International Journal of Marketing and Management Sciences Vol.4, No.1 July, 2024 ISSN 2536-605X

Corporate Culture and Corporate Sustainability: The Case of Small and Medium Enterprises in Plateau State, Nigeria.

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Abstract

The imperative for corporate sustainability to effectively significantly aid and drive the global effort and commitment to ensure a general sustainable healthy planet earth, has entailed concerted search for the appropriate enabling factors in the organisational setting, among other frameworks. Culture as the obvious key driver of organisational operations, was considered a possible enabler, hence the focus of this study. The small and medium enterprises (SMEs) segment of the organisational setting was considered suitable for the study in view of its role as the bedrock of any economy and its obvious non-formal nature. We undertook a survey of 401 SMEs, targeting their promoters, CEOs, partners or topmost managers, across six industries/sub-sectors in seven Local Government Areas of Plateau State, using a structured questionnaire, designed based on the competing values framework (CVF) of Cameron and Quinn (1999) with clan, hierarchy, market and adhocracy culture components, and the UN-championed economic, social and environment dimensions of sustainability. The responses from 385 SMEs were subjected to both descriptive and inferential statistical analyses, with the key findings of significant impact of the aggregated dimensions of corporate sustainability on three components of the CVF version of corporate culture (hierarchy, market and adhocracy), while the fourth component, clan culture, showed no significant impact. Appropriate recommendations were made, including the necessity of SMEs to continuously consider appropriate sustainability-friendly management practices, especially the clan type that emphasises teamwork; sundry sustainability-enhancing policy frameworks for these categories of enterprises, and further study in fewer or more homogenous industries/sectors.

Keywords: Competing values framework, Corporate culture, Corporate sustainability, Small and medium enterprises.

INTRODUCTION[1]

Sustainability or sustainable development, a phenomenon that has, of necessity, engaged global attention for nearly four decades, has assumed a broader dimension beyond its earliest concerns for physical/natural environmental health and its preservation, to that of the overall society and its key element of economic health and prosperity, reflected in the widely accepted, business-oriented concept of the triple bottom-line (TBL) – environmental, social and economic goals (Noguera et al., 2023) widely labeled as pillars or dimensions (Purvis et al., 2018). Seidler and Bawa (2009, p.1) attest to this thus: "…sustainable development is an extra-ordinarily broad and rich concept, potentially encompassing nearly every human activity''. The society's economic health and prosperity, with related goals, are largely the responsibility of business organisations whose combined activities and outputs impact the social and environmental well-being, both now and in the future, hence the need for the adoption and operationalisation of the concept from the business perspective as "corporate sustainability". This is underscored by the desire that the operations of business entities should not just be to achieve goals in the short-medium term as going concerns for the foreseeable future (Nnabuife & Onwuzuligbo, 2015), but preferably in perpetuity (University of Alberta, 2016).

It is conceptualised variously but most fittingly as organisations' "… holistic approach that recognizes and considers ecological, social and economic dimensions together for lasting prosperity" (University of Alberta, cited in Kantabutra, 2022, p.4). This entails the sustained well-being of both all the corporate entity's stakeholders and the entire current and future generations of the society (Avery & Bergsterner, 2020, cited in Kantabutra, 2022, p.2), perfectly fitting into the United Nation's (UN) Commission's definitive conceptualisation of sustainable development as "development that meets the needs of the present without compromising the ability of the future generations to meet their own needs" (Brundtland, 1987, p. 43).

Considering this all-important mission for a sustainable society beyond the short-term in the mould of corporate social responsibility severally championed, including by Carol (2008), against concern for shareholders' sole interest initially advocated by Friedman (1970), concerted and integrated efforts and actions have been undertaken over the years, spear-headed by the UN and its relevant agencies (Brundtland, 1987; Purvis et al., 2018). These various approaches range from research and advocacy (Purvis et al., 2018), to mimetic and coercive institutionalism reflected in adopting competition-driven practices, and conforming to policy/regulatory frameworks (DiMaggio & Powell, 1983), driven by

[1] The authors **acknowledge** and deeply appreciate the ***TetFund***, a Nigerian federal government agency that supports training and research, for fully funding the research that culminated into this paper.

the highest level of nations' political leadership frameworks such as European Union President committing 23bn Euros in 2023 out of agreed target of $100bn in global climate management (consilium.europa.eu).

Specifically, corporate focus/emphasis has reflected in sustainable business models ranging from physical aspects such as technology, processes, and products, to behaviour of owners/management and employees of organisations, especially organisational or corporate culture, (Isensee et al., 2020; Linneluecke & Griffiths, 2010). The role of culture in corporate sustainability in general, as the driver of long term business and economic success, and the future of the corporation (Hill, 2020), or specifics as long-term firm value (Graham et al., 2022), is not just apparent as the foregoing posit, but is an integral aspect of organisations' strategies, processes and overall structures (Dauber et al., 2010), and affirmed in recent studies harping on internal organisational factors, with some highlighted in the literature review section. This arises largely from its fundamental nature, simply conceived as the "way we do things around here" (Deal & Kennedy, 1982, cited in Linnenluecke & Griffiths, 2010, p.365) or widely shared and strongly held set of values and norms throughout the organisation (Fiordelisi et al., 2018, citing O'Reilly & Chatman, 1996).

