

Variables of corporate social responsibility. A structural equation model

Methodology

The study considered the design of an instrument based on referential research, which was applied to 778 workers.

In the analysis, a structural equation model was proposed to identify the associations and relationships for corporate social responsibility.

Objective

To identify and validate the variables that condition and relate corporate social responsibility.

Introduction

The future value of organizations is conditioned by economic performance along with the satisfaction of social and stakeholder needs;

thus, achieving high levels of corporate social responsibility is a requirement for business success.

Result or conclusion 1

The evaluation of the model and its validation through confirmatory factor analysis allowed to confirm that corporate social responsibility presents a development conditioned by a multidimensional approach.

Results or conclusion 2

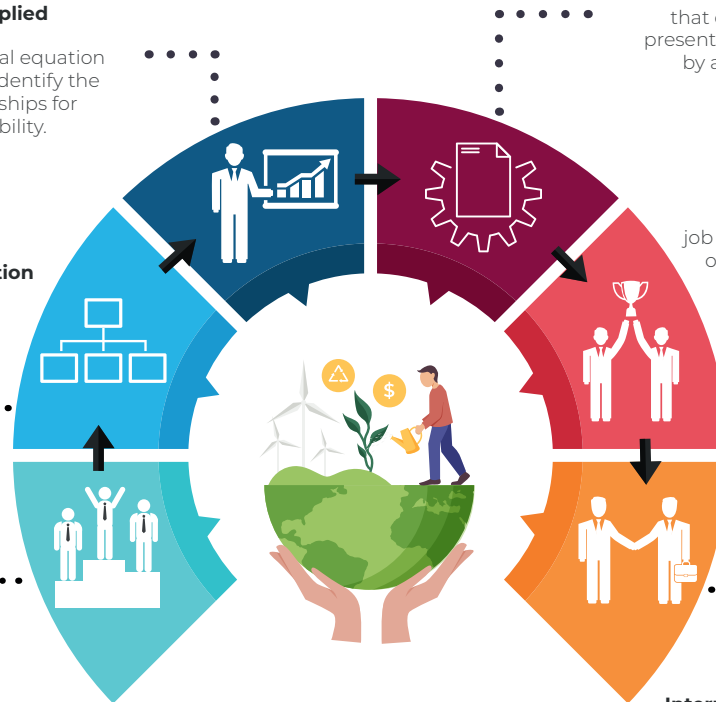
Job satisfaction shows a dual character:

on the one hand, the creation of conditions conducive to job satisfaction is a manifestation of CSR fulfillment; on the other hand, as job satisfaction increases, higher levels of CSR can be achieved.

Result or conclusion 3

Internal organizational variables that show a significant correlation level with CSR recognized by customers are observed,

such as leadership, communication, competency development, organizational values and job satisfaction.



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Variables of corporate social responsibility. A structural equation model

Variables de la responsabilidad social corporativa. Un modelo de ecuaciones estructurales

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Abstract: the future value of organizations depends on the economic performance related to their level of response to social needs and interest groups, as well as the type of relationship established with the environment in which it develops and influences. Thus, achieving high levels of corporate social responsibility (CSR) becomes a necessity for business success. This type of research is empirical. The research was aimed at identifying and validating the variables that condition and are related to CSR. The study considered in its methodology the design of an instrument based on referential research, which was applied to 778 workers. In the analysis, a structural equation model was proposed to identify associations and relationships for CSR. The evaluation of this model of structural equations and its validation through the confirmatory factorial analysis allowed to verify, as main conclusions, that corporate social responsibility presents a development conditioned by a multidimensional approach, where internal variables of the organization are manifested that show a significant correlation level with the CSR that the organization's customers recognize, such as leadership, orientation strategy, organizational design, communication, the development of labor competences, organizational values and job satisfaction, keeping a close relationship with previous research.

Keywords: corporate social responsibility, structural equations, leadership, business strategy, organizational design, communication, labor competences, organizational values, job satisfaction.

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Resumen: el valor futuro de las organizaciones viene determinado por sus resultados económicos junto con su nivel de respuesta a las necesidades de la sociedad y los grupos de interés, así como por el tipo de relación que establezcan con el ambiente en el que se desenvuelve e influye. Así, alcanzar altos niveles de responsabilidad social corporativa (RSC) se convierte en una necesidad para el éxito empresarial. Este tipo de investigación tiene un enfoque empírico. La investigación se orientó a identificar y validar las variables que condicionan y se relacionan con la RSC. El estudio consideró en su metodología el diseño de un instrumento a partir de investigaciones referenciales, el cual fue aplicado a 778 trabajadores. En el análisis se propuso un modelo de ecuaciones estructurales para identificar las asociaciones y relaciones para la RSC. La evaluación de este modelo de ecuaciones estructurales y su validación a través del análisis factorial confirmatorio permitió constatar, como principales conclusiones, que la responsabilidad social corporativa presenta un desarrollo condicionado por un enfoque multidimensional, donde las variables internas de la organización muestran un nivel significativo de correlación con la RSC reconocida por los clientes de la organización, como son el liderazgo, la orientación estratégica, el diseño organizacional, la comunicación, el desarrollo de competencias profesionales, los valores organizacionales y la satisfacción laboral, y guardan una estrecha relación con las investigaciones precedentes.

Palabras clave: responsabilidad social corporativa, ecuaciones estructurales, liderazgo, estrategia de negocios, diseño organizacional, comunicación, competencias laborales, valores organizacionales, satisfacción laboral.

Introduction and state of the art

Corporate social responsibility (CSR) is made up of strategic factors in companies aimed at improving social, economic and environmental conditions (Caro Méndez and Ojeda Hidalgo, 2019; Orjuela Córdoba, 2011). This is confirmed by the Foundation of the European Union, Latin America and the Caribbean (EU-LAC), which considers CSR:

As an ongoing commitment to act ethically and contribute to economic growth, while improving the quality of life for the workforce and their families, the local community, and society. (EU-LAC, 2019, p.11)

Considered as a strategic factor for the survival and development of organizations (Soliz Aguayo, 2017; Rodríguez Cala *et al.*, 2019; Ibarra Padilla, 2014; Carrillo Punina, 2017), CSR is not a recent phenomenon, but it has gained interest in recent years (Akyıldız, 2021; Barchiesi and Fronzetti Colladon, 2021; Bhumika *et al.*, 2022; Jouber, 2022; Tosun *et al.*, 2022; Al-Shammari *et al.*, 2022; Anlesinya and Abugre, 2022; Blasi and Sedita, 2022; Conte *et al.*, 2022; Camilleri, 2022; Kim, 2022; Karatas-Ozkan *et al.*, 2022; Madero Gómez *et al.*, 2022; Rintala *et al.*, 2022; Miethlich *et al.*, 2022; Silva *et al.*, 2022). It has become a new management for organizations worldwide, reason for which the World Business Council for Sustainable Development (WBCSD) has designed a group of company-level strategies focused on the principles of CSR (Soliz Aguayo, 2017).

The Cuban telecommunications company ETECSA offers a wide range of services to the population: free and public wifi connection areas, fixed phone services, internet data (“nauta-hogar”), internet browsing room, mobile services, e-commerce applications (“transfermóvil”), among others. It is the company’s need and social responsibility to guarantee that these telecommunications services are relevant, significant for the company and relevant for society, while maintaining a favorable attitude in their relationship with the environment. In short, it is necessary to convert long-term orientations into social objectives and needs.

