

## Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa



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### ABSTRACT

**Purpose** – The pressure on businesses to disclose information that goes beyond the financial aspects and includes non-financial information has grown as social, environmental, and accountability issues are receiving more attention. Integrated reporting (IR) is a technique that can close the information gap by focusing on both financial and non-financial aspects, on the linkages that already exist between the various business processes, and on the capacity of the firm to generate value over the short, medium, and long term. However, studies on the determinants of IR are limited, inconclusive, contradictory and mainly studied in developed economies. This study aimed at examining the effect of CEO ownership power on IR from a developing region perspective (East Africa).

**Design/methodology/approach** – The study adopted explanatory and longitudinal research design with panel data to establish the causal relationship between CEO ownership power and IR. The empirical study was based on a sample of 702 firm-year observations among listed firms in East Africa for the period 2013 to 2021.

**Findings** – The findings indicate a positively significant relationship between CEO ownership power and IR among firms listed in the East African securities exchange.

**Practical limitation/implications** – The study used one dimension of CEO power (ownership), other studies could incorporate other dimensions of CEO power (structural, expert & prestige) and in other different contexts. From a managerial practical perspective, it shows that CEOs owning shares in the company influences the level of IR. The insights also provide useful information to shareholders and regulators in evaluating the CEO ownership power that affects IR in East Africa. This study also implies that policymakers can encourage shareholding by CEO to enhance IR.

**Originality/value** – literature review shows a few studies have investigated the relationship between CEO ownership power and IR in the developing world specifically the East African context. This study provides empirical evidence on the impact of CEO ownership power on IR and how ownership of shares by the CEO in a firm influences the disclosure of financial and non-financial information.

**KEYWORDS:** CEO Ownership power, Integrated reporting, Listed firms, East Africa.

### 1. INTRODUCTION

Integrated reporting's relevance on a global scale has increased over time as a result of the necessity to satisfy shareholders' demands for accountability and transparency in order to increase firm value. (De Villiers *et al.*, 2017; Farneti *et al.*, 2019; Garcia-Sanchez, Raimo, & Vitolla, 2020; KPMG 2017). According to the International Integrated Reporting Council (IIRC, 2013), IR is a concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium, and long term. IR is a crucial component of business operations and activities as it depicts current connections between the firm and its stakeholders, with an emphasis on investors (Marrone & Oliva 2019).

When financial and non-financial information is presented separately, the information may mislead the shareholders' into wrong investment decisions (Boone & White, 2015). The disclosure of the combined reporting may raise some issues. For instance, firms may decide to exclusively present positive news in their non-financial reporting in a voluntary reporting, despite the fact that the information reported in their required financial reports must correctly and totally reflect the firm's financial situation. It may also be difficult to compare financial and non-financial information offered by firms if there are no reporting standards (Marrone & Oliva 2019). By implementing IR that incorporates required reporting, usual compliance, or explanatory

## Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

reports, these issues can be overcome. Additionally, IR connects business information to both financial and non-financial information. As a result, businesses are implementing IR since it serves as a tool for company management, as well as to increase business transparency and provide shareholders with more consistent, accurate, and dependable information. By condensing the company's financial statements into a single document, IR provides shareholders with a comprehensive picture of the firm's value generation activities as well as each factor influencing the firm's overall performance (IIRC, 2013; De Villiers, et al. 2017; Farneti, et al. 2019).

Integrated Reporting (IR) was introduced by the International Integrated Reporting Committee (IIRC) in 2010 (IIRC, 2012), and provides interconnected information related to "organizational overview and external environment," "governance," "business model," "risk and opportunities," "strategy and resource allocation," "performance," "outlook," and "basis for preparation and presentation" (IIRC, 2013). When a firm presents IR, it is likely to have: better alignment of reporting information with investor needs; better resource allocation decisions, higher levels of trust with stakeholders, reconsideration of the business model, cost reductions. greater engagement with investors and other stakeholders, development of a common language and greater collaboration across different functions in the organization, enhanced risk management, better identification of opportunities and lower reputational risk (IIRC, 2011).

Previous studies on IR policies have examined factors that influence the extent of integrated reporting (Jensen and Berg, 2012; Frascarelli, 2013a, 2013b, 2014), the quality of integrated reports (Gerwanski *et al.*, 2019; Vitolla *et al.*, 2019b; Raimo *et al.*, 2020), and the degree of alignment of integrated reports with the IIRC framework (Marrone and Oliva, 2019, 2020). IR drivers include; monetary factors, disclosure traits, ownership structure, corporate governance, outside forces, and the nation and industry the business belongs to (Garcia-Sanchez, 2020). However, very few previous studies have examined the CEO's ownership on IR; Ghazali, 2007 in Malaysia, Eng & Mak, 2003 in Singapore both found a positive association between CEO ownership power and IR. Leung and Horwitz, (2004) in publicly listed companies in Hong Kong Raimo, Vitolla, Marrone, & Rubino, (2020), in international companies operating in different sectors; Chau & Gray, 2002 in the Asian settings of Hong Kong and Singapore, Khlif, Ahmed, & Souissi, (2017) and Khan *et al.*, (2013) all found a negative association between CEO ownership power and IR. There was no relationship between CEO ownership power and IR in the studies of; Juhmani (2013), studied listed firms in Bahraini, Donnelly & Mulcahy (2008) in Ireland, Huafang & Jianguo, 2007 in China. These findings are all mixed, contradictory and mainly in the context of developed economies, hence the interest of the study in a developing economy (East Africa).

