Revista de Educação e Pesquisa em Contabilidade
Journal of Education and Research in Accounting

Periódico Trimestral, digital e gratuito publicado pela Academia Brasileira de Ciências Contábeis | Available online at www.repec.org.br

REPeC, Brasília, v. 14, n. 4, art. 4, p. 459-479, Oct./Dec. 2020 | DOI: http://dx.doi.org/10.17524/repec.v14i4.2661 | ISSN 1981-8610

Does Corporate Social Responsibility moderate the relationship between the Machiavellian trait and earnings management?

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Abstract

Objective: to analyze the relationship between the Machiavellian personality trait and Corporate Social Responsibility (CSR) and earnings management, in the light of the Upper Echelons theory.
Method: theoretical empirical study, using a survey as the data collection procedure, applied to 208 business professionals. Descriptive statistics, hypothesis testing and regression were applied.
Results: The professionals who care about compliance with policies that refer to legal responsibility do not agree with the earnings management practice, while those who focus on economic responsibility displayed willingness towards this management. As for the Machiavellian influence, those more endowed with these traits tend less towards legal and ethical corporate responsibility and display greater acceptance towards earnings management. In addition, against expectations, the moderation of CSR did not reduce the positive relationship between Machiavellianism and earnings management.
Contributions: The results permit a broader discussion on interdisciplinary practice in behavioral accounting and provide insights on how Machiavellianism can influence corporate decisions and social conduct. Economic and social implications of the findings are of interest to accounting professionals, investors and auditors in order to understand the impact or damage earnings management causes to accounting information.
Keywords: Corporate Social Responsibility; Earnings Management; Machiavellianism.

Published in Portuguese and English. Original Version in Portuguese.

Received in 6/2/2020. Ask to Revise on 6/3/2020. Resubmitted on 9/8/2020. Accepted on 10/26/2020 by Drª Bruna Camargos Avelino (Assistant Editor) and by Dr. Gerlando Augusto Sampaio Franco de Lima (Editor). Published on 23/12/2020. Organization responsible for the journal: Abracicon.

1. Introduction

Accounting scandals such as the famous cases of Petrobras, General Motors, Toshiba, Lehman Brothers, Shell, WorldCom and Enron incite the discussion about the importance of CSR in the business context. The lack of transparency of accounting information and manipulations of earnings by managers were attributed, at the time, to the decline of morality in business, translated by the lack of CSR (Chih, Shen, & Kang, 2008).

CSR corresponds to the specific actions and policies carried out in the organizational context, which take into account the tripod of economic, social and environmental performance and stakeholders' expectations. Companies engaged in CSR are likely to improve their reputation, customer loyalty and product evaluations (Aguinis, 2011), given that the internal policies influence the attitudes and behaviors of managers and employees (Leal, 2013). CSR covers economic, legal, ethical and discretionary aspects (Carrol, 1979).

This theme has been the subject of studies investigating corporate financial performance (Leal, 2013; Callan & Thomas, 2009; Orlitzky, Schmidt, & Rynes, 2003). Some studies have focused on discussing whether CSR inhibits earnings management, as individual and business performance can be masked when managers are willing to manage earnings in order to reflect a performance that is superior to that truly achieved. Shafer and Lucianetti (2018) and Shafer (2015) emphasize that corporate ethics and social responsibility are indicators of lesser profit manipulation. Chih *et al.*(2008) argue that CSR increases the transparency of accounting information and reduces the number of opportunities for earnings management.

Earnings management is observed from two perspectives: informational and opportunistic. The informational perspective focuses on the choice of accounting policies, especially on changing accounting criteria due to the flexibility of accounting standards. It is difficult to see whether such changes represent manipulation or just a discretionary accounting choice. The purpose of the opportunistic perspective is to use accounting information to deceive the key stakeholders regarding the operational earnings. Information is intentionally distorted, causing earnings fraud (Mohanram, 2003).

Studies in the behavioral field suggest that the practice of earnings management is motivated by the personality of individuals (Silva, 2019; D'Souza, Lima, Jones, & Carre, 2019; Góis, 2017; D'Souza, 2016; D'Souza & Lima, 2015) because, as stated by the Upper Echelons theory (Hambrick, 2007; Hambrick & Mason, 1984), the interpretations and choices of executives are related to personal characteristics, values and personality.

Individuals with dark, non-pathological personality traits, such as Machiavellianism, manifest low ethical and moral standards, strategy focused on long-term gains and absence of principles in the business environment. Machiavellianism "is a personality trait marked by a calculating attitude towards human relationships and a belief that ends justify means, albeit inhumane." Machiavellian individuals see others more or less as objects to be manipulated in the pursuit of goals, even if they commit deliberate fraud for this purpose (Vander Bos, 2010, p.574). They are prone to earnings manipulation in order to maximize personal and business gains (D'Souza, 2016).

Regarding the Machiavellian perspective on CSR, Burton and Hegarty (1999) observed that managers grant greater importance to economic liabilities and little attention to ethical and legal liability. If, on the one hand, Machiavellian individuals care about reputation, on the other, callousness, manipulation and dishonesty are striking features of this personality trait.

In this context, this study aims to clarify the following research problem: What is the relationship between the Machiavellian personality trait and Corporate Social Responsibility and earnings management? Therefore, the intention is to analyze the relationship between the Machiavellian personality trait and Corporate Social Responsibility and earnings management. Therefore, 208 business professionals were surveyed and the results of this research indicate that the greater the proneness towards legal accountability, the lesser the willingness to manage earnings. An opposite effect was evident when the economic liability was analyzed. Under the Machiavellian influence, the stronger the trait, the lesser the individuals' motivation for legal and ethical corporate responsibility, and the greater the acceptance of earnings management practices. In addition, against expectations, the moderation of CSR did not reduce the relationship between Machiavellianism and earnings management.

The results evidence the theoretical and practical relevance of this study. It is theoretically relevant because it broadens the debate of the interdisciplinary study that discusses business and psychological themes, still little explored in the business area in Brazil, besides contributing with the theoretical foundation on the approach of the Upper Echelons theory, which is strongly related with the themes CSR, earnings management and Machiavellian personality traits. Also regarding this aspect, it is worth considering the methodological contribution of an empirical study involving business professionals who work or have already worked in the management area and are able to interpret the decision-making process in organizations, permits the critical analysis of the results obtained.

