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Dark Tetrad personality and earnings management: the moderating effect of corporate reputation

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Abstract

Objective: The purpose of this study is to investigate the moderating effect of corporate reputation on the relationship between the Dark Tetrad personality and earnings management.
Method: Two approaches were adopted: one archival and one experimental. In the archival approach, 434 firms (2,645 observations) headquartered in the US were analyzed, covering the period 2010-2017. Earnings management was proxied by accruals quality, reputation was proxied by the score on the ranking of the World's Most Admired Companies, and Dark Tetrad personality was based on CEO speech and 'Big Five' personality analysis. In the experimental approach, we used a 2x2 between-subjects design on a sample of 242 MBA students, most of whom had a background in management. The Dark Tetrad personality was measured with the Short Dark Triad form (Paulhus & Jones, 2014) and the Assessment of Sadistic Personality (Plouffe et al., 2017). For reputation, we adapted the scenarios of Goldberg (1990) and Lafferty (2007). Participants were asked to make five accounting decisions to gauge their disposition to commit fraud.
Results: The results confirmed that CEO personality affects earnings management and showed that a good corporate reputation reduces the likelihood of earnings management and fraud, thereby preserving accounting information quality.
Contributions: Among the practical contributions for auditors and investors, this study expands Upper Echelons Theory by including and associating dark personality traits with greater risk of earnings management and fraud.

Keywords: Earnings management; Dark Tetrad Personality; Corporate Reputation.

How to Cite:

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Introduction

In this study we explore two key factors that may influence earnings management: the presence of dark personality characteristics and company reputation. We argue that some dark personality traits prone to fraud will temper their behavior within a positive ethical environment, whereas others will not. Due to how critical the quality of earnings reports is, it is important to identify factors that may compromise them.

Executives sometimes manipulate earnings through accounting practices, compromising the quality of information and investor forecasts (Luchs et al., 2009). CEOs may use their position opportunistically to increase their compensation, conceal poor performance, or improve the informational value of earnings (Rijsenbilt & Commandeur, 2013). This can either comply with accounting regulations (Jones, 2011) or involve illegal practices. In the latter scenario, the CEO is committing fraud (Stolowy & Breton, 2004). The course a CEO chooses is influenced by various psychological factors.

In 1984, Hambrick and Mason proposed the Upper Echelons Theory (UET). The theory is based on the notion that decision-making is influenced by cognitive models, personality factors, knowledge, values, biases, familiarities, and preferences (Hambrick & Mason, 1984). According to Hiebl (2014), top executives heavily influence organizational outcomes through their choices, which in turn depend on managerial characteristics.

Researchers indicate that opportunistic decision-making is related to certain personality traits (Craig & Armenic, 2011; D'Souza & Lima, 2015; 2019; Jones, 2014; Nottar et al., 2022; Rijsenbilt & Commandeur, 2013). Subclinical (or everyday) personality traits on the darker side of human nature have been studied extensively. Babiak et al. (2010) argue that psychopaths can be found in both prisons and boardroom. CEOs with dark personalities are prone to fraudulent financial reporting practices and most likely have a detrimental effect on organizations (Ten Brinke et al., 2017). Dark personality traits typically involve callousness and manipulation (Jones & Figueredo, 2013).

Early research on dark personalities focused on three traits: narcissism, Machiavellianism and psychopathy-the so-called Dark Triad (Paulhus & Williams, 2002). Later, another dark personality trait, sadism, was added to form a dark tetrad (Buckels et al., 2013). The components of the so-called Dark Tetrad are positively intercorrelated yet may be used to predict unique outcomes (Amos et al., 2022; Paulhus, 2014; Paulhus et al., 2021).

Decision making is influenced by both personality and the CEOs operating environment. A firm's reputation can impact decision-making style and may interact with CEO's personality. Research has demonstrated that struggling companies tend to hire narcissistic managers, who often reduce the ethical organization integrity (Hou et al., 2024). In contrast, Luchs et al. (2009), Garrett et al. (2014) and Tian et al. (2024) concluded that good corporate reputation influences accounting information quality positively, enhancing transparency and minimizing earnings management and fraud.

A solid corporate reputation tends to create an ethical environment and a sense of trustworthiness which inhibits unethical behaviors and encourages executives-even those with dark personalities-to maintain accounting information quality (Bergh et al., 2010). Jones and Paulhus (2014) found that, when consequences are likely, narcissism and Machiavellianism are not associated with fraud.

Introducing narcissistic managers into ethical work environments may reduce their tendence to engage in fraudulent behaviors. However, this doesn't change their underlying propensity for unethical actions, but rather affect their perceived cost-benefit analysis. Psychopaths and sadists are likely to engage in deviant and risky behaviors regardless of the likelihood of punishment or retaliation (Buckels et al., 2013; Jones, 2014; Paulhus et al., 2021). Thus, accounting information quality could be affected by the interaction between dark personality and corporate reputation.

CEO reputation tends to align with corporate reputation (Love et al., 2017). If a CEO is caught managing earnings, it undermines investor confidence in the future accounting figures (Clor-Proell et al., 2023). Therefore, to strategically protect their own and the company's reputation, leaders with dark personality traits might resist unethical temptations.

Following up on the extant body of literature on the influence of dark personality traits on decision-making and business (Cao et al., 2012; Craig & Amernic, 2011; Dechow et al., 2010; D'Souza & Lima, 2015; Jones, 2014; Li, 2010; Luchs et al., 2009; Paulhus et al., 2021; Rijsenbilt & Commandeur, 2013), in this study we investigate two key determinants on the business area: corporate reputation and dark personality (Dark Tetrad).

Our core assumption is that CEOs with a relatively high score on one or more of the Dark Tetrad traits are more likely to manage earnings and commit fraud, whereas, on the other hand, lower levels of fraud and earnings management may be expected in well-reputed firms due to ingrained values, structures and formal or informal rules. Firms with good reputations discourage (explicitly and implicitly) opportunism and manipulation to decrease earnings management. In some instances, the reputation of the firm (and that of the leader) may be too valuable to risk, even for highly dark personalities.

Thus, we investigated the association between dark personality and earnings management or fraud and

how corporate reputation affects dark personality. Our exploration weighed the destructive power of Dark Tetrad CEOs against the halo effect of good reputation. As expected, a reputation built over time was found to be protective against opportunism and callous behavior.

The study's main contribution is its evaluation of the role good corporate reputation (an intangible asset) plays in accounting information quality by inhibiting earnings management and fraud committed by Dark Tetrad CEOs. Our efforts are intended to assist shareholders, investors, board members, analysts and auditors in their activities and decision-making.

Additionally, the study contributes to the literature by advancing and expanding the discussion on Dark Tetrad personality, the intercorrelation between its four components (narcissism, psychopathy, sadism and Machiavellianism) and the complex interplay between corporate reputation, executive personality, and corporate behavior.

