Isomorphic influences and voluntary disclosure: The mediating role of organizational culture

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Abstract: Purpose: The purpose of this paper is to test the mediating effect of organizational culture in the relationship between isomorphic influences and voluntary disclosure. Design/methodology/approach: A cross-sectional design was employed. Data were collected using a survey questionnaire for the independent variables of coercive, mimetic normative isomorphism as well as organizational culture (mediating variable). The data for the dependent and control variable were obtained from content analysis of financial reports of 92 companies and was analysed using partial least squares PLSSEM. Findings: The results indicate that coercive and normative isomorphic mechanisms are positively related voluntary disclosure while mimetic mechanism is not. Organizational culture partially mediates the relationship between isomorphic influences and voluntary disclosure practices of listed firms in Nigeria. Research Limitation/implication: The cross-sectional nature of the study means that it does not capture changes in the Nigerian business environment overtime. Future research may consider a longitudinal study. The study is not industry specific as such may capture industry differences. However, the result is still considered valid since industry category was controlled for. Practical implication: the result has implication for a number of interested parties such as regulatory

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PUBLIC INTEREST STATEMENT

Publicly listed companies play an important role in an economy because they provide employment opportunities, goods and services, income to government and investors thereby improving a nation’s Growth Domestic Products (GDP). Because of this, the entities are required to provide information that meets the needs of all stakeholders. Voluntary disclosure provides an avenue for these firms to provide information that are not specifically covered by company law and accounting standards. This study is an attempt to provide possible explanation to environmental factors that promote disclosure of environmental, social and ethical information which are key for understanding sustainability of corporate earnings. Our study revealed that, in as much as regulations and industrial norms are associated with voluntary disclosure, their influences are partly felt through specific organizational practices. Suggesting that external factors alone do not cause total variation in voluntary disclosure, they also need organizational culture that promotes it.
bodies, accounting professional bodies, external auditors academics, and mangers.

Originality/value: The study, it has contributed to our understanding of the mediating effect of organizational culture on the relationship between isomorphic mechanisms and voluntary disclosure from the perspective of a developing country like Nigeria.

Subjects: Statistics for Social Sciences; Business, Management and Accounting; Accounting; Financial Accounting

Keywords: voluntary disclosure; isomorphism; organizational culture; mediation; developing country; Nigeria

1. Introduction

This study investigates relationship between isomorphic influences and voluntary disclosure practices of publicly listed firms. Specifically, the study seeks to examine the mediating role of organizational culture in the relationship between isomorphic mechanisms and voluntary disclosure. This is in view of the fact that transparency through corporate disclosure is considered as one of the essential pillars of corporate governance principles (Organization for the Economic Cooperation & Development [OECD], 2003). In a bid to improve transparency therefore, listed firms are seen to be providing information in such areas as strategic forecast, relationship with key stakeholders, environmental and ethical issues which are considered voluntary from capital market perspective (FASB, 2001; Schuster & O’Connell, 2006). Though these information are voluntary, they are critical for understanding sustainability of current earnings, proper functioning of capital markets and encourage better flow of Foreign Direct Investments (FDIs) into a country (Qu & Leung, 2006; Qu, Leung, & Cooper, 2013). This is particularly essential in the context of developing countries like Nigeria where disclosure practices of publicly listed companies has been consistently reported to be weak and inadequate overtime (Damagun & Chima, 2013; World Bank, 2004, 2011).

Specifically, the companies have been reported to be providing incomplete, inaccurate and sometimes distorted information to regulatory bodies thereby, depriving investors and other stakeholders of the right information to make informed decisions (Sanusi, 2010). In an effort to promote transparency in corporate disclosure, the Nigerian Government introduced the code of corporate governance in 2003 (hereafter referred to as the code). The code requires that companies should in addition to the disclosure requirements of capital market provide more information on social, ethical and environmental issues voluntarily (comply or explain). However, World Bank Report on Observance of Standards and Codes (ROSC) indicate that, there is limited adherence to codes by companies in Nigeria (World Bank, 2011). This underscores the need to understand the complementary role of institutional factors and specific organizational culture in fostering transparency through voluntary disclosure.

There are several reasons for the choice of Nigeria for this study. First Nigeria is a developing country with the fastest growing and the largest economy in Africa as at 2016 according to Erns and Young report. However, the country’s economy is largely dependent on export of crude oil so there is the need to develop other sectors of the economy.

Secondly, firms operating on the Nigerian capital market are confronted with many regulatory guidelines for industrial practice provided by a number of regulatory bodies such as Financial Reporting Council, Consumers Protection Agency, the Environmental Protection Agency, the Securities and Exchange Commission. Furthermore, the country has two indigenous accountancy bodies: Institute of Chartered Accountants of Nigeria (ICAN) and the Association of National Accountants of Nigeria (ANAN) regulating the training and practice of accounting and auditing in the country. The existence of these multiple regulatory as well as professional bodies makes studying the influence of institutional environment on voluntary disclosure in Nigeria an interesting one. The purpose of this study is therefore,
(1) To examine association between coercive isomorphism and voluntary disclosure.
(2) To examine the association between mimetic isomorphism and voluntary disclosure.
(3) To examine the relationship between normative isomorphism and voluntary disclosure.
(4) To examine the relationship between organizational culture and voluntary disclosure.
(5) To examine the mediating effect of organizational culture in the relationship between isomorphic influences and voluntary disclosure practices of listed firms in Nigeria.

The rest of the paper is organized as follows: the next Section is the literature review, followed by, methodology, data analysis, discussion and conclusion.