In addition to the separate analysis of the theme, the intention is to complete a theoretical gap in the knowledge on the moderating effect of CSR in the relationship between Machiavellianism and earnings management, as previous studies have focused on a separate discussion of the pair relationship between the themes Machiavellianism and SCR (Shafer & Lucianetti, 2018; Burton & Hegarty, 1999) and Machiavellianism and earnings management (Hartmann & Maas, 2010; Murphy, 2012; Byngton & Johnson, 2011), or the analysis of other dark personality traits: narcissism, CSR and management (Lin, Sui, Ma, Wang, & Zeng, 2018; Petrenko, Aime, Ridge, & Hill, 2016; Tang, Mack, & Chen, 2018), *Dark Tetrad* (Narcissism, Machiavellianism, Psychopathy and Sadism), corporate governance mechanisms and earnings management (Silva, 2019); and the *Dark Tetrad,* corporate reputation and accounting information quality (Góis, 2017).

The practical contribution derives from the economic and social implications of the relevant findings for accounting professionals, such as: auditors, regulators and those responsible for corporate governance, as well as business managers who formulate internal policies about the impact or damage caused by earnings management, which refers to operational manipulations that do not violate the laws, and accounting manipulations that violate the laws (Merchant, 1989). It also develops an understanding of how Machiavellianism can influence the social conduct of leaders, inside and outside companies, especially in reporting on the social and financial performance of companies to society. As organizations are managed and led by individuals with diverse characteristics, the results provide an opportunity for discussion that business decisions reflect these managers' values and interests.

This article is divided into five sections. The first is this, the introduction, which presents the problem, the justification, the objective and a summary of the main results of the study. The second contains the theoretical framework explored and the construction of the hypotheses, which presents the discussion on Corporate Social Responsibility, earnings management, Machiavellianism and previous studies. The third section contains the method and information on the study subject; the fourth the analysis of the results; and the fifth and final section the conclusions.

2. Corporate Social Responsibility

The theme CSR has gained importance in academic research. One of the first articles to shed light on the subject was that of Carroll (1979) – a conceptual model on the essential aspects of corporate social performance. The several related studies brought different concepts and definitions of CSR. Maignan, Ferrell and Hult (1999) highlighted the importance of stakeholders and the social performance of companies for CSR and defined it as "the extent to which companies meet the economic, legal, ethical and discretionary responsibilities identified by their various stakeholders" (p. 457). In addition, Aguinis (2011) defined CSR as "specific actions and policies carried out in the organizational context, which take into account the stakeholders' expectations and the tripod of economic, social and environmental performance". In common, it is noticed that these definitions of CSR always present a comprehensive concept, which involves economic, legal and social actions.

This breadth of concepts refers us to the conceptual model of Carroll (1979), who stressed that CSR should cover economic, legal, ethical and discretionary aspects. The economic aspect the author described informs that companies' main objective is to be economic agents producing goods and services that are demanded by society and sold to it for profit. According to the same author, the legal aspect indicates that society expects companies to perform their activities in compliance with legal requirements. The ethical aspect is related to the legal aspects, but Carroll (1979) describes it as a level beyond compliance with the law, so that companies should seek ethics in their actions. Finally, there is companies' discretionary aspect, that is, additional, voluntary actions, not required by law, but aimed at the social good, such as philanthropic contributions.

Considering that companies in general aim to maximize their profits and, consequently, shareholder wealth, one cannot dissociate CSR from this goal. Drucker (1984) pointed out that CSR would be a business opportunity the companies envisaged. Beyond a genuinely social and philanthropic behavior, as some definitions reveal, CSR has come to be pursued for satisfying the shareholders' desire. Hong and Andersen (2011) called this phenomenon "strategic philanthropy" – CSR, beyond a benevolent attitude of companies, would be actions aimed at generating positive results for the shareholders.

CSR actions would be aimed at seeking better results. It is not by chance that much of the academic literature on CSR sought to relate it to companies' financial performance, given that greater investment in CSR would lead to better performance. Studies such as Callan and Thomas (2009) and Orlitzky*et al.*(2003) investigated the relationship between CSR and financial performance in the American market and identified a positive relationship between the constructs. In a study on CSR, psychological aspects and individual performance involving Portuguese employees, Leal (2013) observed that CSR indirectly affects individual performance.

In this context, the Upper Echelons theory (Hambrick & Mason, 1984; Hambrick, 2007) grounds the manager's behavior on the choices and interests resulting from individuals' values, characteristics and personality, which influence the corporations' economic and social decisions. Thus, this study rests on the principles of the Upper Echelons theory when evaluating the personal characteristics of managers and their relationship with CSR, through potential earnings management actions.

3. Earnings Management

According to Merchant (1989), earnings management can be defined as any action, by management, that affects the declared result, does not provide true economic advantage for the organization and can, in the long run, be quite harmful to the various accounting information users. The procedure is intended to mislead stakeholders as to the company's economic situation and performance, and to influence the contractual results that depend on the reported accounting figures. To this end, the manager exercises discretion over the accounting figures, with or without constraint. The criteria adopted reflect the maximization of company value or an opportunistic stance (Healy & Wahlen, 1999).

Three forms of earnings management are investigated in the literature: accrual-based management, real management and classification change. Accrual-based management takes place when, using discretionary accumulations, the managers "borrow" the earnings from future periods to increase the earnings of the current period or, in the opposite sense, push the earnings from the current period to the future. Consequently, the costs incurred to increase current gains are added to the detection costs and then deducted from the future gains. The earnings from future periods are mechanically reduced as results of net profit that is accelerated to the current period (Albernathy, Beyer, & Rapley, 2014).

Real earnings management occurs when managers deviate from optimal business decisions to real management activities such as, for example, overproduction to reduce the cost of products sold (CPS), by cutting discretionary expenses, such as in research and development, to meet profit targets (Albernathy *et al.*, 2014).