2 Theoretical Framework and Hypotheses

Upper Echelons Theory (UET), as proposed by Hambrick and Mason (1984), highlights the direct influence of top executives on organizational decision-making and culture. In this light, corporate decisions are often determined by subjective managerial values and cognitive biases rooted in bounded rationality rather than objective economic analyses.

Yamak et al. (2014) believe UET should consider top managers' personality traits and the organizational environment, including corporate reputation, governance and ethics, which significantly shape leadership behavior and strategic decision-making. Incentives may constitute another area of interaction between CEO personality and earnings management (Hsieh et al., 2014) in which asymmetrical rewards favor CEOs with dark personalities, though few studies have explored this dimension.

Kaplan et al. (2007) observed an association between poor moral judgment and high levels of earnings management. Blair et al. (2017) found that CEOs with dark personalities often engage in unethical behaviors such as lying and manipulating for promotion. Indeed, dark personalities are over-represented in accounting fraud, stock manipulation, unnecessary layoffs and environmental damage (Rijsenbilt & Commandeur, 2013).

Based on these premises, Harrison et al. (2016) looked at how Dark Triad personality leads to unethical decision-making. Narcissism, for example, is associated with unethical behaviors for personal benefit, but it also implies unrealistic perceptions of one's own abilities (Paulhus et al., 2021). Machiavellianism is not only associated with a lack of ethics, but with a keen ability to perceive opportunities to deceive others (Harrison et al., 2016). However, the most aggressive forms of anti-social behavior are observed among psychopaths (Jones, 2014), and sadistic individuals (Buckels et al., 2013).

CEOs with strong Machiavellian traits often engage in financial misreporting and feel less guilt about it (Murphy, 2012). Majors (2015) noted that managers with dark personalities frequently use aggressive and misleading reporting practices. In auditing, Johnson et al. (2013) found narcissistic client behavior and fraud motivation to be positively associated with high overall fraud risk.

Shafer and Wang (2011) showed that CEOs with dark personalities are more lenient with earnings management. Olsen et al. (2014) reported that dark personality traits in top executives affect financial performance through subjective decisions and influence rather than through objective accruals and accounting judgments. Harris et al. (2022) found that managers' dark personality traits increase their tendency to engage in disruptive and unethical organizational behaviors, including accounting earnings management.

Since dark personality traits affect moral and ethical judgment and decision-making, a Dark Tetrad CEO is particularly prone to earnings management and fraud for personal gain. To evaluate that, we formulated the following hypothesis:

Hypothesis 1. Dark personality traits are positively related to earnings management and fraud.

Corporate governance through formal contracts emerged to the problem of agency conflicts and CEO opportunism (Leuz et al., 2003). Despite this, CEOs can still act opportunistically. Veh et al. (2019) suggest that strong corporate reputation and effective governance significantly mitigate agency problems. This effect relies on self-discipline and repeated stakeholder interactions, fostering trust and accountability over time.

Corporate reputation is an essential intangible resource, enhancing value, financial performance and reducing uncertainty (Roberts & Dowling, 2002). Veh et al. (2019) assert that strong reputation, characterized by efficient management, ethical practices, talented employees, and innovation, indicates quality and aligns with shareholder interests, boosting trust and signaling commitment to sustainable growth and ethics.

Kim et al. (2012) found that reputable firms whit corporate social reponsibility are less prone to earnings management. Similarly, Garrett et al. (2014) found that firms trusted by stakeholders exihibt better accrual quality and fewer financial statement misstatements and internal control material weakness.

Companies with strong reputation or high-quality standards develop a perceived aura of competence

rooted in their accountability, credibility, and trustworthiness. Over time, these values contribute to forming a corporate culture, which is upheld through unwritten norms and traditions rather than formal policies, incompatible with fraud and conducive to high quality financial reporting (Agarwal et al., 2011; Cao et al., 2012; Garrett et al., 2014; Luchs et al., 2009; Veh et al., 2019). This leads us to our second hypothesis:

Hypothesis 2. A good corporate reputation is negatively associated with earnings management and fraud.

As predicted by UET, decision-making is affected simultaneously and differently by personality, internal environmental or organizational pressure, and corporate reputation (Hambrick & Mason, 1984; Hiebl, 2014; Yamak et al., 2014). It is reasonable to assume that the two constructs (dark personality and corporate reputation) interact-favoring or inhibiting earnings management and fraud.

Cao et al. (2012) claim that highly reputable companies have greater incentives to protect their reputation since good reputation attenuates agency problems by inducing behaviors aligned with the shareholders' interests, even in the absence of formal contracts. Thus, good corporate reputation can discourage CEOs from engaging in opportunistic behaviors or activities (Kim et al., 2012).

Giving the link between company and CEO reputations (Love et al., 2017), opportunistic behaviors violating accounting standards lead to losses in personal prestige and (presumably) financial wealth (Desai et al., 2006). A credible corporate environment positively influences the behavior of dark personality CEOs, improving accounting information quality (Chen, 2010). Zakerian et al. (2021) found a negative and significant relationship between corporate reputation and accrual-based, real, and reductive earnings management, indicating that highly reputed firms are less likely to engage in such practices. Based on these claims, we formulated a third study hypothesis:

Hypothesis 3. The presence of Dark Tetrad CEOs is positively related to earnings management and fraud, though less so when corporate reputation is strong.

3 Methods

Earnings management was evaluated with an archival study, whiereas fraud was analyzed with an experimental study. This choice was made because archival proxies for fraud often show low variability or lack fraud cases entirely.

Archival study
Data collection

The accounting information required to measure earnings management (accruals quality) was obtained from the websites of CRSP and Capital IQ (Wharton Research Data Services).

The process of measuring the Dark Tetrad personality involves: (1) downloading transcriptions of CEO Earnings Calls from Seeking Alpha Website; (2) extracting and analyzing CEO speeches using IBM's 'Personality Insights' tool, which applies natural language processing (NPL) to assess the personality of the speaker. It returns scores based on the Big Five personality traits; and (3) translating Big Five traits to Dark Tetrad traits using existing literature (O'Boyle et al., 2015). The Big Five personality dimensions (extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience) are correlated whit the Dark Tetrad traits: narcissism, Machiavellianism, psychopathy and sadism. The Big Five model's correlation with Dark Triad constructs (narcissism, Machiavellianism, psychopathy) enables this translation.

This study bridges Big Five personality traits to Dark Tetrad traits by converting natural language analysis scores into CEOs behavioral profiles. This assessment gauges CEOs tendencies for narcissism or Machiavellianism based on their spoken words during earnings calls. The process builds on prior research connecting everyday personality traits (Big Five) to darker personality constructs (Dark Tetrad) (Book et al., 2016; Buckels et al., 2013; Geel et al., 2017; Greitemeyer & Sagioglou, 2017; Vize et al., 2018).