2. Literature review

2.1. Regulatory framework for corporate disclosure practice in Nigeria
Since the phenomenon of interest in this study is corporate voluntary disclosure, there is the need to understand the regulatory framework guiding disclosure practices of firms within the geographical setting of the study, i.e. Nigeria. The legal document guiding formation, registration, company proceedings and protection of minority interest is the Companies and Allied Matters Act (CAMA) issued by the Corporate Affairs Commission (CAC). Companies that are listed on the Nigerian Stock Exchange (NSE) are required by the law to comply fully with the provisions of CAMA and Investment and Securities Act (2007). The Nigerian Code of Corporate Governance (2011) of Nigeria which issues accounting standards required to be observed in the preparation and presentation of financial reports. The Securities and Exchange Commission (SEC) issues the code of corporate governance to be observed by publicly listed companies in their disclosure practices. The code emphasizes the disclosure of social, ethical and environmental policies in addition to the requirements of CAMA. In this study, the requirements of both CAMA and accounting standards are regarded as mandatory disclosure while that of SEC is regarded as voluntary (Barako, Hancock, & Izan, 2006; Eng & Mak, 2003).

2.2. Prior empirical studies and hypotheses development
Voluntary disclosure has been variously defined as information made public at the discretion of corporations (Akhtaruddin & Rouf, 2012). It is also seen as deliberate release of corporate information either numerical or qualitative via formal or informal channels (Gibbins, Richardson, & Waterhouse, 1990). In this study, voluntary disclosure is conceptualized as any release of information which is primarily outside the requirements of International Financial Reporting Standards (IFRSs) or required by CAMA following the position of the Financial Accounting Standards Board (FASB, 2001). Consequently, corporate disclosure in such areas as management strategic forecast, environmental impact assessment, stakeholder relationship and ethical issues are considered voluntary for the purpose of this study. Prior studies have documented evidence of relationship between voluntary disclosure and corporate governance variables as well as firm specific characteristics such as board size, leadership structure, audit committee size, board independence, ownership structure, auditor type, board committee expertise, corporate governance, firm size, industry category, profitability and liquidity based on prescription of agency theory (Akhtaruddin, Hossain, Hossain, & Yao, 2009; Akhtaruddin & Rouf, 2012; Albawwat & Ali-basah, 2015; Alfraih & Almutawa, 2017; Baroko et al., 2006; Damagun & Chima, 2013; Ntim & Soobaroyen, 2013; Soliman, 2013). Also from the perspective of stakeholder theory, others have looked at stakeholders characteristics and voluntary disclosure (Boesso & Kumar, 2007, 2009; Dincer, 2011; Oliveira, Rodrigues, & Craig, 2013; Qu & Leung, 2006; Thijsens, Bollen, & Hassink, 2015).

Similarly, studies utilizing institutional theory have documented evidence of direct relationship between isomorphic influences and voluntary disclosures in advanced countries (Amran & Haniffa, 2011; Barnet & King, 2008; Marquis, Toffel, & Zhou, 2015; Pfarrer, Smith, Bartol, & Zhang, 2005; Qu, Cooper, Wise, & Leung, 2012; Villiers & Alexander, 2010). These studies have documented mix evidence of such relationship. This is probably because they seem to ignore the fact that, corporate disclosure is a managed process requiring active participation of managers (Adams, 1997).
Furthermore, firms conformity to institutional influences can be symbolic, actual practices within organizations differ because of cultural cognitive differences (Scott, 2008). This suggests that, to understand the effect of institutional factors on voluntary disclosure, it is important to test the mediating effect of organizational culture to provide a sufficient explanation from both internal and internal perspectives. This study contributes to academic knowledge by empirically testing the mediating effect of organizational culture in the relationship between isomorphic influences and voluntary disclosure utilizing data from Nigeria a developing country.

The study is guided by institutional theory which suggests that firms constantly aim to maintain and increase legitimacy through complying with pressures arising from their external environment (DiMaggio & Powell, 1983; Qu et al., 2012). Two forms of Institutional theory are identified in literature: decoupling, which refers to actual or factual practices being different from the institutionalized or apparent practices (Scott, 2008) and isomorphism which refers to a constraining process that makes organizations adopt similar institutional practice (DiMaggio & Powell, 1983). These constraining processes stem from external environmental factors such as regulations. The focus of this study is on the influence of external environmental factors such as regulations, professional norms and uncertainties arising from market competition hence, institutional isomorphism is found suitable for the study. According to DiMaggio and Powell (1983), isomorphic change occurs through three antecedents: coercive, mimetic and normative). Coercive isomorphism stems from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent, and by social expectations in the society within which they operate. This form of isomorphism suggests that firms will use voluntary corporate reporting disclosures to address the economic, social, environmental and ethical values and concerns of stakeholders such as regulatory agencies who have the power sanction deviant behaviours (Pfarrer et al., 2005). Mimetic isomorphism takes place when a firm benchmark other successful firms in coping with uncertainties arising from the external environment (Qu et al., 2012). Normative isomorphism stems from professionalization, that is, the collective struggle of members of an occupation to define their conditions and methods of work (DiMaggio & Powell, 1983). When firms conform to such professional ethics, they are likely to disclose information on ethical social and environmental issues which are voluntary in nature.

