the components and constituents of CR and

Figure 2 here.

their concomitant scale items developed in the research are all content valid, that is to say relevant for specific stakeholder groups/raters. Thus what is considered, according to the domain sampling model, as a primary source of error, namely inadequate sampling of the domain of relevant items (Churchill, 1979, p. 68) has been addressed. This has been addressed by ensuring diligent concern for the relevance of "what lies behind the numbers" and of "constructs of the minds in response to our questions."(Gardner, 1978)

The consideration of how stakeholders think and feel about, and behave towards, a company incorporates and extends beyond the three principle approaches to the measurement of CR identified in the literature: social expectations, the different corporate personality traits that people attribute to companies, and the level of trust or distrust people have for a company (Berens and van Riel, 2004). CR incorporates essential (identity), affective/ perceptual (image, the corporate brand) as well as rational/behavioral dimensions (performance, financial performance, products and services, management leadership, corporate leadership, ethical management and leadership). The theoretical assumption made earlier that stakeholders/raters differ about what they consider to be the characteristics of CR appears to be supported by the NGT research.

The importance of construct definition

The conception, in relation to validity theory, of ontology, reference, and causality, (cf. epistemology, meaning, and correlation) has been referred to in the literature (Borsboom, Mellenbergh, & van Heerden, 2004, p. 1061) and earlier in this paper. Text analysis and the NGT have contributed to the conceptualization of the CR construct that provides a framework and specific constituents and items to be used in the qualitative phase of the research. Within the text analysis phase, the network of relationships between CR and its key components is identified. Within the NGT phase, the key components are confirmed, revised and the construct (including constituents) confirmed.

Main Study: Validation

In accordance with the C-OAR-SE procedure, items in the multiple-item scales employed are worded with intensity-free stems (e.g., 'It has a clear vision, strategy and set of values.') and minimum intensity to maximum intensity answer categories (e.g., a scale from 0 to 6 where 0 = disagree strongly and 6 = agree strongly). The response dimensions that characterize CR attributes are of degree (expressed as bipolar). The psychological zero category has been clearly identified. The verbally labelled, bipolar, single-item attitude scale, with the numbers shown only to indicate scale values is found to be appropriate (Rossiter 2002 p. 324). Attribute scales carry a box next to them for raters to indicate "don't know" when this is a legitimate response alternative to the "decidedly neutral" response that 0 implies (Rossiter 2002 p. 324). Failure to allow for these two
different responses is a large source of score error in bipolar scales (Grichting, 1994; Voss, Stem Jr., & Fotopoulos, 2000).

The stakeholder survey focuses on the CR of one company ("The Bank"). The survey is conducted across stakeholder groups and on a company that has relevance for the stakeholders and *vice versa.* The Bank satisfies the criteria of being well-know, locally-traded and whose condition according to established industry ratings is stable; the Bank is experiencing no controversies that may prejudice the research.

The possibility that CR is evaluated differently by different stakeholder groups has been identified in the literature. That CR should be measured differently has not until now been explored fully. Such a measurement approach would put a company in a position to manage its reputation effectively. Insights into differences across stakeholder groups promise to make a valuable contribution to knowledge and to theory.

Stakeholder Sample

The following stakeholders/rater are selected as relevant to The Bank's business outcomes: employees and customers; media; finance and investment specialists; CEOs of large companies and of SMEs, who are important given a high propensity among financial service firms to develop strategic alliances (Marciukaityte, Roskelley, & Wang, 2009); communications specialists, and a probability sampling approach taken to obtain a sample representative of the population for each stakeholder segment (Aaker, Kumar, & Day, 2004). Given the intention to use factor analysis, a minimum sample size of 50 observations and at least five times as many observations as variables to be analyzed (Hair, Anderson, Tatham, & Black, 1995) is assured. Sample sizes and response rates are shown in Table 3.

Table 3 here.