Corporate reputation was proxied by the firm's overall score on the Fortune list of the World's Most Admired Companies (http://fortune.com/worlds-most-admired-companies/).

Control variables were obtained from the websites of CRSP and Capital IQ (Wharton Research Data Services), from Bloomberg (https://www.bloomberg.com/) and from Relationship Science (https://relationshipscience.com/).

Sampling

The research population included all public companies listed at least once on the Fortune ranking of the World's Most Admired Companies from 2010 to 2017, whit available data on CRSP, Capital IQ and Seeking Alpha. The start of the sampling period was set to the year 2010 to avoid confounding by the 2007-2009 financial crisis (Table 1).

Table 1. Sampling

Criteria	Number of firms
Firms listed on the ranking of the World's Most Admired Companies	1.029
Firms with financial information on the websites of CRSP and Capital IQ (Wharton Research Data Services)	913
Firms with earnings conference call transcriptions (Seeking Alpha)	584
Firms not in the financial industry	465
Firms headquartered in the US, with no missing values	434

Source: Authors.

After applying the criteria listed in Table 1, the final sample consisted of 434 firms (2,645 observations)

headquartered in the United States.

Initially, due to the lack of a universally applicable measure of reputation in the literature, we included all firms on the ranking of the World's Most Admired Companies. We verified the availability of information for these firms in the databases CRSP and Capital IQ (Wharton Research Data Services). Firms not traded on the stock market (no available financial data) were excluded. Thirdly, we verified the availability of earnings conference call transcriptions on the Seeking Alpha website from which to extract the CEO statements needed to identify Dark Tetrad traits.

We excluded financial institutions due to their peculiar accounting procedures. We also excluded non-US companies (less than 15% of the sample) to achieve greater sample homogeneity. Finally, we eliminated firms with missing values for the variables used to test our hypotheses. Thus, only 434 firms met the inclusion criteria and were included in the regressions.

Mensuração das Variáveis

Our definition of earnings management was based on Francis and Wang (2008) and Dechow et al. (1995), i.e., "abnormal and discretionary accruals". Hence, high levels of earnings management are synonymous with low accounting information quality.

Abnormal accruals (AB) were defined as in Francis and Wang (2008), i.e., the firm's actual total accruals in year t, minus the predicted total accruals for year t. AB was quantified in four steps; the first was the measurement of total accruals, as shown in Equation 1.

$$TA_{it} = (IBEI_{it} - OCF_{it})/A_{it-1} \quad (1)$$

where TA_{it} is total accruals, $IBEI_{it}$ is earnings before extraordinary items, OCF_{it} is operating cash flows, and A_{it-1} is total assets.

The second step involved the measurement of current accruals (Equation 2).

$$CA_{it} = \Delta(ACT_{it}\text{-}CHE_{it}\text{-}TSCA_{it}) - \Delta(LCT_{it}\text{-}DCL_{it}\text{-}PD_{it}) \quad (2)$$

where CA_{it} is current accruals, ACT_{it} is total current assets, CHE_{it} is cash and short-term investments, $TSCA_{it}$ is treasury stock shown as current assets, LCT_{it} is total current liabilities, DLC_{it} is debt in current liabilities, and PD_{it} is proposed dividends.

In the third step, we measured predicted accruals using the method proposed by Francis and Wang (2008), which differs from models like that of Dechow et al. (1995). In this model, predicted accruals may be calculated by replacing the values in Equation 3. No regression is necessary.

$$PA_{it} = \{[S_{it} \times (CA_{it-1}/S_{it-1})] - [PPE_{it} \times (D_{it-1}/PPE_{it-1})]\}/A_{it-1} \quad (3)$$

where PA_{it} is predicted accruals, S_{it} is sales, CA_{it} is current accruals, PPE_{it} is gross property, plant and equipment, D_{it} is depreciation and amortization, and A_{it-1} is total assets.

Fourth, we measured abnormal accruals, defined as the difference between TA and PA, as shown in Equation 4.

$$AB_{it} = (TA_{it}\text{-}PA_{it})/A_{it-1} \quad (4)$$

where TA_{it} is total accruals, PA_{it} is predicted accruals, and A_{it-1} is total assets. The greater the abnormal accruals, the lower the quality of the accruals and the accounting information.

Due to the existence in earnings of noise from accruals manipulation (Dechow et al., 2010), we calculated another metric: discretionary accruals. Following the example of Dechow et al. (1995) and Dechow et al. (2010), DA was calculated in three steps, the first of which is illustrated in Equation 5.

$$TA_{it} = \beta_0 (1/A_{it-1}) + \beta_1(\Delta REV\text{-}\Delta REC)_{it} + \beta_2 PPE_{it} + \varepsilon_{it} \quad (5)$$

where TAit is total accruals (difference between earnings before extraordinary items and discontinued operations and operating cash flows from continuing operations) deflated by total assets, REV_{it} is net revenues deflated by total assets, REC_{it} is receivables deflated by total assets, PPE_{it} is gross property, plant and equipment deflated by total assets, A_{it-1} is lagged total assets, and ε_{it} is error of regression.

The coefficients estimated from Equation 5 (β_0, β_1 and β_2) are used in Equation 6 to estimate firm-specific non-discretionary accruals.

$$NDA_{it} = \beta_0(1/A_{it-1}) + \beta_1(\Delta REV\text{-}\Delta REC)_{it} + \beta_2 PPE_{it} + \varepsilon_{it} \quad (6)$$

where NDA_{it} is non-discretionary accruals deflated by total assets, REV_{it} is net revenues deflated by total assets, REC_{it} is receivables deflated by total assets, PPE_{it} is gross property, plant and equipment deflated by total assets, A_{it-1} is lagged total assets, and ε_{it} is error of regression.

DA corresponds to the difference between TA and NDA, as shown in Equation 7.

$$DA_{it} = TA_{it}\text{-}NDA_{it} \quad (7)$$

It may be inferred that the greater the discretionary accruals, the lower the quality of the accruals and the accounting information.

Dark Tetrad personality was identified based on analyzing the content and language of CEO speeches extracted

from earnings conference calls. Over the past decade, several authors have demonstrated that CEO personality (common or unique) can be gleaned from personal letters and communications (Chatterjee & Hambric, 2011; Craig & Amernic, 2011). Cragun et al. (2020) find a meta-analysis on CEO narcissism and its behavioral impacts, which also highlights how personality can be interpreted from various forms of communication, including personal letters and public statements.

Rather than using CEO letters to shareholders, as many others have done, we analyzed transcriptions of speeches delivered during the earnings conference call's questions and answers (Q&A). Such speeches are more spontaneous than letters and may therefore be expected to capture CEO personality more reliably.

