Corporate environmental disclosures and performances in annual reports of listed manufacturing firms in Nigeria: The stakeholders perspective.

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Abstract: The purpose of this paper is to examine the level of corporate environmental disclosures and performances of listed manufacturing firms in Nigeria from the perspective of the stakeholders. The level of environmental disclosure and performances as shown in annual reports of Nigerian listed firms is low. This study uses the stakeholders’ theory to reinvestigate this phenomenon. In order to achieve a wider and in-depth study, secondary data were obtained from the annual reports of fifty five (55) manufacturing firms. The annual reports were examined for a five (5) years period from 2012 – 2016. The purposive sampling method was used in selecting the sampled firms. The empirical results indicates that environmental performances has no significant influence on firm’s disclosure practices. The findings of this study are of practical significance to regulatory bodies, investors, academics as they should be cautious while interpreting increase in disclosures related to environmental activities.

Keywords: environmental disclosure, environmental performance practices, stakeholder theory, manufacturing firms, Nigeria.

I. Introduction

Activities of business organisations such as environmental pollution and waste disposal practices causes depletion of the ozone layer and consequently results to global warming. Therefore, the role of firms in addressing environmentally related issues is very important (Dryzek, 2013). Prior to this era, companies paid little or no attention to the deteriorating environmental conditions caused by their activities. However, now in a new era of sustainability. Businesses are under increasing pressure from regulatory bodies, non-governmental organisations and the communities to be environmentally friendly (Uwuigbe, 2011). There is an increasingly attention of stakeholders and the resultant demand for environmental responsibility makes it necessary for companies to improve their environmental performance and information disclosure practices (Chima&Damagun, 2013).

Disclosure of environmental related issues reflects a company’s environmental commitment to all its stakeholders. It contains relevant environmental information concerning the firm’s environmental activities and performance. High quality environmental disclosure provides vital information about management decisions and resolutions about environmental assessment. In addition, the environmental disclosure can assist existing and potential investors in making informed decisions (Hood &Nicholl, 2002). Stakeholders require environmental information about the firm’s environmental protections activities and sustainable development plan. The stakeholders are also expected to be updated of the company’s activities and performances. In Nigeria, disclosures practices of listed firms in the country has been adjudged to be inadequate and weak over the years (Chima&Damagun, 2013; World Bank, 2011, 2004).

Particularly, companies have been reported to be providing inaccurate,distorted and incomplete information to regulatory bodies, thereby, denying stakeholders access to the right information to make informed decision (Sanusi, 2010). The Nigerian code of corporate governance 2003 was promulgated by the Nigerian government in a bid to promote transparency in corporate disclosure. The code requires that companies should provide more information on social, ethical and environmental issues voluntarily in addition to the disclosure requirements of capital market. Despite the introduction and implementation of the code, the reports from the World Bank report on observation of standards and codes (ROSC) indicates that there is limited improvement in corporate reporting practices by Nigerian companies (World Bank, 2011).
Nigeria is a developing country with a population of over one hundred and eighty million people, Nigeria is also one among the developing countries facing environmental challenges, and Nigeria does not have mandatory regulations for environmental disclosures (Adelapo&Uwuigbe, 2013). Therefore, the environmental information reported by Nigerian companies in their annual reports is rather low. Nigerian companies disclose environmental information to achieve ISO certification and maintain a good relationship with its various stakeholders (Sanusi, 2010).

The relationship between environmental performance and environmental disclosure is one area that has been widely researched in the accounting literature (Al-Tuwaijri et al., 2004; Hughes et al., 2001). Extant literature on the relationship between environmental performance and environmental disclosure both empirically and theoretically is inconclusive (Clarkson et al., 2011; Freedman &Wasley, 1990; Wang et al., 2009). This paper is set to contribute to the body of knowledge by empirically investigating the underlying relationship between environmental performance and environmental disclosure in Nigeria taking the stakeholder’s perspective into consideration from the theoretical lens of stakeholder theory.