2.3. Coercive influences and voluntary disclosure
Prior scholars have documented evidence of link between coercive isomorphism and voluntary disclosure. For example Pfarrer et al. (2005) investigated formal and informal institutional influences on voluntary disclosure of deviant behaviour in the United States of America. Their findings suggest that voluntary disclosure is associated with industry peer pressure but coercive pressure such as regulatory sanction are not associated with voluntary disclosure. However, Qu et al. (2012) found that, firms in China respond to the coercive pressure by increasing their voluntary disclosure practices. In the same vein, Setyorini and Ishak (2012) found that government regulation is associated with social and environmental disclosure in Indonesia. In this study, it is expected that listed firms in Nigeria will respond to the regulatory pressure exerted by the Securities and Exchange Commission (SEC), consumer’s protection agency, environmental protection agency as well as the Financial Reporting Council (FRC) of Nigeria by increasing the extent of information voluntarily disclosed in annual reports. We therefore hypothesize thus:

H1: There is a positive relationship between coercive influences and voluntary disclosure practice of listed firms in Nigeria.

2.4. Mimetic influences and voluntary disclosure
Institutional theory (DiMaggio & Powell, 1983) asserts that in response to uncertainties arising from their institutional environment, firms benchmark others who have handle such issues successfully in the past. Furthermore, literature suggests that in a competitive market, firms or a whole industry may recognize the need for voluntary disclosure, as a means of addressing information asymmetry problems (Barnet & King, 2008). An empirical study by Setyorini and Ishak (2012) suggests that
under uncertainty listed firms in Indonesia mimic other firms resulting to increase in the extent of social and environmental disclosure. Additionally, Pfarrer et al. (2005) found that firms voluntarily restate their earning when industry peers did so in the past. Therefore, looking at the uncertainties surrounding listed firms in Nigeria occasioned by frequent changes in regulatory requirements, hypothesize thus:

\[ \text{H}_2: \text{There is a positive relationship between mimetic Influences and voluntary disclosure practices of listed firms in Nigeria.} \]

2.5. Normative influences and voluntary disclosure

Institutional theory suggests that firms conform to a set of norms, shared values and rules developed by a professional or industrial networks. Empirically, Ball and Craig examined the capacity of professional bodies in providing an understanding of organizational response to social and environmental issues. They concluded that adherence to professional ethics and norms by firms have a significant influence on their corporate social responsibility reporting practice. Likewise, Zhou (2012) documented that external auditors play key role in detecting and reporting corporate fraud. This is because, auditors are professionals with high sense of integrity, objectivity and competence which enables them advise management to be transparent through voluntary disclosure. Similarly, Amran and Haniffa (2011) found that normative influences are significant influencers of sustainability reporting in Malaysia. This aligns with the assertion that the external auditor is responsible for obtaining reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. Therefore, it is anticipated that professional advice from external auditors and adherence to professional code of practice by members of ICAN and ANAN the extent of information voluntarily disclosed by listed firms in Nigeria will increase. The study hypothesizes, therefore, that:

\[ \text{H}_3: \text{There is positive relationship between normative influences and voluntary disclosure practices of listed firms in Nigeria.} \]

2.6. Organizational culture and voluntary disclosure

Culture can be viewed as a set of standards for behaviour considered authoritative within a society. Hofstede (1983) sees culture as “the collective programming of the minds which distinguishes the members of one group from another”. Such mental programming could exist in several layers at various levels including national, regional, ethnic, religious affiliation, gender and social class levels in addition to organizational and corporate levels. Hofstede (1983) expressed culture in five dimensions namely power distance, individualism, uncertainty avoidance, masculinity and long, versus short-term orientation. These five cultural dimensions explain the difference in individuals’ behaviour from country to country. Hofstede (2011) added a six dimension called indulgence verses restrained. This dimension is related to gratification verses control of basic human desires related to enjoying life.

According to Sejjaaka (2005), the most well-known attempt to relate culture to accounting is the work of Gray (1988) who derived four accounting values from various accounting literature and relating them to Hofstede’s (1983) cultural dimensions. The four accounting values from the Gray (1988) cultural dimensions are: professionalism Versus statutory control; uniformity verses flexibility; conservatism verses optimism and secrecy verses transparency. Hofstede and Gray cultural values are used to explain the role of national culture on organizational practices. At the organizational level, other scholars such as Schein (1995) and Hofstede, Neuijen, Ohayv, and Sanders (1990) provide the theoretical base for describing cultural practices within organizations. Schein (1995) defined organizational culture as “... a pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problem of external adaptation, and that have worked well enough to be considered valid, and therefore, to be taught to new members as the way to perceive, think, and feel in relation to their problems”. Similarly, Wahid ElKelish and Kamal Hassan (2014) defined organizational culture as “... shared perception of organizational work practices within organizational units that may differ from other organizational units”. This suggests that,
organizational culture focuses on internal climate, flexibility and concern for shared goals and team-works (Cameron & Quinn, 1999). This study believes that the phenomenon under investigation, i.e. voluntary disclosure is a product of management activity (Gibbins et al., 1990). As such it requires strict adherence to laid down disclosure policies, procedures, strategies and norms which will limit opportunistic-seeking behaviour of dominant personalities within the organization. In this study, therefore, organizational culture was conceptualized in terms of ritualism and opportunism based on the Gibbins et al. (1990) model. These two cultural attributes determines the way a firms' strategic response to any disclosure issue under a normal condition (Gibbins et al., 1990).