The development of a socially responsible activity will allow the organization to contribute to sustainability, to increase its market share, and to obtain economic benefits; achieving the objectives oriented to technological development, innovation, structure and processes, with the purpose of creating value for customers that differentiates the company from its competitors, in order to respond in a timely and effective manner, benefiting business performance and promoting social impact (Espinoza-Santeli, 2018).

CSR activities are supported by initiatives that go beyond compliance with laws and economic issues, in which the contribution to the triple helix sustainability model is recognized: economic, social and environmental (Soliz Aguayo, 2017; Soto Alemán and Batista Torres, 2020; Ibarra Padilla, 2014; Ríos *et al.*, 2019; Ochoa Rivera and Caisa Yucailla, 2019; López Salazar *et al.*, 2017). CSR should be part of the strategic

planning of companies (Cruz Botache et al., 2020; Antúnez Sánchez and Díaz Ocampo, 2017), since, in addition to generating benefits Carrillo Punina, 2017), it constitutes a key exercise in their evolution (Duque Orozco et al., 2013). Indeed, an important element to take into account in this research.

Therefore, an organization called “socially responsible” ensures its long-term sustainability (Burgos Romero, 2018) and carries out activities aimed at satisfying the needs and expectations of its internal and external stakeholders, as well as the care and preservation of the environment (Saldarriaga Ríos, 2013; Murillo Barrera et al., 2017; Ramos Grijalva et al., 2021).

Although the CSR concept has evolved, its main fundamentals and precepts have persisted from the early 1950s to the present (Limo Silva and Peña Avilés, 2019). With the purpose of analyzing the associated trends and concepts, 99 investigations were studied. The first theoretical contributions to the CSR approach were made by Bowen (1953), who is considered the father of corporate social responsibility due to his important contributions in this area (Carroll, 1999). This author conceives social responsibility as “the new field available to businessmen to guide and make decisions based on the expectations, objectives and values of society” (Carroll, 1999, p. 270).

A search in the Scopus database, under the following criteria: TITLE-ABS-KEY (“corporate social responsibility”) and (LIMIT-TO (SUBJAREA, “SOCI”)) and (LIMIT-TO (DOCTYPE, “article”)), showed that the first publication related with corporate social responsibility dates back to 1972 with the publication of Votaw (1972). From then to date, its trend has been growing, although to a lesser extent than other areas. Initially, it was a bit slow, with only 178 publications up to 2000. At present, more than 20 000 publications are registered in this database, of which 8437 are directly related to the social sciences and 6976 to scientific articles.

Two observations are established from the analysis of Figure 1: according to the keywords, the main research is oriented towards the manifestation or result of social responsibility in the organization’s environment, delving into

aspects such as economic and social effects (Sharma and Sathish, 2022), sustainability (Batat, 2021), environmental impact (Huang, 2022), among other aspects of organizations. Similarly, it is observed that the subject is interesting in different continents and that collaborative relationships are established between them (Perera and Hewege, 2022; Pündrich et al., 2021; Rao and Tilt, 2021).

According to the available publications, the achievement of CSR is recognized from different aspects: the provision of a quality service in accordance with customer requirements (Afzali and Kim, 2021; Ahn and Lu, 2021; Akbari et al., 2020), responding to the demands of environmental conservation (Adomako and Nguyen, 2020; Alda, 2019) and the contribution to the development of the territory, in its different scales of analysis (Bhatia and Makkar, 2020; Boğan et al., 2020). Similarly, there is a group of variables in the organization whose behavior conditions the development degree of CSR, among these are: the leadership exercised by the directive and the way in which this promotes socially responsible behavior (Aftab et al., 2021; Bardos et al., 2020). Likewise, the influence of organizational values, both of managers and workers, is recognized, assumed and observed (Hoepner and Schopohl, 2020; Kim et al., 2019), as well as the influence of social values on organizational values (Kim et al., 2019).

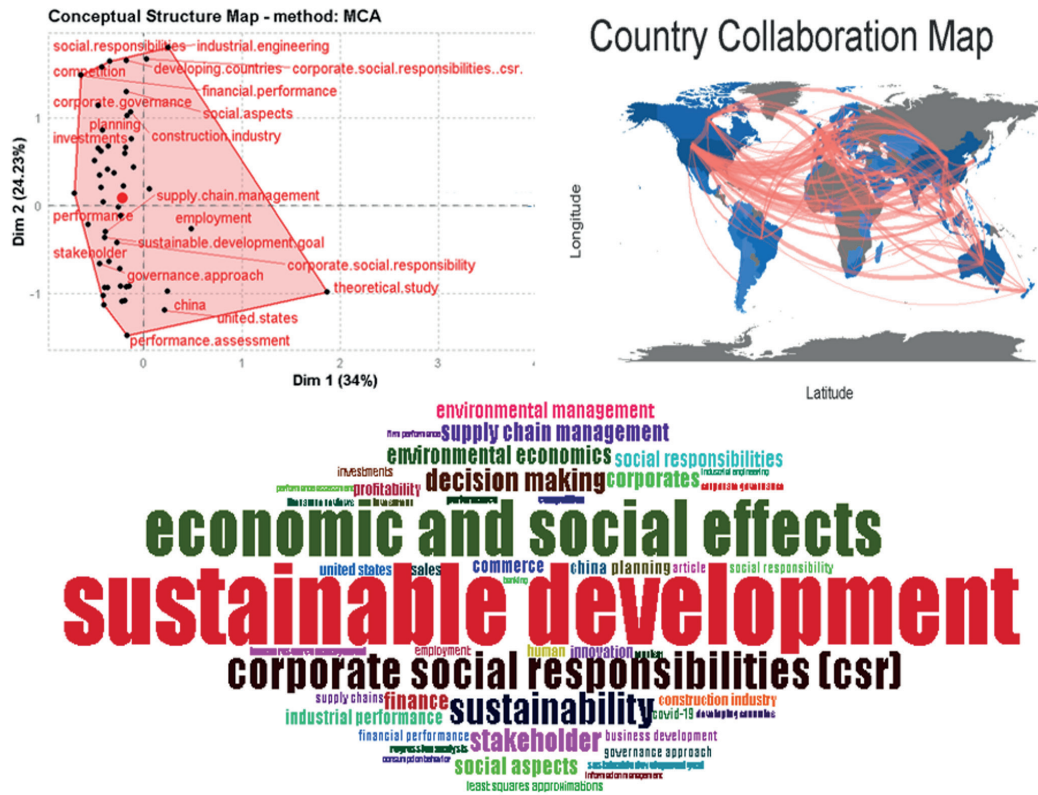
Regarding the projection of the leaders as a manifestation of their positions, there is another variable of influence: the conception and strategic conduction of the organization from the vision, mission or work objectives (Abugre and Anlesinya, 2020; Bhatia et al., 2020). Closely related, and as a way to guarantee the achievement of the guiding objectives, the conception of the organizational design applied in the organization (Donnelly and Wickham, 2020; García-Castillo et al., 2020) and the organizational communication processes (Park and Kang, 2020; Pérez et al., 2020) are also highlighted.

At a more operational level, the influence of workers can be distinguished, especially from two basic aspects: their professional competencies (Jamal et al., 2021; Osagie et al., 2019) and

their job satisfaction (Nejati *et al.*, 2020; Schaefer *et al.*, 2020). To the extent that workers are more competent and satisfied, their performan-

ce should be more favorable and consequently the company will be more responsive to social demands.

Figure 1
Characterization of trends in social responsibility-related publications



Note. Output from bibliometrix (RStudio).