II. Literature Review

Prior studies between environmental performance and environmental disclosure shows mixed results, both theoretically and empirically (Li et al., 2017) and inconclusive. Some of the studies showed negative relationship (Bewley& Li, 2000; Cho et al., 2012; de Villiers & Van Staden, 2011) while others explained positive relationship (Clarkson et al., 2011; Giannarakis et al., 2017; Lu & Taylor, 2017) and others studies found no relationship (Ingram & Frazier, 1980; Liu et al., 2011).

Ingram and Frazier (1980) in one of their earliest research, found no relationship between environmental performance and environmental disclosure. In studying 40 US firms in other to determine the environmental disclosure, they used the corporate environmental performance rating as a proxy for environmental performance and applied content analysis technique. Patten (2002) opined that companies with poor environmental performance disclose more environmental information than companies with high environmental performance. In examining the annual reports of 151 US firms for disclosure content, and data information on toxic waste management, he discovered a negative relationship between environmental performance and environmental disclosure.

On the other hand, Al-Tuwaijri (2004) found a positive relationship between environmental performance and environmental disclosure. The environmental performance was measured based on four indexes; environmental penalties and fines, toxic release inventory measures, toxic release and potential parties responsible, environmental disclosures was measured based on content analysis technique. With the use of global reporting index for environmental disclosure and toxic release inventory as proxy for environmental performance, Clarkson et al., (2008) discovered a positive relation between environmental performance and environmental disclosure. Similarly, Meng et al., (2014) with a sample of 533 listed companies in China, examined the relationship between environmental performance and environmental disclosure. The study utilised the content analysis technique to measure environmental disclosure and evaluated environmental performance based on five measures. The results showed a non-linear relationship between environmental performance and environmental disclosure. They suggested that companies with poor environmental impact disclose more information about their environmental activities than average performers.

Past studies have identified various factors that motivate companies to disclose environmental information. According to de Villiers and Van Staden (2011), firms with poor image due to their environmental activities tend to disclose more to their various stakeholders. They found that most firms disclose to protect their image and divert the focus of the society away from environmental problems created as a result of their activities. According to Sumiani et al., (2007) most ISO firms consider environmental disclosure as a tool to promote their corporate image. Similarly, Jaffar and Buniamin (2004) also found that companies disclose to keep a good corporate image and be perceived as been environmentally friendly.

Furthermore, studies in voluntary disclosure have investigated factors such as firms’ specific characteristics such as board structure, firm size, firm age, leverage and profitability (Bhatia &Tuli, 2017; Lan et al., 2013). Similarly, corporate governance attributes such as ownership structure, board size and board independence have been investigated (Damagun&Chima, 2013; Kurawa&Kabara, 2014). Recently, the focus of scholars has shifted to the influence of voluntary disclosure on stakeholders. Studies have investigated how stakeholders view voluntary disclosure by using secondary data from financial reports (Thijssens et al., 2015; Qu et al., 2013). Though such approach provides clues into how stakeholders influence voluntary disclosure, it does not take into consideration stakeholder’s perception. Additionally, there seems to be limited literature on voluntary disclosure using stakeholder theory in the Nigerian context. This study is set to fill this knowledge gap by empirically investigating the relationship between environmental performance and environmental information disclosure practice of Nigerian companies taking stakeholder’s perception into consideration from the theoretical lens of stakeholder theory.
Theoretical framework
Since environmental disclosure in Nigeria is voluntary rather than mandatory, other disclosure motives than jurisdictional enforcements are likely to be key drivers. Prior literature suggest several other theories that may provide useful information in voluntary disclosures such as decision usefulness theory (Whitting & Miller, 2008), Agency theory (Chow & Wong-Boren, 1987), legitimacy theory (Deegan, 2002). This study is anchored on the stakeholders’ theory in the light of environmental disclosures.