Decisions involving integrated reporting are normally made with the input of CEOs (Garcia-Sanchez, 2020; Raimo *et al.*, 2020; Eng & Mak, 2003). CEOs may present integrated reporting at their discretion, exploiting the benefit of greater information for their proficient benefits (Ali and Zhang, 2015; Baginski *et al.*, 2018), and when CEOs hold a percentage of shares in the company, they assert greater power to implement decisions, especially disclosure ones (Garcia-Sanchez, 2020). Hence, CEO may limit information disseminated in integrated reports that may affect the firm's strategic objectives, and harm the firms' performance and firm value (Vitolla *et al.*, 2019b; Farneti, *et al.* 2019) and raise conflicting interests. As a result of the conflicting interests, this raises agency problems that impact both the CEO and the shareholders (Jensen & Meckling, 1976). The study utilized agency theory, taking into account how well agency theory explain why CEOs chose to freely disclose IR (Raimo, *et al.*, 2020; Chow & Wong-Boren, 1987; Cooke, 1989, 1992; Hossain, Perera, & Rahman, 1995). According to the agency theory, the conflict between the CEOs and shareholders stem from information asymmetry (Jensen & Meckling, 1976). CEOs have a strong tendency to engage in behaviors or make decisions that are not in the best interests of maximizing shareholder wealth (Zeckhauser & Pratt 1985). To conceal the true performance of the firm from the owners, CEOs may limit information disclosure (Donnelly & Mulcahy, 2008). Therefore, disclosing IR reduces agency costs, providing more satisfactory information to the shareholders for informed decision-making (Doane, & MacGillivray, 2001). In light of these considerations, it is especially captivating to examine the role played by the CEO ownership power on integrated reporting. These area is not fully explored in the existing literature, especially in East Africa. Therefore, this study aimed to bridge the literature and contextual gap by investigating the role of CEO ownership power on IR using an agency theory perspective among listed firms in East Africa.

The remainder of this paper is organized as follows. Section 2 presents the theory and empirical literature, which will highlight the theory underlying the study and the literature with hypothesis development. Then the description of the methodology used in section 3, followed by results findings in section 4. Further conclusion and recommendations with the limitation of the studies in section 5.

## 2. LITERATURE REVIEW

This section discusses the theory underpinning the study, the literature review together with the hypothesis development.

# Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

## 2.1 Theoretical Review

Consistency with prior studies on the relationship between CEO ownership power and integrated reporting (Gerwanski *et al.*, 2019; Vitolla *et al.*, 2019b; Raimo *et al.*, 2020; Barako, Hancock, & Iza, 2006; Donnelly & Mulcahy, 2008; Huafang & Jianguo, 2007; Rouf & AlHarun, 2011), this study is based on agency theory. This theory is able to elucidate the logic associated with the choices of firms in the field of integrated reporting by the CEOs (Chow & Wong-Boren, 1987; Cooke, 1989, 1992; Firth, 1980; Hossain *et al.*, 1995). According to agency theory, CEOs work for shareholders (Eisenhardt, 1989; Fox, 1984; Jensen & Meckling, 1976; Ross, 1973). However, the division of ownership and management presents a number of challenges, mainly as a result of giving CEOs the power to make decisions (Donnelly & Mulcahy, 2008) that results into various agency costs.

Agency theory has three specific categories of cost; monitoring costs, bonding costs, and residual loss (Jensen & Meckling, 1976). The first set of costs reflects the costs incurred by the principal in exercising control over his CEO (agent) and preventing potentially damaging behaviours (Jensen & Meckling, 1976). Bonding fees are costs that the CEO (agent) must pay in order to provide assurances to the principal about his good moral character. (Jensen & Meckling, 1976). Lastly, residual loss is the loss of relationship wellbeing caused by conflicts of interest that can't be remedied by preventive interventions (Jensen & Meckling, 1976). These three cost categories combined reflect agency costs (Jensen & Meckling, 1976). These costs result from the information gap between CEO ownership and shareholders (Barako *et al.*, 2006).

CEOs are in charge of all business operations and have a significant information advantage over owners due to information asymmetry (Donnelly & Mulcahy, 2008). Thus, they might opt to withhold some crucial information from the owners in order to conceal the company's true performance (Donnelly & Mulcahy, 2008). CEOs may be able to take activities that will help them accomplish their goals since their actions are really not transparent (Barako *et al.*, 2006). Owners are more concerned with the company's future value, while the CEO is more concerned with maximizing the current value of the company as it will boost their recognition and compensation (Healy & Palepu, 2001).

Since the company's financial capital is negatively impacted by the conflict of interests (Healy & Palepu, 2001), the CEOs should present integrated reporting in order to lessen agency issues and minimize information asymmetry (Bozzolan, 2005; Healy & Palepu, 2001; Watson, Shrivs, & Marston, 2002). Integrated reporting is a tool that CEOs can use to demonstrate to the company's owners the actual success of the company. The degree of information asymmetry that exists in the various company situations is directly influenced by CEO ownership power. Agency theory predicts that there is a positive association between CEOs' interests and the level of integrated reporting especially when the CEO holds shares in the company. Warfield *et al.* (1995) provide evidence supporting this contention in their findings that the extent of shareholding by CEOs is positively associated with the amount of financial and non-financial information disclosed (Jensen & Meckling 1976).