Though Corporate culture (CC), has been extensively investigated, being one of the most influential management concepts (Linnenluecke & Griffiths, 2010), most of the studies have been on its generic nature and performance or effectiveness generally, or sustainability, without its specific types or categories, notwithstanding the dominance of values and norms (Graham et al., 2022; Linnenluecke & Griffiths, 2010). This is even true of studies involving such specific culture types as defined by the (CVF), except for those reported in Linnenluecke and Griffiths (2010), Deirmentzoglou et al. (2020), and Medina-Alvarez and Sanchez-Medina (2023), some of which are as contained in the empirical review section, aside theirs, largely on isolated aspects of the pillars. The majority with focus on general cultural change for effectiveness, with no specific impact on sustainability, range from the foundation works of Quinn and Rohrbaugh (1983) and Cameron and Quinn (1999) to several others, including Alharbi and Abedelrahman (2018), and Lizbettinova et al. (2016).

In the Nigerian setting, some of these studies focused on different aspects of SMEs' operations, including performance (Adiak, 2020; Amah, 2012; Ojogiwa & Qwabe, 2023) and turnover intention (Adiak et al., 2021; Idiegbeyan-ose et al., 2018). Hence, to the best of the researchers' knowledge, its place in sustainability has scantily been investigated empirically beyond mere survival, using different theoretical and analytical frameworks (Nnabuife & Onwuzuligbo, 2015), environmental performance (Adebayo et al., 2020), and only one investigating a single industry in one location (Sodeinde et al., 2022), on similar values but different nomenclature and analysis method.

Thus, a huge gap exists in the setting, which justifies the current study, undertaken to assess the relationship between CC and corporate sustainability (CS). Moreover, the current study contributes to this pertinent research stream from the perspective of SMEs, not so much considered key players in the environment management advocacy, despite their well-acknowledged significant contributions to global socio-economic activity and well-being, and as the engine of value creation and inclusive and green growth (Koirala, 2018). Again, the survey is more comprehensive and encompassing than encountered in the literature, covering (six) different industries/sub-industries, with insight gained from the responses of promoters, CEOs and other top-level managers, largely responsible for enthroning desired cultural practices in oranisations (Graham et al., 2022), hence tendency for greater insight, as opposed to previous studies' insights from staff of single organisations or industries/sectors. Quite interesting also as an important contribution is the methodology employed herein where the analyses of the CVF-generated culture via the Organisational Culture Assessment Instrument (OCAI) is a departure from its dominant use as a tool for identifying prevailing culture types, with no direct implication for or relationship with sustainability. Besides, quite significant differences exist in Nigerian and other nations' cultures in accordance with the 'national culture' hypothesis of Hofstede (1994), re-stated by Cumming and Zhang (2019), citing among others, Kirkman et al., (2017), hence the imperative of the research gap, notwithstanding that some or all of the elements of the CVF might have been investigated elsewhere, besides the inconsistencies in their findings.

The details of these are contained in the rest of the paper as follows: literature review and hypotheses development, the methodology encompassing data collection procedures and analysis, with the findings and attendant conclusions, including suggestions for further studies.

2.0 Literature Review and Hypotheses Development.

2.1.1 Corporate Sustainability

Corporate sustainability (CS) is a variant of the general concept of sustainability, or sustainable development, so integral to the survival and development of society that the global community, championed by the UN, has committed unquantifiable efforts and resources to it in recent times, reflected in yearly and appropriate periodic strategic evaluative sessions, such as the most recent in Dubai where over 85,000 attended, including over 150 Heads of State and Governments (unfc.int/cop28). It is not surprising, therefore, that its commission provided the most acceptable broad definition as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" Brundtland (1987), with the specifics of balancing economic, social and environmental considerations set and restated in its subsequent reports (UN, 1992, 1997, cited in Purvis et al., 2018). Its sustainable development goals (SDGs) are pursued in these three dimensions (Purvis et al., 2018),

which have been adopted by reputable frameworks such as the Dow Jones Sustainability Index, and scholars (e.g. Lo & Sheu, 2007), for empirical studies on sustainability.

Considering this profound importance, sustainability was integrated into business management as corporate sustainability, defined by scholars variously, with no standard or generally acceptable version (Kantabutra, 2022; Montiel & Delgado-Ceballos, 2014). However, as a variant of sustainability, the various definitions have tended to align with it. Ketola (2010), considers CS as an organisation's efforts in meeting its direct and indirect stakeholders' needs in due consideration of their future. To Artiach et al. (2010, p.31), CS is "a business and investment strategy that aims to use best business practices to meet and balance the needs of current and future stakeholders". These, though fittingly add business terms to the general sustainability conceptualized in the UN Commission's report (Brundtland, 1987), are rather unspecified. The definition by the University of Alberta (2016), presented earlier, best brings out specifics with its conceptualization as an integration of economic, social and environment considerations in corporate decisions for lasting prosperity. It is also seen as the extension of the TBL framework of Elkington (1997) where economic, social and environmental considerations need to be satisfied simultaneously, entailing that to be sustainable (economically) over the long term, companies need to preserve natural and social capital, while running their business activities (Dyllick & Hockerts, 2002). The defining dimensions are also referred to as the"3Ps" - "People, Planet, Profit", representing social, environmental and economic considerations in key corporate decisions (Deimentzoglou et al., 2020, citing Kolk & Van Tulder, 2010; McNamara et al. 2017). These align perfectly with the UN's 1992 and 1997 reports of sustainability being underlined by the dimensions of economic consideration, social equity and environmental integrity/sustainability adopted by scholars over time and reflected in the Dow Jones's Sustainability Index.

Hence CS entails the business organisation's pursuit of its economic survival and sustained growth goals over the long-run with integral consideration of the needs of its other stakeholders equitably and the health and sustenance of the natural environment, both of which have considerable implications for the long-term economic goals attainment. These considerations are as typified in the Dow Jones Sustainability Index, contained in table 1, which has been widely adopted or adapted as appropriate.