Several attempts have been made as to stakeholders’ definition. Freeman (1984) defines a stakeholder as “any group or individual who can affect or is affected by the achievement of the firm’s objectives”. Hill and Jones (1992) define stakeholders as “constituents who have a legitimate claim on the firm”. This legitimacy is established through the existence of an exchange relationship. Gray et al. (1996) define a stakeholder as “any human agency that can be influenced by, or can itself influence, the activities of the organization in question”. These definitions provide the core boundaries of what constitutes a stake. An organization is, therefore, likely to have many stakeholders such as shareholders, customers, suppliers, employees, creditors, competitors, public interest groups, local communities, governmental bodies, stock markets, industry bodies, national and international society and the general public. Each of the stakeholders can be seen as supplying the firm with critical resources and in exchange each expects its interests to be satisfied (Hill & Jones, 1992).

Stakeholder theory has been widely employed in accounting literature as providing strong justification for both corporate performance and environmental disclosure practices. Stakeholder theory involves the recognition and identification of the relationship between the company's behaviour and the impact on its stakeholders (Ansoff, 1965). Therefore, “the corporation's continued existence requires the support of the stakeholders and their approval must be sought and the activities of the corporation adjusted to gain that approval. The more powerful the stakeholders the more the company must adapt” (Gray, et al., 1995).

According to Gray et al. (1996), the organization has many stakeholders, hence, it owes accountability to all its stakeholders, referring to the wide range of responsibilities assigned to corporate decision-makers. In addition, the more important the stakeholder to the organization, the more effort will be made to manage and manipulate this relationship. Managing such relationship can be done by providing more information through voluntary social and environmental disclosures, to gain the support and approval of these stakeholders.

Therefore, various stakeholders are challenging more disclosure of company environmental information due to their interest in the environmental problems and its relevant costs and responsibilities (Elijido-ten, 2004). In reacting to this requirement, many organizations are providing voluntary environmental reports in addition to the conventional annual financial reports. Moreover, environmental problems are taken into account of stakeholders’ risk and return (Kassinis & Vafeas, 2006). Furthermore, stakeholders are progressively challenging that environmental disclosure truly and fairly symbolizes companies' past and future success (Gray, 2000).

Research Methodology
This study adopted the secondary data collection technique in analysing the environmental disclosures and environmental practices themes in manufacturing companies listed on the Nigerian stock exchange. Content analysis is used in analysing the content of corporate annual reports of the selected manufacturing companies for a five (5) years period (2012-2016). This period was selected because of the increased awareness of corporate environmental disclosure in Nigeria. Content analysis is a research technique widely used in various social sciences research over the years (Klaus, 1980). Content analysis is considered one of the most systematic, objective and quantitative methods of data analysis technique employed in social sciences involving environmental disclosures (Rupley et al., 2012; Ingram & Frazier, 1980; Clarkson, Li, Richardson & Vasvari, 2006). Data collection using content analysis can be both qualitative and quantitative, the qualitative nature of the data can be translated into quantitative following a systematic counting procedures (Marshall & Rossman, 2010). Therefore this study adopts the content analysis method in order to measure the quality of environmental disclosures in annual reports of manufacturing companies in Nigeria.

In order to obtain an in depth and wider coverage, sample from companies across various sectors were collected. The manufacturing companies are selected based on purposive sampling method. The sample consist of both high profile and low profile companies. The sample collection is based on the following criteria (1) manufacturing companies are located in Lagos, Kano, Kaduna and Ogun state because of the growth of industrial activities in those selected states (2) availability of annual reports from 2012-2016 (3) nature of production activities that pollutes the environment (4) the toxicity of the waste. Thus, the total sample number of annual reports is 55 for this study.