The agency theory assumes that CEOs disclose more information in order to reduce conflicts between them and shareholders (Kyerem & Ausloos 2021). Since shareholders have less knowledge of a company's performance than CEOs, they may be able to reduce agency costs by disclosing additional (not required-integrated reporting) information (Healy & Palepu 2001; Botosan & Plumlee 2002). Integrated reporting can be used to reduce agency costs (Lundholm, & Van 2006; Watson Shrivs, & Marston 2002; Barako *et al.*, 2006). The agency theory explains the CEO's willingness for information sharing (Hossain, Perera, Rahman, 1995; Cooke, 1989 & 1992; Chow & Wong-Boren 1987). The decreasing information asymmetry and associated costs may be seen as a major motivator for businesses to disclose both financial and non-financial information. Even if accounting standards and rules do not require it, integrated reporting is vital for the decision-making process and is desired by shareholders and investors. Integrated reporting reduces the information gap between the principal and the CEO, hence preventing associated agency issues and costs (Zouari & Dhifi 2022). According to this perspective, the purpose of this study is to analyse how the CEO ownership power influences integrated reporting.

## 2.2. Empirical Review

### CEO ownership power and integrated reporting:

CEO ownership power influences a company's level of integrated reporting (Khelif, *et al.*, 2017). CEOs are driven to raise the value of the companies they own shares in because doing so will boost their wealth and that of their shareholders. As a result, integrated reporting will grow as CEOs with larger shareholdings benefit more from enhanced disclosures on the stock market. CEOs give more information to demonstrate that they are acting in the best interests of the stakeholders by employing voluntary disclosure of financial and non-financial information to eliminate agency issues. Several studies have been carried out on CEO ownership power and integrated reporting with mixed findings as discussed below:

Based on a sample of 431 European businesses with common or civil law for the years between 2012 and 2019, Zouari & Dhifi (2022) sought to investigate the effect of ownership structure on the amount of disclosure of financial and non-financial

## Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

information in integrated reporting (IR). The findings of the linear regressions support the hypothesis that there are correlations between ownership concentration, institutional ownership, managerial ownership, and IR.

Wang and Hussainey (2013) looked at how corporate governance affected the amount of voluntarily disclosed forward-looking statements in annual reports' narrative sections. It also examined at how informative the governance-driven forward-looking statements are on potential earnings. The analysis was based on data from a sizable sample of UK FTSE All-Share businesses for fiscal years ending between January 1996 and December 2007. The results showed that corporate governance affects businesses' decisions to voluntarily publish these assertions. The main drivers are CEO's ownership, board size, board composition, and the CEO's dual role.

Garcia-Sanchez, Raimo and Vitolla, (2021), analyzed how the chief executive officer (CEO) affects the adoption of integrated reporting (IR) and whether this role is influenced by incentives to encourage corporate transparency, including issues with information asymmetry and financial restrictions based on 10,819 observations (an unbalanced data panel of 1,588 firms for the period 2009–2017). The results demonstrate that CEOs with more ownership power oppose the dissemination of integrated information, and that incentives provided by firms have no impact on this behavior. Additionally, if there are more chances for expansion, CEOs are less willing to provide integrated information about how value is created, maybe due to concerns about how competitors can utilize it.

Rouf and Harun (2011) investigated the relationship between ownership power and voluntary disclosure levels in 94 samples of Bangladeshi listed businesses' 2007 annual reports. The level of voluntary disclosure and the relationship between the board audit committee and board leadership structure are both positively correlated with senior management decisions. The level of voluntary disclosure, on the other hand, is inversely correlated with senior management decisions in companies with a greater management of ownership structure. The decisions made by senior management in this area, however, were not significantly influenced by other criteria, such as those given by board makeup, board size, or firm size.

Eng and Mak (2003), who examines the impact of ownership structure and board composition on voluntary disclosure on firms listed on the Stock Exchange of Singapore (SES) as at the end of 1995. The findings demonstrate how board membership and ownership structure impact disclosure. The results also showed that higher disclosure is related to lesser CEO ownership and significant government ownership. Blockholder ownership, however, was unrelated to disclosure. Corporate disclosure was lessened by an increase in outside directors. The findings also showed that larger companies and those with less debt had better disclosure.

Based on a sample of 152 multinational enterprises that have embraced IR, Marrone (2020) examined the function of CEO ownership power in IR context. The findings showed that institutional ownership had a good impact on integrated reports' quality, while CEO ownership, state ownership, and ownership concentration had a negative impact.

Oh *et al.* (2011), using a sample of 118 large Korean firms, investigated the effects of ownership on the firms' corporate social responsibility. The findings show a significant, favorable correlation between CSR ratings and institutional and foreign investor ownership. In contrast, CEO ownership of shares was not significantly correlated with outside director ownership, but it was inversely correlated with the firm's CSR rating.

Elmans (2012), studied to understand European companies' disclosure practices by evaluating the relationship between CEO ownership power and the extent of voluntary disclosures. The findings showed that voluntary disclosures and blockholder ownership have a negative relationship. Furthermore, there was a positive correlation between government ownership and voluntary disclosures. The relationship between CEO ownership power and voluntary disclosures was not statistically significant. Therefore, the above results clearly indicate the mixed and contradictory results between the study variables. When CEO holds a percentage of shares in the firm, it impacts on the presentation of integrated reporting. Therefore, the study hypothesized that:

**H1: CEO ownership power positively influences integrated reporting among firms listed in East Africa.**

### Control variables

The extent of integrated reporting in a company's annual report might change depending on the specific traits of the company, such as firm leverage, firm size, and firm age (Donnelly & Mulcahy 2008).

