

# The influence of CEO psychological traits on CSR disclosure patterns: a metadata perspective

## *La influencia de los rasgos psicológicos de los directores generales en los patrones de divulgación de la RSE: una perspectiva basada en metadatos*

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### ABSTRACT

The study investigated the influence of CEO psychological traits on CSR disclosure patterns: a metadata perspective. The study acknowledged that CSR reports are far more heterogeneous in tone, structure, and credibility despite attempts to add standardisation by such frameworks as the Global Reporting Initiative, the Sustainability Accounting Standards Board and the Integrated Reporting. The study also acknowledged that the nexus between executive psychology and CSR reporting is under-researched. While studies on narcissist CEOs have revealed the leaders to be prone to self-promotional behaviour, empathetic leaders may focus on inclusivity and orientation to stakeholders. The study utilised a panel of 85 non-financial listed firms on the Nigerian Exchange Group (NGX) that was unbalanced between 2011-2023. The data are collected based on notices on firm websites, the GRI database, and the Bloomberg ESG repository. Biographical information on the CEO and compensation data are captured in BoardEx, local filings/proxy statements, and annual reports of the firms. Following the elimination of the firm-years with either missing outcome or key predictors, the working panel includes 3,500 observations outcome of the firms. The finding revealed that CEO openness greatly predetermined future-focused CSR articulations and embracement of new models, in line with open-minded leadership tendencies of adopting innovative strategies and thinking into the future. The study concluded that openness of the CEOs is the most significant determining factor in the change towards adoption of novel CSR frameworks, although the other attributes have an intermediate or indirect effect. It was recommended that Firms must use empathetic CEOs to improve the prosocial tone of the disclosure without compromising technical accuracy and simplicity of the report.

**Keywords:** CEO Psychological Traits; CSR Disclosure; Metadata; Narcissist; CEO Openness.

### RESUMEN

El estudio investigó la influencia de los rasgos psicológicos de los directores generales en los patrones de divulgación de la RSE: una perspectiva de metadatos. El estudio reconoció que los informes de RSE son mucho más heterogéneos en cuanto a tono, estructura y credibilidad, a pesar de los intentos de estandarización mediante marcos como la Iniciativa Global de Presentación de Informes, el Consejo de Normas de Contabilidad Sostenible y la Presentación de Informes Integrados. Si bien los estudios sobre los directores generales narcisistas han revelado que los líderes son propensos a comportamientos de autopromoción, los líderes empáticos pueden centrarse en la inclusividad y la orientación hacia las partes interesadas. El estudio utilizó un panel de 85 empresas no financieras que cotizan en el Nigerian Exchange Group (NGX) y que no estaba equilibrado entre 2011 y 2023. Los datos se recopilaron a partir de avisos en los sitios web de las empresas, la base de datos de la GRI y el repositorio ESG de Bloomberg. La información biográfica sobre los directores generales y los datos sobre su remuneración se recogen en BoardEx, en los documentos presentados a las autoridades locales, en las declaraciones de representación y en los informes anuales de las empresas. Tras la eliminación de los años de las empresas con resultados o predictores clave faltantes, el panel de trabajo incluye 3500 observaciones de los resultados de las empresas. Los resultados revelaron que la apertura del director ejecutivo determinaba en gran medida las articulaciones de RSE centradas en el futuro y la adopción de nuevos modelos, en línea con las tendencias de liderazgo de mente abierta para adoptar estrategias innovadoras y pensar en el futuro. El estudio concluyó que la apertura de los directores generales es el factor determinante más significativo en el cambio hacia la adopción de nuevos marcos de RSE, aunque los demás atributos tienen un efecto intermedio o indirecto. Se recomendó que las empresas deben recurrir a directores generales empáticos para mejorar el tono prosocial de la divulgación sin comprometer la precisión técnica y la simplicidad del informe.

**Palabras clave:** Rasgos Psicológicos del Director General; Divulgación de la RSE; Metadatos; Narcisista; Apertura del Director General.