Ritualism is defined as the “... propensity towards uncritical adherence to prescribed norms for the measurement and disclosure of financial (and non-financial) information ...” Collectively, shared norms and perceptions are synonymous with internal antecedent conditions such as a company's history of reporting practices and the culture of management to make policy change, and external influences on voluntary disclosure such as industry norms of behaviour. Opportunism is defined as manager's “... propensity to seek firm specific advantage in the disclosure of financial (and non-financial) information...” (Gibbins et al., 1990, p. 130). Thus, opportunism is generally compatible with both internal conditions such as the political motives of individual managers in the firm, and environmental signalling to investors, consumers and industry regulators in order to achieve a competitive advantage (Adams, 1997).

Drawing from the work of Gibbins et al. (1990) and Adams (1997) empirically studied the impact of ritualism and opportunism and concluded that organizational culture and environmental conditions such as the state of market competition influence voluntary disclosure practice. Likewise, Wahid ElKelish and Kamal Hassan (2014) and Akhtaruddin and Rouf (2012) also find a strong relationship between culture and voluntary disclosure in UAE and Bangladesh, respectively. The evidence of such relationship seems elusive in the Nigerian context. Based on theoretical empirical evidence from other jurisdictions, we hypothesized thus,

H4: There is a significant positive relationship between organizational culture and voluntary disclosure practice of listed firms in Nigeria.

2.7. The mediating role of organizational culture

Institutional theory suggests that external environmental factors influence organizational practices (DiMaggio & Powell, 1983). Meaning that as firms adhere to regulatory or professional guidelines provided by external bodies, their structure, practices and policies are changed to reflect expectations of society. This shows that, there is a link between isomorphic mechanisms and organizational culture which determines how information is managed within an organization. This is also in line with Gibbins et al. (1990) model which indicates that corporate disclosure are partly defined by externally imposed regulations and partly by internal practices. This is because, some disclosure issues such as issuing prospectus involve a specific set of externally imposed procedures that influence timing, content, and medium for disclosure. Other issues such as earnings forecasts, social, ethical and environmental require the firm's management to establish internal norms that promote their disclosure. As such organizational culture is a possible mediator in the relationship between isomorphic influences and voluntary disclosure. Based on the prescription of institutional theory and Gibbins et al. (1990) model, this study hypothesizes thus:

H5: Organizational culture mediates the relationship between isomorphic influences and voluntary disclosure practices of listed firms in Nigeria.
3. Methodology

3.1. Research design
This study employed a cross sectional research design to examine the relationship between the predictor variables and voluntary disclosure. The study population comprises 192 firms listed firms on the Nigerian Stock Exchange as at December 2015. Using Krejcie and Morgan (1970) sample size selection table, the sample size is 129 firms. Following Blumberg, Cooper, and Schindler (2014), area sampling was found suitable for the study due to the clustered nature of the population with over 80% concentration in Lagos. Unit of analysis is at firms' level while the unit of enquiry includes heads of units and managers. A total of 195 valid responses were obtained. These responses were aggregated at firms' level using a firm identity as a breaking variable. This gives a total of 92 firms that participated in the survey.

3.2. Sample characteristics
Since the unit of analysis for this study is at firms' level, it is important to consider the characteristics of the participation firms. In this regard we considered industrial category, firm size (measured as number of employees) and firm's age (measured as years of operations on the Nigerian market). In terms of industrial category, the financial sector (32.6%). This is probably due to the high response rate from this sector. In terms of firms' size most of the firms have employees size ranging between 151 and 200 (25%) with the least having employees below 50 (12.0%). This is a reflection of the fact that most firms participating in the Nigerian capital market are large enough to employ many employees. Looking at firms age, majority (57.6) have being in operation in the Nigerian market for a period ranging between 21 and 40 years. This is an indication that most of the firms visited during the data collection have sufficient knowledge of the Nigerian capital market.

Gender distribution shows a fair spread between males and females with 53.3% males and 46.7% are females. This indicates listed firms in Nigeria are gender sensitive in their recruitment policy. Most respondents (30.8%) are accountants, 27.2% are internal auditors and 25% are public relation officers while 29.2% are marketing officers and others. In terms of professional qualification, the accounting professional qualification dominates with 49.2%. This is an indication that most of the respondents have adequate knowledge of the subject matter under investigation. The frequency distribution of the respondent’s educational qualification indicates that most of the respondents 58.5% have either a bachelor's degree or its equivalent (higher national diploma) with few 5% having ordinary national diploma/ certificate of education constitute. This suggests that most of the respondents have the ability to read and understand the questions and provide an appropriate response.

3.3. Operationalization and measurement of variables
The dependent variable in this study is voluntary disclosure while the predictor variable is isomorphic influences and the mediating variable is organizational culture.

Voluntary disclosure was operationalized as any information disclosed in annual reports that is not specifically required by accounting standards or company law based on (FASB, 2001). These include management’s strategic forecast, environmental impact assessment and relationship with stakeholders and ethical issues disclosures. The study employed the use of index approach to measure the Voluntary disclosure in line with prior studies on voluntary disclosure (Akhtaruddin & Rouf, 2012). Before determining the index for each company in the sample, a disclosure checklist was prepared to enable us select items of information in annual reports that are not mandatorily required by Companies and Allied Matters Act 2004, or International Financial Reporting Standards (IFRSs). The disclosure checklist for this study covers 25 items in such areas as strategic information; forward looking and social and ethical information disclosures in line with previous researchers (Damagun & Chima, 2013). See Appendix 1.
The issue in prior disclosure studies is whether to score disclosure items based on weighted or un-weighted method. It has been argued that the weighed approach may introduce a bias towards a particular user orientation, while the un-weighed approach dwells on the assumption that all items are equally important which might not be true (Barako et al., 2006). This research use the un-weighted approach to avoid any bias arising from weighing such as making a particular disclosure more important than the other even though it is not without its own limitation. Each item was scored (1) if disclosed in the annual reports and (0) if otherwise in line with Akhtaruddin and Rouf (2012). This is based on the assumption that all items are equally important and since different stakeholders pay attention to different information. The study employed disclosure index employed by Akhtaruddin and Rouf (2012):

\[
Dsore = \sum_{j=1}^{n} \frac{d_j}{n}
\]

where Dscore = the aggregate disclosure score; \(d_j = 1\) if the jth item is disclosed or 0 if not disclosed; \(n\) = the maximum score each company can obtain.

