Audit Committee Characteristics and Integrated Reporting: Empirical Study of Companies Listed on the Johannesburg Stock Exchange

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Abstract:

This study aims to investigate the effect of audit committee characteristics (audit committee expertise, frequency of audit committee meetings, and audit committee independence) on integrated reporting.

Data for this study were gathered from integrated reports of manufacturing companies listed on the Johannesburg Stock Exchange. Total samples of 58 companies were selected using purposive sampling method. A multiple regression model was then employed to analyze data.

The findings showed that the level of integrated reports of the companies met 70% of all required items. In addition, the audit committee expertise and frequency of audit committee meetings positively influenced the level of integrated reports. However, this study did not support the association of independent audit committees and the companies’ reports.

Keywords: integrated reporting, audit committee expertise, frequency of meetings, audit independent committee independence, JSE.

JEL Classification: M41; M48; N27.

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1. Introduction

Integrated reporting is seen as the latest format of corporate reporting that promotes more integrated and transparent information about an entity. The emergence of such reporting is mainly due to dissatisfaction with conventional financial reporting which focuses on historical and financial performance. Integrated reporting presents financial and non-financial information (Azam, Warraich and Awan 2011; Eccles et al., 2015; Morros, 2016; Soyka, 2013) and shows the dimensions of historical and future performance of an entity (Adams and Simnett, 2011). Such reporting can change the mindset of investors about how the company operates and creates a shift from short-term financial goals to long-term business strategies (Eccles et al., 2015). Unfortunately, most companies have a poor understanding of integrated reporting (Perego, Kennedy and Whiteman 2016; Suryanto and Thalassinos, 2017).

The emergence of integrated reporting has attracted accounting scholars to discuss and study it (Adams, 2015). Current studies on integrated reporting are more focused on the benefits, progress and challenges faced by companies in implementing integrated reporting (Burke and Clark 2016; Havlová, 2015; Thalassinos and Dafnos, 2015). Other studies have tried to investigate the influence of political and economical aspects (Dragu and Tiron-Tudor 2013), the legal system (Frías-Aceituno, Rodríguez-Ariza and García-Sánchez, 2013), and cultural aspect (Frías-Aceituno et al., 2013) on the successful implementation of integrated reporting (Thalassinos and Liapis, 2014). South Africa has been seen as successful in the implementation of integrated reporting, especially for companies listed on the Johannesburg Stock Exchanges (JSE).

Previous studies have contributed to the development and implementation of integrated reporting. However, the previous studies are not able to reveal the reasons why publicly listed companies publish different integrated reporting. For example, integrated reporting has been implemented as mandatory in South Africa (Atkins and Maroun, 2015; Carels et al., 2013), but it is not clear the detailed information included in integrated reporting. Consequently, different companies may publish different numbers of disclosed items on integrated reporting. This implies that there are unique characteristics inherent in each company that could potentially affect integrated reporting. Characteristic of corporate governance, especially audit committee is believed to affect integrated reporting. However, is not easy to find such studies.

As other research on corporate reporting, the role of audit committees is considered as important and influential in over seeing financial reporting (Bédard and Gendron, 2010; Li et al., 2012; Lisic et al., 2015). The audit committees play an active role in reviewing the financial statements, including integrated reporting (Haji, 2015). In addition, audit committees should review the disclosure of sustainability information on the integrated reporting to ensure that such disclosure does not conflict with the other information (The Institute of Directors in Southern Africa, 2009). Therefore,
this study is conducted to answer the question whether the characteristics of audit committees (audit committee expertise, frequency of audit committee meetings, and audit committee independence) affect the integrated reporting in South Africa. Thus, this study is the first attempt to uncover the influence of the characteristics of audit committees on the integrated reporting. The results of this study can be used as an evaluation of the existence and effectiveness of audit committees in reviewing and ensuring the quality of transparency and accountability of business mainly integrated reporting that has not been studied previously.

2. Hypothesis Formulation

In the agency relationship, audit committee plays an important role in overseeing the implementation of financial policies and accounting firms (Bédard and Gendron, 2010; Ghafran and O’Sullivan, 2013; Li et al., 2012; Dezoort, 1998; Hayes, 2014; Spira, 1998; 1999). The audit committee is believed to have a role in reducing information asymmetry (Akhtaruddin and Haron, 2010; Al Daoud et al., 2015) and consequently reduce agency costs (Bédard and Gendron, 2010). Therefore, presentation of integrated reporting cannot be separated from the role of the audit committees. This argument is in line with the role of audit committees in various corporate policies such as in the prevention of earnings management (Garven, 2015; Miko and Kamardin, 2015), compliance with regulations (Bepari and Mollik, 2015; Bryce et al., 2014), disclosure and financial reporting (Abernathy et al., 2015; Haji, 2015; Akhtaruddin and Haron, 2010; Tanyi and Smith, 2015).