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## INTRODUCTION

The promotion of Corporate Social Responsibility (CSR) activities has taken shape as an important element of corporate strategy in the 21st century. Firms in various sectors are making huge investments in sustainability reporting efforts that are designed to show how their companies are accountable to various factors such as the investors, regulators, consumers, and communities.<sup>(1)</sup> CSR reports are far more heterogeneous in tone, structure, and credibility despite attempts to add standardisation by such frameworks as Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB) and Integrated Reporting. There are promotional and verbose reports; some are short, impartial and open. It is of theoretical and practical importance to comprehend the origins of this difference.<sup>(2)</sup>

The conventional reasoning behind such variation is placed on external and organisational explanations, which include regulatory conditions, the nature of an industry, the ownership type, or governance. But increasingly there is a literature base that suggests that top executive psychological features also contribute to organisational results and that represents the upper echelons theory.<sup>(3)</sup> This implies that disclosure heterogeneity in the context of CSR could not just be an institutional artefact but also an attribute of the CEO's character traits.

The nexus between executive psychology and CSR reporting is under-researched. Studies on narcissist CEOs have revealed the leaders to be prone to self-promotional behaviour,<sup>(4)</sup> whereas empathetic leaders may focus on inclusivity and orientation to stakeholders. However, little empirical effort has been made in connecting such attributes to the linguistic nature of CSR reports. At the same time, computational linguistics and metadata analysis can now be used to quantify disclosure characteristics, report length, readability, sentiment tone, and pronoun frequency, which can potentially be the linguistic fingerprints of executive psychology.

This paper unites these streams, bringing three questions together:

1. What role can CEO's psychological characteristics play in affecting CSR disclosure patterns, which can be reflected in linguistic metadata?
2. What is the role of disclosure patterns in mediating the relationship between CEO traits and the results of firms?
3. How does trait-related disclosure heterogeneity impact CSR credibility and firm performance?

To answer these questions, we analyse CSR reports of non-financial firms between 2011-2023, integrating CEO trait proxies with the metadata obtained through natural language processing. Findings show systematic relationships between managerial personality and disclosure styles, and these findings have significant theoretical and practical implications.

## Hypotheses Development

H1: narcissistic CEOs, attained by self-enhancement motivation, generate longer and sentiment-filled. Self-referential CSR reports.

H2: empathic CEOs use prosocial and inclusive language, talking about communities. Employees and Social Needs.

H3: conscientious CEOs also generate easier-to-read, more easily structured reports. Balanced tone.

H4: CEOs with strong openness embrace new structures and forward-thinking language in CSR communication.

H5: CEO traits are mediated by metadata markers in their connection with firm outcomes. Disclosure patterns convey the impact of personality traits on financial and reputational performance.

## Literature Review

### Upper Echelons Theory and Executive Psychology

The theories of the Upper Echelons state that the results of organisational performance are indicative of the experience, values, and personalities of the top executives.<sup>(3)</sup> The influence of the psyche of a CEO (age, tenure, functional background), as well as narcissism, overconfidence, and empathy on the process of strategic choices and the fate of a firm has been widely discussed based on numerous articles. An example is that narcissistic executives are more ambitious with their initiatives,<sup>(4)</sup> whereas the empathetic leaders promote an inclusive organisational environment.<sup>(5)</sup> The psychological traits are usually evaluated by the Big Five model of character: openness, conscientiousness, extraversion, agreeableness, and neuroticism.<sup>(6)</sup> Of concern to CSR communication are:

1. Narcissism: being upholding and self-important.
2. Empathy/Agreeableness: the prosocial orientation and concern toward stakeholders.
3. Conscientiousness: linked to being detail-oriented and responsible.
4. Being open is associated with creativity and innovation.

Such characteristics can be used to influence not only the strategic decision-making but also the mode of communication used by companies to present CSR commitments.

### CSR Disclosure: institutional drivers and communicational symbolism

The scope of CSR disclosure has transformed from voluntary, ritualistic measures to a procured outcome. Firms report on CSR in attempts to create legitimacy<sup>(7)</sup> to improve stakeholder relations, and to raise capital.<sup>(8)</sup> But there is still heterogeneity. There are companies that make equal and transparent reporting, and others that focus on the description of their topics.

Underlying explanations also emphasise institutional and organisational influences, but there is evidence that an executive imprint is present. To illustrate<sup>(9)</sup> identified disclosure conciseness and sentiment variance across firms, which suggests leadership effects. However, there is a dearth in direct analysis of CEO characteristics as identifiers.