After each company's disclosure score was determined using the disclosure index above, scores were percentage and placed on a scale as follows: 1–20% = 1, 21–40% = 2, 41–60% = 3, 61–80% = 4 and 81–100% = 5. The aim is to maintain a uniform scale for all variables since the independent variables were measure on an interval scale. The questionnaires were pre-coded before distribution to match data from both primary and secondary source for each company.

Isomorphic influences were operationalized along three dimensions: coercive, mimetic and normative. Coercive was conceptualized as the degree to which firms adhere to guidelines provided by regulatory bodies such as the Nigerian Consumer Protection Agency, The Nigerian Standards Organization, Financial Reporting Council of Nigeria and Federal Inland Revenue Service. This was measured by adopting and modifying scales by Molleda, Connolly-Ahew, and Quinn (2006). Responses were indicated on a five-point likert scale ranging from one (strongly non adherence) to five (very high adherence). Mimetic was conceptualized to measure the degree to which firms benchmark industry leaders, competitors, industrial best practices and peers in their disclosure practices. This was measured by adopting and modifying scales by Molleda et al. (2006). Responses were indicated on a five-point likert scale ranging from one (strongly non influence) to five (very high influence). Normative was operationalized as the extent to which firms adhere to professional code of practice issued by professional bodies and industrial associations. It was measured by adopting and modifying scales by Molleda et al. (2006). The responses were indicated on a five-point likert scale ranging from (1) strongly disagree to (2) strongly agree with statement items such as: “our industrial association emphasizes adherence to professionalism”, “We believe in the principle of objectivity in this company”, “our staff are encouraged to adhere to professional codes of ethics set up by their respective professional bodies”.

3.3.1. Organizational culture
This variable was operationalized along two dimensions: Ritualism and opportunism. Ritualism was operationalized to measure the degree to which managers adhere to firm’s prescribed norms for the measurement and disclosure of corporate information. Norms are the formal or informal rules, procedures and standards believed by the firm’s managers to apply to a particular disclosure issue (Adams, 1997). This study adopted and modify measures based on those developed by Hofstede et al. (1990) and Gibbins et al. (1990) to measure this latent variable using statements such as: “there is a formal way of doing things in this organization that employees must follow. There is a hierarchy of information flow that must be observed in this organization. New employees are required to go through formal induction training before they are given work schedules. Employees are required to follow company procedures laid down by board of directors without questioning the logic. These
statements were anchored on a five-point likert scale ranging from one (Strongly disagree) to five (Strongly agree).

3.3.2. Opportunism
Opportunism was operationalized to measure firm’s propensity to seek specific advantage in the disclosure of financial information using scales adopted and modifies from those developed Gibbins et al. (1990) and Adams (1997). Some of the items on the scale include: our organization is more practical than strict in dealing with external stakeholders, managers at all levels have adequate authority to make certain decisions on behalf of the company when the need arises. When reporting to my superiors, there is a major emphasis on results rather than procedures.

3.4. Controls for endogeneity bias
Endogeneity bias in research arises when the researcher fails to control for variable(s) which have been shown in previous studies to have strong relationship with the dependent variable under study but is omitted in the theoretical model (Bartov, Gul, & Tsui, 2000). We control for the effect of industrial category since it is shown to have positive relationship with voluntary disclosure (Barako et al., 2006; Eng & Mak, 2003).

3.5. Data collection
The data for the study were collected from both primary and secondary sources. The questionnaire was used to obtain the data for the independent and mediating variables (isomorphic influences and organizational culture) and the control variable (industrial category). While the data for dependent variable (voluntary disclosure) were extracted from the annual reports of the firms. Specifically, the data for the independent and control variables were collected between September and December, 2016 alongside with the financial statements of 2015 for the dependent variable. It was unable to use the financial data of 2016 due to the retrospective nature of financial reports.

4. Data analysis
It was necessary to clean the data before analysing it following recommendations of Field (2009). Little’s MCAR test indicates data were missing completely at random ($\chi^2 = 6.001$, DF = 5, sig = 0.306), and were therefore replaced using linear interpolation as recommended by Field (2009). Also few outliers were identified in the data-set using the z-score and were assigned the next lower or higher values in line with Field (2009). The data were analysed using Structural Equation Model with the aid of Partial least Squares PLS. Specifically, SmartPLS3 students' version was used. According to Hair, Hult, Ringle, and Sarstedt (2013), PLS works with small samples (less than 200). Valid responses were from 92 listed firms hence, PLS_SEM is found suitable for structural equation modelling. The reliability and validity of the instrument tested using the measurement, while associations between the study variables were assessed using the structural models.

4.1. Assessment of the measurement model
In assessing the measurement model, the focus is on model fit, collinearity diagnostic, validity and reliability. The result showed that the Standardized Root Mean Square Residual (SRMR) model fit is 0.087 thus meeting the cut-off value of 0.08 suggesting the model fits the data (Henseler, Hubona, & Ray, 2016). Variance Inflation Factors (VIF) values for all variables meet the minimum threshold of five indicating that multicollinearity is not an issue in this study.

