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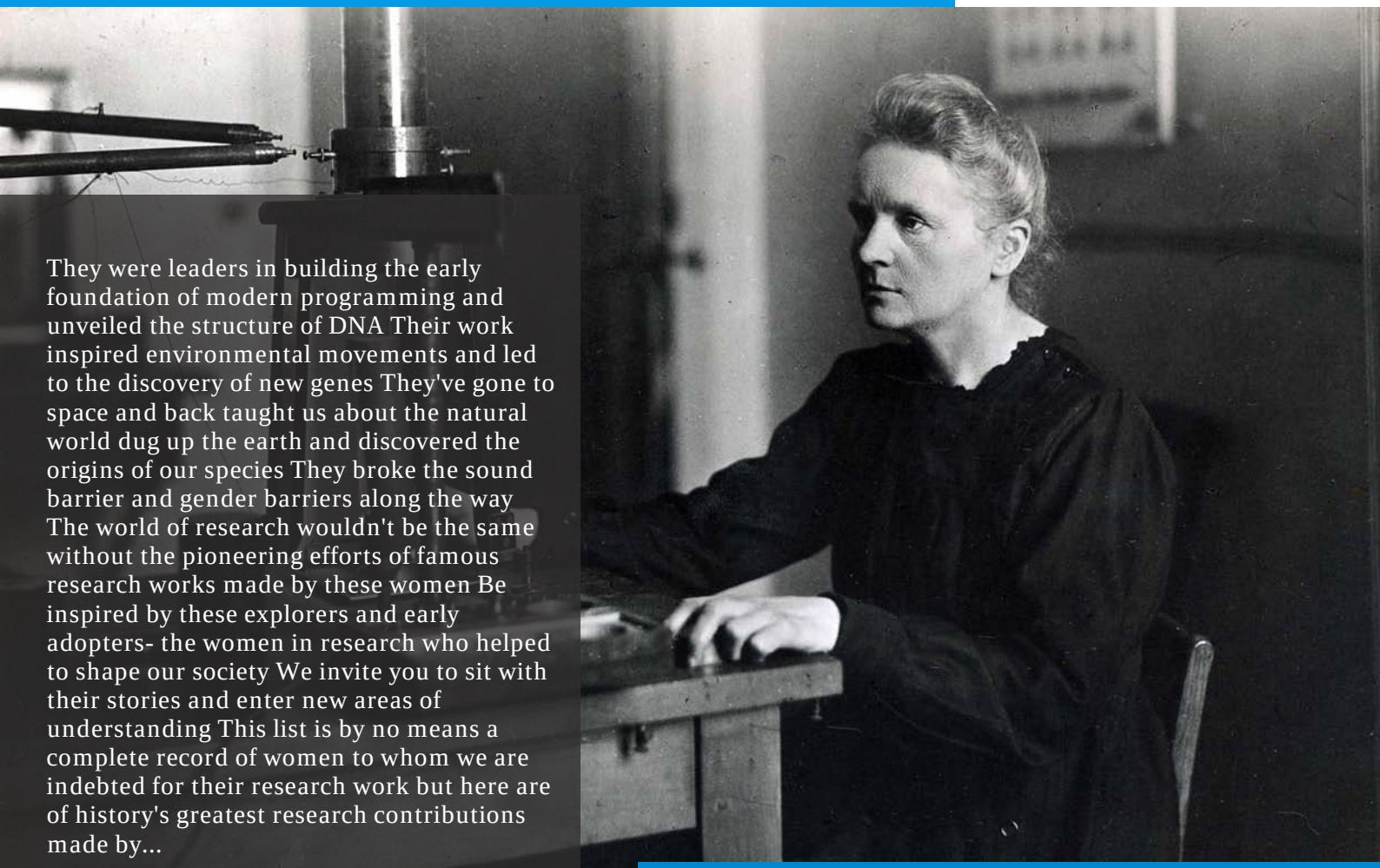

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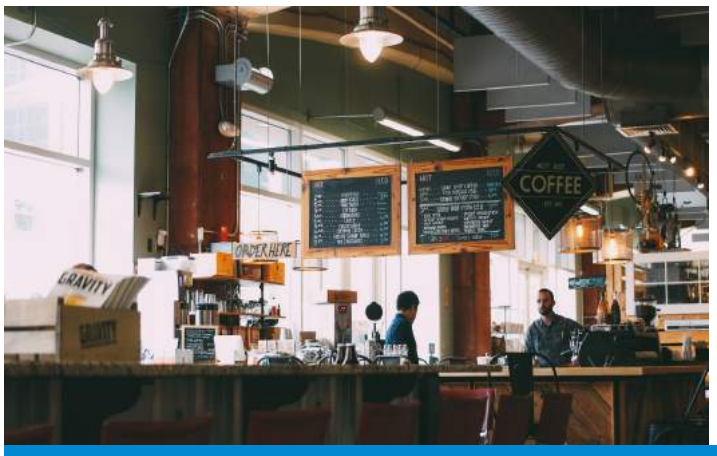

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Usman O. A, Oladejo, M.O, Alimi, A. A & Adeoye, M. A

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Board Characteristics, Audit Committee and Firms' Financial Performance in Nigeria: Hausman Test Approach

Usman O. A[α], Oladejo, M.O [σ], Alimi, A. A[ρ] & Adeoye, M. A[Ꞷ]

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Corporate failures and financial scandals have shaken the corporate world and sparked a global conversation about the need for good corporate governance. Specifically, the study evaluated the effect of board characteristics on financial performance of selected industrial goods companies in Nigeria. The study used secondary data that sourced from the yearly financial reports of the thirteen industrial goods companies that were sampled for the study, which covered the ten-year period from 2011 to 2020. To accomplish the study's objective, the data were examined using both descriptive and inferential statistics.

The findings of Panel regression reported that the board size and board gender diversity have a positive and significant effect on the accounting-based measure of performance of industrial firms. While in the case of market-based measure of performance, board independence, board gender diversity and audit committee size are positive and statistically significant. The study concluded that there is a positive and significant relationship of board characteristics, audit committee size with Return on Asset (ROA) and Tobin's Q for industrial firms. It is therefore recommended that industrial firms in the country should put in place strict evaluation mechanism to identify the most appropriate board characteristics that will help to sustain improved performance at all time and this evaluation mechanism should be design to factor in dynamic adjustment that might be inherent in the patterns of influence of board structure on performance.

Keywords: board characteristics, audit committee, return on assets, tobinsq, financial reports, accounting based performance and market based performance.

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I. INTRODUCTION

Corporate failures and financial scandals have shaken the corporate world and sparked a global conversation about the need for good corporate governance. The recurrence of high-profile company failures and scandals around the world has weakened investors' and other users' confidence in annual reports and accounts and thus impair the performance of companies (Iyanuoluwa, 2019). Owolabi (2015) emphasized that with the corporate collapses of Enron (2001), WorldCom (2001), Cadbury (2009), Oceanic bank (2011), PHB Bank (2011), textile industries and Intercontinental bank (2013), among others, the corporate scandal took on a new dimension in early 2000. Financial scandals that have shaken users' confidence have resulted in a loss of credibility due to poor performance of manufacturing companies in Nigeria. The financial scams and crises in emerging markets have led to renewed discussions on the issue of corporate governance. Investor protection has become a much more vital issue for all businesses and financial markets. Indeed, corporate disclosure acts as a basis for investment decisions of various primary participants of the capital market. The soul of corporate governance is transparency, which is exposed to the corporate

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disclosure made by the firm (Neeti, Payal, Satish and Radha, 2020).

Most firms in Nigeria are characterized by paucities in accounting standards, poor financial reporting, financial impropriety, lack of compliance with the code of best practices with adverse effects on return on investment and productivity. Other Nigerian companies' corporate problems include a lack of transparency and accountability, inadequate control and monitoring, which significantly decreases the trust of investors in management. In the 1998 UAC audit report, for instance, the directors' attempt to sell the company's property to themselves was rejected by shareholders (Jonathan, 2013).