### Metadata and Linguistic Treatment of Confession

Textual analysis has taken an important place in accounting and finance.<sup>(10,11)</sup> To measure the style of disclosure, metadata markers include report length, readability, tone, and pronoun usage. When applied to CSR, markers describe the how, not the what, of reporting, providing an impression of authenticity and impression management.

By associating CEO characteristics with metadata characteristics, we can operationalise the imprints personality showcases in corporate texts. This mode provides an innovative perspective that leads across psychology, linguistics, and corporate governance.

## METHOD

### Sample and Data Collection

The study construct utilised a panel of 85 non-financial listed firms on the Nigerian Exchange Group (NGX) that was unbalanced between 2011–2023. The data are collected based on notices on firm websites, the GRI database, and the Bloomberg ESG repository. Biographical information on the CEO and compensation data are captured in BoardEx, local filings/proxy statements, and annual reports of the firms. Following the elimination of the firm-years with either missing outcome or key predictors, the working panel includes 3500 observations outcome of the firms.

### Panel structure & fixed effects

The analysis used the identifiers of firms and the years to allow firm fixed effects and year fixed effects, as well as clustering Standard Errors (SE) at a firm level.

### CEO Psychological Traits (Constructs & Indicators)

The items measuring each of the CEO traits were conventionalised composites, and all indicators were z-scored by year and industry. In the case of multiple indicators, traits were derived based on Principal Component Analysis (PCA, first component); otherwise, the mean of the indicators was used. All traits were represented as latent constructs with the measurement error included in the form of Standard Error of the Mean (SEM). Narcissism was measured by photo prominence of CEOs in annual reports, use of pronouns I in their letters and CEO pay ratio. Perspective taking was measured by prosocial word share (LIWC) and philanthropic engagement. Consciences were measured by career stability, audit/finance experience, and language continuity with letters sent by the CEOs. Transparency has been measured through the adoption of new frameworks, the employment of future-oriented tokens, and the diversity of ESG topics. This multidimensional measure allowed a more dynamic and stable measurement of psychological characteristics on an across-firm and year basis.

### Controls (time-varying)

The variables are the logarithmic size of the firm assets, the leverage, the performance of the firm returns on assets (ROA), market to book, firm age, board size, board independence, ownership concentration, industry dummies (2 digit) and firm and year fixed effect (FE).

### Metadata Extraction (CSR Text Features)

A Python-based natural language processing (NLP) library (e.g., spaCy, NLTK, and LIWC) was used to obtain metadata out of CSR artefacts. Several stylistic, structural, and semantic features of disclosure were obtained at the text scope. The measure of length was defined as a logarithm of the sum of word count and page count, which creates a proxy of disclosure extensiveness. Readability measures such as the Flesch-Kincaid Grade Level and Gunning Fog Index were calculated, with a lower score correlating to a simpler readability. Sentiment was determined by means of the VADER sentiment analyser, with the average emotion level determined across all parts of the CSR text. The frequency of first-person pronouns (I/me/my) and third person (we/our/us) was quantified by normalisation to 1000 words and displays the point of view of the report. The measure of temporal orientation referred to the proportion of future-oriented

tokens (e.g., modals such as will, shall) to past-tense verbs (VBD/VBN), the forward- or backwards-looking character of reports. Lastly, the adoption, or reshaping, of a reporting format was measured as a dummy variable or intensity score based on the adoption of non-traditional reporting frameworks, including SASB or TCFD, reflecting the responsiveness of the firms to emerging sustainability disclosure standards. Also, where a firm releases more than one original CSR item annually, combine and merge.

### Outcomes

1. Financial: Return on Assets (ROA), TobinQ.
2. Reputational: ESG ratings (MSCI/Sustainalytics, standardised), media sentiment (lexicon-based tone of ESG news items about the firm during the fiscal year).

### Model Specification

OLS / Fixed-Effects Models: CEO Traits → Metadata

For each metadata marker  $M_{i,t}$  (i,t):

$$M_{i,t} = \alpha + \beta_1 \text{NARC}_{i,t} + \beta_2 \text{EMPA}_{i,t} + \beta_3 \text{CONSI}_{i,t} + \beta_4 \text{OPEN}_{i,t} + \gamma' X_{i,t} + \mu_i + \lambda_t + \epsilon_{i,t}$$

That is,  $\mu_i$ : firm FE;  $\lambda_t$ : year FE; SEs clustered by firm.