4.2. Validity and reliability
4.2.1. Reliability
Since the dependent and categorical variables were modelled as uni-dimensional constructs, they were not evaluated for reliability (Mashahadi, Ahmad, & Mohamad, 2016). We therefore focused on assessing reliability of the independent variables. This was done by observing both indicator and internal consistency reliability. The result indicates that, both Cronbach alpha coefficients and
composite reliability were observed to have values greater than 0.7, establishing high levels of internal consistency (Bagozzi & Yi, 1988; Hair, Black, Babin, & Anderson, 2010). Table 1 presents the results.

4.2.2. Validity

4.2.2.1. Convergent validity. To check convergent validity, each latent variable’s Average Variance Extracted (AVE) was evaluated. The result indicated that all of the AVE values are greater than the acceptable threshold of 0.5, indicating convergent validity is confirmed (Henseler et al., 2016) as indicated in Table 1.

| Table 1. Measurement model isomorphic influences and organizational culture |
|-----------------------------------------------------|-----------------|-----------------|--------|---------|
| Indicator loadings | Cronbach alpha | Composite reliability | AVE | VIF |
| Coercive | | | | |
| We adhere to the provided by financial reporting council of Nigeria | 0.809 | 0.887 | 0.723 | 1.841 |
| We adhere to guidelines provided by the Nigeria stock exchange | 0.843 |
| We adhere to guidelines provided by securities and exchange commission | 0.842 |
| Mimetic | 0.897 | 0.936 | 0.829 | 1.799 |
| We follow industry leaders when dealing with uncertainties | 0.932 |
| We copy industrial peers in coping with environmental uncertainties in our organizational practices | 0.943 |
| We benchmark our competitors when coping with uncertainties | 0.871 |
| Normative | 0.797 | 0.881 | 0.711 | 1.699 |
| Our staff are encouraged to adhere to professional codes of ethics of their respective professions | 0.828 |
| Our industrial association emphasizes adherence to professionalism | 0.896 |
| Our organization considers professional qualification in their recruitment policy | 0.804 |
| Ritualism | 0.669 | 0.821 | 0.609 | 2.345 |
| There is a hierarchy of information flow that must be observed in this organization | 0.863 |
| Employee are required to follow company procedures laid down by board of directors without questioning the logic | 0.829 |
| Our organizational policy is not opened to change to meet up with current environmental challenges | 0.629 |
| Opportunism | 0.825 | 0.895 | 0.740 | 1.984 |
| Our organization is more practical than strict in dealing with external stakeholders; when reporting to my superiors | 0.835 |
| Managers at all levels have adequate authority to make certain decisions on behalf of the company when the need arises | 0.904 |
| Our organizational policy is opened to change to meet up with current environmental challenges | 0.843 |
4.2.2.2. Discriminant validity. The Fornell and Larcker (1981) criterion was used to establish discriminant validity. According to the criteria, if square root of AVE for each latent variable is greater than its correlation values with other variables, then discriminant validity is established (Wong, 2013). Looking at Table 2, this condition was made indicating that, discriminant validity is established.

4.2.3. Assessment of the structural model
In assessing the quality of the structural model, the path coefficients ($\beta$), coefficient of determination ($R^2$) and the effect size ($f^2$) were evaluated as recommended by Henseler and Sarstedt (2013). According to the authors, $f^2$ values of 0.02, 0.15 and 0.35, respectively, has small, medium and strong effects on the endogenous variable.

4.2.4. Test of hypotheses
We ran two models to test the hypothesized paths. The first Model 1 tested relationship between dimension of isomorphic influences and voluntary disclosure. Model 2 tested the relationship between global variables (isomorphic influences, organizational culture, industry category and voluntary disclosure).

Model 1 indicate that, coercive, mimetic and normative influences explain 41.8% variation in voluntary disclosure ($R^2 = 0.418$). On examining the paths coefficients, Table 2, indicate that, coercive influences are associated with voluntary disclosure ($\beta = 0.265$, $t = 2.675$, 225, $p < 0.05$) thus hypothesis 1 was supported. Mimetic influences are not significant in explaining voluntary disclosure ($\beta = 0.047$, $t = 0.626$, $p > 0.05$), therefore hypothesis 2 is not supported. Normative influences are significant in explaining voluntary disclosure ($\beta = 0.465$, $t = 5.262$, $p < 0.05$), thus hypothesis 3 is supported. Table 3 summarizes the results.

Model 2 indicates that, organizational culture is positively related to voluntary disclosure ($\beta = 0.425$, $t = 3.998$, $p < 0.05$) thus, hypothesis 4 was support. The overall model Figure 1 indicates that, the predictor variables jointly explain 48.2% variation in the behaviour of voluntary disclosure ($R^2 = 0.482$). Table 4 presents the results.

4.2.5. Testing for mediation
To establish mediation effect, the study relied on the Hierarchical Bayesian method for estimating indirect effects. This method is one of the modern approaches for testing mediation effects in social sciences and business studies (Falk & Biesanz, 2015). The method relies on confidence interval approach to estimate indirect effects and it is regarded as a more powerful technique than the traditional Baron and Kenny (1986) procedure and the Sobel z-test. According to Falk and Biesanz (2015), the method is comparable or even slightly higher than other modern methods such as bootstrapping and Monte Carlo. More importantly, the method works well with small samples (Falk & Biesanz, 2016) which makes the method suitable for this study. Hence, the choice of the method.