As a result, for a strong appreciation of corporate governance in Nigeria's manufacturing sector, it is imperative to take a fast look at the condition of manufacturing performance in Nigeria. Adenikinju (2005) revealed that the share of GDP in the sector increased from 5.4% in 1980 to a peak of 8.1% in 1990 and subsequently decreased to 6% in 2019. Exports rose from 0.3 percent in 1980 to 0.6 percent in 2019, but the export contribution to foreign exchange earnings was found to be less than 1 percent, while the industry used about 81 percent of the total foreign exchange earnings of the country. In terms of employment generation, around 10 percent of the population was engaged in job development, compared to 70 percent in agriculture and 20 percent in services.

Corporate governance protects firms against some long-term loss. Big scandals like Enron, in particular, have had a significant impact on the industry and the economy. Several stakeholders, including employees, customers, consumers, vendors, shareholders, and regulators, have a duty to ensure that the firm performs well. As a result, corporate governance affects not just the firm but also society (Scherer and Palazzo 2008). Good governance, in every field of society, whether be the corporate environment or the general society, or the political environment, is important. Good governance will boost public confidence and trust in the political environment. It is a good level of governance that can help to promote the wellbeing of society if the resources are too small to reach the minimum needs of the people. And, of course, governance issues are at least as common in the business sector (Crowther and Seif, 2010)

Nigeria's weakness is exacerbated by its heavy reliance on Chinese imports. In 2019, raw materials accounted for 70% of total imports from China into Nigeria, while Asia and Europe accounted for 86 percent of Nigeria's imports in Q4 2019, according to the National Bureau of Statistics (NBS). The new constraints on cross-border trade have greatly distorted supply chains for producers, and the Nigerian economy is beginning to feel the effects. Via board decisions, industrial goods companies must become more flexible, local, and sensitive to customer needs, whether by increasing supplies or depending more on e-commerce (NBS, 2020). It is against this background that this study seeks to analyse the relationship between corporate governance, audit committee, and firms' financial performance Consequently, this paper is divided into five parts. Part one deals with the background discussed in chapter one while part two deals with previous literatures and conceptual clarifications, part three describes the methodological aspect of the paper, part four deals with presentation and discussion of the results, and finally part five explains summary, conclusions and policy recommendations.

Statement of the Problem

Researchers have been concerned with means to address the challenges faced by companies as a result of poor corporate governance and a lot of researches conducted with a view to proffering ways of resolving it. In Nigeria, for example, the study of Sanda, Mukailu and Garba (2005) looked at the entire firms listed on the floor of the Nigerian Stock Exchange (NSE) as at year 2000. Study like Emeka and Alem (2016) focused on the insurance and the banking sectors respectively. In fact, the recent study of Ibe,Ugwuanyi and Okanya (2017) equally looked at the entire listed firms on the NSE. To the best of the researcher's knowledge, no study has been conducted in this area using Industrial firms. Based on sectoral

indices released by the NSE, industrial sectors represent the sectors with the highest sectoral market capitalization as at December 31, 2020. Therefore, the need to investigate the relationship between corporate governance mechanisms and financial performance of these sectors in Nigeria cannot be over-emphasised.

A company can face a crisis if it lacks good corporate governance. As a result of weak corporate governance processes, many businesses may become excessively leveraged and/or have a high level of short-term debt, resulting in a financial crisis. The Global Financial Crisis of 2008 is one of the most well-known examples of a crisis caused by a company's financing decisions. As a result of the economic meltdown that hit the United States of America in 2008, Nigeria's firms were in shambles. Until now, some of our industries have not recovered from the effects of the economic recession despite the government's bailout fund and intervention (Luqman, 2015). Corporate governance mechanism and its effect on firm performance had been studied by several researchers, but just very few researchers emphasised corporate governance practices and its impact generated on firm performance using industrial sector

This study employs two alternative measures of firm performance. First and foremost, accounting profitability is a common measure of firm financial performance proxy by Return on Asset (ROA). Second, Tobin's q has been employed by many researchers to capture firm value in the literature and this study also includes Tobin's q as the second measure of performance. Shareholders interest are usually conflict with the management interest but cannot be underestimated. Further, the audit committees are extremely important in promoting good corporate governance because they are in charge of ensuring the accuracy and clarity of financial reporting. Investors use these financial reports to assess a company's financial status (Saad, 2010). Velnampy and Pratheepkanth (2012) asserted that corporate governance is a very critical issue in both the private and public sector and this continues to be an issue of great importance to firms in both short and long-run survival of firms, this study will serve as a database for further researches in this field of research which will be determined by what they engage in whether questionable or unquestionable, thus enhancing transparency aimed at improving corporate governance structures in Nigeria's industrial sectors. In order to obtain a solid conclusion, this study includes more relevant explanatory and controlled variables, panel unit root test, and a powerful econometric approach such as variance inflation factor.

Research Hypothesis

Ho_1: Board characteristics and audit committee have no significant effect on financial performance of selected industrial goods companies in Nigeria

II. LITERATURE REVIEW AND CONCEPTUAL EXPLANATION

2.1 Theoretical Review

Agency Theory

In fact, due to information miscommunication and opportunistic behaviour, some agents cannot always behave in the best interests of shareholders, which can lead to conflict between them. As a result, the agent-principal relationship becomes an agency issue (conflict), and the organizations suffer numerous losses known as agency expense. The division of ownership and management in the business of the company results in the transition of responsibility for all decisions to management since they must have a great deal of knowledge to accomplish the aim of optimizing shareholder capital. The agency's theory helps to link the interest of managers and owners with the promise that there is no conflict of interest between the management and the firm owner (Fama and Jensen, 2018). Agency Theory explains how to create a contract between the principal and the agent that will result in the agent's best effort on behalf of the principal. The most critical aspect is that information is not distributed equally among managers and owners. This issue is referred to as information asymmetry, and it consists of two distinct but related elements: moral hazard and adverse selection. As it relates to contemporary

organizations, agency theory's main goal is to reconcile the principal's and the agent's competing interests. One of the drawbacks of agency theory is that it restricts the principal to the owners and only pursues the interests of the owners. However, there are more stakeholders that are interested in the contract, and this deficiency gave rise to the stakeholder's theory, which is covered in more detail below.

Stakeholder Theory

Stakeholder theory asserts that several stakeholders are participating in the organization, each of whom is entitled to a reward for their efforts. This idea first appeared in Milton Friedman's work (1970). According to this principle, the profit of a company is maximized when it is managed on behalf of all stakeholders and returns are distributed fairly among them in a manner that is agreeable to all. Unfortunately, there is no universally accepted method for dividing returns among all stakeholders, and stakeholder theory is severely lacking in suggestions in this regard. Nonetheless, this theory has some traction, and it is founded on the idea that running a company in this way results in the maximization of returns to shareholders as part of the overall process of maximising returns to all stakeholders (Vargas-Hernandez and Gonzalez, 2018; Murphy and Smolarski, 2020)

Signalling theory

Ross (2017) stressed that signaling theory is concerned about how businesses can interact with users of financial statements in the form of details on what the manager has achieved in achieving the owner's goals. Financial success, which is essential to certain parties, may serve as a signal. Profit is one of the factors that decide dividend policy for shareholders; the higher the profit, the higher the dividends, and this is generally well-received by the market, increasing the share price. The benefit is an incentive for investors to bring funds from investors into a business.

Information Asymmetry theory

According to the asymmetry principle, parties connected with the venture do not have the same knowledge about the company's prospects and risks. Managers, on average, have more knowledge than outsiders like investors. Individuals participating in all streams of ties between the organization and stakeholders, according to this theory, should not have the same knowledge at the same time. This means that people will behave differently and make choices that will affect the company's success. As a consequence, in the theory of information asymmetry, the information that individuals possess is very important, as are the decisions that they may make based on that information (Marcel, Ortan, and Otgon, 2010).

2.2 Corporate Governance Practices and Firms' Financial Performance

Concept of Corporate Governance

According to Tsamenyi *et al.* (2017), emerging economies face a slew of issues, including risk and uncertainty, political instability, poor regulation, high levels of government interference, and a lack of investor security. As a result, it is critical to adopt and implement successful corporate governance mechanisms. Improve the strength and transparency of capital market systems to increase overall investor trust, improve the performance of domestic businesses, and encourage growth through the use of equity rather than debt have all been proposed as ways to further improve governance structures (Reed, 2002).