Table 1 shows the variables studied from the internal perspective, which is the focus of re-

search that seeks to analyze how these variables are related to corporate social responsibility.

Table 1
Internal variables influencing corporate social responsibility

Variables	Authors
Leadership	(Bhumika <i>et al.</i> , 2022; Joubert, 2022; Tosun <i>et al.</i> , 2022)
Organizational values	(Al-Shammari <i>et al.</i> , 2022; Barchiesi and Fronzetti Colladon, 2021; Foncubierta-Rodríguez, 2022)
Strategic conception	(Akyıldız, 2021, 2021; Anlesinya and Abugre, 2022)
Organizational design	(Blasi & Sedita, 2022; Conte <i>et al.</i> , 2022; Köseoglu <i>et al.</i> , 2021)

Institutional communication	(Camilleri, 2022; Kim, 2022; LaVan <i>et al.</i> , 2022)
Work competencies	(Karatas-Ozkan <i>et al.</i> , 2022; Madero Gómez <i>et al.</i> , 2022; Rintala <i>et al.</i> , 2022)
Job satisfaction	(Miethlich <i>et al.</i> , 2022; Silva <i>et al.</i> , 2022; Trivellas <i>et al.</i> , 2021)

The following conclusions can be drawn from the above analysis: there is greater focus on the external aspects of social responsibility and its impact on the environment; the various internal variables that may influence the manifestation degree or development of social responsibility are analyzed to a lesser extent; however, no research was found, at least explicitly, where the relationship between the various internal dimensions and their relationship with social responsibility is structured. Based on this theoretical analysis, the research problem was oriented to answer the question: What correlation level exists between the variables that condition the degree of corporate social responsibility of the organization under study? To contribute to the solution of this problem, the following research objective was defined: to construct a structural equation model to identify the internal variables that impact CSR in order to design an action plan to facilitate intervention in these variables and thus favor the increase of the dependent variable.

Methodology

The methodology applied in this research responds the quantitative paradigm at a correlational level by means of a structural equation analysis related with the variables under study and the field modality.

Based on the review of the referential framework, the research activities were oriented to verify following hypotheses:

H1: There is a direct relationship between top management leadership and the CSR level recognized by external stakeholders.

H2: There is a direct relationship between organizational values and the CSR level recognized by external stakeholders.

H3: There is a direct relationship between the strategic conception and the CSR level recognized by external stakeholders.

H4: There is a direct relationship between organizational design and the CSR level recognized by external stakeholders.

H5: There is a direct relationship between the effectiveness perception of institutional communication and the CSR level recognized by stakeholders outside the organization.

H6: There is a direct relationship between job competencies and the CSR level recognized by stakeholders outside the organization.

H7: There is a direct relationship between job satisfaction and the CSR level recognized by external stakeholders.

Once the hypotheses to be verified were formulated, the following steps were applied:

Design of research instruments

Several types of research instruments were applied. The first was aimed at determining the perception of the development degree of CSR according to the criteria of the stakeholders. This instrument assessed the recognition degree of three fundamental variables: customer orientation; contribution to territorial development; and environmental impact.

In general, these three variables were evaluated through 26 questions (nine for customer orientation, seven for environmental impact and ten for contribution to territorial development), using a statement on the variable under analysis to be evaluated through a seven-classification Likert scale (strongly agree, agree, partially agree, undecided, disagree, strongly disagree, and partially disagree). The reliability of the instrument was evaluated once the instrument was applied using Cronbach's Alpha coefficient, which in general reached a value of 0.875, and in no case it showed values lower than 0.828 when eliminating the different items.

Seven instruments were designed for evaluating the independent variables, one for each independent variable, as described in Table 1. The definition of the items to be considered in

each of the variables and the face and content validity of the instruments were analyzed through work with experts. The group of experts was made up of seven doctors of science related to the field of Management, with more than ten

years of experience in academia and with experience in business consulting work. Likewise, the reliability of the instruments designed was evaluated through Cronbach's Alpha coefficient, as shown in Table 2.

Table 2

General characterization of the instruments applied by variables

Variables	Subvariables	Number of items	Cronbach's alpha of the instrument
Leadership	Attitudes	9	0.876
	Skills	9	
	Participation	10	
Strategy	Mission	5	0.882
	Vision	5	
	Objectives	5	
	Performance	5	
	Context	5	
Organizational values	Declared	14	0.925
	Shared	14	
Communication	Vertical (upward and downward)	10	0.863
	Intradepartmental	9	
	Interdepartmental	9	
Organizational design	Functions	9	0.838
	Processes	9	
	Responsibilities	10	
Competencies	Skills	6	0.817
	Training	6	
	Team work	6	
	Innovation	5	
	Commitment	5	
Job satisfaction	Work content	7	0.912
	Group work	8	
	Stimulation	7	
	Working and welfare conditions	6	

The content validity of the different instruments was assessed by consulting seven experts, all with a PhD, with more than ten years of teaching experience and with research results in the field of study.

Sample selection and characterization

The population is made up of 778 workers, composed of different strata in terms of sex, age, years of seniority in the organization and occupatio-

nal category. To define the total sample size, the expression established for these purposes for finite populations and random probability sampling was applied, establishing a sample size of 256 people.

Once the sample size was defined, a proportional stratified sampling was established according to the composition of the existing strata. Table 3 presents the general characterization of the population and the sample.

Table 3
Sample composition

Internal population		Population	%	Sample
Strata	Total	778	32.90	256
Sex	Male	352	45.24	116
	Female	426	54.75	140
Occupational category	Managers	48	6.161	16
	Technicians	191	24.55	63
	Operators	539	69.28	177
Years of experience	Less than 1 year	198	25.44	65
	From 1 to 5 years	231	29.69	76
	More than 5 years	349	44.85	115

Processing of results

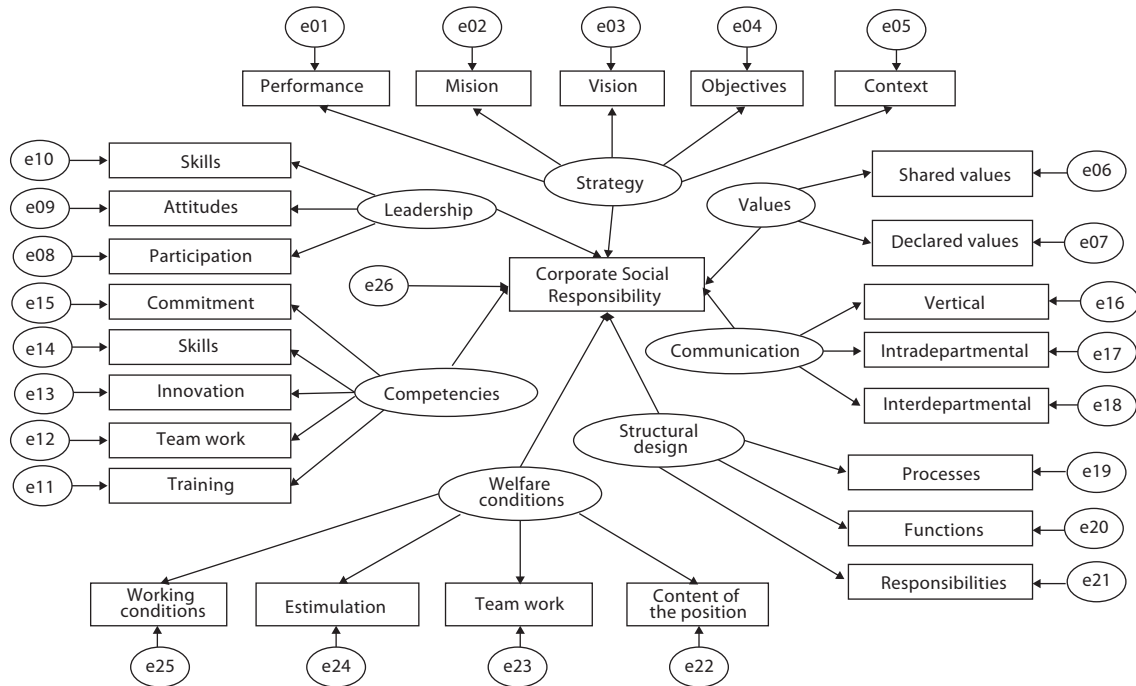
The processing of the results was divided into four steps, beginning with the behavior characterization of the variables under analysis.