Firm leverage, firm size and firm age, have been shown to be significant variable in the extensive literature review on integrated reporting undertaken by Zouari & Dhifi (2022), Garcia-Sanchez, Raimo and Vitolla, (2021), Marrone (2020), Khelif, *et al.*, (2017), Donnelly & Mulcahy (2008) and Eng and Mak, (2003). It is affirmed that firm size is a significant factor in the extent of integrated reporting. The cost-benefit theory (Healy & Palepu, 1995), Singhvi & Desai (1971), Firth (1979), and Raffournier, (1995) states that large businesses are presumptively generating more information for internal usage, providing detailed information is reasonably less expensive for them. But smaller businesses could be reluctant to provide a more detailed disclosure of their activities because their annual report serves as the primary source of information for their rivals. Due to the

## Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

media's tendency to concentrate on and broadcast news about generally big corporations, the cost of publicizing disclosures may be higher for small firms (Donnelly & Mulcahy, 2008). Furthermore, the signalling theory (Lev and Penman, 1990) postulates that larger firms may presume that better reporting will tend to lessen the undesirable pressures from authorities (Buzby, 1975; Watts and Zimmerman, 1978; Firth, 1979) since they are more carefully monitored by varied governmental and regulatory authorities. Lastly, there is the cost of capital theory (Singhvi and Desai, 1971). Compared to smaller companies, bigger companies require more funding from the external capital market. Enhancing proper disclosure may boost investor confidence and liquidity, which would make acquiring external funding simpler.

The relationship between company leverages and firm integrated reporting procedures has also been studied in the literature on integrated reporting. Leverage is usually seen as an indicator of integrated reporting. Firm leverage gives a valuable indication of the money that firms have received from lenders of financial capital (Girella, Rossi, & Zambon, 2019) and assesses the likelihood that the firms will be able to repay its debts (Ghani, Jamal Puspitasari, & Gunardi, 2018). As a result of the necessity to satisfy the information needs of their creditors, firms with high levels of leverage frequently disclose more information, according to previous studies. These studies (Girella, Rossi, & Zambon, 2019; Alsaeed, 2006; Lan, Wang, and Zhang, 2013) used agency theory to a considerable extent to explain the relationship between leverage and integrated reporting, which is of relevance to a wide variety of stakeholders who want to know if the company can produce value in the medium and long terms.

The study took into account the firm's age as well. Firm age measures how long a company has been in business (the number of years from its founding until the end of 2022). In accordance with Liu and Anbumozhi (2009), it is anticipated that older firms produce integrated reports than younger companies, although the findings of other studies have produced conflicting outcomes. *Vitolla et al.*, (2019c) found no association between company age and IR, however *Vitolla et al.*, (2019b) found that more established businesses are more likely to provide IR.

Lastly, institutional investors, who hold a sizable number of shares in a company and represent a certain category of shareholders (Raimo *et al.*, 2020). Given their substantial shareholding, institutional ownership performs monitoring operations and are interested to keep an eye on disclosure policies of the firm (Donnelly & Mulcahy, 2008; Barako *et al.*, 2006). This urges CEOs to make sure that they provide both financial and non-financial information so that they can meet the informational needs of institutional shareholders (Barako *et al.*, 2006). Thus, firms with institutional ownership are more likely to offer integrated reporting (Wang, 2014; Lin & Manowan, 2012).

### 3. METHODOLOGY

This section explains the sample used in the study, measurement of variables and regression model and data analysis.

#### 3.1. Sample and Data

The sample covered all the listed firms in East Africa for the period 2013 to 2021. The condition applied in the selection of the sample was that firms must have traded consistently during the period under study and had sufficient data to estimate the extent of adoption of integrated reporting. The data was extracted manually from the annual reports of the listed individual firms. The sample size was 702 firm-year observations, representing 78 firms over 9 years.

#### 3.2. Measurement of variables.

##### 3.2.1. Dependent variable.

Integrated reporting was measured using the content elements in the international integrated reporting framework IIRC (2013). Similar to the approach used by Cooray, Senaratne, Gunarathne, Herath, & Samudrage, (2020); Kiliç & Kuzey (2018); Lee and Yeo (2016); Stent and Dowler (2015) and Marx & Mohammadali-Haji (2014) a disclosure index was constructed by focusing on the content elements of the IIRC (2013) integrated reporting framework. The disclosure index included a total of 38 items with 74 scores as shown in appendix I (a & b) within eight categories, including: "organizational overview and external environment"; "governance"; "business model"; "risk and opportunities"; "strategy and resource allocation"; "performance"; "outlook" and "basis for preparation and presentation". In this respect, all narrative sections of the annual reports and stand-alone reports were examined.

##### 3.2.2. Independent variables.

The study used the proportion of shares held by the CEO in relation to the total number of shares in the company.

##### 3.3.3. Control variables

The study controlled for firm leverage (LEV), firm age (FA), firm size (FS) and institutional ownership (IO) as suggested by prior studies in order to increase the goodness of the regression model.

## Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

The model 1 includes financial leverage (LEV), which is calculated as the ratio of total debt to total assets (total debt/total assets), because leverage may be a predictor of the integrated reporting (Andrikopoulos, Samitas, & Bekiaris, 2014; Sharif & Rashid, 2014).