Questionnaire

The aspect of questionnaire design of relevance to this study meets the study's information needs to assess the reliability of a range of items, and is developed according to the C-OAR-SE procedure for scale development (Rossiter, 2002). A key informational need is to measure the strength of agreement on the value of items within each stakeholder grouping and the significance of any differences between these groupings.

The survey phase probes differences between ratings of characteristics by stakeholder group. The questionnaire needs to measure CR in a useful way: to be reliable for the measurement of each stakeholder segment's assessment of the company's reputation. Each of the six stakeholder segments sampled is asked to look at a number of different ways to describe a company and asked to express how strongly they agree – or disagree – that each description fits the way they, as a particular stakeholder group member, think about the company named in

the study. To what extent is one, or more, variables explicitly considered the criterion or dependent variable and all others the predictor or independent variable?

In a question, respondents evaluated how well the company performed in terms of each item. Only a single item was used to represent either the component or those of its constituents relevant to the stakeholder. A final, two-part question asked respondents to evaluate the reputation of the company, a) in terms of each stakeholder's stakeholder-specific perspective based on stakeholder-specific criteria, and then b) overall, in terms of each individual's evaluation so that multiple linear regression analysis could be conducted.

Analysis and Results

When engaging in exploratory or confirmatory structure analytic research, an assessment of whether the observed co-variances or correlations are within sampling a error of zero is appropriate before proceeding with further data analysis (Hoyle, 1999). Table 4 shows the bivariate correlation coefficients and their one-tailed observed significance levels for the nine components of CR. The output indicates significant positive relationships between all variables.

Table 4 here.

Cronbach's alpha values range from 0.68 to 0.97 (see Table 5). Among all six stakeholder segments no indication one item appears to be unrelated to the rest of its scale

Table 5 here.

such that the item should be removed. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett test of sphericity are employed. The KMO measure across stakeholder groups and factors ranges from 0.50 to 0.81 which has been described as acceptable and meritorious respectively (Kaiser, 1974). Coefficients in the Barlett's test are significant and not "0" and support the assumption of multivariate normality.

NGT establishes the items that belong to each factor for each stakeholder group. Exploratory analysis tests these stakeholder groups to see whether, or not, factors load as expected. Differences in evaluations are expected when each stakeholder group is considered separately. Each group factors well, each variable yields, through regression analysis (where the factors are shown to be highly correlated), the relative importance of the variables to each other group. In those cases where factor analysis was valid (i.e., in cases where a component is represented by two or more constituents, each of which was represented by a single item) principle component analysis is used to extract components.

Exploratory factor analysis is used to address the question, "to what degree do the data meet the expected structure (i.e., the CR construct)?" and to explore the structure of the correlations among the sets of stakeholder scale ratings of the reputation of The Bank by defining a set of common underlying factors, and to compare the structure with the hypothesized CR construct. The Bartlett test of sphericity is employed to test whether the observed data are a sample from a multivariate normal population in which all correlation coefficients are 0. The Bartlett test determines the appropriateness of factor analysis by testing for the presence of correlations among the variables (Norusis, 2005). Factor analysis, as a multivariate statistical technique, helps define the underlying structure of the data (Hair et al., 1995) and is used in the development of the Corporate Personality Scale (Davies & Chun, 2002) and in a study on the conceptualization of CR (Walsh & Wiedmann, 2004). Quantitative data analysis is theory driven (cf. data driven) hence exploratory factor analysis has been used to investigate and to reduce a number of correlated variables to a smaller number of independent factors; to test hypotheses about the fit of the data to a predetermined factor solution. In all cases across all components and across all stakeholder segments, a single component is extracted. This supports the validity of all components of CR derived from the literature review, text analysis and NGT research.

Principle component analysis, using an orthogonal Varimax rotation confirms the independence of the factors: in all cases they load cleanly on to a single factor and are thereby considered suitable for subsequent regression analysis. Analysis of eigenvalues for all factors across all items among stakeholders indicates that none of the factors should be excluded.