Structural Equation Model Construction

Considering that there are statistical procedures that do not offer an advantageous way to diffe-

rentiate between observable and latent variables, the application of the structural equation model is justified since it allows testing theoretical models with empirical data. IBM SPSS AMOS 23 professional software was used to build the model. The proposed model (Figure 2) responds to the results found in the literature review and supports the hypotheses of the proposed research.

Figure 2
Proposed model



Model evaluation

To evaluate the model obtained, the indicators established for this purpose will be used, which are summarized in Table 4.

Table 4
Indicators for evaluating the value of the generated model

Indicators	Acronyms	Contrast value
Chi-square value/ degrees of freedom	CMIN/DF	< 3- Good
Probability level associated with the Chi-square value	Pobabilistic level	> 0.05- Significant
Comparative fit index	CFI	> 0.95- Very good
Goodness-of-fit index	GFI	> 0.95- Excellent > 0.90- Traditional > 0.80- Permissible
Adjusted goodness-of-fit index	AGFI	> 0.80- Acceptable
Mean square error of approximation	RMSEA	< 0.05- Good 0.05 a 0.10- Moderate
Probability of perfect fit	PCLOSE	> 0.05- Significant

Once the model has been identified and estimated, the fit of the data to the proposed model is evaluated, for which three alternatives are followed: fit evaluation of the global model, fit evaluation of the measurement model and fit evaluation of the structural model (Salgado Beltrán, 2009).

Model validation

The validation of the model was carried out through a confirmatory factor analysis following the recommendations of Hair *et al.* (1999).

Results

Table 5 shows the results of the general evaluation of the variables analyzed. According to the values obtained in relation to CSR, there is a good performance, mainly in relation to environmental management. The greatest difficulties are in the perception of the clients, where difficulties stand out, such as: not being able to respond to the totality of the demand, the existence of high access costs, instability of services for some residential areas, among other aspects. Likewise, a satisfactory value is obtained in terms of the community's perception, given that the institution makes important and recognized contributions to society in general.

Table 5
Status of the variables evaluated

Variables	Subvariables	Mean of the subvariable	Mean of the variable
Corporate Social Responsibility	Customers	5.6	6.1
	Community	6.1	
	Environment	6.8	
Leadership	Attitudes	5.3	5.0
	Skills	5.6	
	Participation	4.2	
Strategy	Mission	3.4	3.7
	Vision	3.4	
	Objectives	4.0	
	Performance	3.3	
	Context	4.6	
Organizational Values	Declared	5.2	4.5
	Shared	3.7	
Communication	Vertical (upward and downward)	3.9	3.7
	Intradepartmental	3.9	
	Interdepartmental	3.4	
Organizational Design	Functions	5.1	4.6
	Processes	4.7	
	Responsibilities	4.1	

Competencies	Skills	4.2	3.8
	Training	4.3	
	Team work	4.2	
	Innovation	2.8	
	Commitment	3.6	
Job satisfaction	Work content	4.1	4.3
	Group work	4.2	
	Stimulation	4.8	
	Working and welfare conditions	4.0	

When analyzing the independent variables, the individual values are lower than those of CSR, showing that CSR is achieved as a result of the systemic combination of the independent variables. The most affected variables are: strategic orientation, organizational communication and mastery of competencies.

Strategic orientation is affected by performance levels that do not show satisfactory results, as well as the low level of recognition and identification with the stated mission and vision. The greatest difficulties in communication are observed among employees from different work areas, who must coordinate their individual efforts in function of the collective result. In terms of competencies, the most affected were: innovation and commitment.

On the other hand, the best evaluated latent variables were leadership, organizational design and job satisfaction. The perception by workers of the existence of attitudes and aptitudes in their leaders that favor work and give them power over the collective is a strength for the achievement of CSR. Similarly, the recognition of a favorable organizational design is an important factor in achieving the objective.

The existence of shared values and levels of job satisfaction shows a relatively satisfactory behavior, while at the same time demonstrates the existence of reserves for improvement in relation to working conditions and the need to implement actions to guarantee that the values stated or recognized as necessary or important are really assumed and are part of the decision

criteria, as well as the behavior of the workers.

Once the state of the variables under analysis was characterized, compliance with the model presented in the methodology was evaluated to verify compliance with the research hypotheses formulated. IBM SPSS AMOS 23 software was used for this purpose. The results obtained are shown in Figure 3.

The values observed suggest that the model generated represents the influences of the latent variables found in CSR. According to the results, the variables that make up each of the dimensions have high or acceptable relationship degrees with the latent variable to which they belong, and there are significant levels of influence between them. However, the latent variables found vary in their level of influence on CSR in a generalized way.

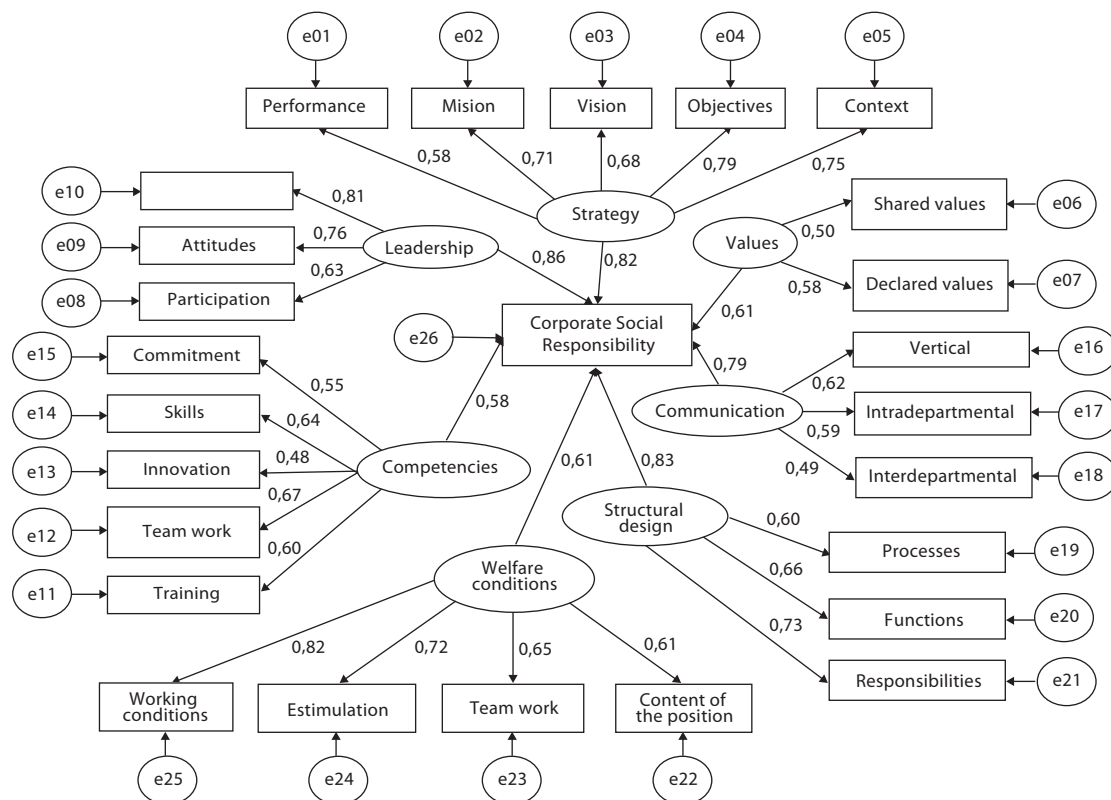
As can be seen, the correlation levels between the dimensions under analysis and corporate social responsibility as a dependent variable range from 0.58 (labor competencies H6) to 0.86 (leadership H1); the rest of the hypotheses formulated are observed with intermediate values. According to these results, the eight hypotheses formulated are fulfilled by showing significant correlation levels with the dependent variable, in accordance with the criteria of Hair *et al.* (1999).