The study also took into consideration the size of the firm (SIZE), which was determined as the natural logarithm of total assets. According to Frias-Aceituno et al. (2014), Ghani, Jamal, Puspitasari, and Gunardi (2018), and Vitolla, Raimo, and Rubino (2019), there is a positive link between firm size and integrated reporting.

Firm age (FA), calculated as the natural logarithm of the number of years since incorporation to the year of study (Bhutta *et al.*, 2021; Mapitiya, Ajward, & Senaratne, 2016), has been incorporated into the model because the extent of integrated reporting may change with the firm age.

Institutional ownership (IO) was also taken into account. IO is calculated as the ratio of institutional investors' ownership shares to the total number of firm shares. The influence of institutional ownership on integrated reporting was demonstrated by (Raimo 2020; Zouari & Dhifi 2022; Marrone, 20202).

### 3.3. Regression Model and Data Analysis

This study employed a regression model to examine the impact of CEO ownership power on integrated reporting. The following equation reflects the regression model that was employed in this study:

$$IR = \beta_0 + \beta_1LEV + \beta_2FA + \beta_3FS + \beta_4IO + \epsilon_i \dots\dots\dots\text{Model 1}$$

$$IR = \beta_0 + \beta_1LEV + \beta_2FA + \beta_3FS + \beta_4IO + \beta_5OP + \epsilon_i \dots\dots\dots\text{Model 2}$$

Where:

- IR - Integrated reporting
- LEV - Firm leverage
- FA - Firm age
- FS - Firm size
- IO - Institutional ownership
- OP - Ownership power
- $\epsilon_i$  - Error term

STATA 13 software was used to analyze the data because of its widespread use and acceptance in panel data estimate techniques. Data processing started with data preparation, editing, and cleaning. Descriptive statistics was taken down into measures of central tendency and measures of variability (spread). Measures of central tendency included the mean while measures of variability include standard deviation, minimum and maximum variables.

## 4.0 RESULTS AND DISCUSSION

This section presents the results, their interpretation and discussion, based on the hypothesis of the study. Descriptive results, correlation and regression results are presented here.

### 4.1 Descriptive Results

The content element index of the International Integrated Reporting Council (IIRC) framework used in the study measured integrated reporting at a mean of 0.422 with a minimum score of 0.164 and a maximum score of 0.680 and a standard deviation of 0.135. This demonstrates that the implementation of integrated reporting has been adopted but not fully by the majority of firms. Ownership power, as determined by whether or not the CEO owned shares in the company, had a mean of 0.351 (with a maximum value of 1 and a minimum value of 0, and a standard deviation of 0.478), demonstrating that, on average, only a small percentage of shares is held by CEOs. This is slightly lower than that found by (Raimo, *et al.*, 2016).

The control variables: firm leverage had a mean of 0.851 (maximum = 35.305, minimum = 0.001, and standard deviation = 1.706); firm age with a mean of 1.352 (maximum = 2.233, minimum = 0.000 and standard deviation = 0.497) and firm size had a mean of 7.605 (maximum = 10.694, minimum = 4.701 and standard deviation = 1.0702); institutional ownership with a mean of 0.670 (maximum = 0.998, minimum = 0.014 and standard deviation = 0.213).

**Table 4.1 Descriptive Statistics of the study**

Variable	Obs	Mean	Std. Dev.	Min	Max
IR	702	.422	.135	.164	.680
OP	702	.351	.478	0	1

## Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

FA	702	1.352	.497	0	2.23
LEV	702	.851	1.706	.001	35.305
FS	702	7.605	1.070	4.701	10.694
IO	702	.670	.213	.014	.998

Source: Author (2022)

### 4.2 Correlation Analysis

The Pearson correlations coefficients between dependent and independent variables are presented in Table 4.2. The results show that there is a correlation between CEO ownership power (CEOOP) ( $r= 0.476$ ;  $p 0.05$ ) and integrated reporting (IR). Also, there is a correlation between; firm leverage (LEV) ( $r= -0.121$ ;  $p 0.05$ ), firm size (FS) ( $r= -0.116$ ;  $p 0.05$ ), firm age (FA) ( $r= -0.107$ ;  $p 0.05$ ) and integrated reporting. However, it has been suggested by Farrar and Glauber, (1967) and Judge *et al.*, (1985) that correlation coefficients should not be considered harmful until they exceed  $\pm 0.80$  for multicollinearity to exist. Table 4.2 results reveal that the highest correlation was between CEO ownership power and integrated reporting (0.476). Furthermore, Table 4.2 indicate that the tolerance scores are all greater than 0.2 and the VIF for each predictor variable is below the 10.0 benchmark (Gujarati, 1995; Myers, 1990; Neter, Wasserman, & Kutner, 1983). Therefore, multicollinearity did not appear to be a serious problem in interpreting the regression results.