The method of determining Dark Tetrad personality involved three steps, explained at the beginning of this section. We used the Pearson coefficients for the correlations between Big Five, Dark Triad and sadism presented in the findings of the previous studies (Table 2—Part I). Significant coefficients were averaged, and the number 1 was added to the absolute value of the coefficient (Table 2—Part II).

Table 2. Averaged Pearson coefficients between Big Five and Dark Tetrad components

	NARC	PSYC	MACH	SAD	NARC	PSYC	MACH	SAD
	Part I				Part II			
EX	0,290	-0,041	-0,037	-	1,290	1,041	1,037	-
AG	-0,229	-0,552	-0,420	-0,418	1,229	1,552	1,420	1,418
CO	-0,188	-0.286	-0,238	-0,255	1,188	1,286	1,238	1,255
NE	-0,125	-0,013	0,007	-0,057	1,125	1,013	1,007	1,057
OP	0,215	-0,138	-	-0,031	1,215	1,138	-	1,031

Source: Authors.
Note: NARC=narcissism; PSYC=psychopathy; MACH=Machiavellianism; SAD=sadism; EX=extraversion; AG=agreeableness; CO=conscientiousness; NE=neuroticism; OP=openness. The negative values are highlighted in gray to be used in the following step.

Using the results from the Part II of the Table 2, we developed equations to measure each Dark Tetrad personality. When the association between Big Five and Dark Tetrad was positive, we multiplied the value shown in the Part II of Table 2 by the results obtained with Personality Insights. When the association was negative, we divided the value shown in the Part II of Table 2 by the results obtained with Personality Insights. Finally, the results were averaged, and a Dark Tetrad personality was created, as used by Hrazdil et al. (2018) and Gómez-Leal et al. (2024).

Narcissism (NARC) tends to be associated with the positive extreme of extraversion and openness and with the negative extreme of neuroticism, agreeableness, and conscientiousness (Book et al., 2016; Buckels et al., 2013; Geel et al., 2017; Greitemeyer & Sagioglou, 2017). Equation 8 measures narcissism.

$$NARC_{it} = [(EX_{it} \times 1.290) + (AG_{it}/1.229) + (CO_{it}/1.188) + (NE_{it}/1.125) + (OP_{it} \times 1.215)]/5 \quad (8)$$

where $NARC_{it}$ is narcissism, EX_{it} is extraversion, AG_{it} is agreeableness, CO_{it} is conscientiousness, NE_{it} is neuroticism, and OP_{it} is openness to experience.

Psychopathy (PSYC) tends to be associated with the negative extreme of extraversion, agreeableness, conscientiousness, neuroticism, and openness (Book et al., 2016; Buckels et al., 2013; Geel et al., 2017; Greitemeyer & Sagioglou, 2017). Equation 9 measures psychopathy.

$$PSYC_{it} = [(EX_{it}/1.041) + (AG_{it}/1.552) + (CO_{it}/1.286) + (NE_{it}/1.013) + (OP_{it}/1.138)]/5 \quad (9)$$

where $PYSC_{it}$ is psychopathy, EX_{it} is extraversion, AG_{it} is agreeableness, CO_{it} is conscientiousness, NE_{it} is neuroticism, and OP_{it} is openness to experience.

Machiavellianism (MACH) tends to be associated with the positive extreme of neuroticism and with the negative extreme of extraversion, agreeableness, and conscientiousness (Book et al., 2016; Buckels et al., 2013; Geel et al., 2017; Greitemeyer & Sagioglou, 2017). Equation 10 measures Machiavellianism.

$$MACH_{it} = [(1.037/EX_{it}) + (1.420/AG_{it}) + (1.238/CO_{it}) + (1.007 \times NE_{it})]/4 \quad (10)$$

where $MACH_{it}$ is Machiavellianism, EX_{it} is extraversion, AG_{it} is agreeableness, CO_{it} is conscientiousness, and NE_{it} is neuroticism.

Sadism (SAD) tends to be associated with the negative extreme of agreeableness, conscientiousness, neuroticism and openness (Book et al., 2016; Buckels et al., 2013; Geel et al., 2017; Greitemeyer & Sagioglou, 2017). Equation 11 measures sadism.

$$SAD_{it} = [(AG_{it}/1.418) + (CO_{it}/1.255) + (NE_{it}/1.057) + (OP_{it}/1.031)]/4 \quad (11)$$

where SAD_{it} is sadism, AG_{it} is agreeableness, CO_{it} is conscientiousness, NE_{it} is neuroticism, and OP_{it} is openness to experience.

The literature on Dark Tetrad personality (Paulhus, 2014; Paulhus & Jones, 2014; Paulhus et al., 2021) shows that narcissism, Machiavellianism, psychopathy, and sadism share many characteristics and are intercorrelated.

We therefore performed a factor analysis to create a comprehensive measure of Dark Tetrad personality (not tabulated). As expected, a single factor (D4) was obtained which incorporated 94.4% of the variance shared by the variables. In other words, D4 included all the traits of each dark personality (callousness, impulsivity, manipulation, criminality, grandiosity, and enjoyment of cruelty) (Paulhus, 2014).

Corporate reputation (REP) was proxied by the total score of each firm on the ranking of the World's Most Admired Companies. In years of absence from the ranking, firms were assigned the score 0, based on the assumption that unlisted firms must have a low reputation. In all models, REP was lagged because reputation effects are realized over time: reputation built in t-1 only benefits the firm in the following year (t).

We conducted multiple linear regressions with panel data and random effects controlled by industry and year to test the study hypotheses, as shown in Equation 12. We expect that β_1 shows a positive sign, β_2 shows a negative sign, and β_3 shows a value less than β_1, according to the hypotheses.

$$EM_{it}=\beta_0+\beta_1 DA_{it}+\beta_2 REP_{it-1}+\beta_3 D4_{it}\times REP_{it-1}+\Sigma\beta_n(Control)_{it}+\varepsilon_{it} \quad (12)$$

where EM_{it} corresponds to AB_{it} which is abnormal accruals according to Francis and Wang (2008), DA_{it} is discretionary accruals according to Dechow et al. (1995), REP_{it-1} is lagged corporate reputation proxied by the total score on the ranking of the World's Most Admired Companies, D4 is a factor comprising $NARC_{it}$, $PSYC_{it}$, $MACH_{it}$ and SAD_{it}; $NARC_{it}$ is narcissism obtained with Equation 8, $PSYC_{it}$ is psychopathy obtained with Equation 9, $MACH_{it}$ is Machiavellianism obtained with Equation 10, and SAD_{it} is sadism obtained with Equation 11.