### Table 2. Discriminant validity

<table>
<thead>
<tr>
<th></th>
<th>Mimetic</th>
<th>Normative</th>
<th>Opportunism</th>
<th>Ritualism</th>
<th>Coercive</th>
<th>Voluntary disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mimetic</td>
<td>0.910</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative</td>
<td>0.528</td>
<td>0.843</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunism</td>
<td>0.550</td>
<td>0.567</td>
<td>0.860</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ritualism</td>
<td>0.579</td>
<td>0.615</td>
<td>0.635</td>
<td>0.780</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coercive</td>
<td>0.383</td>
<td>0.596</td>
<td>0.547</td>
<td>0.721</td>
<td>0.850</td>
<td></td>
</tr>
<tr>
<td>Voluntary disclosure</td>
<td>0.285</td>
<td>0.391</td>
<td>0.470</td>
<td>0.632</td>
<td>0.560</td>
<td>1</td>
</tr>
</tbody>
</table>
Model 1. Coercive, mimetic, normative influences and voluntary disclosure.

Table 3. Path coefficients for the dimensions of isomorphic influences

<table>
<thead>
<tr>
<th>Dimension</th>
<th>$B$</th>
<th>t-value</th>
<th>Sig.</th>
<th>$f^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coercive</td>
<td>0.265</td>
<td>2.675</td>
<td>0.008</td>
<td>0.101</td>
</tr>
<tr>
<td>Mimetic</td>
<td>0.047</td>
<td>0.626</td>
<td>0.131</td>
<td>0.019</td>
</tr>
<tr>
<td>Normative</td>
<td>0.465</td>
<td>5.262</td>
<td>0.000</td>
<td>0.338</td>
</tr>
</tbody>
</table>

Notes: $R^2 = 0.418$; Adjusted $R^2 = 0.398$; $p$-value = 0.000.

Model 2. Structural model global variables (isomorphic influences, organizational culture, industrial category).
First a hierarchical regression was ran with independent variable in Model 1 and both independent and the mediating variables in Model 2. Model 1 indicates that the direct relationship between isomorphic influences and voluntary disclosure is positive and significant without the mediator variable ($\beta = 0.620$, $p \leq 0.05$). Model 2 indicates that the relationship between the organizational culture and voluntary disclosure is also positive and significant ($\beta = 0.420$, $p \leq 0.05$), and the direct relationship between isomorphic influences and voluntary disclosure dropped from ($\beta = 0.620$ to $\beta = 0.304$) but still significant ($p \leq 0.05$), suggesting a partial mediation. Appendix 2 presents the results.

To establish significance of mediation, the Hierarchical Bayes confidence interval calculator was used to estimate p-value as recommended by Falk and Biesanz (2015). The calculator can be downloaded online at https://msu.edu/falkcarl/MediationCI.jar. The path coefficients and standard errors in Model 2 with their degree of freedoms were used in the calculator to estimate significance of mediation. The result indicate that the mediation is significant ($p = 0.024$ @ 95% level of confidence) thus hypothesis five was supported.

5. Discussion

On examining dimensions of isomorphic influences, the empirical finding suggests that coercive and normative mechanisms are significant in explaining voluntary disclosures. Comparatively, normative influences are observed to have more explanatory power than coercive mechanisms. This underscores the relevance of adhering to professional as well as industrial ethics. The result is in agreement with Ball and Craig and Pfarrer et al. (2005) suggesting that, adherence to professional ethics and norms as well as industrial networks is associated with voluntary disclosure. This is so because the accounting profession emphasizes that professional accountants should be objective in their discharge of duty. Objectivity connotes transparency therefore professional accountants working with companies are likely to use their professional judgement to advise management to disclose any item of information even in the absence of regulation.

The result also indicated that coercive mechanisms and voluntary disclosure are related. In the Nigerian context, this can be explained in terms of response to multiplicity of regulatory pressures exerted on firms from the operational environment. As stated earlier, these firms are confronted with many guidelines for industrial practice, as such voluntary disclosure is used as a means of communicating compliance with such guidelines to stakeholders. The finding is in line with Qu et al.
(2012) who documented that coercive pressure associated with increase in voluntary disclosure by Chinese listed firms. It however, contradicts Pfarrer et al. (2005) who found that coercive influences are not related to voluntary disclosure practices of firms in the USA. This is possibly due to contextual differences.

The result also suggests that mimetic influences and voluntary disclosure are not associated. This may be so because firms are sometimes careful of what their competitors will make out of such disclosures. This finding, however, contradicts Setyorini and Ishak (2012) as well as Pfarrer et al. (2005). In the context of Nigeria, there is low shareholder activism as well as stakeholders sophistication (Sanusi, 2010), as such there is low motivation for listed firms to model industry leaders since they do not face much threat from stakeholders who may react negatively to their actions.

Furthermore, the study found that organizational culture is positively and significantly associated with voluntary disclosure. This is in agreement with prior findings Akhtaruddin & Rouf, 2012), Adams (1997), Gibbins et al. (1990). This implies that when firms put in place stable policies that favours transparency, they are likely to increase their level of voluntary disclosure. Additionally, if employees adhere to such policies it will promote voluntary disclosure.