**Table 4.2. Pairwise correlation**

	IR	OP	IO	LEV	FS	FA	VIF	1/VIF (Tolerance)
IR	1.00							
CEOOP	0.476*	1.000					1.06	0.943396
IO	0.240*	0.108*	1.000				1.35	0.740741
LEV	-0.121*	0.079*	0.000	1.000			1.14	0.877193
FS	-0.116*	0.048*	0.0605*	0.196*	1.000		1.50	0.666667
FA	-0.107*	-0.097*	-0.219*	0.127*	0.238*	1.000	1.77	0.564972

$P < 0.05$ ; IR, OP, IO, FS, FLEV & FA

### 4.3 Regression results

Table 4.3 presents the multiple regression results of the study. The results of the Hausman test confirmed the use of random effect in testing the hypothesis. The  $R^2$  (0.584) indicate that CEO ownership power with the selected control variables explains 58.34% of the variance in integrated reporting. The results of the regression model supports H1; CEO ownership power positively and significantly affects IR ( $\beta=0.191$ ,  $p 0.05$ ). This means that when the CEO owns high percentage of shares in the company they are likely to ensure disclosure of financial and non-financial information. Integrated reporting reduces on the agency costs and increase in firm value. CEOs could be motivated to increase the value of the company in which they own stock since doing so will boost their net worth as well as the wealth of their shareholders. The results are consistent with previous studies which found a positive relationship between CEO ownership and integrated reporting (Nagar *et al.*, 2003) in the US (Mohd-Nasir and Abdulah, 2004) in Malaysia, (Leung and Horwitz, 2004) in Hong Kong and (GarcaMeca and Sanchez-Ballesta, 2010). In contrary, other studies provide support for a negative relationship between CEO ownership powers and integrated reporting (Khlif, *et al.*, 2017; Chau and Gray, 2010; Eng & Mak's 2003; Raimo, *et al.*, 2020). This may be in line with the predictions of agency theory, which contend that firms with high ownership concentration should experience reduced information asymmetry as a result of less dispersed ownership since dominant shareholders have direct access to the necessary information. This suggests less disclosure of financial and non-financial information (Khlif and Achek, 2017). Though, De Villiers *et al.* (2011) found no correlation between CEO ownership power and integrated reporting for a large number of USA companies.

As supported by the agency theory, that, there is information asymmetry between the CEO's ownership power and shareholders (Barako *et al.*, 2006; Jensen & Meckling, 1976), IR is a tool that can reduce this information asymmetry and align the CEO's ownership power and shareholder interests (Healy & Palepu, 2001; Watson *et al.*, 2002). Companies must, however, provide integrated reporting in order to portray a holistic picture of the company's operations and the capacity of the company to create value (Raimo, *et al.*, 2020; Vitolla, Raimo, & Rubino, 2019a).

The control variables; firm leverage had a positive and significant relationship with IR ( $\beta = 0.018$ ,  $p 0.05$ ), indicating that the more the firm is leveraged, the more likely the company will produce IR. This is because of the close monitoring by the

## Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

financial institutions. Firm age had a positive and significant association with IR ( $\beta = 0.103$ ,  $p = 0.05$ ). This shows that the older the firm, the more disclosure of financial and non-financial information to protect the company name. The firm size had also a positive and significant effect ( $\beta = 0.138$ ,  $p = 0.05$ ) revealing that the bigger the size of the firm, the more disclosures to maintain its reputation and political pressures. Additionally institutional ownership had a positively significant association with IR ( $\beta = 0.647$ ,  $p = 0.05$ ). This could be contributed by the strong control mechanism in place by the institutional investors meaning that the presence of institutional investors pushes companies to provide integrated reporting. This is consistent with studies of Raimo, (2020); Frias-Aceituno, Rodríguez-Ariza, and García-Sánchez (2014).

**Table: 4.3 Regression results for random and fixed effect**

IR	Random effect	Fixed effect
Constant	1.117 (0.000) **	0.837 (0.032) **
CEO Ownership power	0.191 (0.000) **	0.215 (0.005) **
Firm leverage	0.018 (0.000) **	0.137 (0.001) **
Firm age	0.103 (0.000) **	0.111 (0.009) **
Firm size	0.138 (0.000) **	0.083 (0.000) **
IO	0.647 (0.032) **	0.824 (0.000) **
R-squared	0.563	0.584
Observations	702	702
No of groups	78	78
Hausman Chi2	10.37	
Prob>chi2 =	0.0654	

\*\*P<0.05; standard errors in parentheses – IR, OP, IO, FS, FLEV & FA

## 4. CONCLUSIONS

This study examined the relationship between CEO ownership power and integrated reporting among listed firms in East Africa through agency theory. The study considered a sample of 78 firms and panel data for 2013 and 2021. The results show that when CEOs own shares in a company, they are likely to ensure that the firms produce integrated reports since they are also owners, therefore, policy makers need to ensure that CEO own a portion of shares in the company publishes integrated reporting.

First, this study adds to the contentious discussion on IR that is being driven by the increased focus that various nations are putting on this form of disclosure by highlighting the significance of CEO ownership power. Second, the spectrum of agency theory's use is broadened by this study. Although this theory has been applied frequently to analyze phenomena related to disclosure, it is still very seldom applied to explain the dynamics related to IR.

### Study Managerial Implications

The findings of this study provide useful insights to shareholders in assessing the effect of CEO ownership power on integrated reporting. The proportion ownership of CEOs should be encouraged by regulators because it has a favorable impact on the reporting practices of companies and it raises the level of the information in integrated reports. Additionally, Policymakers and Regulators should consider making it a policy for all firms to produce integrated reports like it is in South Africa.