ANOVA is used to inspect the significance of differences in the group means – evaluations of the performance of The Bank on key reputation attributes. As Table 6 shows,

Table 6 here.

ANOVA reveals large differences between some of the groups; the results of the analysis of means for each of the nine components of CR across stakeholder groups shows evidence of differences between levels of agreement. Effect sizes measure the magnitude of an effect. A Hays Omega Square of $\omega^2 = .12$ is a moderate effect (Cohen, 1997). This finding confirms substantial variation among some of the means of the six stakeholder groups. The significance levels indicate this; the F value indicates roughly how strong the effect is. These are fairly large statistical differences with an Omega Square of about 0.12 and 0.13, respectively (Cohen categorizes an effect over .15 as large). A stakeholder perspective would expect to see differences between the ways stakeholder groups evaluate the reputation of a company. No evidence is found to support an alignment perspective which would expect to see congruence between external (e.g., customer) brand image and internal (e.g., employee) views and values.

Stakeholder's evaluations of the reputation of The Bank

Further analysis using ANOVA to inspect the significance of differences in the group mean reveal large differences between groups; the results of the analysis of means for each of the nine components of CR across stakeholder segments shows evidence of differences between levels of agreement. Inspection of the group means by ANOVA reveals a large difference between at least some of the groups ($F = 10.77$, $p < .001$). A Hays Omega Square of $\omega^2 = .12$

indicated a moderate effect (Cohen, 1997). This finding confirms substantial variation among some of the means of the six stakeholder groups. The significance levels indicate this, and the F values indicate roughly how strong the effect is. These are fairly large statistical differences with an Omega squared of about 0.12 and 0.13, respectively. A stakeholder perspective would expect to see differences between the ways stakeholder groups evaluate the reputation of the same company. No evidence is found to support an alignment perspective which would expect to see for example, strong congruence between external (e.g., customer) brand image and internal (e.g., employee) views and values.

Discussion and conclusion

The following discussion is conducted based on the research questions stated earlier. RQ1: Should CR be evaluated holistically, or in a stakeholder-specific way? The theoretical assumption made earlier is that stakeholders/raters differ about what they consider to be the characteristics of CR. The NGT research showed that the components and constituents of CR and their concomitant scale items developed in the research varied for specific stakeholder groups. Expert judges established the items that belong to each factor for each stakeholder group. Exploratory analysis tested these stakeholder groups to see whether, or not, factors loaded as expected. When each stakeholder group was considered separately, differences in evaluations were evident. ANOVA revealed large differences between some of the groups; the results of the analysis of means for each of the nine components of CR across stakeholder groups showed evidence of differences between levels of agreement. A stakeholder perspective would expect to see differences between the ways stakeholder groups evaluate the reputation of a company.

RQ2: Can a more effective application of the C-OAR-SE procedure (Rossiter, 2002) provide a better definition of the CR construct? The research has found an effective adaptation of the C-OAR-SE procedure for a better definition of the CR construct and as a means for more reliable

scale development and measurement. The following working definition of the abstract construct CR: CR is that set of values, based on an estimation of a company, which, in its meaningful content, predisposes a relevant stakeholder segment to think, feel and to behave more positively towards it, is borne out through the scale development procedure and through exploratory factor analysis. This definition of the construct specifies (1) the object (organization), (2) the attribute (set of values), and (3) the rater entity, yet departs from C-OAR-SE by being context-free, rather than context-specific, so that it is more conducive to scientific generalizability (Diamantopoulos et al., 2008).

RQ3: Can C-OAR-SE provide a more valid scale development and measurement? Finn and Kayande (2005) have suggested that the C-OAR-SE procedure may create a gap by advocating against empirical validation of constructs and have suggested that multivariate generalizability theory integrates the Churchill and Rossiter perspectives by requiring a balanced emphasis on conceptual rigor and on the empirical validation of constructs. While Rossiter's (2005) response has focused on the issue of whether statistics should define the construct at the expense of rational thinking at earlier stages in construct definition, this study supports the belief that once the rigor of disciplined construct definition and scale development has been applied, statistical confirmation is necessary for the development of reliable, scientific generalizations. This research has found agreement with Rossiter's (2008, 2002) proposition that the rater entity, the stakeholder segment that rates the object (company) on the attribute (expressive of a component of CR) is a fundamental element of the CR construct. Yet it has required exploratory statistical analysis to establish, empirically, that the items are content valid in the sense that they are relevant to the construct, and therefore to each stakeholder segment.