Another management practice is the change of classification of equity and income accounts. McVay (2006) showed that, opportunistically, managers shift essential expenses, such as the cost of goods sold and general and administrative sales expenses, to special items (income or expenses of which no short repetition is expected, such as, for example, extraordinary expenses, restructuring charges and results of discontinued operations), with a special focus on the investors' analysis of company figures. This vertical movement of expenses does not alter the final result (profit or loss), but highlights an exaggeration of essential/operating gains, and figuratively favors the achievement of the forecasted earnings benchmark projected by analysts.

In this context, Merchant (1989) developed a research instrument with scenarios that refer to earnings management categorized by accounting manipulations, which violate accounting principles and operational manipulations, characterized by the modification of earnings through decisions that do not involve violations of accounting regulations, such as intentionally delaying the registration of expenses for repairs and maintenance, in order to reduce expenses for the current year, or the execution of sales promotions near the end of the year to inflate reported sales and revenues. In this particular case, some of the proposed scenarios can be exemplified in Table 1:

Table 1
Earnings management scenarios

Operational Management
Scenario 1: In September 2018, the General Manager of a large division of a multinational company realized that he would need a strong performance in the fourth quarter to meet his budget goals. He decided to implement a sales program that would offer flexible payment terms, with the purpose of anticipating some sales that would normally occur next year, to the current year. Customers would accept delivery in the fourth quarter and have a 120-day grace period to pay the invoice.
ACTION: The company's General Manager implemented the sales program, and as a result, the division was able to meet its budget goals.
Scenario 2: The General Manager of a small industry has experienced financial difficulties and would not reach the annual budget targets. Therefore, he ordered employees to postpone discretionary expenses (for example, maintenance, advertising and hiring) to the next accounting period.
ACTION: The General Manager's plan was implemented, and as a result, the company was able to meet its budget goals.
Accounting Management
Scenario 3: The General Manager was struggling to meet his profit forecasts during the end of 2018. He decided to call a partner from a consulting partner company who was working for the division and asked him to file the invoice for the services provided e in 2019, although the consulting fee had already been incurred in 2018. The consulting partner agreed.
ACTION: The General Manager did not record the consulting fee expenses in the current year and, thus, the division met its profit forecasts for 2018.
Scenario 4: The General Manager of a large division of a retail company realized near the end of 2018 that his division would significantly exceed his budgeted profit targets for the year. As a result, he ordered his Controller to develop a logic to increase the provision for inventory obsolescence. Assuming an overly pessimistic view of the future market perspectives, the controller was able to identify a significant quantity of finished products to be fully provisioned or downgraded from a sales perspective at a value below the cost of those inventories; even though he was confident that the inventory in question would still be sold in the following financial year at a value close to the market price.
ACTION: The General Manager implemented his strategy of recognizing the excess inventory provision. The division further noted that the 2018 profit targets contained some excess inventory provisions that could be used to increase reported profits in the future.

Source: adapted from Shafer (2015) and Merchant (1989).

Bruns and Merchant (1990) used the tool and applied the research to 649 U.S. managers. They found that operational manipulations were perceived more favorably than accounting manipulations. Then, Merchant and Rockness (1994) applied the survey to general and personnel managers, controllers of operational units and internal auditors of the United States and identified that the participants judged accounting manipulations more harshly than operational manipulations.

In this same perspective, Shafer (2015) used the four earnings management scenarios of Merchant's instrument (1989) to investigate Hong Kong accountants' perception of Corporate Social Responsibility and ethics and decision making for earnings management. The findings pointed to the importance of ethics and social responsibility for the behavioral intentions of accountants and suggest that these professionals rationalize management decisions based on ethics and corporate responsibility. In this same perspective, Chih *et al.* (2008) found that companies with greater social commitment reduced some earnings management practices.

Thus, based on the literature review presented on CSR and earnings management, the following research hypothesis is highlighted:

- **H1: The greater the Corporate Social Responsibility, the lesser the proneness to earnings management.**

4. Machiavellianism

Christie and Geis (1970) characterize individuals endowed with tactics, human vision and morality, besides dexterity, manipulation, strategy, cynical and unprincipled attitudes as Machiavellian individuals, manipulating others according to their point of view and interests. The concept of Machiavellianism was named based on the philosophy of Niccolò Machiavelli, a political adviser to the Medici family, who was in power in the sixteenth century, in Florence, Italy. The essence of Machiavelli's advice was that "the ends justify the means." Jones (2016) points out that Machiavelli's philosophy and the dispositional trends it aligns with facilitate the antisocial methods of individuals endowed with these traits to achieve goals, associated with greed and selfishness.

Machiavellian individuals are prone to manipulation in the long and short term, renouncing short-term benefits for the attainment of long-term benefits, and pay greater attention to reputation (Jones & Paulhus, 2009). Jones and Paulhus (2011), after a review of the writings by Machiavelli and the military strategist Sun Tzu, showed characteristics that refer to manipulative leadership, preparation, planning, premeditation, convenience, rationality, cynicism, logic, opportunism, the cultivation of reputation and the tendency towards decision making dissociated from prejudices and personal sympathies of Machiavellian individuals.

Jones (2016) highlights that Machiavellian individuals may be useful, in some circumstances, due to the distinguished ability to perform work that interests them personally, despite being open to unethical behavior. Therefore, one cannot expect fidelity from the Machiavellian individual for being a risky trade-off.

D'Souza (2016) presents the main characteristics evidenced in studies on Machiavellianism and reflected in the business environment, according to Table 2.

Table 2
Main features of Machiavellianism

General Characteristics	
Amorality	Flexibility
Absence of principles	Insensitivity
Absence of affability	Interpersonal manipulation
Low ethical and moral standards	Lying/Deception
Strategic calculation	Opportunism
Ability to make allies	Future orientation – long term
Ability to influence	Strategy
Cynicism	Reputation
Dishonesty	Tactics
Key empirical findings in the business environment	
Rational decision-making style	Financial fraud
Management strategy	Manipulation of budget lines
Earnings Management	Management tactics
Focus on personal power	Unethical decision making

Source: Table 14. D'Souza (2016). Financial maneuvers and the *Dark Triad*: the dark side of management.

The subsequent section presents the results of previous studies organized according to the elaboration of the next research hypotheses.