Measurement of variables
Dependent variables: corporate environmental disclosure is the independent variable in this study, measured with the use of content analysis in consistent with Haji (2013). A detailed scoring scheme is adopted
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from checklist used by Hanifa and Cooke (2005) with minor changes to fit in Nigerian context. A firm is assigned zero (0) if environmental related information is not disclosed and assigned (1) if information is disclosed. The scoring index is based on the following classification:

- Environmental protection program (EPP)
- Awards for environmental protection (AEP)
- Environmental protection program (EPP)
- Raw material conservation and recycling (RMCR)

Independent variables: corporate environmental performance is the independent variable in this study. The corporate environmental performance were collected from the annual reports of the sampled firms. The detail of the measurement is as follows:

Score (0) when a company received no written warning from the Federal Ministry of Environment (FME) and National Environmental Standard and Regulations Enforcement Agency (NESREA) for non-compliance with environmental regulations in certain aspects of its operation. These companies are considered as good environmental performance companies.

Score (1) when a company received a written warning from the Federal Ministry of Environment (FME) and National Environmental Standard and Regulations Enforcement Agency (NESREA) for non-compliance with environmental regulations in certain aspects of its operation.

Score (2) when a company is charged in court after not doing anything to improve its environmental performance.

Some companies have received written warnings or have court cases more than once during the study period. The measurement of environmental performance takes note of manufacturing companies that do not have any records of non-compliance with the environmental regulations. Therefore, in calculating the environmental performance score, this study also take into account the severity of the environmental problems caused by a manufacturing company (Romlah 2005) as follows:

Total environmental performance score = [total numbers of written warnings * 1] + [total numbers of court cases * 2]

Control Variables

This study includes few control variables that have been reported in prior studies to have influenced environmental information disclosure. Prior studies documented that large firms are likely to disclose information to attract capital and lower cost of collecting and disseminating information (Hossain et al., 1995). Larger firms are also more exposed to public and regulatory probe (Watts & Zimmerman, 1978). Several prior research works have found that the size of the firm is significantly associated with voluntary environmental disclosure in general (Boesso et al., 2013; Chima & Damagun, 2013) and particularly environmental disclosure (Li et al., 2017; Cormier et al., 2011; Rupley et al., 2012).

There are several definition of company size as documented in various literatures, such as total capital employed, total sales, total assets and total number of employees. Based on prior literature, total sales is the generally accepted definition of company size (Rupley et al., 2012; Dryzek, 2013). Consistent with Cormier and Magnan (2003), this study measures company size as the logarithm of total assets. The use of logarithm is to lessen the heteroscedasticity problems.

Prior research also documents that profitable firms tend to disclose more information to attract capital inflow and minimise cost of noncompliance (Chima & Damagun, 2013). Profitable firms tend to provide good quality disclosures in their efforts to maintain a good corporate image to its stakeholders and as a way of contributing to the protection of the environment and satisfying stakeholder’s informational welfare (Dryzek, 2013). On the other hand, firms with low profits disclose less information to cover for their poor performance giving that during the periods of low profitability, stakeholders give more priority to economic demands than environmental issues (Mangos & Lewis, 1995). Based on prior studies, profitability is generally defined as return on assets (ROA) (Peter & Ronni, 2011). This study measures profit as the natural logarithm of return on assets.

Leverage has been in use as a possible variable of environmental disclosure because in highly leveraged firms there is a high demand for information by the stakeholders (Aksu & Kosedag, 2006). It demonstrates a firm’s ability to fulfil its responsibilities. The monitoring demand for information increases while company debt rises (Leftwich et al. 1981), and thus managers being more forthcoming to provide the contracting demand for information, suggesting better environmental performance with higher leverage. Naser et al. (2006) opined that firms with high level of debts are regarded risky and these companies experience difficulties during capital increase. It is for this reason that they are required to disclose more information clarifying their financial positions.

According to Cooke and Terry (1996) companies with higher levels of debt tend to disclose higher quality in order to assure capital investors that they will honour their debt agreements. Although, empirical
evidences regarding environmental disclosure and leverage are inconclusive (Clarkson et al. 2008); Parsa and Deng (2008) found positive relationship between leverage and environmental disclosure while Cormier et al. (2011) found negative relationship between leverage and environmental disclosure. Nevertheless, (Michelon & Parbonetti 2012) were unable to confirm any significant relationship between leverage and environmental disclosure. Based on the arguments above, this study assumes a positive relationship between leverage, environmental disclosure and environmental performance in annual reports of Nigerian listed manufacturing companies.