Table 1: DJSGI corporate sustainability assessment criteria

Dimension	Criteria
Economic (33% weight)	Codes of Conduct/Compliance/Corruption & Bribery
	Corporate governance
	Customer relationship management
	Financial robustness
	Investor relations
	Risk & crisis management
	Scorecards/measurement systems
	Strategic planning
	Industry specific criteria
Environment (33% weight)	Environmental policy/management
	Environmental performance
	Environmental reporting
	Industry specific criteria
Social (33% weight)	Corporate citizenship/philanthropy
	Stakeholders engagement
	Labour practice indicators
	Human capital development
	Knowledge management/organisational learning
	Social reporting
	Talent attraction & retention
	Standards for Suppliers
	Industry specific criteria

Information in this table is from Dow Jones Sustainability Indexes website (http://www.sustainability-indexes.com)

Source: Lo and Sheu (2007).

2.1.2 Corporate Culture

Defined from the management perspective, CC reflects the structure, strategies and processes of the organisation, inclusive of the groups and units creating shared norms, faith, and practices to be followed by individuals working within an organisation (Dauber et al., 2010; González-Rodríguez et al, 2019). These definitions and those of Deal and Kennedy (1982), Graham et al. (2022) and O'Reilly and Chatman (1996), presented in the introduction, among others, align with the positions of Allaire and Firsirotu (1984), Awry et al. (2012), and Hsieh et al. (2018), that CC is not just illusive, slippery and hard to define, but has multiple and uncountable definitions. This notwithstanding, the various definitions emphasise key common features as held and shared norms, values and assumptions, largely unspoken taken-for-granted beliefs, that guide action or behaviour in an organsational setting, manifesting in physical artefacts and other symbols that define it and its quest for existence and progress (Schein, 1985).

The nature of CC is reflected in its central role in organsations such that virtually every aspect of operations is rooted in it, since it reflects not just the behaviour therein, but the appropriate guides in processes, strategies and structures (Dauber et al., 2010; Hsieh et al., 2018), with the resulting desired performance or overall effectiveness, besides specifics as value creation (Fiordelisi et al., 2018; Graham et al., 2022). Hence, it is not just often cited as the primary reason for the failure of implementing organisational processes including change programmes (Linnenluecke & Griffiths, 2010), but considered as an organisation's DNA (Bonchek, 2016, and Roth, 2013, both cited in Hill, 2020).

Considering its importance and complex nature, different scholars have conceived different perspectives, including the CVF of Cameron and Quinn (1999), for its operationalization, which has become one of the leading concepts in organisational studies, especially for desired effectiveness, hinged on cultural change. This variant is composed of four dimensions: Clan, Hierarchy, Market and Adhocracy, characterized by the organisation's focus on two competing dimensions: internal vs external and stability/control vs flexibility/creativity (Quinn & Rohrbaugh, 1983). The basics of these dimensions are highlighted in the theoretical and empirical review sections.

2.2 Theoretical Review

The competing values framework (CVF), adapted and enhanced by Cameron and Quinn (1999, 2006, 2011), underlined by distinct categorical culture types, namely clan, hierarchy, market and adhocracy, was considered the appropriate theoretical framework for the study, to provide a more categorical, direct relationship between CC and CS. This model has been intensively used in the study of organisational or corporate culture, by not just scholars, but also organisations globally, having been found to provide a sound theoretical base in explaining categorical cultural types' association with specific strategic drives, triggering a unique set of effectiveness criteria. More importantly, CC is overwhelmingly defined in terms of values, which are the core of the CVF, with its assessment and measurement deeply focused thereon (Linnenluecke & Griffiths, 2010), to help understand the types of cultures that are dominant in an organisation. The imperative is for them to guide appropriate functional organisational strategies design for goals attainment (Cameron, 2004). Besides, the CVF resulted from an empirical study, with the four quadrants reflecting the major organisation theory dimensions (Scott, 2003). The CVF is a four-quadrant bi-dimensional model, each with its culture type, with characteristics striving for particular goals that are at variance with that directly opposite it.

Firms in the upper left quadrant have a clan or family-like culture, emphasizing collaboration, trust, high morale, cohesion, and commitment, promoted among employees through development, open communication, and maximum-possible worker participation in decision-making. Decisions are decentralized, requiring individual results

and long-term commitment to the organisation. In the lower left quadrant is hierarchy culture, with a unique, highly formalized hierarchical structure of rules, regulations, work schedules, with laid-down standardised processes, subject to strict compliance with sanctions for deviations.

The market culture in the lower right quadrant is based on efficiency and maximum-possible productivity, through goals-setting, planning, precise communication, and central decision-making (Jones *et al.*, 2005). Result-orientation is central to this culture, with the employees hard-driven to be assertive and competitive, towards meeting their targets (Linnenluecke & Griffiths, 2010). In the upper right quadrant is adhocracy culture, characterised by a capacity for creativity, adaptation and disposition to questioning the normal or status quo to engender change. Communication is horizontal, visionary, encouraging discretion in decision-making, with less emphasis on formal coordination and control. In this model, employees are motivated by their tasks' meaning, innovative disposition and action, engendering ideological changes (Linnenluecke *et al.*, 2009; Zammuto *et al.*, 2000).

In the CVF, each organisational culture type both indicates how employees understand and implement sustainability, and depicts the values, practices created by the organisations's managements consistent with the sustainability dimensions. Specifically, this theory relates to this study because every organisation has peculiar operational frameworks, invented/discovered, or developed, driven by espoused values and assumptions, and taught to employees towards tackling its problems (Schein, 1985).