Some studies suggested that the effectiveness of audit committees in monitoring corporate reporting/policies is influenced by several factors such as composition, size, qualifications, as well as the activities carried out by the audit committee (Abbott et al., 2004; Beasley and Salterio, 2001; Carcello and Neal, 2003; Klein, 2002; Lee and Stone, 1997). A study by Felo et al. (2003) concluded the following findings:

a) independent audit committee prevents companies from accounting irregularities; b) financial expertise of audit committee members improve the quality of published financial information; c) the audit committee size improves the quality of financial information.

2.1 Audit Committee Expertise and Integrated Reporting

Expertise in accounting/finance is seen as crucial to audit committee members (Abernathy et al., 2015; Hayes, 2014; Hamid, Shafie and Othman, 2015). A number of studies showed that audit committee effectiveness is determined by knowledge and expertise in finance/accounting of its members (Abernathy et al., 2013; Albring et al., 2014; Badolato et al., 2014). Expertise in accounting/finance allows audit committee members to understand auditing process and resolve disagreements between management and external auditors (Li et al., 2012; Mangena and
Tauringana, 2008), make them more professional and adapt quickly to the business changes and innovation (Badolato et al., 2014; Goodwin, 2003). Consequently, such expertise enables audit committees to understand the risks faced by the company (Purcell et al., 2014). Indeed, the oversight role of the audit committee will decrease when its members have no such expertise (Al Twaijry et al., 2002; Zhang et al., 2007). Such condition will also weaken the effectiveness of audit committees in the financial reporting process including integrated reporting. Consequently, audit committee which its members are expert in accounting/finance will increase the number of items disclosed in integrated reports.

H1. Audit committee expertise in accounting/finance positively affects integrated reporting.

2.2 Frequency of Audit Committee Meetings and Integrated Reporting

Oversight is one of important activities in the implementation of good corporate governance. Agency theory claims that the quality of monitoring can reduce opportunistic behavior of agents to behave in the interests of principals. Effective monitoring may increase when audit committee members meet regularly and frequently. In fact, regularly scheduled meetings will assist audit committees in monitoring accounting records and internal control systems (Lisic et al., 2015). Studies reported that audit committees in the United States and Britain hold a regular meeting at least four to six times a year with an average duration of three to four hours per meeting (Collier and Gregory, 1999; McMullen, 1996).

Meeting frequency allow the audit committee more effective in overseeing the financial reporting process and internal control (Goodwin-Stewart and Kent, 2006; Hoque et al., 2013) and improve the quality of accounting information and audit (Braiotta, 2003; Song and Windram, 2004). Indeed, audit committees who meet more regularly perform better supervisory roles in financial reporting than those who do not meet regularly (Chen et al., 2005; Collier and Gregory, 1999; Hoque et al., 2013; Karamanou and Vafeas, 2005; Mangena and Tauringana, 2008; Munro and Buckby, 2008). Zhang et al. (2007) also found that audit committee positively influences financial reporting quality. As findings on corporate reporting and disclosure, audit committee meeting and integrated reporting are believed to have a similar relationship. Thus, we hypothesize:

H2: The frequency of audit committee meetings positively influences integrated reporting.

2.3 Independent Audit Committee and Integrated Reporting

Audit committee role in overseeing the financial reporting cannot be separated from the independence of its members (Al-Najjar, 2011; Hamid et al., 2015; Spira, 1999). Indeed, independence is the cornerstone of audit committee effectiveness (Carcello and Neal, 2003; Psaros and Seamer, 2004; Spira, 1999). Independence make audit committee more autonomous and free from any vested interests (Al Najjar, 2011;
Hamid et al., 2015). Hence, as claimed by agency theory, independent audit committees result in more effective oversight (Beasley et al., 2009; Song and Windram, 2004) because such committees are free from management influence (Carcello and Neal, 2003; Mangena and Tauringana, 2008) and make them more objective in preventing a company from financial reporting manipulation (Klein, 2002). Thus, independent audit committees can ensure a higher quality of financial reporting (Ebrahim and Fattah, 2015; Herrmann et al., 2006; Krishnamoorthy et al., 2002). Borrowing such arguments, it is believed that the more independent audit committee the more items disclosed in integrated reporting. Thus the hypothesis is as follows:

**H3. Independent audit committees positively affect integrated reporting.**

3. Research Methodology

The key methodology of this study is to develop a multivariate regression model to test the proposed hypotheses and identify the key determinants of integrated reporting among companies listed in the Johannesburg Stock Exchange in 2014. The data of this study comprise all integrated reports of manufacturing companies as the fact that the manufacturing sector is seen as one of the largest sectors in South Africa. Thus, the results are expected to represent companies listed in the JSE. More specifically, to achieve meaningful and consistent results, companies which are used in this study have to meet the following conditions: companies are listed JSE and all required data (audit committee expertise, frequency of audit committee meetings, and independent audit committee) are available on integrated reporting. All data are gathered from annual reports (integrated reports).

The dependent variable, integrated reporting (IRX) is measured by integrated reporting index based on 64 items developed by (NKONKI 2011). Content analysis is applied to identify the number of items disclosed in integrated reporting. If the company discloses the item, then a score of 1 (one) for each disclosed items is given to the company. The integrated reporting index is then determined by dividing all items disclosed by total number of suggested items (64 items). Audit committee expertise (ACE) is measured by the number of audit committee members who have financial/accounting expertise. Meanwhile, Frequency of Audit Committee Meeting (ACM) is measured by the number of meetings conducted by audit committees in one accounting period. Finally, Independent Audit Committees (ACI) are measured by the number of audit committee members who do not have a special relationship with the company.

As the multivariate regression models employed to test the key determinants of integrated reporting, the relationship between the audit committee characteristics and the integrated reporting is analyzed using the following regression model:

\[
IRX = \alpha + \beta_1ACE + \beta_2 ACM + \beta_3ACI + e
\]
where, IRX is integrated reporting, ACE represents audit committee expertise in accounting/finance, ACM is frequency of audit committee meetings, and ACI shows Independent Audit Committee.

4. Findings and Discussion

The descriptive analysis is utilized to describe the main features of data used in this study. Measurements used to obtain the descriptive statistics include minimum, maximum, mean and standard deviation. This study aims to investigate the influence of audit committee characteristics (expertise, meeting and independence) on integrated reporting. The results for descriptive statistics are shown in Table 1. The results of content analysis show that integrated reporting index is relatively high with an average of 70% items disclosed (45 of 64 items) and the highest disclosure is 92% (59 of 64 items disclosed). This suggests that South African companies are becoming aware of the importance of integrated reporting.

In addition, the average number of audit committee with expertise in accounting/finance are around three from maximum of five suggesting that the companies have enough audit committee members who’s their skills and competence are in accounting/finance areas. Whereas the average number of audit committee meeting is only four times per year (with maximum meeting of eight times and minimum meeting about twice). This suggests that the frequency of audit committee of companies listed on the JSE is relatively low. Finally, on average there are three independent members of the audit committee possessed by the companies (total of audit committee size ranges from two to five members).

| Table 1. Descriptive statistics |
|------------------------------|-------------------|-----------------|-----------------|-----------------|
|                             | Min   | Max   | Mean | Std. Deviation | N  |
| IRX                         | 0.41  | 0.95  | 0.70 | 0.13           | 58 |
| ACEXPT                      | 1.00  | 5.00  | 2.43 | 0.90           | 58 |
| ACMEET                      | 2.00  | 8.00  | 3.48 | 1.27           | 58 |
| ACINDD                      | 2.00  | 5.00  | 3.29 | 0.76           | 58 |

| Table 2. Diagnostic Test of Regression Model |
|---------------------------------------------|-----------------|-----------------|
| Variables                                   | Glejer (Sig)    | Collinearity (VIF) |
| ACEXPT                                      | 0.103           | 1.214           |
| ACMEET                                      | 0.169           | 1.106           |
| ACINDs                                      | 0.599           | 1.104           |

Kolmogorov-Smirnov Sig. (2-tailed) = 0.166

Before conducting the regression analysis, it is necessary to carry out several diagnostic tests, such as multicollinearity, heteroscedasticity, and normality test. This is to make sure that the regression results will be meaningful and reliable.
Multicollinearity is tested based on the variance inflation factor (VIF). Meanwhile heteroscedasticity and normality are examined based on Glejser value and Kolmogorov-Smirnov value, respectively. Table 2 reported that the variance inflation factors (VIF) of all variables are less than 10 showing that there is no multicollinearity among independent variables. Glejser values of the variables are more than 5% expressing that the data are homogenous. Finally, Kolmogorov-Smirnov value is 0.166 (higher than 5%) explaining the data are normal.