5. Previous Studies

5.1 Machiavellianism and Corporate Social Responsibility

Dark personality traits have been the subject of study for the analysis of Corporate Social Responsibility. Burton and Hegarty (1999) developed a study involving 219 American business undergraduate students to examine, among other variables, the effect of the Machiavellian orientation in relation to corporate social responsibility. The authors noticed that the respondents with a higher level of Machiavellianism demonstrated that economic liabilities were more important. The levels of social responsibility decreased to the extent that the level of Machiavellianism increased though, mainly due to the low importance the respondents attributed to legal and ethical liabilities. Shafer and Lucianetti (2018) found that the stronger the Machiavellian trait, the lesser the proneness to CSR and orientation to stakeholders. The latter, in turn, showed to be positively correlated with CSR.

Lin *et al.* (2018) examined how personal psychological traits affect the corporate social responsibility practices of top managers of Chinese organizations, who participate in megaprojects. They elected narcissism, another dark personality trait, as a particular focus, and realized that the higher the degree of narcissism of CEOs, the lesser the degree of social responsibility in the megaproject.

On the other hand, Petrenko *et al.*(2016) developed a study with a sample of *Fortune 500* CEOs to verify the effect of corporate social responsibility practices on narcissism in CEOs. The authors confirmed that the desire for attention and reinforcement to the image of CEO's with a dark personality entail positive effects for the levels and profiles of Corporate Social Responsibility. Tang *et al.* (2015) also studied the influence of narcissism and corporate social responsibility in 1500 S&P companies in the period from 2003 to 2010 and found that the most narcissistic CEOs care more about corporate social responsibility.

Based on the literature review presented, the following research hypotheses are listed.

- **H2: The stronger the Machiavellian personality trait, the lesser the corporate social responsibility.**

5.2 Machiavellianism and Earnings Management

Hartmann and Maas (2010) developed an experiment with 136 management accountants and found that the Machiavellian personality trait favors earnings management, given that these individuals are more likely to give in to management pressure to create budget slack when they are involved in decision making. Shafer and Wang (2011) observed that Chinese accountants in Machiavellian traits are more tolerant of earnings management practices.

Murphy (2012) found that individuals endowed with Machiavellianism are more likely to present incorrect reports. Byington and Johnson (2011) realized that Machiavellian individuals tend to manipulate budget lines. Vladu (2013) showed that individuals with Machiavellian traits consider earnings management an acceptable practice.

In a study involving 263 managers, D'Souza (2016) verified that managers rich in Machiavellianism and the other traits of the *Dark Triad* cluster, Narcissism and Psychopathy*, are more prone to earnings management.* In the same sense, D'Souza *et al.*(2019) realized that the three moderate traits of the *Dark Triad* can reveal desirable behaviors in the business environment, even when encouraged to manipulate earnings to maximize gains.

In view of the literature review presented, the following research hypothesis is highlighted:

- **H3: The stronger the Machiavellian personality trait, the greater the proneness to earnings management.**

Finally, the fourth research hypothesis is elaborated to test whether CSR moderates the strength of the dark personality trait in the relationship with earnings management, given the conception of Shafer (2015) and Chih *et al.*(2008), who argue that CSR can reduce the motivation for earnings management.

- **H4: the stronger the personality trait of Machiavellianism, the greater the proneness to earnings management, and this relationship decreases in the presence of Corporate Social Responsibility.**

The study by Góis (2017) applied moderation to verify the strength of the relationship between the dark personality traits – *Dark Tetrad* –, in the relationship with management and fraud. The author moderated the corporate reputation variable based on the assumption that formal or informal values, structures and rules built in companies with strong reputations could reduce the involvement of CEOs with strong traits of shady personalities with earnings management and fraud. The results pointed out that only the highly Machiavellian CEOs decreased the achievement of fraud due to the strong reputation.

Similarly, Silva (2019) moderated the corporate governance variable to verify the relationship between the *Dark Tetrad* traits and earnings management. Regarding management by real decisions, the interference of the high level of narcissism decreased the efficiency of the board of directors, demonstrating influence to increase this type of management. The high traits of psychopathy and sadism, by moderating the audit committee, decreased its efficiency, leading to increased *accruals*-based earnings management.

6. Methods

6.1 Approach, Data Collection Technique and Research Sample

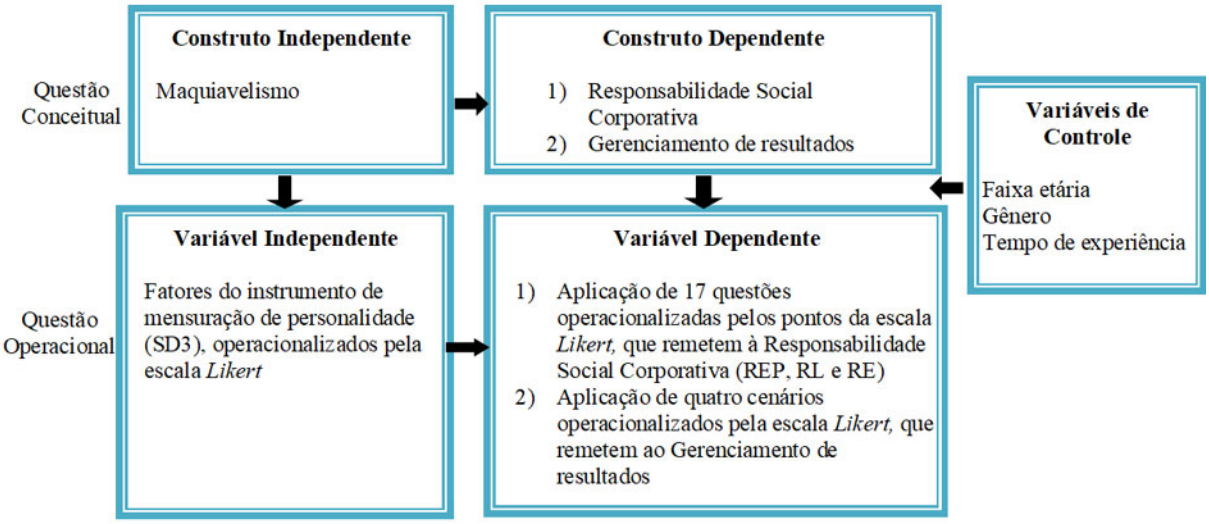
The theoretical-empirical approach was adopted, and the survey was used as a data collection strategy, through a self-reporting questionnaire, composed of five parts: I - informed consent form (TCLE); II - sociodemographic profile; III - corporate social responsibility, with five questions relating to the dimension of economic liability oriented to owners (REP), six to the legal liability dimension (RL) and six to the ethical liability dimension (re), adapted from the study by Shafer (2015), Maignan *et al.*(1999) and Leal (2013), which validated and expanded the instrument; IV - four earnings management (EM) scenarios illustrated through cases that refer to accounting and operational manipulation, adapted from the studies by Shafer (2015) and Merchant (1999); and v - nine specific assertions that measure the trait of Machiavellianism deriving from the *Short Dark Triad* (SD3) (Jones & Paulhus, 2014), an instrument validated in Brazil by D'Souza (2016).