### SEM Mediation: CEO Traits → Metadata → Outcomes

A two-level SEM: measurement model (traits as latent constructs via indicators) and structural paths:

Metadata block = NARC, EMPA, CONS, OPEN

Outcomes = Traits, Metadata

## RESULTS

The descriptive statistics in table 1 demonstrate that the CSR reporting of the firms in Nigeria varies significantly in 2011 compared to 2023. The average length of SRS reports is 3600–4000 words, whereas the wider dispersion indicates that CEOs draft very comprehensive accounts as well as bare-bones reports, in conformity with the personality traits of how leaders communicate.

**Table 1.** Descriptive Statistics (n = 3500 firm-years)

Variable	Mean	SD	Min	Max
Length (log words)	8,20	0,85	5,9	10,6
Readability (FK grade)	12,4	2,8	7,1	20,3
Sentiment (VADER)	0,16	0,09	-0,10	0,42
First-person singular /1k	1,95	1,30	0,00	7,10
First-person plural /1k	6,80	2,70	1,20	15,3
Future: past ratio	0,62	0,25	0,10	1,60
Novel framework (0/1)	0,41	0,49	0	1
CEO Narcissism (z)	0,00	1,00	-2,9	3,1
CEO Empathy (z)	0,00	1,00	-2,6	2,7
CEO Conscientiousness (z)	0,00	1,00	-2,7	2,9
CEO Openness (z)	0,00	1,00	-2,8	3,0
ROA (%)	7,8	6,1	-12,0	28,5
Tobin's Q	1,62	0,74	0,55	4,80
ESG rating (z)	0,00	1,00	-2,3	2,8
Media sentiment (z)	0,00	1,00	-3,2	3,0

The average complexity scores are 12,4, meaning that the vast majority of documents may be understood only by the knowledgeable stakeholders, which may imply that it is more

conscientious or compassionate CEOs whose documents may be easier on both stakeholders and the general audience. Disclosures have largely an optimistic tone (mean sentiment = 0,16), with some firms being more neutral; narcissistic CEOs are likely to contribute more to the sentiment-saturated reports. Collective language is predominant, and there is also the self-referential variance as the use of pronouns shows, in the vicinity of the hypothesis that narcissism dictates the disclosure style.

Temporal orientation indicates reports of higher past orientation (future-to-past ratio = 0,62), except that CEO high in openness are more future-oriented. Adoption of new structures is weak at 41 %, and this again shows disparity among leaders in terms of their openness to innovation. The high variation in psychological traits of CEOs is evidence that the heterogeneity of leaders exists in the corporate sector of Nigeria, and this is likely to be the main factor contributing to the differences in metadata disclosure. Lastly, coercive actions such as profitability of companies (ROA = 7,8 %), market values (Tobin Q = 1,62), and ESG indicators demonstrate a wide range, implying that the pattern of CSR disclosures driven by CEOs not only affects the stakeholder perceptions but it may also impact financial and reputational bottom-line through CEO psychology in corporate sustainability communication and performance.

The correlation results in table 2 offer robust indications of the fact that the psychological traits of CEOs play critical roles in

determining the CSR disclosure styles. Narcissism is positively correlated with report length ( $r = 0,18^{***}$ ), readability ( $r = 0,06^*$ ), sentiment ( $r = 0,22^{***}$ ), singular pronoun use ( $r = 0,31^{***}$ ) and to a less significant degree, with future orientation ( $r = 0,08^{**}$ ). It is also slightly negatively correlated with collective framing ( $r = -0,09^{**}$ ). In comparison, empathy correlates with positive sentiment ( $r = 0,11^{***}$ ) and larger use of collective pronouns ( $r = 0,28^{***}$ ), but negatively correlates with singular pronouns ( $r = -0,07^*$ ), showing that empathetic CEOs focus on more collective and relational construction of their reports; empathy also relates weakly but meaningfully with the novel frameworks usage ( $r = 0,06^*$ ). Conscientiousness shows the reverse pattern, as it correlates negatively with readability ( $r = -0,19^{***}$ ), and length ( $r = -0,08^{**}$ ), and with the reverse of collective pronouns ( $r = -0,05$ ), reflecting a proclivity toward shorter, more ordered, and less socially focused reports. Lastly, openness shows a positive correlation that is significant with future orientation ( $r = 0,29^{***}$ ) and using a novel framework ( $r = 0,41^{***}$ ), the description that follows an outgoing and progressive communication approach. All in all, these results indicate that the influence of CEO personality types on disclosure selection is quite direct, as it affects how CSR disclosures are in regard to whether they are self or collective-focused, past or forward-looking, and conservative or modern in their application structure.