2.3. Empirical Review and Hypothesis Development

Clan culture and sustainability

The clan culture focuses primarily on the human factor, whose welfare and competencies development entrepreneurs or managements invest in (Linnenluecke et al., 2009). While Shin and Park (2019) found that clan culture shows insignificant association with social performance, Dyck et al. (2019) and Ning et al. (2021) found clan culture to have positive significant relationship in that respect in their investigations. Similarly, Linnenluecke and Griffiths (2010) and Deirmentzlogou et al. (2020) report Huang et al. (2001) Golan (2000), and Dumphy et al. (2003) to have established significant relationship between clan culture and the social aspect of sustainability. These findings would ordinarily position clan culture as perhaps being exclusively a driver of social sustainability, but with Berger et al. (2007) and Brammer and Millinkton (2008) not ruling out its impact on economic sustainability, noting the apparent difficulty of entrepreneurs/managements justifying focus on social equity relative to economic goals, it becomes more appropriate to propose the following hypothesis:

H1: Clan culture significantly impacts sustainability of SMEs.

2.3.2 Hierarchy culture and sustainability

Hierarchical culture focuses primarily on economic performance: maximum profits through rational, efficient processes emphasizing waste avoidance, overseen by formal structures. While the studies by Acar and Acar (2014), Deirmetzoglou et al. (2020), Elnagar et al. (2022), Reino et al. (2020), and Medina-Alvarez and Sanchez-Medina (2023) found a positive effect of hierarchy culture on the economic performance dimension of sustainability, Shin and Park (2019) found it to be less positively associated, as do other types of culture.

The dominant impact of hierarchy culture on economic sustainability from empirical findings has drawn criticisms from scholars, including Hart (1995), and Dumphy et al. (2003), along with the empirical position of Sharma and Vrendenburg (1998), besides the global position (Purvis et al., 2018). They all contend that it alone does not guarantee sustainability, except with employees' flexibility-driven freedom of innovative thoughts and processes, crucial for exploiting more opportunities in the environment, and the commitment and satisfaction gained from collaborative spirit and enhanced competencies. Considering these potential encompassing impacts, we hypothesize as follows:

H_2: Hierarchy culture has a significant impact on sustainability of SMEs.

Market culture and sustainability

Market culture stresses the importance of a broader organisational environment management, with emphasis on efficient resource usage, planning and adequate returns from the environment (Linnenluecke & Griffiths, 2010). Some studies, including Green et al. (2015), Bamgbade et al. (2017) and Medina-Alvarez and Sanchez-Medina (2023), found a positive and significant relationship between market culture and the environmental sustainability. Similarly, Reyes-Santiago et al. (2019) positively validated efficient resource consumption devoid of negative impact on the natural environment. Linnenluecke et al's. (2009) investigation in this respect returned insignificant relationship, most probably largely due to the constraint imposed by focus on internal processes, so did Deirmentzoglou et al. (2020), who also investigated it with the social dimension.

To test these conflicting outcomes, and in view of the theoretical position that market culture has the potential to impact the environmental as well as the other aspects of sustainability considering the implication of the expected results driven aggressively, including investing in human systems development for sustained innovative environmental opportunities exploitation (Linnenluecke et al., 2009), we propose the following hypothesis:

H3: Market culture exerts a significant influence on sustainability of SMEs.

Adhocracy culture and sustainability

With the theoretical position of encouragement for freedom of thought, action and collaboration towards creative and innovative disposition to products/resource acquisition and development, amidst minimal controls or boundaries, adhocracy culture's concern is for environmental and social benefits, without losing sight of economic goals. Despite this strong postulation, Linnenluecke et al. (2009), found no significant wholistic impact on sustainability of adhocracy culture. However, many studies, including Sugita and Takahashi (2015), Adewale et al. (2018), Reyes-Santiago et al. (2019), Deirmentzoglou et al. (2020), and Medina-Alvarez and Sanchez-Medina (2023), established positive significant impact of this cultural value, especially in terms of the environmental dimension. This has been equally so even from the narrow perspective of innovation, as Fiordesili et al. (2018), and Sodeinde et al. (2022) established empirically. Since these innovative and creative dispositions, often in collaborative actions, lead to achievement of individual and organisational goals, hence considerable social and economic implications, the following hypothesis becomes imperative:

H_4: Adhocracy culture has a significant impact on sustainability of SMEs

Going by the literature debate above, a conceptual framework was developed (Figure 1), capturing the respective variables.