The research sample involved business professionals who assume or have already assumed management positions in organizations and who participated in the 2018 edition of the *International Conference in Accounting*. The invitation to participate was forwarded by e-mail in October of this year, to 550 participants who fit the profile required for this survey and who offered valid contact information. Answers were obtained from 208 participants, being 54% male, mostly between 26 and 35 years of age (48.1%) and between 1 and 5 years (54.8%) of management experience.

A non-probabilistic sample was chosen based on accessibility, which does not permit the generalization of results, but merely the observation of the phenomenon that refers to the research problem. The questionnaire was reliable with a Cronbach's Alpha amounting to 0.765.

6.2 Research Variables, Parameters and Statistical Approach

According to the research problem, the Machiavellian trait is the independent variable to explain Corporate Social Responsibility and earnings management, considered in this study as dependent variables for testing the hypotheses H1, H2, and H3. The research design has been illustrated in Figure 1:



Translation: Conceptual question ; independent construct: Machiavellianism; Dependent Construct: Corporate Social Responsibility – earnings management; Operational Question; independent variable: factors of the personality measuring tool, operated on the Likert scale; Dependent variable: application of 17 questions operated on a Likert scale, related to Corporate Social Responsibility (REP, RL and RE); application of four scenarios on a Likert scale, related to earnings management; Control variables: age range, gender, length of experience.

Figure 1. Research design.

To test hypothesis H4, corporate social responsibility is considered a moderator of the relationship between Machiavellianism and earnings management. According to Baron and Kenny (1986), a moderating variable affects the sense (-/+) and/or strength of the relationship between an independent variable and a dependent variable. In this particular study, the interaction between the variables (Machiavellianism*REP), (Machiavellianism*RE) and (Machiavellianism*RL) was analyzed.

To operate the research variables, the instrument (SD3) by Jones and Paulhus (2014) was applied to measure the personality trait of Machiavellianism. This consists of seven self-reported assertions on a *Likert* scale (1 to 7 points), such as: *"Most people can be manipulated"*; *"Whatever it takes, you must get the important people on your side"*: *"It's wise to keep track of information that you can use against people later"*. Individual and group means were calculated.

For the corporate responsibility variable, operated on a *Likert* scale (1 to 7 points), the mean score was calculated for the assertions referring to each of the three liability dimensions: REP, RL and RE. These dimensions were selected because they are better related to the research problem, mainly due to the interface with the earnings management scenarios and the characteristics of the Machiavellian trait, for example: the economic dimension was intended to discover the agreement with: "*The company seeks to permanently increase its profits*"; "*The company is concerned with being increasingly profitable*". The legal dimension sought to know the agreement with: "*The company acts promptly in accordance with legal regulations*"; "*In the company, all of our products and services comply with the legal standards*". And, finally, the ethical dimension sought to know the agreement with: *"In general, the company complies with ethical and professional standards and norms*"; "*The company cares about doing what is ethically correct*".

For the earnings management variable, the average of the four scenarios applied was calculated, operated on the *Likert* scale (1 to 7 points).

With regard to the statistical approach, descriptive statistics (frequencies, means and standard deviation, maximum and minimum) were adopted to know the respondents' profile, the mean acceptance of the earnings management and social responsibility practices and the mean acceptance of the Machiavellian traits.

The hypothesis test was used to verify whether the business professionals' profile influences the personality and choices, in accordance with the Upper Echelons theory. Therefore, the Mann-Whitney and Kruskal-Wallis tests were selected, due to the nature of the research variables: qualitative (Gender: 0-female;1-male; Age range: 1: from 18 to 25 years; 2: from 26 to 35 years; 3: from 36 to 45 years and 4: Over 46 years and Length of experience: 1: from 1 to 5 years; 2: from 6 to 10 years; 3: from 11 to 15 years; 4: from 16 to 20 years; 5 from 21 to 25 years, and 6: over 26 years) and quantitative variables (mean EM; REP; RL and RE).

Correlation and regression were techniques adopted to analyze the relationship, signal and the strength between the variables: Earnings Management, Corporate Social Responsibility and Machiavellianism. To get to know the statistical significance of the variables that demonstrate greater relevance for the model and eliminate possible effects of multicollinearity (Fávero, Befiore, Silva, & Chan, 2009), the stepwise method was adopted for the regression test. Prior to the analysis of the regression results, we applied the test of homoscedasticity, self-correlation of residues and linearity of parameters to verify the need for adjustments. Based on the central limit theorem, the data tend to normality.

7. Results and Discussion

The statistical models for the hypothesis tests that were elaborated present the results. Initially, the descriptive results and hypothesis tests are presented with control variables and independent and dependent variables. Then, Model I discusses CSR and EM; Model II, Machiavellianism and CSR; Model III, Machiavellianism and EM; and Model IV, CSR moderating the relationship between Machiavellianism and EM.

Regarding descriptive statistics, Table 4 shows that the highest mean among the three dimensions of CSR was RE ($\bar{x}$=6.7059), followed by RL ($\bar{x}$=6.6867) and REP($\bar{x}$=6.1365). This result shows high agreement scores with CSR practices, revealing that the respondents respect the legal requirements and ethical conduct in the production of goods and services that society needs with a focus on profit. These results are slightly higher than those obtained by Leal (2013), RL ($\bar{x}$=6.0), REP ($\bar{x}$=5.81) and RE ($\bar{x}$=5.59), but imply a positive influence in business operations and accounting reports.