Wierenga & van Bruggen (2000, pp.72–77) have posited that the COAR-SE procedure is grounded in rationalism rather than in empiricism and that no empirical test, beyond expert agreement, can prove that C-OAR-SE produces scales that are more valid than those produced

by the traditional procedure. This has serious implications for the scientific status of C-OAR-SE in the sense that Popper (1966) has spoken of refutability, falsifiability and testability. The statement by Rossiter (2002, p. 308) that C-OAR-SE relies on logical arguments, and the concurrence of experts, based usually on open-ended input from pre-interviews with raters, is in the strictest sense a statement predicated on empiricism rather than rationalism (Ayer, 1952).

This study further concludes that multivariate generalizability theory can integrate C-OAR-SE and the mainstream social science perspectives by requiring an emphasis on conceptual rigor and on the empirical validation of constructs. The possible gap in the C-OAR-SE procedure may indeed be breached, not by the empirical validation of constructs (Finn & Kayande, 2005), but by the empirical confirmation of constructs. In this way rigorous critical evaluation is used to define the construct at the earlier stages in construct definition and statistical analysis is used, not to define the construct, but in a confirmatory manner. A stronger sense of grounding (Strauss & Corbin, 1990) of research procedures (in the consumer or stakeholder language and experience) may hold promise of greater relevance of measures for raters, of a greater value orientation (Nagel, 1994), and hence stronger content validity. Such a promise may not be too distant from what Weber has referred to as significance at the level of meaning as well as of explanation (Weber, 1978, 1994).

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Table 1. Integrating the C-OAR-SE Procedure

Steps in the C-OAR-SE Procedure		Steps Incorporated in Current Study
Construct definition:		
Initial definition in terms of object, attribute and rater entity.	⇨	Text analysis of 492 peer reviewed articles. Working definition developed.
Object classification:		
Concrete singular, abstract collective or abstract formed.	⇨	Company a concrete collective object to be rated on nine key attributes.
Attribute classification:		
Concrete, formed or eliciting.	⇨	'Set of values' classified as second-order formed with formed attributes as components. Nine components combined to produce the attributes.
Generate item parts to represent attribute (one if concrete, multiple if formed or eliciting)	⇨	Multiple items developed through NGT sessions among stakeholders.
Construct definition:		
Add object constituents/components, attribute components if necessary:	⇨	NGT sessions among stakeholders confirm text analysis re: attributes and components of CR. (See Fig. 1)
Rater identification:		
Identify rater entity: individual, set of expert judges, or sample of consumers.	⇨	Expert raters and a stakeholder/rater sample identified.
Scale formation:		
Combine object and attribute item parts as items for scale.	⇨	One particular company (object) the focus of study. All item parts relate to it.
Select appropriate rating scales for the item.	⇨	Seven verbal/numerical labels on a bi-polar scale to gauges net effective predisposition (Cacioppo, Gardner, & Berntson, 1997). A don't know option is provided.
Pre-test each item for comprehension with a pre-test sample of raters;	⇨	Items pre-tested among stakeholder/raters.
If attribute is eliciting, additionally, pre-test attribute items for unidimensionality.		Attributes not eliciting.
Randomize order of multiple items across object constituents/components and attribute components.		Randomized presentation applied across attribute components.