The control variables fell into two categories: CEO and organizational. The former included age, gender and CEO turnover (Hambrick & Mason, 1984; Hiebl, 2014; Yamak et al., 2014), while the latter included company size (Li, 2010), leverage (Dechow et al., 2010), audit quality (Peasnell et al., 2000), sales growth (Li, 2010), loss (Francis & Wang, 2008), return on assets and market-to-book rate (Dechow et al., 2010), industry and year (Johnson et al., 2014). Earnings management variables and organizational control variables below the 1st percentile and above the 99th percentile were winsorized.

Experimental approach

An online Qualtrics survey was administered to 242 MBA students, most of whom had experience in management. The students attended the University of Texas (El Paso, USA), the University of Illinois (Urbana-Champaign, USA), Faculdade FIPECAFI (São Paulo, Brazil) or FUCAPE Business School (Vitória, Brazil).

The constructs D4 and REP were used as independent variables to explain and predict corporate fraud (dependent variable).

Dark Tetrad personality can be measured with a psychological instrument developed by Paulhus and Jones (2014). Containing 36 questions, the instrument is divided into two sub-instruments: The short Dark Triad form (Paulhus & Jones, 2014; Paulhus et al., 2021) and the Assessment of Sadistic Personality (ASP) (Plouffe et al., 2017).

The Short Dark Triad form features 27 items on aspects of narcissism, Machiavellianism and psychopathy. Each item is scored between 0 (strongly disagree) and 10 (strongly agree). The ASP is a 9-item measure of sadism. Each item is scored between 0 (strongly disagree) and 10 (strongly agree). The mean score expresses the degree of dark personality (narcissism, Machiavellianism, psychopathy and sadism) of each respondent.

Each dark personality was submitted to factor analysis to obtain a comprehensive variable (not tabulated). As expected, a single factor was obtained which incorporated 62.04% of the variance shared by the variables. The factor included all the traits of each dark personality (callousness, impulsivity, manipulation, criminality, grandiosity and enjoyment of cruelty) (Paulhus, 2014).

To determine how strongly REP affects the association between Dark Tetrad and corporate fraud, we created two corporate scenarios based on Goldberg (1990) and Lafferty (2007), one of a firm with strong reputation (A) and one of a firm with weak reputation (B), that is the manipulation. Each scenario was randomly assigned to a group of participants. As a manipulation check, the participants were asked to score their firm's reputation on a scale between 0 (very weak) and 10 (very strong). In general, scenario A received high scores while scenario B received low scores.

The dependent variable (corporate fraud) included five items of decision-making: premature revenue recognition in advance, fictitious revenue, reduction of expenses, undervalued expenses and expense delay recognition (Bonner et al., 1998). Participants act as CEOs answered five questions about accounting decisions to measure their propensity to commit fraud. An income figure was provided in each situation; those who chose to manipulate the initial figure were considered to have committed fraud. Based on the accounting decision, values ranged from 0 to 150 (corresponding to USD 150,000). The fraud score was the value assigned divided by 150: higher scores indicated a greater propensity for fraud; zero scores indicated no fraud.

At this point, an incentive to fraud was given in the form of a lottery draw for two tablets. The participants were asked

to pretend they were CEOs and told that the probability of winning was related to their compensation in the company. The amount was divided into fixed and variable compensation. The former corresponded to a number in the lottery, the latter to the number of repetitions of that number, according to the net income of the fictional company.

Thus, the experiment had a 2x2 between-subjects design. The between-subjects manipulations were 1) Dark Tetrad personality (high vs. low), and 2) company reputation (strong vs. weak). Age (AGE), gender (GEN), work experience (EXP), and nationality (NAT) were used as control variables (participant variables) due to their potential influence on decision-making behavior (Góis, 2017).

We used descriptive statistics, correlation analysis and ordinary least-squares regressions. Equation 13 shows the regression model for accounting fraud. We expect that β_1 shows a positive sign, β_2 shows a negative sign, and β_3 shows a value less than β_1, according to the hypotheses.

$$FRAUD_i = \beta_0 + \beta_1 D4_i + \beta_2 REP_i + \beta_3 D4_i \times REP_i + \Sigma\beta_n (Control)_i + \varepsilon_i \quad (13)$$

where $FRAUD_i$ is disposition to commit fraud, $D4_i$ is the individual Dark Tetrad factor and narcissism, Machiavellianism, psychopathy and sadism measured with the short Dark Triad form and the ASP, REP_i is level of manipulation proxied by corporate reputation (strong or weak), Controli is age, gender and work experience, and ε_i is error of regression.

4 Results

Archival approach

Table 3 shows the descriptive statistics for the main variables for our sample.

Table 3. Descriptive statistics (archival approach)

Panel A					
Continuous variables					
Variable	**Observation**	**Min.**	**Max.**	**Mean**	**Std. dev.**
AB	2.645	-0,012	1,463	0,116	0,219
DA	2.645	-15,361	14,954	0,211	3,948
D4	2.645	-12,734	5,880	0,023	0,937
NARC	2.645	0,556	0,719	0,658	0,010
PSYC	2.645	0,437	0,596	0,546	0,008
MACH	2.645	0,388	0,584	0,527	0,01
SAD	2.645	0,441	0,627	0,573	0,009
REP	2.645	0,000	8,800	3,412	3,243
SIZE	2.645	5,421	12,681	9,224	1,343
ROA	2.645	-0,287	0,344	0,104	0,068
MTB	2.645	-0,007	0,011	0,000	0,001
GROW	2.645	-0,514	0,815	0,054	0,147
LEV	2.645	0,000	0,967	0,294	0,182
AGE	2.645	30	82	56	6
Panel B					
Dummy variables					
Variable	**Category**	**Observation**	**Frequency (%)**	**Mean**	**Std. dev.**
BIG4	1	2.606	98,53	0,985	0,121
	0	39	1,47		
LOSS	1	257	9,72	0,097	0,296
	0	2.388	90,28		
GEN	1	2.529	95,61	0,956	0,205
	0	116	4,49		
TURN	1	527	19,92	0,199	0,399
	0	2.118	80,08		

Source: Authors.
Note: AB=abnormal accruals; DA=discretionary accruals; D4=Dark Tetrad factor; NARC=narcissism; PSYC=psychopathy; MACH=Machiavellianism; SAD=sadism; REP=corporate reputation; SIZE=company size; ROA=return on assets; MTB=market-to-book rate; GROW=sales growth; LEV=leverage; AGE=age of CEO; LOSS=company loss; BIG4=audit quality; GEN=gender; TURN=CEO turnover.

Due to the noise in accruals caused by manipulation, we adopted the proxies AB and DA. In this study, AB was positive (0.1162), in contrast with the negative mean value reported by Francis and Wang (2008). DA was also positive (0.2109), in accordance with Dechow et al. (1995) and Cohen et al. (2008).