While the descriptive analysis provides some insights into the average level of variables used in the model, this study is interested in the causal effects of the variables. Thus regression analysis is applied to estimate these effects, using the integrated reporting index as the dependent variables. Table 3 presents the main results.

**Table 3. Regression results of models - Integrated Reporting as dependent**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Standardized Coeff. (Beta)</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-</td>
<td>2.823</td>
<td>0.007</td>
</tr>
<tr>
<td>ACEXPT</td>
<td>0.381</td>
<td>2.895</td>
<td>0.005*</td>
</tr>
<tr>
<td>ACMEET</td>
<td>0.273</td>
<td>2.228</td>
<td>0.030*</td>
</tr>
<tr>
<td>ACINDs</td>
<td>-0.137</td>
<td>-1.079</td>
<td>0.285</td>
</tr>
</tbody>
</table>

F value = 6.080 (sig: 0.001) Adjusted $R^2$ = 0.211

* Note: *) Significant at 5%.

It can be seen from Table 3 that the F value is 6.080 (sig: 0.001) indicating that there is a significant relationship of integrated reporting and its explanatory variables. The results in Table 3 are mostly in line with the proposed hypotheses. The finding supported H1 that audit committee expertise in accounting/finance is positively associated with the scope of integrated reporting ($p < 0.05$). The second hypothesis is also confirmed that the frequency of audit committee meeting is positively associated with integrated reporting scope ($p < 0.05$). However, the third hypothesis is not confirmed by the results. Independent members of audit committee did not determine the scope of integrated reporting ($p > 0.05$). In relation to the role of integrated reporting in reducing agency cost, the finding shows that audit committee plays crucial roles in decreasing information asymmetry (Akhtaruddin and Haron, 2010; Al Daoud et al., 2015) and consequently reduce agency costs (Bédard and Gendron, 2010).

The results of this study indicate that the audit committee with accounting/finance expertise positively affect the scope of integrated reporting. It means that the more audit committee members with accounting/finance expertise the more items disclosed in the integrated report. As part of the corporate governance mechanism, the audit committee is responsible for overseeing financial reporting of an entity. Consequently, its members should have sufficient expertise in accounting/finance
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(Abernathy et al., 2015; Hayes, 2014; Hamid et al., 2015). Furthermore, the audit committee members with accounting/financial expertise tend to quickly respond to changes in the business environment and innovation (Badolato et al., 2014; Goodwin, 2003) and assess the company risks (Purcell et al., 2014). In fact, companies whose audit committee members are lack of expertise in accounting/finance will lead to decrease in their oversight roles (Al Twaijry et al., 2002; Zhang et al., 2007). This finding is consistent with agency theory claiming that to decrease information asymmetry and to align the agent interests to the principal ones, audit committee members must have expertise in accounting/finance. Indeed, accounting/finance expertise became an important feature to ensure that audit committees carry out their role effectively as claimed by other studies (Abernathy et al., 2013; Albring et al., 2014; Badolato et al., 2014). The finding is also consistent with research by Dhaliwal et al. (2010).

The frequency of audit committee meetings also significantly influenced integrated reporting. The more frequent the audit committee meeting the more the items disclosed in integrated reporting. Active involvement of audit committee members in any regularly scheduled meeting enable them to discuss any issues related to company activities including integrated reporting. Indeed, such meetings enable audit committees in overseeing accounting records and the quality of internal control more effectively (Lisic et al., 2015; Goodwin-Stewart and Kent, 2006; Hoque et al., 2013). Moreover, the increasing frequency of audit committee meeting lead to the improvement of accounting information and audit quality (Braiotta, 2003; Song and Windram, 2004). This finding is in line with Zhang et al., (2007) study that the meeting frequency affects the quality of financial reporting and found a positive correlation between the two variables. Other studies reported that the audit committee members who meet more regularly have more time to perform a supervisory role in the financial reporting than those who do not meet regularly (Chen et al., 2005; Collier and Gregory, 1999; Hoque et al., 2013; Karamanou and Vafeas, 2005; Mangena and Tauringeana, 2008; Munro and Buckby, 2008). Referring to similar studies, it is also important to note that effective audit committees hold a meeting as much as four to six times a year, with an average duration of approximately three to four hours per meeting (Collier and Gregory, 1999; McMullen, 1996). To conclude, integrated reporting will increase when the audit committees hold more regular and scheduled meetings.