Table 2. Stakeholder Group Profiles and Characteristics

Stakeholder Constituent Group/Profile	*n* =	Characteristics
Investment/finance specialists	8	Investors, investment advisers, CEOs of shareholder and investor associations.
Corporate communications directors	9	Directors of corporate communications at fmcg, utilities, financial, beverage, airline, software telecoms.
Consumers	9	Consumers and employees.
CEOs/MDs	8	Heads of a variety of large concerns: health products, waste management, architecture, construction, cement, IT, property investment, and tourism.
Marketing communications academics	9	PhDs and degreed.
Business editors/editors of business journals	7	Chief Editors and editors of business and marketing publications.
Heads of PR companies	7	Managing directors of PR companies and PR consultants.
Heads of Advertising agencies	8	Vice chairman, CEOs, managing directors of ad agencies and media organizations.

Table 3. Actual Sample Sizes and Response Rates by Stakeholder Segment

Stakeholder segment	Questionnaires Sent	Actual No. of Respondents	Response %
CEOs	85	57	67
Communications specialists	145	129	89
Customers	300	62	21
Employees	115	58	50
Finance/investment specialists	125	85	68
Media	125	87	70
Total	**895**	**478**	**53**

Table 4. Bivariate Correlation Coefficients and Observed Significance

		Corp Lead	Ethics	Fin Perf	Prod/ Serve	Brand	Perform	Mgmt Lead	Identity
Corp Lead	Pearson Correlation	1	.42(**)	.45(**)	.57(**)	.83(**)	.51(**)	.46(**)	.58(**)
	Sig. (1-tailed)		.000	.000	.000	.000	.000	.000	.000
Ethics	Pearson Correlation	.42(**)	1	.52(**)	.54(**)	.43(**)	.52(**)	.47(**)	.62(**)
	Sig. (1-tailed)	.000		.000	.000	.000	.000	.000	.000
FinPerf	Pearson Correlation	.45(**)	.52(**)	1	.66(**)	.60(**)	.53(**)	.56(**)	.49(**)
	Sig. (1-tailed)	.000	.000		.000	.000	.000	.000	.000
Prod/ Serve	Pearson Correlation	.57(**)	.54(**)	.66(**)	1	.57(**)	.67(**)	.56(**)	.62(**)
	Sig. (1-tailed)	.000	.000	.000		.000	.000	.000	.000
Brand	Pearson Correlation	.83(**)	.43(**)	.60(**)	.57(**)	1	.44(**)	.70(**)	.53(**)
	Sig. (1-tailed)	.000	.000	.000	.000		.000	.000	.000
Perform	Pearson Correlation	.51(**)	.53(**)	.53(**)	.67(**)	.44(**)	1	.50(**)	.58(**)
	Sig. (1-tailed)	.000	.000	.000	.000	.000		.000	.000
Mgmt Lead	Pearson Correlation	.46(**)	.47(**)	.56(**)	.56(**)	.70(**)	.51(**)	1	.61(**)
	Sig. (1-tailed)	.000	.000	.000	.000	.000	.000		.000
Identity	Pearson Correlation	.58(**)	.62(**)	.49(**)	.61(**)	.53(**)	.58(**)	.61(**)	1
	Sig. (1-tailed)	.000	.000	.000	.000	.000	.000	.000	

** Correlation is significant at the 0.01 level (1-tailed).

Table 5. Cronbach's Alpha Values for Stakeholder Segments

Variable	CEOs	Communication Specialists	Customers	Media	Financial Investors	Employees
Image	n/a	0.92	n/a	0.96	0.73	0.84
Identity	0.86	0.90	0.77	0.96	0.68	0.83
Management Leadership	0.86	0.90	0.78	0.96	0.70	0.81
Performance	0.85	0.90	0.82	0.96	0.76	0.83
Corporate Brand	n/a	0.90	n/a	n/a	n/a	n/a
Products and Services	0.86	0.90	0.76	0.96	n/a	0.86
Financial performance	n/a	0.90	n/a	0.96	0.78	n/a
Ethical Management and Leadership	0.85	0.90	0.78	0.96	0.72	0.85
Corporate Leadership	0.85	0.90	0.84	0.96	0.74	0.86