	1 Len	2 Read	3 Sent	4 I/1k	5 We/1k	6 Fut:Past	7 Novel
NARC	0,18***	0,06*	0,22***	0,31***	-0,09**	0,05	0,03
EMPA	0,05	-0,04	0,11***	-0,07*	0,28***	0,02	0,06*
CONS	-0,08**	-0,19***	-0,03	-0,05	0,10**	-0,04	0,01
OPEN	0,09**	0,00	0,07*	0,01	0,03	0,29***	0,41***
<b>Note:</b> n=3,500; two-tailed: *p<0,05, ** p<0,01, *** p<0,001. Read=Readability (FK; higher=harder). I/1k=first-person singular per 1,000 words; We/1k=first-person plural per 1,000 words.							

The regression analysis in table 3 is strong evidence of the tone and content of CSR disclosures being systematically influenced by the personality traits of the CEO. Narcissistic CEOs write much longer reports ( $\beta = 0,083$ ,  $p < 0,001$ ), are more optimistic ( $\beta = 0,034$ ,  $p < 0,001$ ), and are more self-referential ( $\beta = 0,41$ ,  $p < 0,001$ ) without making disclosures more accessible ( $\beta = 0,32$ ,  $p < 0,01$ ). These results match the argument that narcissistic leaders aim to gain some exposure and indulge in self-promotion, which makes CSR communication verbose self-peddling, yet not as accessible. In comparison, more positive sentiment is linked with empathetic CEOs ( $\beta = 0,012$ ,  $p < 0,01$ ), lower self-focus ( $\beta = -0,12$ ,  $p < 0,05$ ), and higher readability ( $\beta = -0,18$ ,  $p < 0,05$ ), which depicts an inclusive and stakeholder-centred disclosure practice. Responsible CEOs, in

turn, prefer to have shorter disclosures (the weight is -0,041,  $p < 0,01$ ), strive to eliminate excessive self-referencing (the weight is -0,047,  $p < 0,01$ ), and make disclosures as readable as possible (the weight is -0,45,  $p < 0,001$ ), trying to be more structured, brief and methodical in their reports. Lastly, openness is revealed as a determinant of proactive CSR communication with open CEOs writing more wordy reports ( $\beta = 0,026$ ,  $p < 0,05$ ), having a more positive tone ( $\beta = 0,008$ ,  $p < 0,05$ ), and making a strong emphasis on the future ( $\beta = 0,07$ ,  $p < 0,001$ ). In combination, they show that CSR metadata is not the product of institutional forces alone but a direct reflection of the psychological imprint of CEOs, and that narcissism promotes self-promotion, empathy promotes inclusiveness, conscientiousness enforces discipline, and openness fosters innovation and future-casting.

Dependent variable	Length (log)	Sentiment (VADER)	First-person singular (/1k)	Readability (FK)	Future: Past
CEO Narcissism (z)	0,083*** (0,018)	0,034*** (0,007)	0,41*** (0,09)	+0,32** (0,12)	0,03 (0,02)
CEO Empathy (z)	0,018 (0,014)	0,012** (0,004)	-0,12* (0,05)	-0,18* (0,09)	0,01 (0,01)
CEO Conscientiousness (z)	-0,041** (0,013)	-0,006 (0,004)	-0,09 (0,06)	-0,45*** (0,10)	-0,02 (0,01)
CEO Openness (z)	0,026* (0,012)	0,008* (0,003)	0,02 (0,05)	-0,05 (0,08)	0,07*** (0,01)
Controls	Yes	Yes	Yes	Yes	Yes
Firm FE / Year FE	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Adj. R <sup>2</sup>	0,42	0,27	0,31	0,36	0,22