The mean D4 value was positive (0.0232), with a high deviation due to the factor analysis. The most observed dark personality trait was NARC, followed by SAD, PSYC and MACH. This is not surprising: our sample consisted of the best-reputed firms in the world, which naturally attract CEOs in search of notoriety and prestige.

The mean REP value was relatively low (3.4). This may be explained by the assignment of the value 0 in years of absence from the ranking of the World's Most Admired Companies. When the 'absent years' were ignored, the mean REP value almost doubled (6.38), corresponding to medium-high reputation.

Table 4 shows the Pearson correlation coefficients for the dependent, independent and control variables.

Table 4. Pearson correlation coefficients (archival approach)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1																	
2	0,01	1																
3	0,11***	0,03*	1															
4	0,09***	0,059***	0,97***	1														
5	0,10***	0,06***	0,99***	0,10***	1													
6	0,09***	0,06***	0,97***	0,92***	0,96***	1												
7	0,13***	0,07***	0,95***	0,88***	0,92***	0,88***	1											
8	-0,25***	-0,05**	0,01	0,04*	0,02	0,01	-0,02	1										
9	-0,61***	-0,03	-0,06***	-0,05***	-0,06***	-0,07***	-0,04**	0,38***	1									
10	0,045**	0,02	0,06***	0,07***	0,06***	0,05***	0,05**	0,22***	-0,08***	1								
11	0,09***	-0,06***	-0,04**	-0,04**	-0,04**	-0,03*	-0,04*	-0,17***	-0,11***	-0,34***	1							
12	-0,02	-0,01	0,02	0,02	0,02	0,02	0,01	0,071***	0,01	0,16***	-0,03*	1						
13	-0,00	0,10***	-0,00	0,01	-0,00	-0,02	-0,01	0,11***	-0,02	0,17***	-0,06***	0,02	1					
14	0,02	0,01	0,09***	0,07***	0,08***	0,09***	0,09***	-0,12***	-0,00	-0,13***	0,20***	0,12***	-0,13***	1				
15	-0,07***	-0,01	-0,00	-0,012	-0,00	0,01	0,00	0,03*	0,09***	0,06***	-0,01	0,03*	-0,03	0,04*	1			
16	-0,01	0,09***	0,13***	0,11***	0,12***	0,12***	0,15***	0,00	0,03	0,07***	-0,08***	0,04**	-0,06***	0,03*	0,06***	1		
17	-0,00	0,01	0,01	0,013	0,01	0,01	0,01	0,02	-0,07***	-0,03*	0,02	-0,00	0,04**	-0,08***	-0,03	0,03	1	
18	-0,02	0,03	0,04**	0,03*	0,04**	0,04**	0,05**	0,02	0,05***	-0,01	0,03	-0,01	0,01	-0,00	0,03	0,13***	-0,00	1

Source: Authors.

AB and DA were both positively associated with D4, supported by Kaplan et al. (2007), Shafer and Wang (2011) and Olsen et al. (2014). AB and DA was positively associated with NARC, PSYC, MACH and SAD. AB and DA were both negatively associated with REP, as reported by Agarwal et al. (2011), Cao et al. (2012), Garrett et al. (2014) and Luchs et al. (2009). Thus, firms with good corporate reputation tend to issue financial reports of higher quality.

Table 5 shows the results of the regression on Dark Tetrad conducted to test the hypotheses.

Table 5. Regression on Dark Tetrad personality (archival approach)

Variable	AB	DA
D4	0,0057*	0,1625*
	(0,0033)	(0,0991)
REP	-0,0013*	0,0018
	(0,0007)	(0,0297)
REP × D4	-0,0017***	-0,0417**
	(0,000)	(0,0217)
SIZE	-0.0997***	-0,0383
	(0,000)	(0,1015)
ROA	-0,0224	-0,8245
	(0,0856)	(,.8394)
LOSS	0,0024	-0,9060**
	(0,0087)	(0,3143)
MTB	0,8912	-23,3803
	(1,0588)	(92,1626)
GROW	0,0644***	0,8810***
	(0,0132)	(0,8594)
LEV	0,0732*	2,4321***
	(0,0379)	(0,7954)
BIG4	0,0258	-0,0961
	(0,0244)	(0,9053)
AGE	0,0000	0,0270*
	(0,0005)	(0,0164)
GEN	0,0125	0,0118
	(0,0112)	(0,3462)
TURN	-0,0027	0,1204
	(0,0039)	(0,2008)
Constant	1,0485***	-0,1319
	(0,1331)	(1,6137)
Industry and year	Yes	Yes
N	2.645	2.645
c2	169,08***	398,78***
R2overall	0,4078	0,0930
R2within	0,1233	0,0402
R2between	0,4477	0,1604

Source: Authors.

Note: ***=significant at the 1% level; **=significant at the 5% level; *=significant at the 10% level; Robust standard error is given in parentheses; AB=abnormal accruals; DA=discretionary accruals; D4=Dark Tetrad factor; REP=corporate reputation; SIZE=company size; ROA=return on assets; LOSS=company loss; MTB=market-to-book rate; GROW=sales growth; LEV=leverage; AGE=age of CEO; BIG4=audit quality; GEN=gender; TURN=CEO turnover.

In the first model (AB) all variables of interest were significant. The fact that D4 was positively associated with AB allows us to infer that CEOs with dark personalities tend to engage in earnings management through abnormal accruals, matching the conclusions of Shafer and Wang (2011). Based on this finding, Hypothesis 1 cannot be rejected, in agreement with Healy and Wahlen (1999) and Lo (2008) who concluded that earnings management occurs when CEOs alter financial reports to their own benefit, unethically misleading stakeholders about the firm's underlying economic performance. Likewise, D'Souza and Lima (2015) pointed out that dark personality traits affect the CEO's judgment, decision-making ability, and perception of earnings management.

Since REP was negatively associated with AB, it may be inferred that well-reputed firms are unlikely to engage in earnings management. In other words, Hypothesis 2 cannot be rejected. According to Cao et al. (2012), because it is an agency problem, earnings management may be attenuated by good corporate reputation. Moreover, firms with high reputation signal high quality, conveying competence and business conduct consistent with shareholder interests.

The interaction term D4XREP was negatively associated with AB. We infer that in well-reputed firms Dark Tetrad CEOs are less likely to engage in earnings management, explained by the halo of credibility of such firms-in other words, by the long-standing culture of ethically sound behaviors and traditions (Agarwal et al., 2011; Cao et al., 2012). Cao et al. (2012) believe highly reputable firms have greater incentives to protect their reputation and therefore curb opportunistic behaviors and activities more emphatically (Kim et al., 2012).

This is compatible with Upper Echelons Theory, according to which internal environmental or organizational pressure (in this case, corporate reputation) have an impact on decision-making (Hambrick & Mason, 1984; Hiebl, 2014; Yamak et al., 2014). The negative effect of Dark Tetrad personality on managerial decision-making and accounting information quality (earnings management through accruals manipulation expressed in abnormal accruals) can be contained by good reputation. Based on this finding, Hypothesis 3 cannot be rejected.