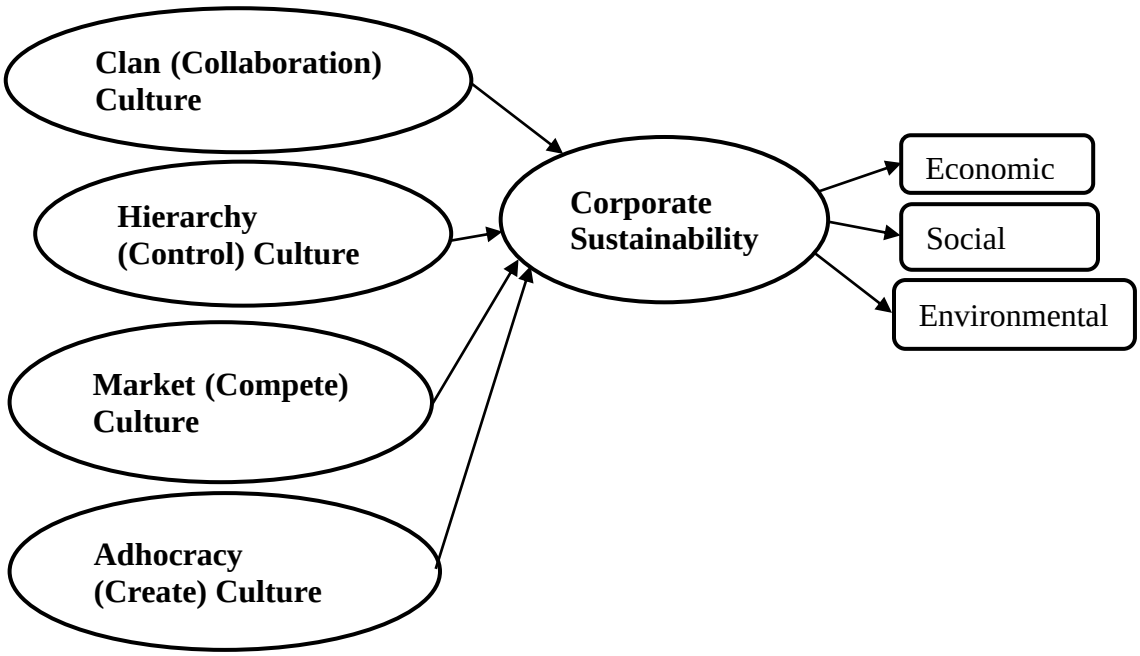


Figure 1: Conceptual Framework
Source: Authors' Conceptualisation, 2024.

3.0 Research Methodology

3.1 Research Design

The explanatory design, with a cross-sectional survey strategy, by which several firms from different sectors and legal forms in the selected Areas of Plateau State, were involved, was adopted for the study, with the data collected over a period of time, to explain the relationship investigated. These variety of sectors and forms were involved to underscore the pervasiveness of culture in the management/operational arsenal of firms of all sizes, especially the small category. We used the quantitative approach in collecting and analyzing the data to give the study an objective posture, with its accompanying underlying positivist philosophy, notwithstanding some pragmatist dispositions.

Population, Sample Size and Technique

Considering the Nigerian situation where not all firms, especially the SMEs, are registered with the Corporate Affairs Commission or other agencies, getting the exact number of SMEs in the study locations, to serve as the study population, was not possible. Consequently we had to rely on the total number of enterprises specified as SMEs in the 2021 survey report of the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and National Bureau of Statistics (NBS), using the definitions in the National Policy on Micro, Small and Medium Enterprises, as entities with 10 to 199 employees. We ignored the other elements of the policy bordering on value of investment in fixed assets and turnover. The report put the total at 21,352 for Plateau State. This served as the effective study population, though pro-rating it would have been most appropriate.

Considering the obvious constraints, including time and cost, the population was considered not feasible from which to elicit the needed data, hence an appropriate sample was obtained, using a simple but popular approach: Yamane's (1967) formula of $n=N/1+N(e)^2$, with e being specified margin of permissible error, e, (5% was adopted) and N, the known population. This gives a sample size of 392. However, noting Saunders et al.'s (2016, p.279) position that "the sample size is almost always a matter of judgement as well as of calculation" considering the relevant influences including the nature of analysis, population and cost, we settled for a sample size of 401, which was larger than computed, hence more representative, moreso that the population used is that of the entire State.

Initially, we employed the purposive sampling technique to know whether they fit into the SME category and ensure representativeness of different industries (trade, service, manufacturing, etc.), hence achieving efficiency and effectiveness of data collection. Thereafter, we selected the actual participants through the simple random method.

Data Collection Instruments/Administration

The data were collected through a structured questionnaire, which was in three parts for respondents' demographics, CC and CS measures respectively. The responses for the CC and CS were designed on the 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5), consistent with Deirmentzoglou et al. (2020), Adiak et al. (2020), and Medina-Alvarez and Sanchez-Medina (2023), who validated the OCAI in relationship studies as this. The content and language of the instrument bore minimal technicality for ease of understanding and completion, with few terms explained by the researchers or assistants as appropriate.

With emphasis on voluntary participation in the study by only the promoters/partners, CEOs or top managers (only one set was administered to an organisation), no official approval for the survey was required other than the initial discussion with the respondents or their immediate subordinates, where they were not around at the time of call. The questionnaire was administered personally by the researchers and the research assistants, to the respondents or dropped with their subordinates, with the appropriate message for later pick-up of the willingly completed instrument or otherwise. Of the 401 sets administered, 389 were returned completed, with 385 found to have been properly completed, representing 96% of the sample.

Measures

Independent Variables

The independent variable, CC, was measured with the OCAI developed by Cameron and Quinn (1999), validated in studies globally by over 10,000 organisations (Cameron, 2004), besides scholars, some of whom are stated in the introduction and preceding sub-section. It has six measurable categories, namely *Dominant Characteristics, Organisational Leadership, Management of Employees, Organisational Glue, Strategic Emphases, and Criteria of Success.* Each of these was measured on the 5-point Likert Scale, under each of the four (culture) categories of *Clan, Hierarchy, Market and Adhocracy* of the CVF. These four (culture) categories served as the proxies for CC. Respondents were required to assign a scale to each of the six statements describing each of the characteristics of the four culture types; hence twenty-four (24) statements/questions were used in measuring CC (Appendix A). It has to be emphasised here that the maximum total measurable value of the OCAI in this study (of relationship), as in others that have modified it, is 30 (5 for 6 categories) as against its traditional usage where the vale for each culture category is 100 (Cameron, 2004). The modified measurement scale has been validated (published reports of studies stated in preceding sub-section and elsewhere herein) to be fit for appropriate inferential statistics, notably, correlation and regression analyses (Hsieh et al., 2018).