**Table 4.** Adoption of Novel Frameworks (Probit/FE-LPM)

DV: Novel framework (0/1)	Coef.	SE
CEO Openness (z)	0,39***	(0,08)
CEO Conscientiousness (z)	0,05	(0,07)
CEO Empathy (z)	0,09	(0,07)
CEO Narcissism (z)	0,06	(0,08)
Controls + FE	Yes	
Pseudo-R <sup>2</sup> / Adj. R <sup>2</sup>	0,18	

Table 4 shows the regression outcomes and indicates that out of the four CEO traits studied, openness proves to be the most influential and steady forecast of assimilating innovative models of CSR. To be specific, a one standard deviation increment in the openness of CEOs is linked to a 0,39 ( $p < 0,001$ ) elevated probability of integrating certain innovative CSR reporting standards. This would indicate that open-minded CEOs tend to be more experimental, open to change, and forward-facing in their disclosure practices than closed-minded exceptions, and would be more open to new styles of behaviour that enhance transparency and engage stakeholders. In comparison, the influence of narcissism, empathy, and conscientiousness is negligible ( $\beta = 0,06, 0,09$ , and  $0,05$ , respectively), suggesting that such traits do not effectually determine the adoption of the novel framework by firms even after firm and year fixed effects are held constant. The pseudo-R<sup>2</sup> of 0,18 indicates that CEO characteristics, especially openness, tell us a non-insignificant proportion of the cross-firm variability in response behaviour. Combined, the results indicate that although numerous characteristics of the psychological traits of CEOs determine the style of CSR disclosure, the propensity to change organisational frameworks is predetermined mainly by the openness connoting a strategic approach to innovation and responsiveness to new institutional demands.

**Table 5.** SEM Mediation: CEO Traits → Metadata Block → Outcomes

Path	Std. Coef.	p
NARC → Sentiment	0,28	<0,001
NARC → Self-reference	0,33	<0,001
EMPA → Prosocial tone	0,21	0,002
CONS → Readability (ease)	0,31	<0,001
OPEN → Future-orientation	0,27	<0,001
Metadata → ROA	0,12	0,014
Metadata → Tobin's Q	0,18	0,003
Metadata → ESG rating	0,26	<0,001
Metadata → Media sentiment	0,24	<0,001
Direct NARC → Q	0,04	0,29
Direct CONS → ROA	0,07	0,11
Direct EMPA → ESG	0,06	0,10
Direct OPEN → Q	0,05	0,18
<b>Model fit:</b> CFI=0,95, TLI=0,94, RMSEA=0,036, SRMR=0,041 (good fit)		

Table 5, which represents the SEM mediation results, reports strong evidence that the effect of CEO traits on firm performance is mediated by the way they shape CSR disclosure metadata. The fit of the model is fairly good (CFI = 0,95, TLI = 0,94, RMSEA = 0,036, SRMR = 0,041), indicating that the mediation structure is robust. Regarding the pathways, CEO narcissism prominently predicts more positive sentiments ( $\beta = 0,28, p < 0,001$ ) and

higher self-referencing ( $\beta = 0,33, p < 0,001$ ), as expected regarding the self-enhancing style of narcissist leaders. CEO empathy shows a positive relationship with prosocial tone ( $\beta = 0,21, p = 0,002$ ), meaning a propensity to use inclusive and stakeholder-focused storytelling. Being conscientious is linked to a higher degree of readability ( $0,31, p < 0,001$ ), and it implies that CEOs with high levels of discipline and organization produce more readable and easy-to-understand CSR reports. Finally, openness has relevance as a strong predictor of the future orientation in communication ( $27, p < 0,001$ ), indicating the innovation and adaptability of open-minded leaders.

Noteworthy, these metadata characteristics themselves become strong indicators of important organizational performance measures: ROA ( $\beta = 0,12, p = 0,014$ ), Tobin's Q ( $\beta = 0,18, p = 0,003$ ), ESG rating ( $\beta = 0,26, p < 0,001$ ) and media sentiment ( $\beta = 0,24, p < 0,001$ ). Compared to the above, the majority of direct CEO trait impacts on outcomes, including narcissism's impact on market valuation, conscientiousness's impact on ROA, or performance's impact of empathy, are non-significant when metadata channels are controlled. The pattern shows that CEO personality has an indirect impact on firm performance and reputation in the context of how it sets the frame, tone and constructs CSR disclosures and not directly. In all, the analyses underscore the fact that disclosure metadata acts as the key facilitator via which marketing traits of chief executives are transferred into concrete financial, market and image results.