The greatest influence is observed in the variables strategies and leadership, both of which are directly related to the activity of top management and the orientation sought to achieve in the organization. On the other hand, the variables more related to the workers, such as the

degree to which the declared values are shared, the development level of competencies and job satisfaction show values with a less significant influence on the dependent variable, although in

all cases the values exceed the value of 0.5, so it can be affirmed that the model initially projected is fulfilled under the conditions existing in the entity under study.

Figure 3
Structural equation model



The fit indicators of the model analyzed are summarized in Table 6, according to which it can be stated that the relationships between the variables constitute a good model, since all the fit indicators comply with the established para-

eters except the GFI (0.834), which only achieves a permissible value (> 0.80) and the RMSEA (0.052), whose behavior is qualified as moderate (0.05-0.10).

Table 6
Model fit indicators

Indicators	Value reached	Evaluation
CMIN/DF	2.341	Good
Probabilistic model	0.301	Significant
CFI	0.904	Very Good

GFI	0.834	Permissible
AGFI	0.809	Acceptable
RMSEA	0.073	Moderate
PCLOSE	0.058	Significant

In accordance with the methodology, a confirmatory factor analysis was applied, using IBM SPSS 23 software for this purpose. In this table, only factor loadings above 0.70 are considered. The extraction method was: principal component analysis; the rotation method: Varimax with

Kaiser normalization (convergent rotation in five iterations); the Kaiser-Meyer-Olkin sample adequacy measure equal to 0.876; Bartlett's sphericity test. Chi-square equal to 1 568.672, with Sig.:0.000; and total variance explained equal to 75.791.

Table 7
Rotated Component Matrix

Variables	F1	F2	F3	F4
Attitudes	0.082	0.324	0.241	0.759
Skills	0.322	0.345	0.308	0.689
Participation	0.157	0.286	0.272	0.631
Mission	0.054	0.074	0.171	0.807
Vision	-0.141	0.061	0.247	0.748
Objectives	-0.321	-0.114	0.418	0.712
Performance	0.114	0.225	0.171	0.694
Context	0.093	0.232	0.341	0.716
Declared	0.214	0.314	0.753	0.230
Shared	0.182	0.315	0.716	0.156
Vertical (upward and downward)	0.242	0.714	0.175	0.185
Intradepartmental	0.313	0.739	0.253	-0.038
Interdepartmental	0.294	0.744	0.297	0.019
Functions	0.204	0.813	0.150	-0.062
Processes	0.321	0.717	0.321	-0.015
Responsibilities	0.366	0.749	0.150	0.137
Skills	0.687	0.262	0.196	-0.205
Training	0.794	0.263	0.162	-0.176
Team work	0.825	0.316	0.157	0.214
Innovation	0.704	0.136	0.142	-0.209
Commitment	0.773	0.165	0.178	0.235
Work content	0.163	0.167	0.747	0.923
Group work	0.257	0.327	0.751	-0.136
Stimulation	0.147	0.301	0.816	0.156
Working and welfare conditions	0.173	0.344	0.723	0.119

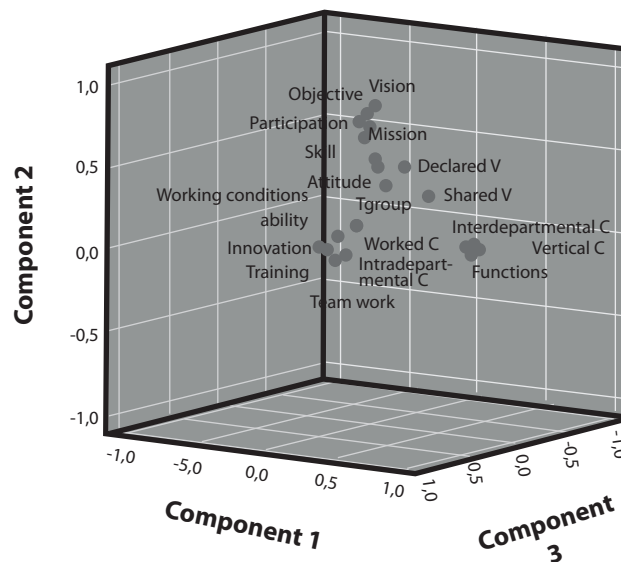
According to the values of the validity indicators of the factor analysis, it is satisfactory. The principal component extraction method and the varimax rotation method were applied. The KMO value showed a high value, relatively close to unity, and Bartlett's sphericity test showed a satisfactory validity significance.

As can be seen, the observed variables are distributed in four factors, showing a relatively expected grouping due to their level of relationship. According to the factor loadings, factor 1 groups the variables related to workers' competencies (skills, training, teamwork, innovation and commitment). Factor 2 combines the variables of

organizational design (functions, processes and responsibilities) and communication (vertical, inter- and intra-departmental), which by their very nature are directly interrelated according to the criteria of Robbins and Judge (2009). As in factor 3, the variables related to job satisfaction (job content, group work, stimulation and working conditions) and the values (stated and shared) of the workers are grouped together. Finally, the fourth factor includes variables related to top management (attitudes, skills, participation) in terms of strategic conception and leadership (mission, vision, objectives, performance and context). Figure 4 shows the rotated component graph.

Figure 4

Component chart of rotated space components



However, it should be noted that the grouping of the factor analysis did not show the same distribution in factors or dimensions that was modeled in the structural equation analysis. However, the same variables were included in both analyses, and in the factor analysis, despite variations in the number of factors, variables of the same dimension were grouped in the same factor. Therefore, despite the differences, it can be concluded that the factor analysis corroborates the structural equation model.

Discussion and conclusions

The results observed in the study are closely related to previous research, corroborating that corporate social responsibility is a variable whose development is conditioned by a multidimensional approach where variables related to top management are observed, such as leadership (Aftab *et al.*, 2021; Bardos *et al.*, 2020), the strategic conception of the organization (Abugre and Anlesinya, 2020; Bhatia *et al.*, 2020) and the orga-

nizational design implemented to achieve these strategic objectives (Donnelly and Wickham, 2020; García-Castillo *et al.*, 2020), as well as the organizational communication processes (Park and Kang, 2020; Pérez *et al.*, 2020) that derive from the materialization of the implemented organizational design and the action of the leaders.