According to the previous researches, corporate governance and agency theory provide a theoretical rationale for the correlation between corporate governance and firm success, as well as testable theories on the various corporate governance mechanisms in terms of improved financial performance.

Functions of Corporate Governance

According to Jonathan (2017), corporate governance refers to the rules, strategies, and practices that a company utilizes to achieve its business objectives and improve its infrastructure. Corporate governance functions include, but are not limited to, the following:

i. Goals and Risk Management

The board of directors of a firm establishes policies and processes to effectively satisfy the company's short- and long-term investment goals while minimizing the extent of risk associated with the investment. Each investment decision is made with the purpose of ensuring the company's long-term growth and profitability. The board of directors handles the risk associated with each new investment opportunity by carefully examining the venture's worth and assessing the most likely challenges. This enables the organization to anticipate possible problems and devise measures to mitigate them (OECD, 2014)

ii. Corporate Accountability

Corporate governance further promotes compliance within the board of directors and the improved operational structure of the organization. This creates a framework of checks and balances to ensure appropriate execution of company operations and initiatives. Because of the increased accountability and communication within the company's management structure, the board of directors can keep up with the progress of investments and business ventures (Emiliano, 2017)

iii. Shareholder Meetings

Effective corporate governance requires shareholders to remain well informed of the company's financial health and the status of its ongoing business initiatives. To keep shareholders informed, a corporation's board of directors' schedules regular meetings where the board shares the company's level of profitability, its strategies for achieving goals and any problems it foresees in the market that may cause them to fall short of meeting those goals. Shareholders who are kept well-informed of company practices are more likely to trust the board of directors and remain as corporate investors as opposed to selling company stock (OECD, 2014)

iv. Government Regulations

Transparency in respect to government corporate rules is an important aspect of corporate governance. Regular financial reporting, ethical treatment of workers, safe environmental standards, and the handling of hazardous chemicals are only a few of the operations covered by these rules. The 2010 BP Deepwater Horizon oil spill is an example of how a lack of corporate governance resulted in inadequate practices, resulting in a large-scale environmental disaster that impacted a wide area of the United States (OECD, 2007).

Problems of Corporate Governance in Nigeria

There are numerous challenges to good corporate governance in Nigeria. These include:

i. The Institutional Challenges

The interwoven link between governmental regulators and the private sector is one of the issues in enforcing corporate governance in Nigeria. Public officials utilize private enterprises to launder money stolen from the public sector (among other things), compromising their independence in enforcing a strict regulatory environment (Ogbonna, 2020). Even when it is clear that a company is defaulting, it is covered. Sanctions should be imposed without prejudice in order for business laws to be enforced effectively. The Nigerian corporate governance framework is inefficient due to its poor institutional base. The Nigerian corporate governance framework is inefficient due to its poor institutional base. According to Adegbite (2015), corporate law enforcement and self-regulatory activities in Nigeria are stuck in idealism due to the country's inadequate institutional backdrop.

ii. Corruption

Corruption is one of the primary obstacles to Nigeria's smooth corporate governance practice. It is widely held opinion that you cannot obtain anything without paying a bribe, particularly from government or public authorities. As a result, private business owners who require government approval or waivers are unable to do so unless they engage in corrupt methods (Yakasai, 2020). Corruption is Nigeria's biggest problem when it comes to corporate governance. Corporate executives milk their own companies and become "fat cats," while investors become "anemic," which is a serious problem in any non-transparent developing country. This is a situation that is all too common in Nigeria.

Nigeria is ranked 144th out of 180 countries, indicating that corruption is a severe problem in

the country. As a result of deep-seated corruption, weak governance emerges, which obstructs the efficient application and enforcement of laws (Gholami and Habeeb, 2019).

iii. Multiplicity of Codes on Corporate Governance and Weak Regulatory Mechanisms

According to Osemeke (2020), the lack of specificity (i.e. the inclusion of ambiguities) in the code's suggestions, as well as disputes among them, are concerns related to the multiplicity of codes. Multiple corporate governance standards, according to the report, are ineffectual in controlling the corporate sector, particularly in emerging nations. Multiple contradicting codes result in "reduced compliance by enterprises and poor enforcement by regulatory agencies," according to the report.

Corporate organizations such as banks have been unable to achieve their goals of maintaining adequate corporate governance in Nigerian banks due to poor implementation and enforcement of corporate governance regulations.

iv Protection for Whistle Blowers

Fear of retaliation has deterred many potential whistleblowers from reporting corporate governance violations (Brennan and Kelly, 2007). When employees in positions to disclose these wrongdoings remain silent for fear of losing their jobs or being "harmed" in the process, it becomes difficult for corporate governance practices to function effectively. Nigeria currently lacks any comprehensive whistleblowing legislation.

Despite these obstacles, Nigeria remains one of Africa's top five countries for corporate governance compliance, according to the Organisation for Economic Co-operation and Development (OECD).

Corporate Governance Mechanisms

Good corporate governance practice is germane to business survival, business growth, and in appreciating the value of the firm as well as its effect on the Nigerian economy at large. The provisions include the roles of the board and management of quoted companies, the rights and privileges of shareholders, and the role of the audit committee. The following are some of the variables that can be used to assess corporate governance and audit committee in an organization:

Board Size

Board size which uses the number of the director as a proxy is an important yardstick in corporate governance. Previous studies on board size show that there exists both a positive and negative relationship between board size and firm value. Mak and Yuanto (2003) found that firm value is highest when board sizes are small. Sanda *et al.* (2003), on the other hand, discovered that small board size, rather than large board size, is positively associated with firm financial efficiency.

i. The composition of the board of directors and a clear-cut job definition of all board members is another index.
ii. Separation of CEO from the chairman of the board of directors. Previous studied showed that firms are more valuable when the CEO and the chairman of the board positions are manned by different persons.

Composition of board members

The composition of board members is also proposed to help reduce the agency problem (Hermalin and Weisbach 2003). The proportion of outside directors on the board of directors is assumed to have a positive relationship with firm efficiency. Outside directors, as opposed to inside directors, are more positioned to challenge CEOs. Outside directors are expected to make up at least two-thirds of the board in the United Kingdom, perhaps in acknowledgment of their importance. In the United States, they must make up at least three-quarters of the board (Bhagat and Black, 2001).

Other studies also found no evidence of a connection between firm financial performance and the number of outside directors on the board (Hermalin and Weisbach 2003). In reality, according to Weng and Lin (2017), there is a negative correlation. The importance of committee structure in increasing the board's independence is emphasized by John and Senbet (1998). They cite Klein's (1998) work to argue for the creation of specialized audit, remuneration,

and selection committees. In contrast to the previous claim in favour of board structures,

Board size and Firm performance

Yermack (1996) examined the relationship between board size and firm performance, concluding that the smaller the board size the better the performance, and proposing an optimal board size of ten or fewer. The results of Yermack, according to John and Senbet (1998), have important consequences on the firm because they relied on forces outside the market system to decide the size of the board.

Ownership concentration

The next important element of governance mechanisms examined is ownership concentration, which refers to the proportion of a firm's shares owned by a given number of the largest shareholders. A high concentration of shares puts more pressure on managers to act in ways that maximize shareholder value. According to Shleifer and Vishny (2017), an increase in ownership concentration would be correlated with an increase in firm value at low levels of concentration, but the relationship may be negative above a certain level of concentration.

Audit Committee size

The principle behind audit committees vary according to the objectives, functions, and responsibilities assigned to them. According to Arens *et al.* (2009), an audit committee is a group of people chosen from the board of directors who are responsible for maintaining the auditor's independence. Furthermore, according to Al-Thuneibat (2006), it is a committee made up of non-executive directors in the company. The audit committee was formed with the primary aim of improving the quality of auditing and questioning of the board of directors.

Klein (2002) found a negative correlation between earnings management and audit committee independence. Anderson, Mansi and Reeb (2004) observed a significant relationship between independent audit committee and low debt financing cost.