Dependent Variable

The dependent variable, CS, was proxied by three dimensions, popularly called three pillars, of the earlier business concept of the triple bottom line – economic, social and environment– consistent with an integral part of the Dow Jones Sustainability Governance Index (DJSGI), a reflection of the almost universally accepted dimensions championed by the UN, as validated in previous studies, including Lo and Sheu (2007), Deirmentzoglou et al. (2020), and Medina-Alvarez and Sanchez-Medina (2023). Six statements/questions as in or modified from previous studies on each of the social and environment dimensions and five of the economic were measured on the 5-point Likert scale similar to that applied to the independent variables (Appendix A). The sixth question we had initially included on the economic dimension, consistent with the DJSI, borders on corporate governance, but we excluded it from the survey on grounds that corporate governance, though has overwhelming impact on the economic aspects of organisation's activities and ultimately goals, has considerable impact on the enthronement of the other two dimensions also, hence assumed to be an integral measure of all three dimensions.

Control Variables

We considered such other factors as the age of the entity and the industry or sector, to be possible alternative explanatory bases for sustainability. These factors were part of the demographics of the questionnaire.

Data Analysis Method

We analysed the collected data using various fitting statistical tools, notably the Pearson's Correlation Coefficient to determine the relationship between each of CC elements and the CS dimensions. The impact on CS was assessed in an aggregate form, using PLS-SEM.

Before these inferential tests, we undertook the appropriate preceding validity and reliability tests to justify the suitability of the instrument used for data collection, bases for the use of the statistics to measure the variables and subsequent generalisation of the outcome, besides the objectivity of the process and outcome. Equally important were the tests of the instruments and data meeting the inherent normality of the data and process, notably the existence or otherwise of collinearity, since multiple variables were involved. In line with the standard analytical procedures, the model for the study was in form of the equation:

$$CS = \beta_0+\beta_1 EC + \beta_2 S + \beta_3 EN + \beta_4 A + \beta_5 I + \varepsilon_i$$

Where CS= Corporate Sustainability; EC = Economic; S = Social; EN = Environment; A = Age of business organisation; and I = Industry or sector of

organisation; $\beta 0$ and $\beta_{1....5}$ are the constant and regression coefficients of the independent and control variables; and ε_i = error term.

4. 0. Results and Discussion

Respondents' Demographic Profile

Tables 1 to 4 contain the respondents' demographics.

Table 1: Respondent's Gender

2.0	Category		**3.0**	Frequency	**4.0**	Percentage (%)
5.0	**6.0**	Male	**7.0**	219	**8.0**	56.9
	9.0	Female	**10.0**	166	**11.0**	43.2
	12.0	**Total**	**13.0**	**179**	**14.0**	**100.0**

Source: Survey, 2024

Table 1 presents respondents' gender, indicating gender inclusiveness, with males and females represented by 56.9% and 43.2% respectively.

Table 2: Respondents' Educational Qualification

15.0	Variables		**16.0**	Frequency	**17.0**	Percentage (%)
18.0	**19.0**	FSLC	**20.0**	35	**21.0**	9.1
	22.0	SSC/GCE	**23.0**	79	**24.0**	20.5
	25.0	OND/NCE	**26.0**	110	**27.0**	28.6
	28.0	HND/BSc +	**29.0**	161	**30.0**	41.8
	31.0	**Total**	**32.0**	**179**	**33.0**	**100.0**

Source: Filed Survey, 2024

The nature of the study requires adequate level of understanding of the questionnaire, which was comfortably achieved, considering that 70.4% of the respondents have minimum of ordinary diploma, in addition to the 20.5% with secondary school qualification. Moreover all respondents attained the basic literacy threshold, as 9.1% hold primary school certificate, which entails a basic understanding of the questions, which were in simple non-technical language.

Table 3: Age of Business

34.0	Years		**35.0**	Frequency	**36.0**	Percentage (%)
37.0	**38.0**	≥ 3	**39.0**	40	**40.0**	10.4
	41.0	4-5	**42.0**	91	**43.0**	23.6
	44.0	6-10	**45.0**	136	**46.0**	35.3
	47.0	11 +	**48.0**	118	**49.0**	30.6
	50.0	Total	**51.0**	179	**52.0**	100.0

Source: Survey, 2024

From Table 3, though majority (65.9%) of the responding firms have passed the five-year threshold reported to be the average maximum survival age of most Nigerian SMEs (SMEDAN, 2021), the potential for fears of longer-term sustainability still sub-sits, with 30% still within the 5-year range.

Table 4: Industry/Sector Category

53.0	Category		**54.0**	Frequency	**55.0**	Percentage (%)
56.0	**57.0**	Trading	**58.0**	130	**59.0**	33.8
	60.0	Manufacturing	**61.0**	90	**62.0**	23.4
	63.0	Service	**65.0**	147	**67.0**	38.2
	64.0	Others	**66.0**	18	**68.0**	4.7
	69.0	**Total**	**70.0**	**179**	**71.0**	**100.0**

Source: Survey, 2024

Table 4 shows that the survey was multi-sectorial, involving at least three distinct industries/sectors, with four sub-sectors (health, education, hospitality and professional consultancy) in the services sector alone. This survey was thus wider in coverage and more comprehensive, with greater implications for more representative role of culture than reported in most previous studies.

Validity and Reliability.

The robustness of primary surveys is underscored by the validity of the data collected/its instrument and its reliability. Appropriate tests were conducted on the models via factor loadings and other statistical processes, by which inappropriate factors were deleted for optimum results, resulting to the information in Table 5.