The structure observed in the structural equation model, the evaluation indicators that corroborate its validity and its validation through confirmatory factor analysis allow to corroborate that corporate social responsibility is a variable that manifests itself positively from the influence and interaction of a group of internal dimensions. In this sense, the model recognizes that the variable that shows the highest level of relationship with the dependent variable is leadership, a result that corresponds to the previous results.

Likewise, at a more general and operational level, corporate social responsibility is also impacted by variables associated with workers, such as their values (Hoepner and Schopohl, 2020; Kim *et al.*, 2019), as well as the influence of social values on organizational values (Kim *et al.*, 2019), their level of job satisfaction (Nejati *et al.*, 2020; Schaefer *et al.*, 2020) or the development of job competencies (Jamal *et al.*, 2021; Osagie *et al.*, 2019). All of the above allowed corroborating the research hypotheses.

The influence of leadership on the dependent variable was the most significant with a correlation of 0.86. Leadership is the most investigated variable from the internal perspective regarding social responsibility, corroborating the approaches of previous research (Bhumika *et al.*, 2022; Jouber, 2022; Tosun *et al.*, 2022); additionally, a high correlation level was observed for the strategic conception variable, which is an indirect expression of leadership orientation; this result also agrees with other research (Akyıldız, 2021; Anlesinya and Abugre, 2022). Organizational design is the third dimension with the greatest influence, and the organizational structure is usually adapted to the strategic conception; other previous researches were identified in the state of the art, corroborating this result (Blasi and Sedita, 2022; Conte *et al.*, 2022; Köseoglu *et al.*, 2021).

Organizational values and institutional communication were two other dimensions that

showed significant correlation levels. Both are influenced by the behavior of the dimensions previously analyzed and have been the subject of analysis and corroboration of their influence by previous research (Barchiesi and Fronzetti Colladon, 2021; Camilleri, 2022; Kim, 2022; LaVan *et al.*, 2022; Miethlich *et al.*, 2022; Al-Shammari *et al.*, 2022; Foncubierta-Rodríguez, 2022).

With a less significant correlation value but still significant are the development of job satisfaction and job competencies, variables with less recognition and depth in previous research (Trivellas *et al.*, 2021; Karatas-Ozkan *et al.*, 2022; Madero Gómez *et al.*, 2022; Rintala *et al.*, 2022; Miethlich *et al.*, 2022; Silva *et al.*, 2022).

Based on the above, it can be concluded that the objective of the research was achieved by constructing a structural equation model that allows corroborating the internal variables that influence the achievement of the desired CSR behavior. Similarly, it was possible to establish that leadership, strategic conception, organizational design, shared values, internal communication, mastery of labor competencies and satisfaction experienced by workers are internal variables of the organization, showing a significant correlation level with the CSR recognized by the organization's customers.

Although the research objectives were achieved and the research hypotheses formulated were validated, it should be noted that the results obtained are limited by the nature of the sample used. It would be important to extend the validation of the model in other contexts to verify its compliance or to identify necessary changes in its conception and structure that would justify its potential for generalization.

It must be understood that this research only assessed CSR from the internal perception of employees. The external view of CSR, i.e., from the perception of end customers, was not considered. However, job satisfaction shows a dual character: on the one hand, the creation of conditions conducive to job satisfaction is a manifestation of CSR compliance; on the other hand, to the extent that acceptable levels of job satisfaction are achieved, higher levels of CSR can be attained. This dichotomy could be the subject of further research.

References

- Abugre, J. B. and Anlesinya, A. (2020). Corporate social responsibility strategy and economic business value of multinational companies in emerging economies: The mediating role of corporate reputation. *Business Strategy and Development*, 3(1), 4-15. <https://doi.org/10.1002/bsd2.70>
- Adomako, S. and Nguyen, N.P. (2020). Interfirm collaboration and corporate social responsibility expenditure in turbulent environments: The moderating role of entrepreneurial orientation. *Corporate Social Responsibility and Environmental Management*, 27(6), 2668-2678. <https://doi.org/10.1002/csr.1991>
- Aftab, J., Sarwar, H., Amin, A. and Kiran, A. (2021). Does CSR mediate the nexus of ethical leadership and employee's job performance? Evidence from North Italy SMEs. *Social Responsibility Journal*. <https://doi.org/10.1108/srj-09-2020-0393>
- Afzali, H. and Kim, S. S. (2021). Consumers' responses to corporate social responsibility: The mediating role of csr authenticity. *Sustainability (Switzerland)*, 13(4), 1-13. <https://doi.org/10.3390/su13042224>
- Ahn, J. and Lu, S. (2021). Examining the relative role of CSR activity and service experience on cruise customers' behavior. *Social Responsibility Journal*. <https://doi.org/10.1108/srj-07-2020-0298>
- Akbari, M., Nazarian, A., Foroudi, P., Seyyed Amiri, N. and Ezatabadipoor, E. (2020). How corporate social responsibility contributes to strengthening brand loyalty, hotel positioning and intention to revisit? *Current Issues in Tourism*. <https://doi.org/10.1080/13683500.2020.1800601>
- Akyıldız, F. (2021). CSR and Turkish Universities in ARWU 2018: An evaluation of the strategic plans and performance reports. *Eurasian Studies in Business and Economics*, 20, 321-341. https://doi.org/10.1007/978-3-030-85304-4_20
- Alda, M. (2019). Corporate sustainability and institutional shareholders: The pressure of social responsible pension funds on environmental firm practices. *Business Strategy and the Environment*, 28(6), 1060-1071. <https://doi.org/10.1002/bse.2301>
- Al-Shammari, M. A., Banerjee, S., Shah, T., Doty, H. and Al-Shammari, H. (2022). The value of expertise: How chief executive officer and board corporate social responsibility expertise enhance the financial effects of firms' corporate social responsibility initiatives. *Society and Business Review* (ahead-of-print). <https://doi.org/10.1108/SBR-10-2021-0183>
- Anlesinya, A. and Abugre, J. B. (2022). Strategic CSR practices, strategic orientation and business value creation among multinational subsidiaries in Ghana. *Society and Business Review*, 17(2), 257-279. <https://doi.org/10.1108/SBR-02-2021-0021>
- Antúnez Sánchez, A. and Díaz Ocampo, E. (2017). La responsabilidad social y medio ambiental de la empresa: una perspectiva desde Cuba. *Revista de Responsabilidad Social de la Empresa*, 27. <https://bit.ly/3piG2m0>
- Barchiesi, M. A. and Fronzetti Colladon, A. (2021). Corporate core values and social responsibility: What really matters to whom. *Technological Forecasting and Social Change*, 170. <https://doi.org/10.1016/j.techfore.2021.120907>
- Bardos, K., Gupta, N. and Hughenughen, L. (2020). Stock price reaction to being named an international sustainability leader. *International Journal of Sustainability in Economic, Social, and Cultural Context*, 16(2), 15-28. <https://doi.org/10.18848/2325-1115/CGP/v16i02/15-28>
- Batat, W. (2021). A phenomenological exploration into sustainability in the foodservice industry in the MEA region. *Journal of Services Marketing*, 35(7), 918-932. <https://doi.org/10.1108/JSM-06-2020-0243>
- Bhumika, Priya, K. R. and Sinha, A. K. (2022). Underpinnings of social contributions: Conceptualizing behavioral patterns among socially contributive leaders in India. *Social Responsibility Journal*, 18(2), 221-239. <https://doi.org/10.1108/SRJ-09-2019-0311>
- Blasi, S. and Sedita, S. R. (2022). Mapping the emergence of a new organizational form: An exploration of the intellectual structure of the B Corp research. *Corporate Social Responsibility and Environmental Management*, 29(1), 107-123. <https://doi.org/10.1002/csr.2187>
- Bhatia, A. y Makkar, B. (2020). Stage of development of a country and CSR disclosure-the latent driving forces. *International Journal of Law and Management*, 62(5), 467-493. <https://doi.org/10.1108/ijlma-03-2020-0068>
- Bhatia, S., Gupta, G. and Tripathy, A. (2020). The strategic corporate social responsibility (CSR) quandary: an instructional case. *Emerald Emerging Markets Case Studies*, 10(3), 1-30. <https://doi.org/10.1108/eemcs-12-2019-0344>
- Boğan, E., Dedeoğlu, B. B. and Balıkçıoğlu Dedeoğlu, S. (2020). The effect of residents' perception of hotel social responsibility on overall attitude toward tourism. *Tourism Review*. <https://doi.org/10.1108/tr-08-2019-0353>
- Cruz Botache, L. P., Vélez Romero, C. A. and Romero Restrepo, M. (2020). Beneficios tributarios por