When analyzing the acceptance of EM practices, such as acceptance of operational management scenarios ($\bar{x}$=4.34) and accounting management ($\bar{x}$=2.73), greater agreement was observed with operational manipulation practices. Although not very expressive, this finding refers to the respondents ' agreement on the modification of earnings through the anticipation of sales registers, non-registration of expenses in the current year and increase of provisions. Similar results were found in the studies by Bruns and Merchant (1990) and Merchant and Rockness (1994). For this study, the mean acceptance ($\bar{x}$=3.5361) of the two scenarios was adopted for the entire analysis, as the objective of the study is to know the willingness to manage earnings in general, a method in accordance with Shafer's study (2015).

Concerning the Machiavellian orientation, the mean of ($\bar{x}$=3.7404) leads to agreement on the attitudes of the dark trait, a result that indicates the respondents' proneness to use strategy, tactics, long-term orientation, and manipulation. This finding is proportionally lower than that found by Silva (2019), ($\bar{x}$=2.55814), and D'Souza (2016), ($\bar{x}$=2.9155), when the authors investigated Brazilian managers, using a five-point *Likert* scale.Góis (2017) also verified a mean score for Machiavellianism of ($\bar{x}$=4.42) for Brazilian MBA students, and ($\bar{x}$=4.6) for North-Americans, on a scale from (1 to10).

Table 3
Descriptive statistics

Variables	No. of Participants	Minimum	Maximum	Mean	Standard deviation
Economic Liability	208	2.20	7.00	6.1365	.86041
Legal Liability	208	4.00	7.00	6.6867	.56727
Ethical Liability	208	4.00	7.00	6.7059	.48508
Earnings Management	208	1.00	7.00	3.5361	1.29236
Machiavellianism	208	1.00	7.00	3.7404	1.14334

Source: research data.

When it comes to the control variables, gender was distinctive in the presence of CSR. Men showed greater REP ($\bar{x}$=6.2754), while women showed greater proneness to RE ($\bar{x}$=6.7606) and RL ($\bar{x}$=6.7872). It is verified here that women are more prone to compliance with the economic mission of the business in compliance with legal requisites, based on ethical conduct.

The age group and the length of experience differed in the presence of Machiavellianism. Respondents between the ages of 18 and 25 were more prone ($\bar{x}$=3.9142) to Machiavellian traits. This result is similar to the study by D'Souza and Lima (2018), which found greater predisposition to manipulation and strategy among students aged 17 to 25 years ($\bar{x}$=3.643364). With regard to the length of experience, participants with between (1 and 5) years of experience presented greater Machiavellian orientation ($\bar{x}$=3.9288). This means that the shorter the length of experience, the greater the proneness to use the strategy for manipulation.

Table 4
Hypothesis testing

Variables	Test	Machiavellianism	EM	REP	RL	RE
		Sig	Sig	Sig	Sig	Sig
Gender	Mann-Whiney	.257	.268	.047(*)	.045(*)	.007(*)
Age range	Kruskal-Wallis	.000(*)	.076	.239	.410	.580
Length of Experience	Kruskal-Wallis	.009(*)	.403	.137	.579	.964

Obs.: LengthExper: Length of Experience; EM: Earnings Management; REP: Economic Liability; RL: Legal Liability; RE: Ethical Liability.
(*) p < .05.

Source: research data.

These results are based on the Upper Echelons theory (Hambrick, 2007), considering that characteristics such as age, role in the company, functional experience, education, socioeconomic roots and financial position permit a psychological view of human behavior. Hence, picturing the CEO's characteristics plays a determinant role in the choice of strategies and affects the choice of organizational strategies.

7.1 Model I – Corporate Social Responsibility and Earnings Management

The results showed a significant and positive correlation between RE and REP and RL. When analyzing the relationship between CSR and EM, a significant and negative correlation with RL is observed. This result permits the validation of the hypothesis H1 for the RL dimension because, the higher the RL, the lower the inclination towards earnings management.

It also permits inferring that the respondents care about obeying laws and regulations; therefore, the use of EM to improve company performance is not an acceptable act, whether violating the accounting information or not. Nevertheless, against expectations, RE and REP were not related to EM. When confronting previous results, Chih *et al.* (2008) found that the greater the companies' commitment to corporate social responsibility, the lower the willingness to manage earnings. In the study by Shafer (2015) then, involving Italian managers, the rationalization of EM when CSR is present was evidenced.

Table 5
Correlation between CSR and EM

Variables	REP	RL	RE	EM
Economic Liability	1			
Legal Liability	.067	1		
Ethical Liability	.175(*)	.573(**)	1	
Earnings Management	.127	-.200(**)	-.083	1

Obs.: REP: Economic Liability; RL: Legal Liability; RE: ethical liability; EM: Earnings Management.
(**) p < .01; (*) p < .05.

Source: research data.

To verify the significance of the model, multiple regression was applied including the dependent variable EM, the dimensions that refer to the CSR and the control variables (Length of Experience, Age and Gender). As observed in Table 6, the model is significant and REP was significant and positive, while RL was significant and negative.

Table 6
Regression CSR and EM

DV	Determinants		Variables	Coefficients	Standard error	T-statistics	Sig
EM	R2	.078	(Constant)	5.479	1.167	4.694	**.000**
	Adjusted R2	.064	RL	-.459	.154	-2.982	**.003**
	F-statistics	5.731	REP	.223	.101	2.198	**.029**
	P-value (F)	**.001**	LengthExper	-.125	.063	-1.990	**.048**

Obs.1: Durbin-Watson Test=1.769; White Test: (p-value =P(Chi-squared(9) > 11.1909)=0.26285; RL: Tolerance Test 0.992; VIF: 1.008; REP: Tolerance Test 0.993; VIF: 1.007; LengthExper: Tolerance Test 0.993; VIF: 1.007.
Obs. 2: DV: Dependent Variable; LengthExper: Length of Experience; REP: Economic Liability; RL: Legal Liability; RE: Ethical Liability; EM: Earnings Management.