Table 5: Validity and Reliability Indices

Variable	Loadings	AVE	CR
Corporate Sustainability (CS)			
ECO2	0.65		
ECO3	0.87		
ECO5	0.74		
SOC3	0.76		
SOC4	0.80		
SOC6	0.71		
ENV3	0.88		
ENV5	0.73		
ENV6	0.59	0.595	0.921

Clan Culture (CC)			
CC2	0.84		
CC3	0.66		
CC6	0.69	0.539	0.776
Hierarchy Culture (HC)			
HC2	0.77		
HC3	0.78		
HC4	0.83		
HC5	0.73		
HC6	0.71	0.585	0.876
Adhocracy Culture (AC)			
AC2	0.89		
AC3	0.90		
AC5	0.62	0.671	0.857
Market Culture (MC)			
MC2	0.74		
MC3	0.82		
MC4	0.64	0.543	0.779

Source: PLS output from Survey, 2024

The validity and reliability are evident from table 5, after the exploratory factor loading, during which process three factors from each dimension of the independent variables could not survive, yet acceptable positions were obtained. Basically the process/model evaluates convergent and discriminant validity, providing the framework for composite reliability.

Convergent validity is achieved as the model/process satisfied the basic criteria of loading exceeding 0.5, so also the composite reliability above 0.7 (Hair & Alamer, 2022), besides the need for the average variance extracted (AVE) exceeding 0.5 (Fornell & Lacker, 1981).

The model also satisfies all the criteria for discriminant validity – as the AVE shared between pairs of latent variables (Fornell & Lacker, 1981), with items' loading being larger than cross-loadings (Hair & Alamer, 2022). Besides, the VIF (Table 7) did not exceed 5, thus ruling out multicollinearity in this study.

Normality and Goodness-of-fit Tests

The key issue of normality of data and process, with its goodness-of-fit, for optimal correlation and impact analyses was ascertained through the appropriate statistical tests, with parameters as appear in Table 6, even though the structural model, PLS-SEM, does not assume normally distributed data, nor requires goodness-of-fit (Hair & Alamer, 2022).

Table 6: Assessment of Normality

Variable	Min	Max	Skew	c.r.	Kurtosis	c.r.
INDUST. TYPES	1.000	4.000	.059	.470	-1.300	-5.206
BIZ AGE (YEARS)	1.000	4.000	-.407	-3.259	-.854	-3.421
ADHOCULTRE	1.000	5.000	-1.455	-11.653	2.668	10.685
HIERCULTURE	1.000	5.000	-1.576	-12.621	3.139	12.573
MRKTCULTURE	1.000	5.000	-1.120	-8.973	1.750	7.008
CLANCULTRE	1.000	5.333	-1.700	-13.615	4.865	19.484
CORPSUSTAIN	1.000	5.000	-1.662	-13.316	3.016	12.079
Multivariate					36.345	31.765

The normality is largely determined by the distribution's skewness (symmetry) and kurtosis (peakedness), with acceptable range of values between -3 and 3, and -7 and 7, respectively (Kim, 2013; Hair & Alamer, 2022). These benchmarks are easily met with the data in Table 6.

Correlation Analysis

The relationships between the variables under investigation is presented in Table 7.

Table 7: Correlation Matrix.

	Tolerance	VIF	CLCTR	HIERCLTR	MRKTCLTR	ADHOCLTR	CORPSUSTAIN
CLANCLTR	.980	1.021	**1.000**				
HIERCLTR	.709	1.410	.000	**1.000**			
MRKTCLTR	.658	1.521	.121	.368	**1.000**		
ADHOCLTR	.797	1.254	.081	.583	.515	**1.000**	
CORPSUSTAIN			-.021	.851	.491	.776	**1.000**

Table 7 shows that the independent variables, except clan culture, have moderate to strong association between each other and the dependent variable, sustainability. The relationships are all positive, indicating the direction of influence, especially on the dependent variable, implying they contribute to the enhancement of the desired phenomenon, but with no basis for conclusive position, which the impact analysis tool handles. Evidently, the clan variant, aside apparently not having any reasonable influence, exerts a negative one.

Multicollinearity

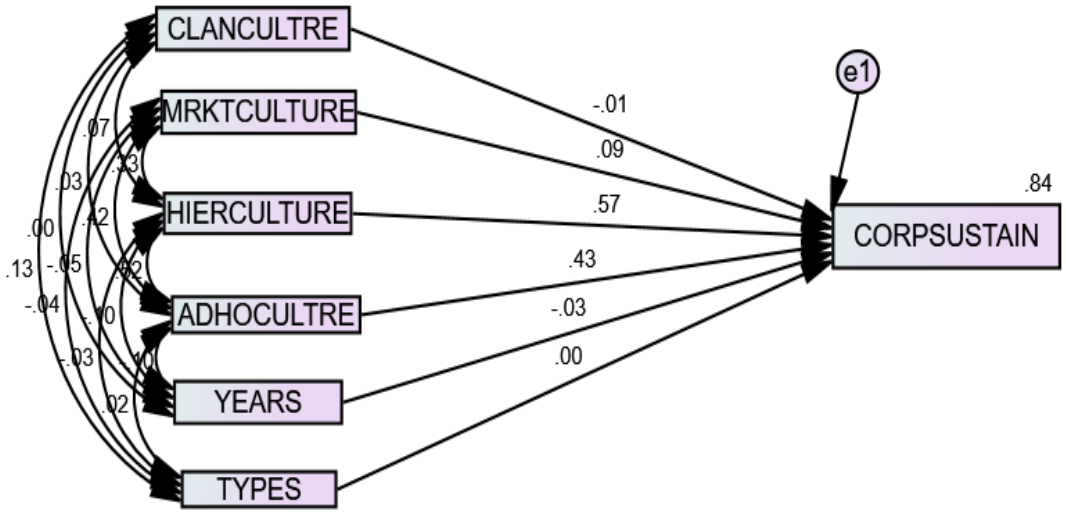
Multicollinearity, a critical determinant of the optimal outcome of this type of analysis, exists if the predictor variables correlate highly when regressed against each

other, more or rather than with the dependent variable. This condition manifests in values below or above two parameters, the **tolerance level** and the **variance inflation factor (VIF).** According to Hair et al. (2022), tolerance values below .2 show the existence of multicollinearity, while VIF values above 5 indicate serious concern. Table 7 reveal tolerance values ranging from .2 and above and VIF values below 5, implying non-multicollinearity among the variables, thus meeting the benchmarks.