Lastly it was established that, organizational culture mediates the relationship between isomorphic influences and voluntary disclosure. This is so because a firm's culture is a reflection of how it is likely to response to external environmental factors. Firms with policies on environmental, stakeholder management, consumer protection and professionalism disclose more information than the minimum required by accounting standards and company laws. Moreover, strict adherence to policies minimize the tendency for managers to seek specific advantage when disclosing information items when such is not mandatory. This implies that, even though, isomorphic mechanisms directly influence voluntary disclosure, their influences are partly felt through the organizational practices. This lends support for the assumptions of institutional theory (DiMaggio, 1991; Scott, 2008) that, conformity to environmental pressures by firms may be symbolic but actual practices are guided by cultural cognitive factors such as organizational culture.

5.1. Theoretical implication
Theoretically, the study finds support for institutional Isomorphism (DiMaggio & Powell, 1983) that firms’ actions are influenced by their institutional environment. This study found evidence to suggests that external factors and internal mechanisms play complementary role in fostering voluntary disclosures. Suggesting that, studies in voluntary disclosure utilizing institutional theory should take cognisance of this.

5.2. Practical implication
This study has implication for policy makers such as regulatory agencies as well as professional accountancy bodies. If regulatory bodies such as the Nigerian Financial Reporting council should provide a policy guidelines for companies to disclose information such as ethical issues, environmental impact and social disclosure, managers are likely to adhere to such policy. This will in turn promote transparency through voluntary disclosure. Additionally if the two professional accountancy bodies in Nigeria continue to encourage adherence to professional code of practice by their members working in these companies, voluntary disclosure practice will be enhanced. The implication of this study to managers is that when deliberate policies that encourage voluntary disclosure are put in place, and such policies are followed, voluntary disclosure will be promoted. To the academic community, the study has shade light on mediating role of organizational culture in the relationship between external environmental influences and voluntary disclosure.

5.3. Limitations of the study
Despite the contribution of this paper to disclosure literature in providing insights into the mediating role of organizational culture, it has some inherent limitations. The use of survey questionnaire is subject to self-reporting bias (Podsakoff, MacKenzie, Podsakoff, & Lee, 2003). However, this was
overcome by measuring the dependent and the independent variables from different sources. Also, the study is cross-sectional in nature which may not capture change in the perception overtime. Further studies may use a longitudinal approach to investigate voluntary disclosure.

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References
Cameron, K., & Quinn, R. (1999). Diagnosing and changing organizational culture, Prentice Hall, NJ.


Appendix 1. Disclosure checklist for the disclosure index

<table>
<thead>
<tr>
<th>Strategic information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Company’s mission statement</td>
<td>1</td>
</tr>
<tr>
<td>2. Brief history of the company</td>
<td>1</td>
</tr>
<tr>
<td>3. Organizational structure/chart</td>
<td>1</td>
</tr>
<tr>
<td>4. Description of major goods/services produced</td>
<td>1</td>
</tr>
<tr>
<td>5. Likely effect of business strategy on current performance</td>
<td>1</td>
</tr>
<tr>
<td>6. Review of current financial results and discussion of major factors underlying performance</td>
<td>1</td>
</tr>
<tr>
<td>7. Educational qualification/Academic level of Board of Directors</td>
<td>1</td>
</tr>
<tr>
<td>8. Information about directors Remuneration</td>
<td>1</td>
</tr>
<tr>
<td>9. Information on Attendance and frequency of Board meetings</td>
<td>1</td>
</tr>
<tr>
<td>10. Share Capitalization history</td>
<td>1</td>
</tr>
<tr>
<td>11. Factors that may affect future performance</td>
<td>1</td>
</tr>
<tr>
<td>12. Director’s projection of future performance</td>
<td>1</td>
</tr>
<tr>
<td>13. Planned research and development</td>
<td>1</td>
</tr>
<tr>
<td>14. Information relating to the general outlook of the economy and its likely impact on future performance</td>
<td>1</td>
</tr>
<tr>
<td>15. Disclosure relating to competition in the industry and its impact on future performance</td>
<td>1</td>
</tr>
<tr>
<td>16. Disclosure of policy on corruption</td>
<td>1</td>
</tr>
<tr>
<td>17. Statement on actual cases of corruption were handled during the year</td>
<td>1</td>
</tr>
<tr>
<td>18. Statement on its relationship with the host community</td>
<td>1</td>
</tr>
<tr>
<td>19. Statement on company relationship with key stakeholders</td>
<td>1</td>
</tr>
<tr>
<td>20. Relationship with customers</td>
<td>1</td>
</tr>
<tr>
<td>21. Statement of environmental policy</td>
<td>1</td>
</tr>
<tr>
<td>22. Information about employee workplace safety</td>
<td>1</td>
</tr>
<tr>
<td>23. Social responsibility</td>
<td>1</td>
</tr>
<tr>
<td>24. Statement about environmental risk management</td>
<td>1</td>
</tr>
<tr>
<td>25. Overview of how business operations impact on the environment</td>
<td>1</td>
</tr>
<tr>
<td>Maximum score</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: Adapted and modified from Damagun and Chima (2013) & Akhtaruddin and Rouf (2012).

Appendix 2. Hierarchical regression model

<table>
<thead>
<tr>
<th>Coefficientsa</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Unstandardized coefficients</td>
</tr>
<tr>
<td></td>
<td>β</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
</tr>
<tr>
<td> Isomorphic influences</td>
<td>0.623</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
</tr>
<tr>
<td> Isomorphic influences</td>
<td>0.306</td>
</tr>
<tr>
<td> Organizational culture</td>
<td>0.378</td>
</tr>
</tbody>
</table>

aDependent variable: voluntary disclosure.