CEO Pay Slice

According to Bebchuk, Cremers, and Peyer (2011), the CEO's pay slice (CEOP) reflects the CEO's relative importance in terms of skills, contribution, and power. This is a good proxy for the CEO's relative importance in the top management team. CEOP is described by Bebchuk et al.(2011) as the CEO's total compensation as a percentage of the combined total compensation of the company's top five executives (including the CEO). Salary, bonus, other annual pay, long-term retention payouts, the total value of restricted stock awarded that year, Black-Scholes value of stock options granted that year, and all other total compensation are included in total compensation.

Insider shareholding and Firm Value

The use of insider shareholding is the first claim to answer the issue of agency. Several studies have been conducted on this subject with very mixed results. Insider ownership and firm results have a significant curvilinear relationship (Bino and Tormar, 2010). Bino and Tormar (2010) discovers a substantial and strong nonlinear relationship between Tobin'sQ and REIT insider ownership, which is consistent with the trade-off between incentive alignment and insider ownership entrenchment.

Corporate Governance Approaches

i. Rule-Based Approach

A rules-based approach to corporate governance is based on the belief that corporations should be forced to follow existing corporate governance standards by law (or by some other form of mandatory regulation). The rules which only extend to some types of businesses, such as large stock market firms. However, the rules must be followed by the organizations to which they refer, and few (if any) exceptions are permitted.

ii. Principle-Based Approach

An alternative to a rule-based approach to corporate governance is a principle-based approach. It is founded on the belief that a single set of rules is ineffective for all firms. Companies have different circumstances and conditions. The circumstances of a single business can shift over time. This means that the best corporate governance practices for a business can vary

depending on the circumstances, and that the best corporate governance practices for a company can evolve over time. As a result, it is proposed that all large corporations be subjected to a corporate governance code, which should consist of principles rather than laws.

Firm Financial Performance

Financial Performance measures are germane to an enterprise not only to evaluate the implementation of the strategy and the strategic actions that managers take to pursue the strategy but also to inform managers about the relevant aspects they need to consider when making those decisions. Because whether a company is growing, profitable, or increase shareholders' value, financial performance is the main goal for most companies. Financial success affected the outcomes and results of the business sector, reflecting the firm's overall financial health over time. Financial performance refers to how efficiently a company uses its capital to increase shareholder wealth and profitability.

Financial ratios are the most common performance measurement used in the field of finance and statistical inference. While a full assessment of a firm's financial performance should include other types of metrics, financial ratios are the most common performance measurement used in the field of finance and statistical inference (Farah, Farrukh and Faizan 2016). In this study, the financial performance used for the measurement of the financial performance of the manufacturing sector (Industrial goods companies) are return on asset and Tobin's Q from the period 2011-2020.

2.3 Review of Empirical studies

Neeti *et al.* (2020) emphasized that corporate governance ensures that corporations are transparent, accountable, and equal. For the period 2014 to 2018, the data is collected for Indian automotive companies listed on the NSE top 500 firms. The relationship between parameters of corporate governance and parameters of financial performance and corporate governance and the structure of capital is discussed. To research, the impact of independent variables, such as board composition, remuneration of the directors, Chief Executive Officer (CEO) duality independent directors, skilled and independent audit committee, a board of directors, descriptive statistics, correlation and multiple regression analysis were used. Financial performance and capital structure represented by ROE and total debt/total asset are proxied to be dependent variables and are not significant to the independent variables used in the study. The study does not provide conclusive evidence, but they do highlight that policy conclusion of the results based in Indian data that are not necessarily transferable to other countries such as Nigeria

The relationship between corporate governance and corporate performance was also examined by Kuen-Chang, Ta-Cheng, Chih-Hao, Pei-Hsun (2019). To act as a decision-making guide for managers and investors, the study aimed to establish a more robust corporate governance evaluation process. The results suggested that corporate output was affected positively by corporate governance. These findings were consistent in both an overall review and several periodic studies. Findings on the effects of different corporate governance dimensions on corporate performance suggested that the arrangement of ownership, equal treatment of shareholders, and the structure of the board of directors (BD) can be used to strengthen corporate performance. However, the result of this study cannot be generalized because Nigeria was not captured in the scope of the study. Yameen, Farhan and Tabash (2019) examined the impact of corporate governance practices on a firm's performance in the Indian tourism sector. The study employed a panel dataset of 39 hotels listed on the Bombay Stock Exchange (BSE) for the period from 2013/2014 to 2015/2016. The ordinary least square regression model was used for estimating the results. The study posited that the size of the board of directors and the size of the audit committee have a negative effect on the performance of Indian hotels, while the composition and diligence of the board of directors, the composition and diligence of the

audit committee, and foreign ownership have a positive impact on the performance of Indian hotels as calculated by accounting proxies. Furthermore, the study found that the size of the board of directors, the size of the audit committee, and foreign ownership have a positive effect on the performance of Indian hotels as calculated by marketing proxies, while the composition of the board of directors, the vigilance of the board of directors, and the composition of the audit committee have a negative impact. Hence, this study used inadequate sample size that will be distinct from the study under consideration. In Nigeria, Odunayo (2019) examined the impact of corporate governance on firm financial performance. To capture corporate governance, the model used return on asset (ROA) and return on equity (ROE) as dependent variables and ownership structure (OWNSTR), board independence (BIND), board size (BSIZE), and board gender diversity (BGD) as explanatory variables. Board independence (BIND) has a positive impact on return on asset, while ownership arrangement (OWNSTR), board size (BSIZE), and board gender diversity (BGD) have negative effects. The study also discovered that board independence (BIND) has a positive impact on return on asset, while ownership arrangement (OWNSTR), board size (BSIZE), and board gender diversity (BGD) have negative impacts. All of the explanatory variables, such as ownership structure (OWNSTR), board independence (BIND), board size (BSIZE), and board gender diversity (BGD), have an important and positive impact on return on equity, according to the report. The study found that corporate governance has a major impact on return on equity, and it was suggested that the size of the board of directors (membership) be increased, but not beyond the maximum number prescribed by the bank's code of corporate governance.

III. METHODOLOGY

The main focus of this study is the Nigeria's manufacturing companies being a driving force of the Nigerian economy with emphasis on industrial goods companies. This sector was chosen because the industrial goods industry is largely concerned with the production of goods. Aluko (2018) asserted that the industrial goods sector of the Nigerian Stock Exchange (NSE) shows the highest growth rate among other sectors thus far in 2018. The NSE Industrial Goods Index, which appreciated 23.8 percent in 2017, has recorded a growth of 18.9 percent so far in 2022. It has outperformed the NSE Banking Index, which currently has recorded a growth of 9.3 percent. After the recovery of the Nigerian economy from a six-quarter-long recession, which ended in 2017, the industrial goods market is back on track to trend upwards, as Nigeria is predicted to become one of the Top 20 economies in the world by 2030.

Therefore, even with the major challenges in the industrial sector that most companies will have to overcome, according to the present trends in the public market, the opportunities for growth in this sector look very promising. The study employed six key corporate governance variables (board independence, board size, equity ownership, CEO pay slice, board gender diversity and audit committee size), two firms' financial performance variables that capture both market-based performance and accounting-based performance (return on asset and Tobin's Q) were also employed

Model Specification

Model 1: Board characteristics, audit committee and financial performance (ROA) of selected industrial goods companies in Nigeria

$$ROA_t = f(BND_t, BZ_t, CEPA_t, EO_t, ACZ_t, LNTA_t, BGD_t). \quad (1)$$

$$ROA_t = \gamma_0 + \gamma_1 BND_i + \gamma_2 BZ_i + \gamma_3 CEPA_{it} + \gamma_4 EO_t + \gamma_5 ACZ_t + \gamma_6 BD_t + \gamma_7 lnTA_{it} + \varepsilon_{it} \quad (1)$$

Model 2: Board characteristics, audit committee and financial performance (Tobin's q) of selected industrial goods companies in Nigeria.