Hypotheses Testing.

To validate the relationships evident in the correlation matrix in Table 4.8, a more robust hypotheses testing procedure was necessitated, using PLS-SEM, the model structure of which is shown in figure 2, with the resulting parameters summarized in Table 4.9.

Figure 2. Structural Model (PLS)



Aside the indices shown in the figure, the following are equally pertinent, thus validating it and the accompanying parameters and their implications: CIMN 7.995, CMIN/DF 3.99, P 0.018, RMR 0.020, GFI 0.994, AGFI 0.918, NFI 0.991, RFI 0.910, IFI 0.994, TLI 0.931, CFI 0.993

Table 8: Summary Result of Hypothesis Testing

Hypothesis	Relationship	Std Beta	Std Error	T value	P value	Decision
H1	CC -> CS	-0.006	0.023	-0.276	0.782	Reject
H2	HC -> CS	0.086	0.023	3.741	0.000	Accept
H3	AC ->CS	0.567	0.024	23.24	0.000	Accept
H4	MC -> CS	0.430	0.023	16.95	0.000	Accept

Control Variables

CORPSUSTAIN	<---	YEARS	-0.023	0.016	-1.462	0.144	
CORPSUSTAIN	<---	TYPES	0.004	0.017	0.234	0.815	

Source: SPSS AMOS

Summary of Findings

The hypotheses test results are displayed in Table 8. The first hypothesis examines the influence of clan culture (CC) on CS in its generic term encompassing the three dimensions. CC has a negative and insignificant effect on CS ($\beta = -0.006$, $p > 0.782$). This result, consistent with the wide theoretical position in terms of the economic and environmental dimensions, affirms Shin and Park's (2021) finding of no relationship, though inconsistent with the critical positions of Wilkinson (2008) and Berger et al. (2007), besides the dominant empirical positions, including Golan (2000), Dyck (2019), Deimentzoglou et al. (2020) and Ning et al. (2021), which all returned positive significant relationship with social sustainability. That the aggregate impact is negative entails the postulated positive social impact was possibly overwhelmed by the other two aspects.

The second hypothesis, Hierarchy (control) culture (HC), has significant positive effect on CS ($\beta = 0.086$, $p < 0.000$), thus confirming the general theoretical positions on the dimensions, except the social aspect, with typical focus on social equity/collaboration, though fitting into some criticisms including Sharma and Vendenberg (1998). The result affirms findings especially in the economic realm, including Acar and Acar (2014), Deirmentzoglou et al. (2020), Elnagar et al. (2022), and Medina-Alvarez and Sanchez-Medina (2023), as well as reinforcing the environmental dimension with focus on regulatory and industry standards, among others.

Similarly, Market Culture (MC), the focus of hypothesis three, positively significantly influences CS ($\beta = 0.43$, $p < 0.000$), consistent with the major expectations of the dimensions, specifically the economic and environmental aspects, concerning target goals achievement in the face of competition and other environmental constraints, empirically supported, including Bamgbade et al. (2018), and Medina-Alvarez and Sanchez-Medina (2023).

Adhocracy Culture (AC), the last category, positively significantly impacts CS ($\beta = 0.567$, $p < 0.000$), consistent with the dominant theoretical and empirical positions reflected in the findings of Siguita and Takahashi (2015), Adewale et al. (2018), Deimentzoglou et al. (2020), and Medina-Alvarez and Sanchez-Medina (2023), but negating Linnenluecke et al.'s (2009) finding of no wholistic impact.

The results of the control variables revealed that they (age of the business and the industry type) have no significant impact on CS, with the relevant statistics above the significance thresholds (p-vs: 0.144, 0.815, respectively).

5.0 Conclusion.

The study was undertaken to validate the UN-championed economic, social, and environmental sustainability dimensions, in their aggregate form, in the critical, though often ignored, SMEs sector, from the perspectives of their culture-driven management practices. The popular but very relevant competing values framework of culture was used, with the outcome affirming the theoretical positions in terms of the hierarchy, market and adhocracy variants of culture impacting sustainability wholistically significantly, implying that majority of the management practices of SMEs have been tailored towards ensuring that this critical economic sector thrives in the future to continue to sustain society.

Consequently, managements of SMEs are enjoined to continue to imbibe the desired sustainability cultures in their operations, with the relevant policy frameworks periodically monitoring and enhancing, where appropriate. SMEs need to have a review of their management/operational practices towards the enthronement of the culture of employees' equitable welfare and development, for the needed team-spirit, cohesiveness and competency, for positive and sustainable performance.

Our study has quite a number of limitations, including the multiple sectors covered, although with prospects for greater representativeness, with implication for possible lack of depth of specific industry practices, and the theory-guided measurement instrument, hence the imperative of scholars to narrow the focus for possible more meaningfully compact outcomes, either employing similar methodology and theoretical framework or others. Besides, sustainability was assessed in aggregate form, with implication for possible variations in individual dimensions, hence need for investigation in this respect.

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