Source: research data.

The positive significance of REP is highlighted here which, also against expectations, does not inhibit earnings management. This result draws the attention of investors to better analyze companies that position themselves as socially responsible and that practice opportunistic acts to increase profit and profitability. They benefit shareholders and harm other stakeholders in accounting information. The results also demonstrate that the shorter the length of experience, the greater the proneness to earnings management. Younger professionals are more prone to practicing earnings management. It is also observed here that the premises of the Upper Echelons theory on the individual profile influence the decisions.

7.2 Model II – Machiavellianism and Corporate Social Responsibility

Regarding the analysis between Machiavellianism and CSR, Table 7 shows a negative and significant correlation between Machiavellianism and RL and RE. It can be inferred that the proneness to Machiavellian features does not motivate participants to obey laws and regulations and respect the standards and values of society.

Table 7
Correlation Machiavellianism and CSR

Variables	REP	RL	RE	Machiavellianism
Economic Liability	1			
Legal Liability	.067	1		
Ethical Liability	.175(*)	.573(**)	1	
Machiavellianism	.022	-.257(**)	-.227(**)	1

Obs.: REP: Economic Liability; RL: Legal Liability; RE: Ethical Liability.
(**) p < .01; (*) p < .05.

Source: research data.

When the control variables and the three dimensions of CSR were inserted individually as dependent variables, the non-significance for Machiavellianism and REP was observed. This finding goes against Burton and Hegarty (1999), who showed that business students rich in Machiavellianism demonstrated REP. On the other hand, as predicted, Machiavellianism explains, in a significant and negative way, the RL and RE in this study.

Table 8

Regression RL and RE and the variables of Model II

Dependent variable	Determinants		Variables	Coefficients	Standard error	T-statistics	Sig
*RL	R2	.059					
	Adjusted R2	.055	(Constant)	7.105	.0954	74.51	**.000**
	F-statistics	13.109	Machiavellianism	-.111	.0306	-3.621	**.000**
	P-value (F)	**.000**					
*RE	R2	.076					
	Adjusted R2	.067	(Constant)	7.119	.093	75.80	**.000**
	F-statistics	8.470	Machiavellianism	-.090	.028	-3.280	**.001**
	P-value (F)	**.000**	Gender	-.126	.028	-2.308	**.022**

Obs. 1: *Corrected heteroscedasticity: statistics based on weighted data.
Obs. 2: REP: Economic Liability; RL: Legal Liability; RE: Ethical Liability; LengthExper: Length of Experience.

Source: research data.

Table 8 shows that as the strength of the Machiavellian trait increases, social responsibility decreases. This result is in line with Burton and Hegarty (1999), who observed the decrease in RE and RL as the Machiavellian traits increase, and with Shafer (2018), who also found a strong negative association between Machiavellianism and corporate social responsibility.

It can also be observed that the gender variable was significant and negative in the presence of ethical liability. It is observed here that the premises of the Upper Echelons theory on the individual profile, such as gender, influence the choices and values. Based on these results, hypothesis H2 can be partially validated.

7.3 Model III – Machiavellianism and Earnings Management

Table 9 presents the positive and significant correlation between Machiavellianism and EM. It can be inferred that the absence of principles, strategy and low ethical and moral standards of Machiavellian individuals motivate the use of accounting and operational maneuvers, such as: postponing discretionary expenses, increasing provisions, postponing expenses for the year and anticipating sales to improve business performance.

Table 9

Correlation Machiavellianism and Earnings Management

Variables	EM	Machiavellianism
EM	1	
Machiavellianism	.294(**)	1

Obs. 1: EM: Earnings Management

Source: research data.

When inserting the control variables, adopting EM as the dependent variable, a significant model is observed and the confirmation that Machiavellianism explains EM in a significant and positive way. The stronger the traits of Machiavellianism, the greater the respondents' proneness to attitudes that imply operational and/or accounting earnings management. In one way or another, accounting and management information will be distorted, which will benefit the shareholder or the company responsible for the information in an opportunistic manner.

Table 10

Regression Machiavellianism and EM

<table>
<tr><th>DV</th><th colspan="2">Determinants</th><th>Variables</th><th>Coefficients</th><th>Standard error</th><th>Estatística t</th><th>Sig</th></tr>
<tr><td rowspan="4">EM</td><td>R2</td><td>.078</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Adjusted R2</td><td>.064</td><td>(Constant)</td><td>2.292</td><td>.294</td><td>7.788</td><td>.000</td></tr>
<tr><td>F-statistics</td><td>5.731</td><td>Machiavellianism</td><td>.333</td><td>.075</td><td>4.418</td><td>.000</td></tr>
<tr><td>P-value (F)</td><td>.001</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Obs. 1: Durbin-Watson Test=1.835; Breusch-Pagan test (p-value =P (Chi-Square (1) > 0.301209) = 0.579398. Tolerance Test 0.999; VIF: 1

Obs. 2: DV: Dependent Variable; EM: Earnings Management.

Source: research data.

This result is in line with the findings by D'souza *et al.* (2019), Silva (2019), Góis (2017), Vladu (2013), Murphy (2012), Shafer and Wang (2011), Byington and Johnson (2011) and Hartmann and Maas (2010) and draws attention from the community, especially in accounting, to the possible losses caused by managers with dark personality traits in companies. Based on this result, H3 can be validated.

7.4 Model IV – Corporate Social Responsibility Moderating the Relationship between Machiavellianism and Earnings Management

To analyze the moderating effect of the variable CSR in the relationship between Machiavellianism and EM, the interaction between the variables, (*Machi*REP),* (*Machi*RL*), (*Machi*RE*) was applied. There was a significant and positive association of the moderating variables with EM (r=.333, p=.000), (r=.277, p=.000), (r=,231, p=,000), highlighting *Machi*REP* with greater association, followed by *Machi*RE*. Subsequently, multiple regression was applied, as shown in Table 11.