London Journal of Research in Management and Business

$$\text{Tobin's } Q_t = f(BND_t, BZ_t, CEPA_t, EO_t, ACZ_t, LNTA_t, BGD_t) \quad (2)$$

$$Tobin'sQ_t = \gamma_0 + \gamma_1 BND_i + \gamma_2 BZ_i + \gamma_3 CEPA_{it} + \gamma_4 EO_t + \gamma_5 ACZ_t + \gamma_6 BD_t + \gamma_7 lnTA_{it} + \varepsilon_{it} \quad (2)$$

Where:
Dependent variables

$$ROA_i = Return\ on\ assets\ of\ selected\ firms\ i\ in\ industrial\ sector$$

$$Tobin's\ Q_t = Tobin's\ q\ of\ selected\ firms\ in\ industrial\ sector$$

Independent variables

BND= Independent Director
BZ = Board size
BD = Board Gender Diversity
EO = Equity ownership
CEPA = CEO pay slice
ACZ = Size of Audit Committee

Control variables

LnTA= Natural logarithms of total assets
ei_t, = Stochastic error Term
$\gamma - \gamma_7 = regression\ parameters$
i=individual firms
t=time

The a priori expectation is such that:

$BNDt, BZ_t, BD_t, EO_t, ACZ_t, Ln\,TA, CEPA_t > 0$. A positive relationship is expected between explanatory variables ($BNDt, BZ_t, BD_t, EO_t, ACZ_t, Ln\,TA, CEPA_t$) and the dependent variables (ROA and Tobin's Q). The correlation coefficient (γ_o) explained the various levels of association between the independent variables.

Table 1: Measurement of Variables

Variables	Definitions	Previous Studies
Return on Asset (ROA)	This measures the net income divided by total assets at the end of the year (Accounting based measure of firm performance). This will be extracted from the annual report of companies under consideration.	Ahmadi et al. (2018), Đặng et al. (2020) and Yang et al (2019)
Tobin's Q (TQ)	This measures market capitalization to the total asset of the company (Market-based measure of firm performance)	Satwinder, Naeem, Tamer, and Georgios (2017).
Board size (BZ)	Total number of directors that are on board	Haque, Deegan and Inglis (2016)
Equity ownership (EO)	The percentage of equity ownership held by the management who run the operations of the firm	Ahmadi et al. (2018)
Audit Committee size (AZ)	Total number of members of the Audit committee	Werder, Talaulicar and Kolat (2005).
Board independence (BND)	Board Independence is measured as the ratio of non-executive directors on the Board divided by total directors on the Board	Nadeem, Suleman and Ahmed (2019)

Board gender diversity (BD)	Percentage of Female Executives	Low et al. (2015), Haque, Deegan and Inglis (2016)
CEO pay slice (CEPA)	Fraction of the total compensation to the group of top-five executives that is received by the Chief executive officer (CEO)	Xiangwei (2017)
Firm size	Natural logarithms of total Assets	Byoun et al. (2016)

Source: Author's compilation, 2022

IV. RESULTS AND DISCUSSIONS

4.1 Unit Root Tests

Table 2 report all the variables used in the study for industrial goods companies and the first row of the table depicted different panel unit root tests results which are given at the level as well as the first difference against each variable. The results indicated that most of the variables are stationary at level and other variables are stationary at first difference i.e I(1).

Table 2: Unit Root Test for Industrial Goods Companies

Variables	IPS		FADF		LLC	
	I(0)	I(I)	I(0)	I(I)	I(0)	I(I)
ROA	-1.57	-2.61	29.78	46.79	1.5e+02	-98.98
TOBINSQ	2.38	-2.94	19.64	112.36	-4.83	-11.21
BZ	-1.37	-4.94	40.18	102.2	-8.24	-13.81
BND	-4.94	-5.09	2.36	11.89	-3.24	-9.95
BD	1.22	-8.96	16.45	35.83	-6.21	-14.36
CEPA	-3.27	-6.79	73.87	173.23	-11.00	-16.20
ACZ	4.38	-3.67	104.40	66.63	-8.95	-15.24
EO	-1.02	-1.54	31.72	43.07	-6.14	-11.57
LN_TA	-6.54	2.68	19.36	52.64	-11.57	-19.57

Source: Computed by researcher using data extracted from annual reports of Industrial goods companies (2022)

4.2 Variance Inflation Factor (VIF)

The VIF test show in Table 3 is the test of multicollinearity assumption of the classical regression model. Multicollinearity is a problem that occurs when explanatory variables of the model share a linear relationship, and it may disturb the results of the regression model. If the value of VIF is less than 10 or 1 / VIF is greater than 0.1, the study found that there is no strong correlation between all predictions. Thus, the results of the analysis reported that no predictor with linear relationships is found. The VIF shows that there is no difficulty with multicollinearity among the variables in this study, indicating that there is no need to be concerned about the connection between the explanatory variables. Gujarati (2003) and Shan and McIver (2011) both agree that a VIF of less than 10 causes no concern. As a result, the model for industrial sector has no problem with multicollinearity.

Table 3: Variance Inflation factor (VIF)

	Industrial Goods	
VARIABLES	VIF	1/VIF
ACZ	1.25	0.798423
EO	1.16	0.859527
BZ	1.37	0.729619
BND	1.35	0.739362
BD	1.09	0.915725

CEPA	1.25	0.800330
IN_TA	1.09	0.919503
Tobin's Q	1.05	0.953903
ROA	1.04	0.961538

Source: Author's Computation (2022)

4.4 Descriptive Analysis

The descriptive statistics presents summary of all variables employed in the study for industrial goods. Statistics reported under this section include mean, standard deviation, minimum and maximum of the pooled observations of all variables across unit and time period i.e 13 industrial goods companies over 10 years period spanning 2011 to 2020. Summary of the descriptive statistics is presented in table 4. The minimum value of the variable ROA is 13 percent for industrial goods while the maximum, or largest, value of ROA is 87.000. The arithmetic mean across the observations is the most widely used measure of central tendency. It is commonly called the average. The descriptive statistics of all the variables was examined; the result showed that average ROA value of 41.7808 for industrial goods companies shows the average return from assets of each firm. This means that every industrial company listed on the Nigerian Stock exchange generates an average profit margin of 42% of the total assets which is a good indicator for industrial markets. For TobinsQ, which shows a value of 4.28 for industrial good companies, which means that the firms worth more than the cost of their assets since their average mean value is greater than 1.

Table 4: Descriptive Statistics for industrial companies

		Industrial Goods			
VARIABLES	N	Mean	Std. Deviation	Minimum	Maximum
ROA	130	41.7808	14.1505	13.0000	87.0000
TOBIN'S Q	130	4.2792	1.4816	1.1899	8.2257
BZ	130	9.2154	2.0192	4.0000	14.0000
BND	130	2.2538	1.0877	0.0000	5.0000
BD	130	1.6385	0.8353	1.0000	3.0000
CEPA	130	3.4154	0.8697	2.0000	5.0000
ACZ	130	3.8000	1.0373	1.0000	6.0000
EO	130	1.7769	0.9087	0.0000	4.0000
LN_TA	130	10.1788	1.2174	7.7444	14.737

Source: Researcher's computation using data extracted from annual reports of Industrial goods companies (2022)

Pool OLS Regression for Industrial Goods

Table 5 presents the OLS regression with the coefficients of explanatory variables. The explanatory variables board size, board gender diversity and audit committee size and natural logarithm of total assets exhibit positive coefficients, indicating that these variables possess a positive influence on financial performance of selected industrial goods measured by return on assets. Of all these variables, only the board size is statistically significant at 5 percent level. The negative coefficients of board independence, CEO pay slice and equity ownership of -15.3735, -57.8692 and -2.23094 indicating that for every unit increase in all these variables, return on assets reduces by the same amount. Of these variables, only the board independence is statistically significant.

The positive coefficient of LN_TA, which is statistically insignificant at 5 percent level indicating that the size has a positive effect on

return on asset. This brings out the question about size of large companies in industrial service sector in Nigeria as to whether the board reduces the size to derive personal benefits for the manager. The positive coefficients of board size, board independence, board gender diversity, audit committee size and natural logarithm of total assets indicating that corporate governance practices in these industries contribute positively towards return on asset.