- la adopción de políticas de responsabilidad social empresarial (RSE). *Dictamen Libre*, 26.
- Bowen, H. R. (1953). *Social responsibilities of the businessman*. Harper & Row.
- Burgos Romero, C. (2018). La Responsabilidad Social o sostenibilidad: un enfoque desde el entorno y la comunicación. *Revista de Ciencias de la Administración y Economía*, 8(16), 47-60. <https://doi.org/10.17163/ret.n16.2018.04>
- Carroll, A. B. (1999). Corporate social responsibility: evolution of a definitional construct. *Business & Society*, 38(3), 268-295. <https://doi.org/10.1177/000765039903800303>
- Camilleri, M. A. (2022). Walking the talk about corporate social responsibility communication: An elaboration likelihood model perspective. *Business Ethics, Environment and Responsibility*. <https://bit.ly/3PhVGJ2>
- Caro Méndez, C. G. and Ojeda Hidalgo, J. F. (2019). Responsabilidad Social y clima organizacional en la Universidad Autónoma de Nayarit. *Proyecciones*, 13. <https://doi.org/10.24215/26185474e002>
- Carrillo Punina, Á. (2017). Responsabilidad social en las pymes latinoamericanas y españolas: limitaciones, objetivos y estrategias. *CienciAmérica*, 6(2), 61-65. <https://bit.ly/3JLJMpO>
- Conte, F., Sardanelli, D., Vollero, A. and Siano, A. (2022). CSR signaling in controversial and noncontroversial industries: CSR policies, governance structures, and transparency tools. *European Management Journal*. <https://doi.org/10.1016/j.emj.2021.12.003>
- Donnelly, T. and Wickham, M. (2020). Exploring the antecedent resources and capabilities of strategic corporate social responsibility. *Social Responsibility Journal*. <https://doi.org/10.1108/srj-12-2018-0334>
- Duque Orozco, Y., Cardona Acevedo, M. and Rendón Acevedo, J. A. (2013). Responsabilidad Social Empresarial: Teorías, índices, estándares y certificaciones. *Cuadernos de Administración*, 29(50). <https://bit.ly/3WBWBMQZ>
- Espinoza-Santeli, M. G. (2018). Percepción sobre las empresas socialmente responsables en Distrito Metropolitano de Quito. *PODIUM*, (33), 35-44. <https://doi.org/10.31095/podium.2018.33.4>
- EU-LAC (2019). *Responsabilidad social empresarial y objetivos de desarrollo sostenible en la Unión Europea, América Latina y el Caribe. Planes nacionales de acción y políticas públicas para promover la sustentabilidad*. EU-LAC Foundation.
- Foncubierta-Rodríguez, M. J. (2022). Influence of the entrepreneur's personal values in business governance style and their relationship with happiness at work. *Corporate Governance (Bingley)*, 22(3), 592-617. <https://doi.org/10.1108/CG-05-2021-0197>
- García-Castillo, N., Bueno-Doral, T. and Hänninen, L. I. (2020). Responsible research and innovation (Rri) as a driving force for change in corporate communication: New forms of governance and participatory structures. *Profesional de la Información*, 29(3), 1-9. <https://doi.org/10.3145/epi.2020.may.13>
- Hair, J. F., Anderson, R. E. and Tatham, R. L. (1999). *Análisis multivariante*. 5ta ed. Prentice Hall.
- Hoepner, A. and Schopohl, L. (2020). State pension funds and corporate social responsibility: Do beneficiaries' political values influence funds' investment decisions? *Journal of Business Ethics*, 165(3), 489-516. <https://doi.org/10.1007/s10551-018-4091-z>
- Huang, D. Z.-X. (2022). An integrated theory of the firm approach to environmental, social and governance performance. *Accounting and Finance*, 62(S1), 1567-1598. <https://doi.org/10.1111/acfi.12832>
- Ibarra Padilla, A. M. (2014). Principios de la responsabilidad social empresarial en el ordenamiento jurídico colombiano. *Revista de Derecho*, 41, 51-82. <https://bit.ly/3dpkG3I>
- Jamal, T., Zahid, M., Martins, J. M., Mata, M.N., Rahman, H. U. and Mata, P. N. (2021). Perceived green human resource management practices and corporate sustainability: Multigroup analysis and major industries perspectives. *Sustainability (Switzerland)*, 13(6). <https://doi.org/10.3390/su13063045>
- Joubert, H. (2022). Women leaders and corporate social performance: Do critical mass, CEO managerial ability and corporate governance matter? *Management Decision*, 60(5), 1185-1217. <https://doi.org/10.1108/MD-07-2020-0953>
- Karatas-Ozkan, M., Özgören, Ç., Yamak, S., Ibrahim, S., Tunalioglu, M. N., Pinnington, A., Nicolopoulou, K. and Baruch, Y. (2022). Dual nature of the relationship between corporate social responsibility and human resource management: A blessing or a curse? *Corporate Social Responsibility and Environmental Management*. <https://doi.org/10.1002/csr.2305>
- Kim, M., White, C. and Kim, C. (2019). Examining relationships among cultural factors and expectations of CSR. *Journal of Communication Management*, 23(4), 427-443. <https://doi.org/10.1108/jcom-01-2019-0009>
- Kim, S. (2022). The Process of CSR Communication. Culture-Specific or Universal? Focusing on Mainland China and Hong Kong