Table 11
Regression (*Machi*REP*), (*Machi*RL*), (*Machi*RE*) and EM

DV	Determinants		Variables	Coefficients	Standard error	T-statistics	Sig
EM	R^2	.111					
	Adjusted R^2	.107	(Constant)	2.305	.257	8.958	**.000**
	F-statistics	25.675	Machi*REP	.054	.011	5.067	**.000**
	P-value (F)	**.000**					
	R^2	.054					
	Adjusted R^2	.049	(Constant)	2.538	.305	8.318	**.000**
	F-statistics	11.648	Machi*RL	.040	.012	3.413	**.001**
	P-value (F)	**.001**					
	R^2	.076					
	Adjusted R^2	.072	(Constant)	2.355	.299	7.884	**.000**
	F-statistics	17.060	Machi*RE	.047	.011	4.130	**.000**
	P-value (F)	**.000**					

Obs. 1: Machi*RE: Durbin-Watson Test=1.830; Breusch-Pagan Test:(p-value=P(Chi-squared(1)> 0.514631)=0.473141;Tolerance Test:1; VIF: 1.Machi*RL: Durbin-Watson Test=1.862; Breusch-Pagan Test:(p-value=P(Chi-squared(1)> 0.316236)=0.573878;Tolerance Test: 1; VIF: 1.Maqui*RE: Durbin-Watson Test=1.866; Breusch-Pagan Test:(p-value=P(Chi-squared(1)> 0.720008)=0.396141;Tolerance Test:1; VIF: 1.
Obs. 2: DV: Dependent Variable; EM: Earnings Management.
(**) p < .01; (*) p < .05.

Source: research data.

Against expectations, the results indicate that the moderation of CSR is significant and positive for the three dimensions, indicating that CSR influences the relationship between Machiavellianism and EM. Another important aspect to highlight is that the moderation of CSR did not have the strength to inhibit, but increased the relationship between Machiavellianism and management.

Therefore, the findings reveal that, even in the presence of CSR, the stronger the Machiavellian traits, the greater the attitudes of modifying gains to generate benefits for the manager or the company, even if the legal, ethical and professional standards are broken for this purpose. This highlights the analysis of the Machiavellian strategy to seek and present better company results to attract investments, credit, even if results are presented for this purpose that do not portray the company's true situation. This finding entails economic and financial implications and serves as a reference for investors who use the results reported in the financial statements to invest in companies. For auditors to observe the Accounting information reported with greater care in order to issue independent and risk-free opinions about companies that use CSR as a background to manage earnings.

This result does not validate the hypothesis H4 and differs from the findings by Góis (2017), who found that corporate reputation moderates and inhibits the relationship between Machiavellianism and fraud. And Silva (2019), who also found that moderation in corporate governance resulted in a negative relationship between Machiavellianism and EM.

In short, the study results are based on the Upper Echelons theory and permit the inference that legal liability reduces the strength of earnings management, which partially validates the hypothesis H1. The Machiavellian trait reduces the proneness to legal and ethical liability, which partially validates the hypothesis H2. The stronger the Machiavellian trait, the stronger the relationship with EM, which validates the hypothesis H3. Finally, the moderation of CSR was unable to inhibit the positive relationship between the dark trait and earnings management, which does not validate the hypothesis H4.

8. Conclusion

The study involving 208 business professionals revealed that those who care about observing policies that refer to legal liability do not agree with the practice of earnings management, while those who focus on economic liability were prone to this management. This means that, when professionals are faced with the possibility of improving business and personal performance, to increase profit continuously, practices that violate or do not violate accounting practices are accepted, without concern with the impact or harm the use of earnings management causes to society.

As for the Machiavellian influence, those more endowed with these traits tend less towards legal and ethical corporate responsibility and display greater acceptance of earnings management. Thus, it is inferred that the strategic orientation and low ethical and moral standards of Machiavellian individuals influence the practice of earnings management, especially as the characteristic insensitivity reduces the analysis of future consequences, which can impact the incorrect reporting of accounting information, the corporate image and the future of employees and investors. If, on the one hand, Machiavellian individuals could use CSR as a projection tool to improve their reputation and that of the company before society, on the other hand the strong opportunistic and manipulative characteristics stand out.

The result on the Machiavellian influence on earnings management is not surprising, given the gloomy character of the trait that motivates dishonest behaviors, notably by callousness and cynicism. This finding draws the companies' attention in order to observe and monitor professionals endowed with these traits, so as not to persuade the work team to engage in opportunistic acts that may compromise the continuity of the company in the long term.

When CSR moderation was applied to verify a possible inhibition of the relationship between Machiavellianism and earnings management, it was observed that the three dimensions of CSR showed influence, however, with a positive effect; therefore, the moderation did not reduce the positive relationship between the study variables. In this particular sense, this result surprised but, at the same time, it is understandable, given that economic responsibility has been positively associated with earnings management, and management has also been positively associated with Machiavellianism. Therefore, the dark nature of the trait stands out when compared to the willingness towards CSR, especially regarding the REP, which demonstrated the greatest explanatory power among the three dimensions. This responsibility is aimed at profit and profitability, assets desired by those who manage earnings, disregarding practices that violate or do not violate the law.

It should also be noted that male professionals presented greater economic liability, demonstrating greater focus on profit, cost reduction and business profitability, while women were more sensitive to the principles of ethical and legal liability. In addition, professionals between 18 and 25 years old revealed greater Machiavellian dispositions, which permits inferring that the younger, the greater the orientation towards the future and less concern with possible dishonest acts. Those with less experience seem to be more Machiavellian, a result that aligns with the above.

These results are based on the Upper Echelons theory, considering that the individuals' characteristics, such as profile, values and personality, promote interpretations, choices, attitudes and behaviors.

In this context, this research achieved the proposed objective by presenting the empirical results that provide relevant information for managers, shareholders, regulators, professionals responsible for corporate governance on the influence of personality traits of Machiavellianism as a motivator for engaging in earnings management and less compliance with CSR.

These results are limited to a behavioral analysis, without the diagnostic and clinical claim of the business professionals involved in the study, nor any intent on generalizing the findings. For the sake of future research, a broader sample could be analyzed, and moderating variables could be included that can inhibit the relationship between dark personality traits and earnings management, aiming to get to know the distinctive results of the study phenomenon.

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