Table 5: Pooled OLS Parameter Estimates (Industrial Goods- *ROA*) Series: *ROA BDSZ BIND BGD CEPS ADCZ EQO LN_TA*

Variable	Coefficient	Standard Error	T-Test Values	Probability
C	-1037078	87.0693	-1.19	0.236
BZ	11.9466	4.13128	2.89	0.003*
BND	-15.3735	7.66441	-2.01	0.047
BD	2.95638	12.9687	-0.23	0.820
CEP	-57.8692	160.6145	-0.36	0.719
ACZ	5.19638	8.286813	0.63	0.532
EO	-2.23094	8.703166	-0.26	0.798
LN_TA	4.01948	6.52527	0.62	0.539
R-square_ 0.4986, Adjusted R-square_0.4233, F-statistics_ 1.59, Prob(F-stat)_0.0340				

Source: Field Survey, 2022

Table 6 presents the OLS regression with the coefficients of explanatory variables for industrial goods companies (Tobin's Q as a measure of performance). The explanatory variables board size, board independence, board gender diversity, CEO pay slice and natural logarithm of total assets (firm size) exhibit negative coefficients, indicating that these variables possess a negative influence on financial performance of selected industrial goods measured by Tobin's Q. Of all these variables, the board independence and audit committee size are statistically significant at 5 percent level. The negative coefficients of board size, board independence, board gender diversity, CEO pay slice and natural logarithm of total assets of -0.40822, --8.889663, -89.43894 and -4.45602 indicating that for every unit increase in all these variables, Tobin's Q reduces by the same amount. The negative coefficient of LN_TA, which is statistically insignificant at 5 percent level indicating that the size has a positive effect on TobinsQ. This brings out the question about size of large companies in manufacturing sector in Nigeria as to whether the board increase the size to derive personal benefits for the manager. The positive coefficients of audit committee size and equity ownership of 8.576464 and 4.75654 indicating that corporate governance practices in these industries contribute positively towards TobinsQ. R-square statistics reported in table 4.11 stood at 0.1997 which implies that about 20% of the systematic variation in TobinsQ can be jointly explained by corporate governance variables including board size, board independence, board gender diversity, CEO pay slice, audit committee size, equity ownership and natural logarithm of total assets. F-statistics reported in table 4.11 stood at 4.35 alongside probability value of 0.0002 which authenticate the significance of the joint influence of corporate governance variables on financial performance of industrial goods companies measured in terms of TobinsQ

Table 6: Pooled OLS Parameter Estimates (Industrial Goods-TobinsQ) Series: *TOBIN'S Q BDSZ BIND BGD CEPS ADCZ EQO LN_TA*

Variable	Coefficient	Standard Error	T-Test Values	Probability
C	3.369949	42.63672	0.08	0.937
BZ	-0.4082208	2.023036	-0.20	0.840
BND	-8.889663	3.753161	-2.37	0.019*
BD	-89.43894	78.65084	-1.14	0.258

CEPA	-89.43894	78.65084	1.23	0.134
ACZ	8.576642	4.057946	2.11	0.037*
EO	4.756942	4.261829	1.12	0.267
LN_TA	-4.456015	3.195341	-1.39	0.166
R-square= 0.5997, Adjusted R-square=0.4988, F-statistics= 4.35, Prob(F-stat)=0.0002				

Source: Field Survey, 2022

Examining the effects of board characteristics on financial Performance of Selected Industrial goods company in Nigeria

Table 7 showed the results of the fixed effect and GLS random effect estimation of Pooled OLS. The result of the estimation can only be reported but the more appropriate model can be achieved through the Hausman test of significance value. The result showed that the coefficient of board size is positive and statistically significant at the level of 5% in case of ROA. The result reported an R-square value of *0.2650,* which connote that about 27% of the systematic variation in return on asset of selected industrial goods companies can be explained by variation in corporate governance mechanisms included in the study. This shows that very small of the variation was explained by the joint explanatory variables. The result of random effect estimation also shows similar effect and the reported R-square value of *0.2650.*

Table 7: Fixed Effect and Random Effect (Industrial Goods Companies- ROA)

	Fixed Effect Model				Random Effect Model			
	Dependent variables (ROA)				Dependent variables (ROA)			
Variable	Coefficient	Standard Error	T-Test Values	Probability	Coefficient	Standard Error	T-Test Values	Probability
C	-123.2219	89.87255	-1.37	0.173	-111.34	87.09144	-1.28	0.201
BZ	12.04402	.4.25344	-1.86	0.005*	11.9658	4.115791	2.91	0.004*
BND	-14.42488	7.760997	0.10	0.066	-14.97157	7.585778	-1.97	0.048*
BD	1.280499	13.21933	-0.45	0.923	2.31584	12.86796	0.18	0.015
CEPA	-74.26902	166.3979	0.78	0.656	-63.94794	160.4253	-0.40	0.690
ACZ	-6.53284	8.378805	-0.57	0.437	5.729888	8.196719	0.70	0.485
EO	-5.0983	8.998904	0.88	0.572	-3.356943	8.684115	-0.39	0.699
LN_TA	5.930198	6.740979	-1.37	0.381	4.769854	6.51039	0.73	0.464
R-square= 0.3419, Adjusted R-square=0.3217, F-statistics= 2.67, Prob(F-stat)=0.0136					*R-square= 0.2650, Adjusted R-square=0.2172, F-statistics= 2.95, Prob(F-stat)=0.0072,Wald* chi2(7)=30.44			
Hausman test chi2(7)=3.09, Prb o>chi2 = 0.8764								

Source: Field Survey, 2022

Table 8 reported the coefficient estimates of the of both fixed and random effect for industrial goods. Table 8 reported coefficient estimates of .2027118, .9.16517, 27.6694, -101.0293, 8.79362, 3.95954, -4.03766 for BZ, BND, BD, CEPA, ACZ, EO and LN_TA for industrial goods using TobinsQ as metrics for financial performance under industrial goods. The result revealed that only the board gender diversity is positive and statistically significant at 5% level of significance. The result reported an R-square value of 0.2941 which connote that about 29% of the systematic variation in return on asset of selected industrial goods companies can be explained by variation in corporate governance mechanisms included in the study. This shows that not much of the variation was explained by the joint explanatory variables.

Random effect model showed coefficients estimates of 0.408221, -8.8897, 28.1826, -89.4394, 8.57664, 4.75694, -4.45602 for BZ, BND, BD, CEPA, ACZ, EO and LN_TA using TobinsQ as metrics for financial performance under industrial goods. The result reported an R-square value of *0.2650,* which connote that about 27% of the systematic variation in Tobin's Q of selected industrial goods companies can be explained by variation in corporate governance mechanisms included in the study. This shows

that not much of the variation was explained by the joint explanatory variables.

Table 8: Fixed Effect and Random Effect (Industrial goods-TobinsQ)

Fixed Effect Model					Random Effect Model			
Dependent variables (Tobin's Q)					Dependent variables (Tobin's Q)			
Variable	Coefficient	Standard Error	T-test Values	Probability	Coefficient	Standard Error	T-test Values	Probability
C	-3.772148	44.85445	-0.08	0.933	3.369949	42.63672	0.08	0.937
BZ	.2027118	2.122846	0.10	0.924	-0.4082208	2.023036	-0.20	0.840
BND	-9.165165	3.873432	-2.37	0.020	-8.889663	3.753161	-2.37	0.018*
BD	27.66936	6.59763	4.19	0.000	28.18257	6.350585	4.44	0.000*
CEPA	-101.0293	83.04745	-1.22	0.226	-89.43894	78.65084	-1.14	0.255
ACZ	8.793615	4.181774	2.10	0.038	8.576642	4.057946	2.11	0.037*
EO	3.9595839	4.491258	0.88	0.380	4.756942	4.261829	1.12	0.264
LN_TA	-4.037662	3.364352	-1.20	0.233	-4.456015	3.195341	-1.39	0.163
R-square= 0.2941, Adjusted R-square=0.2503, F-statistics= 6.72, Prob(F-stat)=0.0000					*R-square= 0.2650, Prob(F-stat)=0.0001, Wald chi2(7)=30.44*			
	Hausman Test: chi2(7)= 1.61 Prob>chi2 = 0.9783							

V. DISCUSSION OF FINDINGS

Table 7 reported that board size and board independence exert a positive significant influence on performance measured in terms of return on assets while in table 8, performance measured in terms of Tobins Q tend to increase by 28.18257 and 8.576642 for every one percent increase in the board independence and audit committee size for industrial goods. The participation of seasoned audit committee members will help to decrease financial mismanagement and improve quality oversight. As a result, having experienced audit committee members should be a top priority for industrial firms. The discovery made in this study about the interrelationship between board qualities, audit committee and performance is in agreement with an evaluation based on a-priori expectation. This finding supports recent findings by Peizhi and Ramzan (2020), Khan and Subhan (2019), Kung and Munyua, (2016), Morellec, Nikolov, and Schurhoff (2012) that board composition has a beneficial impact on a company's financial performance. The result disagreed with the findings of Opanga (2013). Through deductive reasoning, it could be established from this discovery that any industrial firms in the country can maximize their performance by increasing proportion of board size, board independence and board gender diversity sitting on the board.