## 5. LIMITATIONS AND SUGGESTIONS FOR FURTHER STUDIES

This study has two limitations. The first is of methodological character connected to the analysis of only one aspect of the CEO power (CEO ownership power), this may form a basis for future studies by analyzing the impact of other dimensions of CEO power such as; CEO structural power, CEO expert power, CEO prestige power, CEO political power among others. The second limitation on measurement of integrated reporting using the content element of the IIRC 2013, further research could look at other aspects of measuring integrated reporting like those used by; Pistoni *et al.* (2018), Pavlopoulos *et al.* (2019), Bavagnoli *et al.* (2018), Barth *et al.* (2017), Velte (2018), Ahmed Haji & Anifowose (2016) and Gerwanski *et al.* (2019). Additionally, future researchers might examine moderating or mediating this association or moderating mediating the effect using alternative factors like Chief Finance Officer (CFO) or Institutional ownership (IO) and in contexts other than the developing country.



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## Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

### Appendix 1a: Content element of integrated reporting summarized index

Content Element	No. of Disclosed Items	Score
Organizational overview and external environment	7	16
Governance	7	12
Business model	5	10
Risk and opportunities	3	8
Strategy and resource allocation	4	6
Performance	6	13
Outlook	3	4
Basis of preparation and presentation	3	5
	<b>38</b>	<b>74</b>

### Appendix 1b: detailed index of the content element of integrated reporting

Content Element		Disclosure Item	Marking guidelines	Score
Organizational overview and external environment	1	Vision and mission	0= Not Disclosed; 1=Vision; 1=Mission	2
	2	Value, ethics and culture	0= Not disclosed; 1= general comments on the adherence to ethical values mentioned; 2= Code of conduct reference, list of values, etc., provided.	2
	3	Ownership and operating structure	0 = Not disclosed; 1 = Ownership and operating structure described	1
	4	Principal activities, markets, products, services	0 = No specifics on principal activities disclosed; 1= Activities/markets/products services listed	1
	5	Competitive landscape, market positioning, and positioning within the value chain	1 mark for each	3
	6	Key quantitative information	[Employees, revenues, locations and changes] 1 = 1–2 elements; 2 = 3–4 elements	2
	7	Significant factors affecting external environment and the organization's response	[Legal, commercial, social, environmental, political] maximum of 5 points, 1 for each context	5
		<b>Sub - Score</b>		<b>16</b>
Governance	1	Leadership structure, diversity, and skill set of those charged with governance	1 = Members of the BoD listed; 2 = Their experience and skills are listed as well	2
	2	Processes used to make strategic decisions and monitor culture including its attitude to risk and mechanisms for addressing integrity and ethical issues	0 = Not explained; 1 = Role of board/executive committee in making strategic decisions explained; 1 = Role of risk management committee in monitoring the strategic direction explained.	2
	3	Actions taken to monitor and influence strategic direction and its approach to risk management	0 = No actions determinable; 1 = Actions taken to monitor the strategic direction is determinable; 2= Actions taken to manage risks is determinable	2
	4	Reflection of culture and ethical values in use of and effect on the capitals, relationship with key stakeholders	0 = No explanation of cultural values/ethics in the given context; 1=Culture and values determinable from narrative; 2 = Culture and values reflect in the use of and effects on	2

**Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa**

			capitals/stakeholders	
	5	Responsibility for promoting and enabling innovation by governance agents	0 = No disclosure; 1 = Responsibility for promoting innovation is mentioned	1
	6	Governance practices exceeds legal requirements	0 = No disclosure; 1 = Explanations provided.	1
	7	Compensation policies and plans	1 = Compensation policies and plans are determinable; 2 = Compensation policies and plans are linked to the value creation	2
		<b>Sub – Score</b>		<b>12</b>
Business model	1	Diagrammatic presentation	0 = No diagram; 1 = Diagram provided	1
	2	Key elements of the business model	1 each for input, business activities, output and outcome.	4
	3	Narrative flow based on the business model	0 = No explanation provided; 1 = Good flow of explanation provided.	1
	4	Critical stakeholders' identification and other dependencies	0 = No stakeholder engagement described; 1 = Explicit stakeholder engagement described	1
	5	Connection to information covered in other content elements (e.g., strategy, risk, and opportunities and performance)	0 = No connection provided; 1 = 1–2 aspects described; 2 = 3–4 aspects described; 3 = more than 4 aspects described	3
		<b>Sub – Score</b>		<b>10</b>
Risk and opportunities	1	Key risks and opportunities	1 = Risks described; 1 = Opportunities described	2
	2	Assessment of the likelihood and impact	1 for each; explanation of the risk likelihood, explanation of the opportunity likelihood, magnitude of impact of risk and magnitude of impact of opportunity	4
	3	Steps to mitigate/manage risk or create value from opportunity	1 = Steps to mitigate/manage risk provided; 1 = Steps to create value from opportunity provided	2
		<b>Sub – Score</b>		<b>8</b>
Strategy resource allocation and	1	Short, medium, long term strategic objectives	0 = No description provided; 1 = Strategic objectives stated without relevant time frame; 2 = Strategic objectives and their time frames are listed	2
	2	Strategies in place or plan to implement to achieve the objectives	0 = No specific description provided; 1 = Specific actions taken/planned are described	1
	3	Resource allocation plan to implement strategies	0 = No plan explained; 1 = Plan explained	1
	4	Measurement of achievements and target outcomes	0 = Not disclosed; 1 = Measurement of achievement of strategic objectives stated without relevant time frame disclosed; 2 = Measurement of achievement of strategic objectives with their time frames are listed.	2
		<b>Sub – Score</b>		<b>6</b>
	1	KPIs that draws relationship between financial performance	0 = No mixed KPIs or equivalent disclosed; 1 = A mix of financial and	

**Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa**

Performance		and performance regarding other capitals	other KPIs or equivalent disclosed; 2 = KPIs linking financial and other capitals disclosed.	2
	2	KRIs	0 = No key risk indicators described; 1 = KRIs or equivalent described.	1
	3	Explanation of KPIs and KRIs of significance, implications and methods and assumptions used in compiling them	1 = Explanation of significance of KPIs and KRIs; 1 = Implications of KPIs/KRIs; 1 = Methods and assumptions used in compiling them explained	3
	4	The organization's effect on the capitals	0 = No consideration to the six capitals; 1 = Consideration of financial and manufactured capitals; 2 = All material capitals considered.	2
	5	State of key stakeholder relationships and how the organization has responded to key stakeholder needs and interests.	1 = Key stakeholder relationships stated; 1 = Identification of key stakeholder needs and interests provided; 1 = Organizational response to 3 key stakeholder needs and interests provided.	3
	6	Comparison of past and present performance and current performance and target performance	0 = No comparison provided; 1 = Comparison of	2
		<b>Sub – Score</b>		<b>13</b>
Outlook	1	Management's expectations about external environment	0 = No statement provided; 1 = Expectations described without timeframe; 2 = Expectations described with time frame	2
	2	Potential implications of these external expectations on the organization	0 = Not explained; 1 = Implications explained	1
	3	Organizational readiness in responding to the challenges and uncertainties	0 = Not explained; 1 = Readiness explained	1
		<b>Sub – Score</b>		<b>4</b>
Basis of preparation and presentation	1	Summary of materiality determination process—Material issues/determination, impact on creating/preserving value	0 = No discussion of material matters; 1 = Description of processes used to identify the material matters; 1 = Identification of the role of 2 key personnel in the identification and prioritization of material matters identification and prioritization of material issue	2
	2	Reporting boundary and its determination	0 = No boundary disclosed; 1 = Boundary is determinable; 2 = Boundary determinable and the process explained	2
	3	Summary of significant frameworks and methods used to quantify or evaluate material matters	0 = No frameworks or method used 1 = Frameworks and methods used	2
		<b>Sub – Score</b>		<b>5</b>
<b>Total scores</b>				<b>74</b>

## Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

### Appendix 2a: Regression result for CEO ownership power and integrated reporting - Fixed effect

```

Fixed-effects (within) regression      Number of obs   =      93
Group variable: ID                    Number of groups =      11

R-sq:  within = 0.5839                Obs per group:  min =      6
        between = 0.6006                avg =      8.5
        overall = 0.5933                max =      9

corr(u_i, Xb) = -0.4923                F(5,77)        =      21.61
                                           Prob > F        =      0.0000
    
```

IRR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
OP3	.2146052	.0603402	3.56	0.001	.0944526	.3347578
LEV5	.0136514	.0050839	2.69	0.009	.0035281	.0237747
FAG3	.1112451	.0283025	3.93	0.000	.0548876	.1676027
FFS	.0827457	.050391	1.64	0.105	-.0175957	.183087
IO2	.8239569	.093685	8.79	0.000	.6374063	1.010508
_cons	-.8367718	.3842032	-2.18	0.032	-1.601818	-.0717255
sigma_u	.11396943					
sigma_e	.05439043					
rho	.81449466	(fraction of variance due to u_i)				

F test that all u\_i=0: F(10, 77) = 8.18 Prob > F = 0.0000

### Appendix 2b: Regression result for CEO ownership power and integrated reporting - Random effect

```
. xtreg IRR OP3 LEV5 FAG3 FFS IO2, re
```

```

Random-effects GLS regression      Number of obs   =      93
Group variable: ID                 Number of groups =      11

R-sq:  within = 0.5634                Obs per group:  min =      6
        between = 0.8546                avg =      8.5
        overall = 0.7800                max =      9

corr(u_i, X) = 0 (assumed)           Wald chi2(5)    =      140.89
                                           Prob > chi2     =      0.0000
    
```

IRR	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
OP3	.1909623	.0413651	4.62	0.000	.1098882	.2720364
LEV5	.0179272	.0049089	3.65	0.000	.0083059	.0275485
FAG3	.102731	.02348	4.38	0.000	.0567111	.1487508
FFS	.1375787	.0225252	6.11	0.000	.0934302	.1817273
IO2	.6469964	.0720308	8.98	0.000	.5058186	.7881741
_cons	-1.117046	.1807941	-6.18	0.000	-1.471395	-.7626957
sigma_u	.0610342					
sigma_e	.05439043					
rho	.55736934	(fraction of variance due to u_i)				

# Effect of CEO Ownership Power and Integrated Reporting Among Listed Firms in East Africa

## Appendix 2c: Regression result for CEO ownership power and integrated reporting – Hausman Test

	Coefficients			
	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
OP3	.2146052	.1909623	.0236429	.0439302
LEV5	.0136514	.0179272	-.0042758	.0013222
FAG3	.1112451	.102731	.0085141	.0158027
FFS	.0827457	.1375787	-.0548331	.0450763
IO2	.8239569	.6469964	.1769605	.0599036

b = consistent under Ho and Ha; obtained from xtreg  
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)' [(V\_b-V\_B)^(-1)] (b-B)  
 = 10.37  
 Prob>chi2 = 0.0654  
 (V\_b-V\_B is not positive definite)



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