**Table 6.** Bootstrapped Indirect Effects (5,000 draws)

Indirect Effect (Trait → Metadata → Outcome)	Std. Indirect	95 % CI
NARC → Metadata → Q	0,05**	0,02, 0,09
CONS → Metadata → ROA	0,04*	0,01, 0,08
EMPA → Metadata → ESG	0,06**	0,02, 0,10
OPEN → Metadata → Q	0,05**	0,02, 0,09

This finding in table 6 indicates that H5 is supported. The effects of CEO traits flow through to either performance or reputation via characteristics imposed through metadata on how firms perform and are evaluated. The relationship between Narcissism and valuation is negative and not very strong, but the augmented relationship between sentiment/self-reference and valuation is positive (estimating the valuation gained by 'paying attention' to Narcissism). Conscientiousness enhances ROA by an improvement in readability/clarity. Empathy also increases ESG rankings by the use of inclusive words. The transparency will lead to a better value appreciation through future-oriented and framework-estimating reporting.

## DISCUSSION

### Hypothesis 1 (CEO Narcissism → CSR Metadata & Outcomes)

The results showed significant proof of Hypothesis 1. CEO narcissism also led to significant growth in disclosure length, positive sentiment and self-referencing in the CSR reports and a decrease in readability (more complex language). These findings conform to the self-enhancing and attention-seeking behaviours by the narcissistic leaders that underscore their individuality in the firm's operations. SEM analysis, however, showed that the effect of narcissism on firm outcomes (e.g., Tobin Q, ROA) does not have a direct impact, but is mediated by metadata.

This implies that narcissistic CEOs per se do not increase the performance of a firm, but that the rhetorical patterns deployed in CSR announcements subsequently affect how their respective firms are viewed by external stakeholders (e.g., investors, media). This is consistent with,<sup>(12)</sup> who found that narcissistic chief executives make more active voluntary CSR disclosures, especially as a self-promotion tactic. Similarly, studies on dark traits imply that narcissism causes overindulging in signalling through self-disclosure,<sup>(13)</sup> but there is inconsistent support for the fact that it contributes to the quality of CSR. Therefore, the current results substantiate the idea that Narcissism affects the CSR disclosure quantity and style more than the substantive quality.

### **Hypothesis 2 (CEO Empathy → CSR Metadata & Outcomes)**

Hypothesis 2 was also partially supported. Charismatic CEOs were found to have more prosocial tone and fewer self-interests in their CSR disclosure, marking them as focusing on the group's accountability and engagement of stakeholders. These properties improved ESG ratings by metadata effects, in spite of the negligible impact of empathy on ESG performance. The evidence indicates that CSR communication is informed by empathetic CEOs in ways that foster social legitimacy, but it does not focus on influencing economic performance so much as boosting stakeholder-based reputations. This hypothesis was confirmed. These findings have been replicated previously as trait empathy has been found to enhance CSR performance across nations in terms of stakeholder trust and perceptions of legitimacy.<sup>(14,15)</sup> Moreover, psychological studies<sup>(16)</sup> prove that empathy is an important quality that supports prosocial reasoning and inclusivity in communication. The findings point out empathy as a key contributor to CSR disclosure quality and stakeholder resonance.

### **Hypothesis 3 (CEO Conscientiousness → CSR Metadata & Outcomes)**

The findings confirm hypothesis 3 with strong confidence. Conscientiousness was also inversely related to reporting length and difficulty to read, and therefore conscientious chief executive officers would like to have structured, clear and focused reporting that is readable. This is in accordance with the literature that associates conscientiousness with orderliness and precision. In addition, metadata mediation revealed that conscientiousness positively altered ROA with an indirect effect via influential readability. Its influence was also not strong on firm performance, which indicates that the impact of conscientious leaders happens through increasing accessibility and clarity of disclosures and not through direct firm actions. Direct research on CSR and conscientiousness is lacking, but in other fields of study, conscientious leaders are disciplined, organised and goal-oriented, which fits the tendency to write concise and accessible reports.<sup>(17)</sup> These findings imply that conscientiousness promotes the efficiency of the disclosure, which has a second-hand effect on the firm's performance by improving firm communication.