In prior studies, the ratio of debt to assets is commonly used as the measurement for leverage (Peters & Romi 2011). Accordingly, this study measures leverage as the ratio of total debt to total assets. The following model is developed to help achieve the research objectives.

CEDISQ$_{it}$ = $\beta_0$ + $\beta_1$CEPF$_{it}$ + $\beta_2$SIZE$_{it}$ + $\beta_3$PROF$_{it}$ + $\beta_4$LEVE$_{it}$ + $\beta_5$TOTRV + $\epsilon_{it}$

Where:
CEDISQ = corporate environmental disclosure quality
CEPF = Corporate Environmental performance
SIZE = Logarithm of total assets
LEVERAGE = ratio of debt to assets
TOTRV = Total revenue
$\epsilon_{it}$ = Error term
$\beta_0$ = intercept

III. Analysis and results:

The descriptive analysis for the dependent and independent variables of sampled firms from 2012-1026 is shown in Table 1 below. The mean and maximum scores for the environmental disclosure is 12.088 and 53.614 respectively, while the minimum score obtained by the sample companies is 1.228.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>-45.910</td>
<td>56.470</td>
<td>2.663</td>
<td>7.400</td>
</tr>
<tr>
<td>LEV</td>
<td>0.000</td>
<td>0.783</td>
<td>0.172</td>
<td>0.086</td>
</tr>
<tr>
<td>TOTRV</td>
<td>0.000</td>
<td>1.457</td>
<td>0.071</td>
<td>0.131</td>
</tr>
<tr>
<td>CEP</td>
<td>0.000</td>
<td>16.000</td>
<td>0.244</td>
<td>1.370</td>
</tr>
<tr>
<td>SIZE</td>
<td>10.024</td>
<td>18.221</td>
<td>13.156</td>
<td>1.483</td>
</tr>
<tr>
<td>CEDQ 100</td>
<td>1.228</td>
<td>53.614</td>
<td>12.088</td>
<td>7.370</td>
</tr>
</tbody>
</table>

ROA = return on assets; LEV = ratio of debt to assets; TOTRV = total revenue; CEP = corporate environmental performance; SIZE = logarithm of total assets; CEDQ = corporate environmental disclosure quality.

The results of the Pearson correlation matrix is shown in Table 2 below. The results indicates that there is a significant negative relationship between leverage and ROA, while a positive relationship exist between firm size and leverage, total revenue as well as corporate environmental performance. On the other hand, leverage is negatively related to total revenue. Based on the results in table 2, none of the associations are having coefficient correlation of greater than 0.80. This also shows that there is no multicollinearity problem among independent variables (Cooper & Schindler, 2003).

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>LEV</th>
<th>TOTRV</th>
<th>CEP</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>-0.143**</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTRV</td>
<td>0.001</td>
<td>0.767</td>
<td>-0.007</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CEP</td>
<td>0.001</td>
<td>0.844</td>
<td>0.013</td>
<td>0.006</td>
<td>0.685</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.61</td>
<td>0.23</td>
<td>0.161**</td>
<td>0.111**</td>
<td>0.153**</td>
</tr>
</tbody>
</table>

ROA = return on assets; LEV = ratio of debt to assets; TOTRV = total revenue; CEP = corporate environmental performance; SIZE = logarithm of total assets; CEDQ = corporate environmental disclosure quality.
Result of Regression Analysis

Table 3 shows the regression of the results. As shown in module 1, environmental disclosure is regressed with environmental performance and all the variables. The regressed results shows that the relationship between environmental performance and environmental disclosure is not significant. This results agrees with prior studies by Freedman and Wasely (1980) and Ingram and Frazier (1980). This insignificant results shows that firm performance does not influence the level of environmental disclosure. Theoretically, this finding is in agreement with the stakeholder theory especially in respect to corporate environmental disclosures in which the aim of the disclosure is to impress the various stakeholders by meeting their informational needs (Qu et al., 2013; Thijssens et al., 2015).