The last hypothesis claims that independent audit committees influence integrated reporting. However, this research finding does not support such claim meaning that integrated reporting is not affected by independent audit committee. Descriptive statistics showed that on average there are three independent members of the audit committee possessed by the companies listed in the JSE (the total of audit committee size ranges from two to five members). Even though they have enough independent members, the members may not be actively involved in a regularly scheduled meeting to determine to content and format of integrated reporting including the number of items disclosed in it. In addition, the establishment of independent audit
committee members is only intended to fulfill the requirement of corporate governance regulation in South Africa.

The finding does not support claims that independent audit committee members can provide more effective oversight than members who are not independent (Beasley et al., 2009; Song and Windram, 2004). Moreover, the finding is not in line with other studies (Al Najjar 2011; Carcello and Neal, 2003; Spira, 1999) indicating that the independent members force management to act more transparent and more accountable. Finally, this study also does not support the findings that independent audit committee members can ensure higher quality of financial reporting (Ebrahim and Fattah, 2015; Herrmann et al., 2006; Krishnamoorthy et al., 2002).

5. Conclusion and Limitation

This study is motivated by dissatisfaction with traditional financial reporting practices focusing on historical data and financial information. Such dissatisfaction has led to the emergence of integrated reporting, providing more holistic and integrated information containing financial and non-financial information as well as the historical and future performance of a company. The purpose of this study was to examine the effect of the characteristics of audit committees (audit committee expertise, frequency of audit committee meetings and independent audit committee) on integrated reporting. This research employed multiple regression analysis with a total sample of 58 companies publishing integrated reports.

Based on the research findings, this study found that companies listed in the Johannesburg Stock Exchange disclosed relatively high items of integrated reporting with an average of 70% items (45 of 64 items) and the highest disclosure is 92% (59 of 64 items disclosed). This implied that South African companies are becoming aware of the important roles of integrated reporting in communicating firm performance and other relevant information.

The research contributed new interesting findings on integrated reporting issues. Indeed, audit committee characteristics, especially audit committee expertise and frequency of audit committees significantly determined integrated reporting of companies listed in the JSE. Such findings contributed to the previous research findings, which mostly claimed that integrated reporting is affected by political and economic factors (Dragu and Tiron-Tudor, 2013), the legal system (Frías-Aceituno et al., 2013), and cultural factors (García-Sánchez, Rodríguez-Ariza and Frías-Aceituno, 2013).

In regard to the association of audit committee characteristics and integrated reporting, this study concluded that first, audit committee expertise (in accounting/finance) positively and significantly affected integrated reporting. These results indicated that the more the audit committee members possessing accounting/financial skills and competence the more items disclosed in integrated
reports. As the fact that integrated reporting can change the view of management and stakeholders, companies need to increase the number of audit committee members with accounting/financial expertise. Such expertise can enhance the capabilities of audit committee members in monitoring the financial reporting process, especially the publication of integrated reporting.

Secondly, the frequency of audit committee meeting had positive and significant association with integrated reporting. The results showed that the more intense the audit committees hold meetings, the more effective the their role in monitoring the preparation and presentation of integrated reports and consequently the more items discloses in integrated reports. Audit committee meetings can be seen as effective media of communications among audit committee members to share their views and expertise in regard to integrated reporting. Thus, it is necessary for audit committees to hold more regular and scheduled meeting. As the issues of audit committee meetings in other countries, for example, US and UK (Collier and Gregory, 1996; McMullen, 1996), audit committee of publicly listed companies need to hold meetings at least four times a year.

Thirdly, independent audit committees did not significantly influence integrated reporting of companies listed in the JSE. The result showed that the higher proportion of independent audit committees did not automatically guarantee the effective roles of audit committees in monitoring the preparation and presentation of integrated reporting. It seems that independent audit committees is only established to fulfill the requirement of corporate governance regulations. Even though, audit committee members are independent, they will not perform their roles well if the members have no accounting/financial expertise and do not communicate properly through regular and scheduled meetings.

Despite its new contributions to accounting knowledge and practice, especially in the context of business reporting issues, this study suffered from pitfalls. The first weakness is that this study employed a limited sample of manufacturing companies due to limited required data available in annual reports. Such samples may influence the quality of research findings, especially for generalization purpose. Hence, further studies need to consider more samples from different sectors of business as the fact that the type of industry may also affect integrated reporting. Secondly, the findings only considered three variables of audit committee characteristics: audit committee expertise, frequency of audit committee meetings and independent audit committee and only two variables—audit committee expertise and meeting—were supported. It means that future research may consider other factors of corporate governance such as the quality of external auditors, internal audit effectiveness, types of industry and company size.

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