Table 6. ANOVA of Stakeholders' Evaluations of ASB Bank Limited

		Sum of Squares	DF	Mean Square	*F*	Sig.
Image	Between Groups	487.78	3	162.59	127.59	<.001
	Within Groups	352.99	277	1.27		
	Total	840.77	280			
Identity	Between Groups	130.03	5	26.01	19.76	<.001
	Within Groups	421.15	320	1.32		
	Total	551.18	325			
Mangmt Lead	Between Groups	43.02	5	8.60	6.25	<.001
	Within Groups	456.86	332	1.38		
	Total	499.88	337			
Perform	Between Groups	66.38	5	13.28	13.08	<.001
	Within Groups	380.62	375	1.02		
	Total	446.99	380			
Prod/ Serve	Between Groups	37.03	4	9.26	9.53	<.001
	Within Groups	295.39	304	.97		
	Total	332.42	308			
FinPerf	Between Groups	8.54	2	4.27	3.89	.022
	Within Groups	208.48	190	1.10		
	Total	217.02	192			
Ethics	Between Groups	32.28	5	6.46	5.96	<.001
	Within Groups	383.53	354	1.08		
	Total	415.82	359			
Corp Lead	Between Groups	219.62	5	43.92	46.20	<.001
	Within Groups	338.45	356	.95		
	Total	558.06	361			

Figure 1. Graphical Visualization of the Structure of Relationships Between Key Concepts

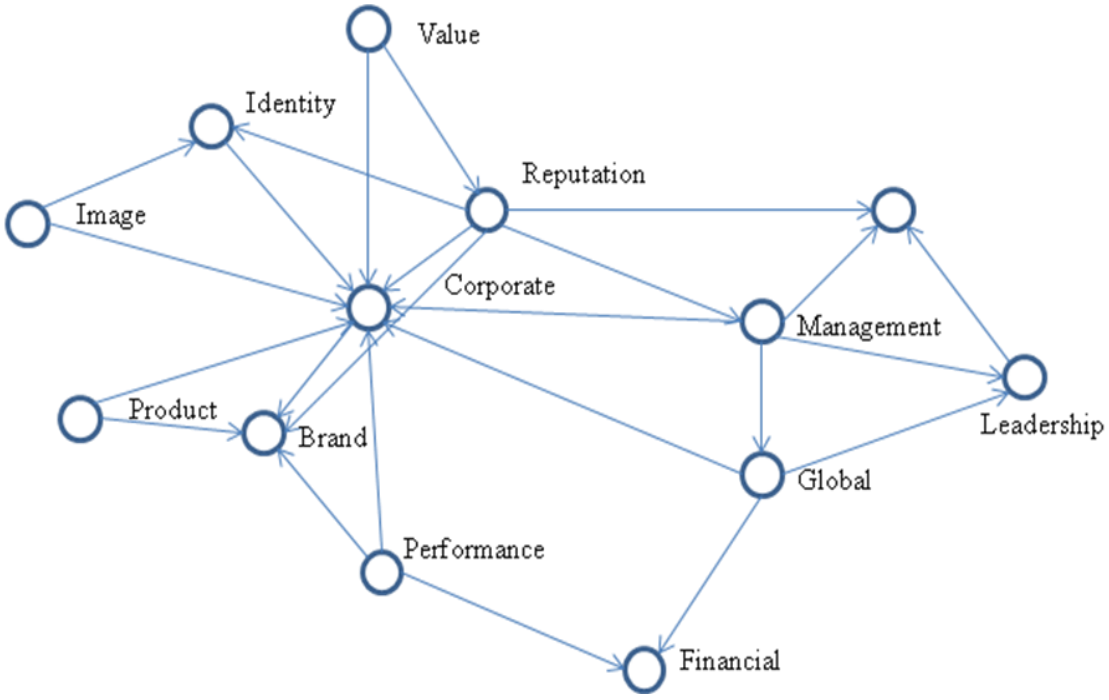

Figure 2. The CR Construct