Among the control variables, only SIZE, GROW and LEV were significantly associated with AB. As evidenced by the correlation analysis, SIZE was negatively associated with AB. This means large firms have less incentives to engage in earnings management, as concluded by Francis and Wang (2008). In the present study, GROW was positively associated with AB. AB and LEV were also positively associated, meaning that highly leveraged firms are more likely to engage in earnings management, possibly to comply with debt covenants (Francis & Wang, 2008).

In order to control for noise in earnings due to accruals manipulation (Dechow et al., 2010), we ran a discretionary accruals model. Based on the observed DA values, Hypothesis 1 and 3 cannot be rejected.

After that, we ran models to correlate each dark personality component (narcissism, psychopathy, Machiavellianism and sadism) with earnings management (not tabulated). In this analysis, all the variables of the models remained constant, except for REP. When the individual dark personality was inserted into the model instead of D4, reputable firms engaged more in manipulation by accrual. However, earnings management was restrained in reputable firms managed by highly dark personalities.

Our results confirm both the deleterious effect of Dark Tetrad traits in CEOs and the halo effect of good reputation, in which ethical values and perceptions built over time protect the organization against the effects of crises and opportunistic behaviors. Hence, corporate reputation may be seen as a moderator between earnings management and Dark Tetrad personality. Since good reputation can modulate CEO behavior, firms should invest in reputation-building strategies (e.g., innovation, governance, human capital and product/service quality) capable of boosting credibility and trustworthiness (Agarwal et al., 2011; Cao et al., 2012).

Experimental approach

Table 6 shows the results of the descriptive statistics for the main variables.

Table 6. Descriptive statistics (experimental approach)

Panel A					
Continuous variables	**Obs.**	**Min.**	**Max.**	**Mean**	**Std. dev.**
FRAUD	242	0,2341	0,2178	0,0000	0,7610
NARC	242	5,2615	1,3384	1,3333	9,0889
PSYC	242	2,6442	1,4187	0,0778	7,6889
SAD	242	1,7541	1,5665	0,0000	8,7222
MACH	242	5,0783	1,6569	1,4333	9,8333
D4	242	0,0000	1,0000	-1,9497	3,9477
AGE	242	28,0620	6,9902	21	54
EXP	242	1,7066	4,0631	0	30
Panel B					
Dummy variables	**Category**	**Frequency**	**Percent**	**Cumulative**	
REP	Weak	137	56,6	56,6	
	Strong	105	43,4	100,0	
GEN	Female	107	44,2	44,2	
	Male	135	55,9	100,0	

Source: Authors.
Note: ***=significant at the 1% level; **=significant at the 5% level; *=significant at the 10% level; FRAUD=fraud; NARC=narcissism; PSYC=psychopathy; SAD=sadism; MACH=Machiavellianism; D4=Dark Tetrad factor; AGE=age; EXP=work experience; REP=corporate reputation; GEN=gender.

The sample of 242 participants included 81 Chinese (33.47%), 57 Brazilians (23.55%), 55 Americans (22.73%), 30 Indians (12.40%) and 19 other nationalities (7.85%). Males accounted for 55.79% and females for 44.21%.

Scenario A (strong corporate reputation) was randomly assigned to 105 participants (43.4%), while scenario B (weak corporate reputation) was randomly assigned to 137 participants (56.6%).

The variable FRAUD was assigned a range between 0 (no fraud) and 1. As shown in Table 6, some participants did not commit fraud (25 participants), since they indicated a value of 0. The remaining participants committed fraud (217 participants) varying only the level of fraud, in which the maximum value was 76.10%, yielding a mean value of 0.2341 (complete sample which includes the participants who did not commit fraud) or 0.2611 (subsample of participants committing fraud). When FRAUD was divided into three parts by percentiles, the mean level of fraud was moderate (not tabulated).

Mean scores were low for NARC, PSYC, MACH and SAD, since the values were below 6 of 10. The highest-scoring Dark Tetrad component was narcissism (5.26), followed by Machiavellianism (5.07), psychopathy (2.64) and sadism

(1.75). The results of Plouffe et al. (2017), who used the same scales as us, differed regarding the first and second position (Machiavellianism followed by narcissism).

Table 7 shows the results of the Pearson correlation analysis of the dependent, independent, and control variables.

Table 7. Pearson correlation coefficients (experimental approach)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	1									
(2)	0,33***	1								
(3)	0,36***	0,35***	1							
(4)	0,47***	0,35***	0,75***	1						
(5)	0,27***	0,28***	0,58***	0,55***	1					
(6)	0,45***	0,57***	0,88***	0,87***	0,78***	1				
(7)	-0,01	-0,03	0,02	0,02	0,01	0,01	1			
(8)	-0,03	0,05	0,19***	0,14**	0,03	0,13**	-0,01	1		
(9)	-0,34***	-0,13**	-0,08	-0,22***	-0,14**	-0,18***	-0,10	0,24***	1	
(10)	-0,20***	-0,08	-0,02	-0,10	-0,14**	-0,11*	-0,08	0,23***	0,72***	1

Source: Authors.
Note: ***=significant at the 1% level; **=significant at the 5% level; *=significant at the 10% level; 1=fraud (FRAUD); 2=narcissism (NARC); 3=psychopathy (PSYC); 4=sadism (SAD); 5=Machiavellianism (MACH); 6=Dark Tetrad factor (D4); 7=corporate reputation (REP); 8=gender (GEN); 9=age of CEO (AGE); 10=work experience (EXP).

The Pearson correlation analysis of the dependent, independent and control variables pointed out that FRAUD was positively associated with all dark personality traits, matching the results of Kaplan et al. (2007), Shafer and Wang (2011) and Olsen et al., (2014). No association was found between REP and FRAUD. Among the control variables, AGE and EXP were negatively associated with FRAUD, indicating that the younger and less experienced participants committed more fraud.

Table 8 shows the results of the regressions on FRAUD and D4. We ran five models, one for each Dark Tetrad component, and one for D4.