<table>
<thead>
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<th>Table 3: Presents the Regression Analysis</th>
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<tbody>
<tr>
<td>Model 1</td>
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<tr>
<td>Constant</td>
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<tr>
<td>Environmental Performance</td>
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<tr>
<td>Return on Assets</td>
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<td>Leverage</td>
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<tr>
<td>Total Revenue</td>
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<tr>
<td>Ln Size</td>
</tr>
<tr>
<td>CEP*ROA</td>
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<tr>
<td>Adjusted R²</td>
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<tr>
<td>F</td>
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<tr>
<td>Sig.</td>
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</table>

Significant at (1%***; 5%** and 10 %*)

As shown in table 2, additional analysis was carried out with the use of data of the financial performance as a moderating variable. This is because firms with strong financial base tend to disclose higher environmental activities since environmental disclosure involves a lot of cost and only firm with good financial standing are able to do so.

From Table 3, the insignificant and negative relationship in module 2 implies that financial performance (ROA) does not moderate the relationship between corporate environmental performance and corporate environmental disclosure. It was earlier predicted that firms with strong financial base tend to disclose more environmental activities, however, based on the results in table 3, we conclude that environmental performance does not have significant relationship with environmental disclosure quality.

The results of the study also shows that, the size of the firm, leverage, and financial performance are significantly related with environmental disclosure quality. The relationship between environmental disclosure and total revenue however, is not significant. The positive coefficient of size implies that large firms are visible in the market and tend to report higher environmental information’s. This findings support prior studies conducted by Cormier et al., 2011 and Rupley et al., 2011. Furthermore, firms with high leverage are considered too risky for investors and stakeholders. Hence, these firms tend to disclose more environmental information to bridge information asymmetry. This findings is consistent with prior studies by Al-Tuwajiri et al., (2014), Liu et al., (2011) and Clarkson et al., (2011). Firms with high profits and good financial standing are more inclined to reporting higher environmental disclosure because they have more resources to provide the information to its various stakeholders (Meng et al., 2014).

IV. Conclusion

The study investigates the relationship between environmental performance and environmental disclosure quality of sampled manufacturing firms listed on the Nigerian Stock Exchange from 2012-2016, from the perspective of the shareholders. The environmental disclosure is measured through the content analysis using a detailed checklist developed by Haniffa and Cooke (2005)and Hackson and Milne (1996). The environmental performance variable is measured based on the degree of a firm’s compliance and non-compliance with Nigerian environmental regulations.

This study reveals that environmental reporting quality in Nigeria is still low compared with the level of disclosures in developed countries. This is because there is no mandatory requirements for companies in Nigeria to report environmental information in their annual reports. The findings also show that company’s actual environmental performance is not related to environmental disclosure quality. This findings is consistent with stakeholder theory which suggest that the purpose of the reporting is to satisfy the informational needs of the stakeholders. Therefore, stakeholders such as shareholders, customers, suppliers, employees, creditors, competitors, public interest groups, pressure groups, local communities, governmental bodies, stock markets, industry bodies, national and international society and the general public are expected to complement regulatory agencies by exerting greater pressure on companies to respond to the informational needs of the various stakeholders.
The results of this study highlights the importance of having a minimal reporting framework on voluntary reporting practices, particularly environmental disclosure practices. Hence, regulatory bodies like Federal Ministry of Environment (FME) and National Environmental Standard and Regulations Enforcement Agency (NESREA) should establish guidelines that will form the basis of environmental reporting among listed companies in Nigeria. From the stakeholders’ perspective, a more objective, non-bias environmental report will surely assist them in making better economic and informed decision about the firm.

References


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