VI. CONCLUSION AND RECOMMENDATIONS

From the discoveries made in the study, the findings of Panel regression reported that the board size and board gender diversity have a positive and significant effect on the accounting-based measure of performance of industrial firms. While in the case of market-based measure of performance, board independence, board gender diversity and audit committee size are positive and statistically significant. These findings support the agency's assumption that independent directors, carefully selected board members (female board members), and audit committee oversight favourably impacted company performance for industrial goods companies. Certainly, these findings suggest that industrial firms should exercise caution when assembling boards of directors with varied members and incorporating various resources in order to pique directors' interest in the firm's main mission. As a result, industrial firms should devise ways to ensure executive directors' independence, as this will almost result in greater favourable changes in performance than dependent directors.

Overall, the study found a positive and significant relationship of corporate governance structures, comprised of board size, board independence, board gender diversity and audit committee size

with ROA and Tobin's Q for industrial goods companies. Furthermore, it is therefore recommended that industrial firms in the country should put in place strict evaluation mechanism to identify the most appropriate board characteristics that will help to improve performance.

REFERENCES

1. Adegbite, E. (2015). Good Corporate Governance in Nigeria: Antecedents, Propositions and Peculiarities. *International Business Review,* 24, 319-330.
2. Adenikinju, A. F. (2005). Productivity performance in developing countries. United Nations Industrial Development Organization. Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria www.unido.org · --wwqww33q
3. Al-Thuneibat, A. (2006) Audit in the light of the international auditing standards and regulations and local laws: the theory and application. Amman, Jordan University publications.
4. Andersen, R. (2008). Modern Methods for Robust Regression. Los Angeles: Sage University Paper Series on Quantitative Applications in the Social Sciences. 07–152.
5. Arens, A., Elder, R. and Beasley, M. (2009). Auditing and Assurance Services: An Integrated Approach. Pearson.
6. Bebchuk, L. Martijn Cremers, A. J. and Peyer, Urs. C (2011).The CEO pay slice. Journal of Financial Economics. **102 (1):** 199-221
7. Bino A. and Tormar. S (2010) Corporate Governance and Bank Performance; Evidence from Jordanian Banking Industry
8. Brennan, N. and Kelly, J. (2007). A Study of Whistleblowing among Trainee Auditors. The British Accounting Review. **39:** 61 – 87
9. Bhagat, S. and Black, B. (2002). The Non-Correlation between Board Independence and Long Term-Firm Performance. *Journal of Corporation Law,* 27, 231-274
10. Crowther D and Seifi S (2010). Corporate Governance and Risk Management; Copenhagen; Ventus.
11. Emeka, E.E. and Alem, I.E.B. (2016). The Effect of Corporate Governance on Banks' Financial Performance in Nigeria. IOSR Journal of Business and Management, **18** (3), 99- 107.
12. Emiliano, Di C., (2017). Board of Directors and the Limits of the Conflict of Interest Definition within Codes of Ethics. *Frontiers in Management Research*, **1** (4). https://dx.doi.org/10.22606/fmr.2017.1400
13. Fama, E. and Jensen, M. (2018). Separation of Ownership and Control. *Journal of Law and Economics*.1983; **8** (1): 301–326.
14. Farah, N. Farrukh, I. and Faizan, N. (2016). Financial Performance of Firms: Evidence from Pakistan Cement Industry. Journal of Teaching and Education, CD-ROM. ISSN: 2165-6266. **5** (1):81–94
15. Gholami, H. and Habeeb, A. S. (2019). Combating corruption in Nigeria: the emergence of whistleblowing policy. *Journal of Financial Crime*; London. 26 (1): 131-145. DOI: 10.1108/JFC-10-2017-0102
16. Hermalin, B. and Weisbach, M. (2003). Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature', in: Economic Policy Review – Federal Reserve Bank of New York **9** (1): 7-26
17. Ibe, H. C. A, Ugwuanyi, G., O. , Okanya, O. C. (2017). Effect of Corporate Governance Mechanisms on Financial Performance of Insurance Companies in Nigeria. *Journal of Finance and Accounting,* 2017, 5 (3): 93-103. Available online at http://pubs. Sciepub. com/jfa/5/3/4.©Science and Education Publishing DOI:10.12691 /jfa-5-3-4
18. Iyanuoluwa, F. (2019). Effects of corporate governance mechanisms early submission of financial reports (listed deposit money banks in Nigeria). Published thesis, Dominion University
19. Jonathan, F. A (2013). Corporate Governance and Productivity in Nigerian Manufacturing Industries. *EJBO Electronic Journal of Business Ethics and Organization Studies*. 18 (2)
20. Jonathan, L., (2017). Functions of Corporate Governance.https://bizfluent.com/info-8044296-functions-corporate-governance.html
21. John, K., & Senbet, L. W. (1998). Corporate governance and board effectiveness. *Journal of Banking & Finance*. 22(4), 371- 403.