- Consumers. *International Journal of Business Communication*, 59(1), 56-82. <https://doi.org/10.1177/2329488418805523>
- Köseoglu, M. A., Yee Yick, M. Y. and Parnell, J. A. (2021). The dissemination of corporate social responsibility into the intellectual structure of strategic management. *Journal of Cleaner Production*, 311. <https://doi.org/10.1016/j.jclepro.2021.127505>
- LaVan, H., Zilic, I. and Basappa, S. (2022). Attitudes of employees in green companies regarding CSR communication. *International Journal of Manpower*. <https://doi.org/10.1108/IJM-11-2020-0542>
- Limo Silva, G. and Peña Avilés, D. H. (2019). *El impacto de la responsabilidad social universitaria en la cultura organizacional de las universidades privadas en Lima metropolitana, año 2019*. Universidad Peruana de Ciencias Aplicadas.
- López Salazar, A., Ojeda Hidalgo, J. F. and Ríos Manríquez, M. (2017). La responsabilidad social empresarial desde la percepción del capital humano. Estudio de un caso. *Revista de Contabilidad*, 20(1), 36-46. <https://doi.org/10.1016/j.rcsar.2016.01.001>
- Madero Gómez, S., Olivás-Lujan, M. R., Rubio Leal, Y. L. and Yusliza, M. Y. (2022). Sustainable human resource management: Practitioners' perspectives. *Management Research*, 20(2), 111-128. <https://doi.org/10.1108/MRJIAM-07-2021-1202>
- Miethlich, B., Beliakova, M., Voropaeva, L., Ustyuzhina, O. and Yurieva, T. (2022). Internal Corporate Policy: CSR and Employee Satisfaction. *Employee Responsibilities and Rights Journal*. <https://doi.org/10.1007/s10672-022-09406-5>
- Murillo Barrera, C., Fajardo Puga, H. and Serrano Mantilla, H. (2017). Estrategias de responsabilidad corporativa aplicables en la gestión de los administradores de las pymes de la ciudad de Milagro. *PODIUM*, (27), 29-41. <https://doi.org/10.31095/podium.2015.27.2>
- Nejati, M., Brown, M. E., Shafaei, A. and Seet, P. S. (2020). Employees' perceptions of corporate social responsibility and ethical leadership: are they uniquely related to turnover intention? *Social Responsibility Journal*, 17(2), 181-197. <https://doi.org/10.1108/srj-08-2019-0276>
- Ochoa Rivera, R. E. and Caisa Yucailla, E. D. (2019). Responsabilidad social corporativa: estudio del comportamiento del consumidor del sector bananero de la provincia de Los Ríos Ecuador. *Universidad, Ciencia y Tecnología*, 24(96).
- Orjuela Córdoba, S. (2011). La comunicación en la gestión de la Responsabilidad Social Empresarial. *Correspondencias & Análisis*, (1), 138-156. <https://doi.org/10.24265/cian.2011.n1.09>
- Osagie, E. R., Wesselink, R., Blok, V. and Mulder, M. (2019). Contextualizing individual competencies for managing the corporate social responsibility adaptation process: the apparent influence of the business case logic. *Business and Society*, 58(2), 369-403. <https://doi.org/10.1177/0007650316676270>
- Park, Y. E. and Kang, M. (2020). When crowdsourcing in CSR leads to dialogic communication: The effects of trust and distrust. *Public Relations Review*, 46(1). <https://doi.org/10.1016/j.pubrev.2019.101867>
- Pérez, A., García de los Salmones, M. M. and Liu, M. T. (2020). Information specificity, social topic awareness and message authenticity in CSR communication. *Journal of Communication Management*, 24(1), 31-48. <https://doi.org/10.1108/jcom-06-2019-0097>
- Perera, C. R. and Hewege, C. R. (2022). Internalising and internationalising country specific CSR practices of a Japanese multinational company. *Critical Perspectives on International Business*, 18(2), 201-223. <https://doi.org/10.1108/cpoib-02-2019-0013>
- Pündrich, A. P., Aguilar Delgado, N. and Barin-Cruz, L. (2021). The use of corporate social responsibility in the recovery phase of crisis management: A case study in the Brazilian company Petrobras. *Journal of Cleaner Production*, 329. <https://doi.org/10.1016/j.jclepro.2021.129741>
- Ramos Grijalva, R. D., Nieto Aguilar, W. G. and Zapata Álvarez, A. V. (2021). Preservación de la cultura, clima, identidad e imagen en la empresa ecuatoriana. *PODIUM*, (40), 75-88. <https://doi.org/10.31095/podium.2021.40.5>
- Rao, K. K. and Tilt, C. (2021). Gender and CSR decisions: Perspectives from Australian boards. *Meditari Accountancy Research*, 29(1), 60-85. <https://doi.org/10.1108/MEDAR-11-2019-0609>
- Rintala, O., Laari, S., Solakivi, T. and Töyli, J. (2022). Fulfilling expectations or overachieving: The role of market values in the linkage between environmental and financial performance. *Business Strategy and the Environment*, 31(3), 768-781. <https://doi.org/10.1002/bse.2916>
- Ríos, M., Guevara, N., Álvarez, J. and Castro, M. (2019). Responsabilidad social empresarial: un análisis desde el ápice estratégico al núcleo operativo en la industria alimentaria de Cuenca-Ecuador. *Universidad, Ciencia y Tecnología*, 23(91).
- Robbins, S. P. and Judge, T. A. (2009). *Comportamiento organizacional*. 13th ed. Pearson Educación.

- Rodríguez Cala, A., Calle Rodríguez, C., Durán García, N., Zöllera, B. and Pons Rodríguez, A. (2019). Responsabilidad social corporativa en los centros de la red hospitalaria de utilización pública de Cataluña. *Gac Sanit.*, 35(1). <https://dx.doi.org/10.1016/j.gaceta.2019.06.001>
- Saldarriaga Ríos, J. G. (2013). Responsabilidad social y gestión del conocimiento como estrategias de gestión humana. *Estudios Gerenciales*, 29(126), 110-117. <https://bit.ly/3QBA9Mr>
- Schaefer, S. D., Terlutter, R. and Diehl, S. (2020). Talking about CSR matters: employees' perception of and reaction to their company's CSR communication in four different CSR domains. *International Journal of Advertising*, 39(2), 191-212. <https://doi.org/10.1080/02650487.2019.1593736>
- Sharma, E. and Sathish, M. (2022). "CSR leads to economic growth or not": An evidence-based study to link corporate social responsibility (CSR) activities of the Indian banking sector with economic growth of India. *Asian Journal of Business Ethics*. <https://doi.org/10.1007/s13520-022-00142-5>
- Silva, P., Carrizo Moreira, A. and Mota, J. (2022). Employees' perception of corporate social responsibility and performance: The mediating roles of job satisfaction, organizational commitment and organizational trust. *Journal of Strategy and Management*. <https://doi.org/10.1108/JSMA-10-2021-0213>
- Soliz Aguayo, N. (2017). La Responsabilidad Social Empresarial: caso Arca Continental. Ecuador. *Revista Publicando*, 10(2). <https://bit.ly/3bI782Z>
- Soto Alemán, L. and Batista Torres, J. (2020). La responsabilidad social de la empresa estatal en el ejercicio pleno de los derechos de los trabajadores en la empresa estatal en Cuba. *Revista del Instituto de Ciencias Jurídicas de Puebla, México*, 14(45). <https://doi.org/10.35487/rius.v14i45.2020.543>
- Tosun, C., Parvez, M. O., Bilim, Y. and Yu, L. (2022). Effects of green transformational leadership on green performance of employees via the mediating role of corporate social responsibility: Reflection from North Cyprus. *International Journal of Hospitality Management*, 103. <https://doi.org/10.1016/j.ijhm.2022.103218>
- Trivellas, P., Dekoulou, P., Polychroniou, P. and Tokakis, V. (2021). Which leadership roles modify employee perceptions of CSR activities? Job satisfaction implications in the case of the tourism industry. *International Journal of Quality and Service Sciences*, 13(4), 618-636. <https://doi.org/10.1108/IJQSS-04-2020-0054>
- Votaw, D. (1972). Genius becomes rare: A comment on the doctrine of social responsibility. *California Management Review*, 15(2), 25-31. <https://doi.org/10.2307/41164415>