Table 8. Regression on accounting fraud and dark personality

	NARC	PSYC	SAD	MACH	D4
DP	0,046***	0,065***	0,058***	0,044***	0,106***
	(0,01)	(0,01)	(0,01)	(0,01)	(0,01)
REP	-0,020	0,069	-0,016	0,127	-0,015
	(0,10)	(0,05)	(0,03)	(0,08)	(0,02)
DP × REP	0,002	-0,033*	-0,001	-0,028*	-0,038*
	(0,02)	(0,02)	(0,01)	(0,02)	(0,02)
GEN	0,012	-0,012	-0,013	0,010	-0,016
	(0,03)	(0,03)	(0,03)	(0,03)	(0,03)
AGE	-0,011***	-0,011***	-0,009***	-0,012***	-0,010***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
EXP	0,004	0,004	0,003	0,006*	0,004
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Intercept	17,462	27,596**	34,255***	19,046	50,743***
	(15,46)	(12,36)	(12,30)	(13,99)	(11,58)
R2	0,203	0,238	0,281	0,186	0,286
F test	12,431***	19,530***	25,341***	11,503***	25,709***
N	242	242	242	242	242

Source: Authors.
Note: ***=significant at the 1% level; **=significant at the 5% level; *=significant at the 10% level. Robust standard error is given in parentheses. NARC=narcissism; PSYC=psychopathy; MACH=Machiavellianism; SAD=sadism; D4=Dark Tetrad factor; DP=dark personality; REP=corporate reputation; GEN=gender; AGE=age of CEO; EXP=work experience.

All dark personality components were positively associated with FRAUD, a finding supported by the literature (D'Souza & Lima, 2015; Shafer & Wang, 2011). Since CEOs with highly dark personalities are more inclined to commit fraud, Hypothesis 1 cannot be rejected.

REP was not significantly associated with FRAUD. However, we had expected REP to be negatively associated with FRAUD since reputation has been shown to reduce agency problems by inducing behaviors in the interest of the shareholders, even in the absence of a formal contract (Cao et al., 2012), and to inhibit opportunistic behaviors on part of the CEO (Kim et al., 2012). In other words, Hypothesis 2 was rejected.

The interaction term DP×REP was significantly and negatively associated with FRAUD in three of the models: PSYC, MACH and D4. From this it may be inferred that Dark Tetrad CEOs, especially when predominantly psychopathic and Machiavellic, are less likely to commit fraud when working in reputable firms. As we have seen, this may be explained by the halo of competence and credibility created by a long-standing corporate culture of unwritten rules and traditions (Agarwal et al., 2011; Cao et al., 2012). Because there are participants from different countries, we also controlled by nationality and the results remained constant.

As mentioned previously, Upper Echelons Theory holds that internal environmental or organizational pressure, including corporate reputation, is a significant factor in decision-making (Hambrick & Mason, 1984; Hiebl, 2014;

Yamak et al., 2014). Thus, good corporate reputation partly neutralizes the propensity of Dark Tetrad CEOs to commit accounting fraud. Based on this result, Hypothesis 3 cannot be rejected.

Our results confirm Upper Echelons Theory, demonstrating that dark personality traits are associated with higher risks of earnings management and fraud, harming the firm. We also expand the theory by showing that psycological traits influence CEO behavior, whereas Hambric and Mason's (1984) model focused solely in background factors (age, experience, etc.).

The main assumption of this paper was confirmed, with some restrictions: CEO with Dark Tetrad traits engage more in earnings management and are more likely to commit fraud. However, in well-reputed firms, these CEOs feel restrained by values, structures, and the potential loss of losing their own reputation. Firms must maintain their reputation to attract and retain competent employees (including top executives), create value, and captivate stakeholders. Reputation alone cannot safeguard corporate integrity. Firms must also follow ethical codes, implement good governance practices, and submit to regular audits by respected third parties. Along with corporate reputation, these policies reduce earnings management and improve accounting information quality.

5 Conclusions

This paper evaluated the moderating effect of corporate reputation on the relationship between Dark Tetrad personality traits and earnings management, using both archival and experimental approaches. Our study provides novel insights into how corporate reputation can act as a buffer against the negative influences of dark personality traits, offering a more nuanced understanding of decision-making process within organizations.

The results demonstrate that dark personality traits—narcissism, psychopathy, Machiavellianism, and sadism—are positively associated with unethical behaviors such as earnings management and fraud. These findings are consistent with previous research, which indicates that individuals with such traits prioritize personal gain and are more likely to engage in manipulative behaviors to achieve their goals (Jones & Paulhus, 2014; Paulhus & Williams, 2002). However, the presence of a strong corporate reputation serves as a mitigating factor, reducing the likelihood that such individuals will act opportunistically. This suggests that reputation is not just a passive asset but an active force that influences corporate culture and decision-making, encouraging more ethical behavior even among those predisposed to act otherwise.

Individuals with dark personalities tend to make decisions based on short-term gains and self-interest, often breaking rules for personal benefit. In firms with weaker reputations, these behaviors are more likely to go unchecked, resulting in more fraud and earnings management. Conversely, strong reputations constrain executives by highlighting the high cost of unethical behavior, such as reputational damage. Thus corporate reputation serves as an informal governance, influencing both corporate strategies and individual behavior.

Corporate reputation is crucial for moderating dark personality traits, emphasizing the importance for a strong ethical standing. It acts as a social capital, influencing employees, customers, and investors. A positive corporate reputation may increase transparency, ethical decisions, and accountability, reducing the chances for individuals with dark traits to manipulate earnings or commit fraud. Cao et al. (2012) and Kim et al. (2012) show that a strong corporate reputation can help to curb opportunistic behaviors by aligning executive interests with those of stakeholders.

Our findings are relevant for corporate governance and risk management strategies for shareholders, board members, accountants, regulator investors, analysts and auditors. Shareholders must be cautions when selecting CEO, as dark personalities can be challenging for cooperation. CEOs with high levels of narcissism or Machiavellianism may initially seem charismatic and driven, but their leadership can lead to significant risks if their actions are not aligned with the long-term health of the company. Firms with strong reputations attract ethical leaders and hold them accountable, reducing the chances of financial loss, regulatory scrutiny, and stakeholder trust issues due to reputational damage.

Regulatory bodies, auditors and analysts should consider how dark personality traits influence corporate decision-making. Given the impact of dark personality traits on earnings management and fraud, auditors should develop more nuanced risk assessment tools that factor in corporate reputation and executive behavior, especially for firms led by individuals with high levels of dark traits, requiring stricter oversight. Regulatory frameworks emphasizing corporate governance and ethical leadership can mitigate fraud and earnings management, particularly in firms with weaker reputational capital.

Our study also highlights the societal implications of dark traits in leadership. CEOs with dark traits can erode a firm's ethical foundation, impacting employees, customers, and the broader economy. As Rijsenbilt and Commandeur (2013) argue, the behavior of CEOs with dark traits can be highly destructive, affecting all stakeholders.

Future research could investigate how other aspects of corporate governance—such as board independence or shareholder activism—interact with dark personality traits to influence decision-making and corporate behavior. Studies could also examine the influence of national

culture on the relationship between personality traits and corporate governance. Cultural factors might either exacerbate or mitigate the expression of dark traits.

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Statement of data availability:

The datasets generated during and/or analyzed during the current study are available from the corresponding author (Gerlando Augusto Sampaio Franco de Lima) on reasonable request.