### **Hypothesis 4 (CEO Openness → CSR Metadata & Outcomes)**

Hypothesis 4 is highly supported. CEO openness greatly predetermined future-focused CSR articulations and embracement of new models, in line with open-minded leadership tendencies of adopting innovative strategies and thinking into the future. This expressed itself in better market valuation and ESG scores through metadata. The finding that openness indirectly

positively influences Tobin Q by influencing forward-looking disclosures was also supported by the SEM results. These conclusions underscore the receptiveness aspect as a quality that promotes strategic innovation in corporate social responsibility communication, which has positive receptive consequences in the capital market and for stakeholders. Consistent with,<sup>(18)</sup> the study has shown that text-based indicators of innovation and forward-looking strategies are mediated by CEO personality traits, in particular, their openness, affecting firm valuation. Open CEOs can therefore be described as drivers of disclosure innovation, as they are perceived as being flexible and long-term oriented, something that investors as well as regulators are interested in.

### **Hypothesis 5 (CSR Metadata → Firm Outcomes)**

Hypothesis 5 is also supported. Thus, Metadata information (sentiment, prosocial tone, readability, and future orientation) meaningfully anticipated both ROA and Tobin Q, ESG ratings, and media sentiment. This affirms metadata not only as a downstream consequence of CEO traits, but as a key intervening process in the transmission of psychological features to financial, market, and reputational results at the firm level. The importance of these unseen indirect effects serves as an expression of the reason created by the disclosure quality of stakeholder assessments of corporate acceptability. This observation is similar to that of Upper Echelons Theory<sup>(3)</sup> that executive traits indirectly influence outcomes through the strategic choices they make. Correspondingly, show that predicted CEO personality influences risk-taking of the firm through communication patterns and not through direct managerial decisions. The evidence, therefore, lends credence to the mediation mechanism, reinstating CSR disclosure style as a conduit through which the CEO attributes impact on corporate legitimacy and performance.

## **CONCLUSIONS**

This study discussed the relationship between personality characteristics of CEOs with openness, conscientiousness, empathy, and narcissism, and the adoption of new CSR disclosure frameworks. The results demonstrate that CEO openness has a significant and positive impact on the change of innovative reporting standards, like SASB and TCFD, as intellectually curious and forward-looking CEOs influence the organisation to follow new global standards. Conscientiousness, empathy, and narcissism, in turn, were not significantly directly related to framework adoption, although they did influence disclosure quality and narrative characteristics in other tests.

The findings are consistent with other studies and show that CEO openness correlates with future-oriented strategy, and that narcissistic CEOs care more about the volume, rather than the quality of disclosure. As a whole, the research confirms that the executive psychological characteristics influence the firm's behaviour significantly based on disclosure decisions. The results also note the readability, tone, and future orientation of the metadata as important mediators between CEO characteristics and report outcomes. The paper also concludes that openness of the CEOs is the most significant determining factor in the change towards adoption of novel CSR frameworks, although the other attributes have an intermediate or indirect effect. This goes to illustrate the significance of leadership psychology in determining organisational resilience to sustainability and governance requirements.

## RECOMMENDATIONS

The study gave the following recommendations:

1. To correct the predisposition toward self-referencing and an inflated positive tone by narcissistic CEOs, firms should implement more robust oversight mechanisms by the board.
2. Firms must use empathetic CEOs to improve the prosocial tone of the disclosure without compromising technical accuracy and simplicity of the report.
3. The training and disclosure provisions should advise well-meaning CEOs to make reporting easier to read and comprehend, as their reporting approaches are more formal and tend to be too complex.
4. CEOs' Boards ought to support the initiatives of open-minded CEOs to promote the implementation of new CSR frameworks (e.g., SASB, TCFD), which create a future-oriented and innovative reporting practice.
5. Policymakers and investors should take note of disclosure metadata (e.g., readability, sentiment, future orientation), as these characteristics intervene between trait associations and firm performance outcomes, including ROA, Tobin Q, ESG ratings, and media sentiment.

## FINANCING

None.

## CONFLICT OF INTEREST

Authors declare that there is no conflict of interest.

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