22. Khan, W. and Subhan, Q. A., (2019). Impact of board diversity and audit on firm Performance. *Cogent Business & Management*. 6 (1): 1–16.
23. Klein, A. (2002). Audit committee, board of director characteristics and earnings management, *Journal of Accounting and Economics*. 33: 375-400.
24. Kuen-Chang, L., Ta-Cheng, ., Chih-Hao Y., Pei-Hsun C.(2019). A Comprehensive Framework for Empirical Research on the Relationship between Corporate Governance and Corporate Performance. Journal of Accounting, Finance and Management Strategy. 14 (2): 31-64
25. Kung J. N. and J. M. Munyua, (2016). Relationship between Corporate Governance Practices and Agency Costs of Manufacturing and Allied Firms Listed in Nairobi Securities Exchange. *IOSR Journal of Economics and Finance (IOSR-JEF)*. **7** (2). 58–68.
26. Lovelock, J., (2009). The Vanishing Face of Gaia. Basic Books, p. 163. ISBN 978-0-465-01549-8
27. Luqman, O. (2015), The Effect of Global Financial Crisis on Nigeria Economy. Available at SSRN: https://ssrn.com/abstract=2673947 or http://dx.doi.org/10.2139/ssrn.2673947.
28. Mak, Y. T. and Yuanto, K. (2005).Size Really Matters: Further Evidence on the Negative Relationship Between Board Size and Firm Value. *Pacific-Basin Finance Journal*. 13 (3): 301-318. DOI: 10.2139/ssrn.303505
29. Marcel, B., Ortan T. and Otgon C. (2010). Information Asymmetry Theory in Corporate Governance Systems, Annals of Faculty of Economics, University of Oradea, Faculty of Economics. **1** (2): 516-522.
30. Morellec, E., Nikolov, B. and Schurhoff, N. (2012). Corporate Governance and Capital Structure Dynamics. *The Journal of Finance*. **67** (3): 803–848.
31. Murphy, M. J., & Smolarski, J. M. (2020). Religion and CSR: An Islamic "political" model of corporate governance. Business and Society, 59(5), 823-854. https://doi.org/10.1177/0007650317749222
32. NBS (2020). The effects of Nigeria's closed borders on informal trade with Benin.https://www.brookings.edu/blog/africa-in-focus/2019/10/29/the-effects-of-nigerias-closed-borders-on-informal-trade-with-benin/
33. Neeti, M, Payal, K, Satish C, T, and Radha M., C. (2020). Corporate Governance, Capital Structure an Financial Performance: An Analysis of Indian Automobile Industry. *The IUP Journal of Corporate Governance*. **19** (2): 2020
34. Odunayo, F, O., (2019). Effect of Corporate Governance on Firm Performance in Nigeria. Acta Universitatis Danubius. Œconomica. **15** (6)
35. OECD (2014), Risk Management and Corporate Governance, Corporate Governance, OECDPublishing.http://dx.doi.org/10.1787/9789264208636-en
36. Ogbonna, M (2020). Corporate Governance Challenges in Nigeria: The way forward. Availableat<https://m.guardian.ng/features/law/corporate-governance-challenge-in-nigeria-the-way-forward> accessed 9 January 2020.
37. Opanga, B. O. (2013). The relationship between corporate governance and financial performance: a study of insurance firms in Kenya. University of Nairobi School of business. D61/62892/2011
38. Osemeke, N. and Okere R. (2020). The Role of Board in Corporate Social Responsibility: A Normative Compliance Perspective. *Corporate Ownership and Control,* 17(4), 152-165.
39. Owolabi, S. A (2015). Corporate Governance Practices in Nigeria a public lecture delivered at the institute of management, remo chapter. held on sunday, May 3, 2015 at the 500 lecture theatre, college library building, oouth sagamu
40. Reed, D. (2002). Corporate Governance Reforms in Developing Countries. *Journal of Business Ethics*. **37** (3): 223-247
41. Ross, S. (2017). The Determination of Financial Structure: The Incentive Signalling Approach. *Bell Journal of Economics,* 8, 23-40.
42. Saad, N.M. (2010). "Corporate Governance Compliance and the Effects to Capital Structure in Malaysia", *International Journal of Economics and Finance*, 2 (1).
43. Sanda, A.U, Mikailu, A.S and Garba, T. (2005). Corporate governance mechanisms and firm

financial performance in Nigeria‖, *AERC Research Paper* 149, Nairobi.
44. Shleifer, A., & Vishny, R. (2017). A Survey of Corporate Governance. *Journal of Finance* 52. 737-783.
45. Tsamenyi, M., Enninful-Adu, E., & Onumah, J. (2017). Disclosure and Corporate Governance in Developing Countries: Evidence from Ghana. *Managerial Auditing Journal*, **22** (3): 319-334.
46. Vargas-Hernandez, J. G., & Gonzalez, D. C. (2018). The discussion on stakeholders in contrast with the shareholders theory: Reconciliation to a conscious capitalism. SAMVAD, 14, 55-57.
47. Velnampy, T and Pratheepkanth.P (2012). Corporate Governance and Firm Performance: A Study of Selected Listed Companies in Sri Lanka; *International Journal of accounting research U.S.A*.
48. Yakasai, G. A (2020). Corporate governance challenges in Nigeria: The way forward'. Availableat<https://m.guardian.ng/features/law/corporate-governance-challenges-in-nigeria-the-way-forward/> accessed 11 January 2020
49. Yameen, M., Farhan, N. H., Tabash, M. I. (2019). The impact of corporate governance practices on firm's performance: Empirical evidence from Indian tourism sector. *Journal of International Studies* **12** (1): 208-228. doi:10.14254/2071- 8330.2019/12-1/14
50. Yermark B. (1996). Higher market valuation for firms with a small board of directors. *Journal of Financial Economics*, **40** (2): 185-211.

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Dr. Rasha Abdulrazzak Waheeb

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Design/methodology/approach: A case study approach was adopted, with thirty construction projects selected from the Baghdad region, of different types and sizes. For the case of the study, the participants in the projects provided data about the projects through the data collection tool distributed through the questionnaire directed to them. Statistical data analysis was used to build statistical relationships between time and cost delay ratios and delay factors.

Findings: Major delay factors identified were contractor failures resulting in schedule overruns, re-designs, poor planning and frequent change orders, security issues, low bid selection, weather factors, and owner failures.

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*Findings*Major delay factors identified were contractor failures resulting in schedule overruns, re-designs, poor planning and frequent change orders, security issues, low bid selection, weather factors, and owner failures.

Originality/value While many studies have looked into factors causing delays and cost overruns, few have studied projects in conditions such as have dominated Iraq the last decade and a half during pandemic as external factors. As such, this study offers unique insights into factors that need to be taken into account when implementing projects in such a context.

Keywords: delay causes (factors), construction projects, project management, emergency reconstruction during pandemic.

I. INTRODUCTION

In that study, we researched the delay factors for construction project acts on a large scale, as they are a major problem in the construction sector worldwide. Knowing that there is a large body of research that has already been conducted for these factors with different causes and environment, some people may be inclined to believe that there is no need for more work in this field, but this is not true, as scientific research must continue to find the best ways and conclusions to reduce This phenomenon is the stumbling and sluggishness of projects, as this affects money and time, emphasizing that time is money, and with all that, the reasons for delay are not fixed, as they change with the development of project methods. As a result, new studies continue to add to the body of knowledge, thus providing practitioners and workers in the construction and project sector with additional insights into the causes and enlightening them on the best ways to address this scourge, namely the stumbling of projects and identifying the most important causes of delay. It is also an example of the field of research where specific factors play a prominent role in relying On the geographical location and context of the projects under study. As a result, this region contains a rich body of literature that reports findings from specific countries or regions, and while some of these findings have limited value outside of that specific geographic region, they often provide new insights that can be transferred to other regions. These are the main reasons for conducting new studies and informing the international research community. The construction delay was determined by Trauner et al. (2009) as: "Achieving something later than expected; to cause something to be done later than planned; or not to act in time. It is what is delayed that determines whether the project or Any other deadline, such as a major event, will be completed late." There are many factors that contribute to delays in construction projects. Delays occur on most construction projects and

the degree of delay varies widely from project to project. It is necessary to identify the actual factors causing delays in order to reduce, mitigate and avoid them in any construction project (Asnaashari et al. 2009). The risk of delay can only be minimized when the causes are identified and the actions required to prevent delays are implemented (Pourrostam and Ismail 2011; Yang et al. 2013). To improve project performance, it is necessary to study delay factors that affect the success of projects (Salunkhe and Patil 2014).

This paper is one contribution to this community, by reporting from a study into a selection of 30 case projects from the Baghdad area in Iraq. Following war and terror attacks, the conditions for undertaking construction projects in this area are challenging. Some of the challenges faced could be unique to Baghdad and Iraq, more likely they are shared areas that have been plagued by war and terror. Other issues are probably shared across a wider range of conditions and contexts and can thus offer new learnings to the project management area at large. This study aimed to identify the factors in construction projects in Iraq that affect time, quality and cost performance, and identify solutions to address these, researchers predicted pandemic SARS Covid-19 as external factor of delays in projects in this study, *Waheeb et al 2022* discussed risk management strategies caused by pandemic-related (Covid-19) suspensions in thirty-six engineering projects of different kinds and sizes selected from countries in the middle east and Iraq as a case study. Thirty projects were selected in different areas of construction based on their different levels of vulnerability to delays. It was designed by using a mixed method, with different methods applied. Mathematical and statistical data analysis was used to construct models to predict delay in time and cost of projects before they started. Multiple regression was chosen to build statistical relationships between time and cost delay ratios and delay factors, and artificial neural networks analysis as a mathematical approach, these models are likely to help decision makers in construction projects to find solutions to delays before they cause serious problems in the projects being implemented.

II. REVIEW OF EXISTING LITERATURE

As part of a study into delay factors in a Norwegian context, Zidane and Andersen (2018) undertook a broad review of existing literature reporting from studies centered around causes of delays in large-scale engineering projects, in construction projects particularly. Table 1 describes a selection of the most relevant studies done worldwide, sorted by country of analysis. This provides clear evidence of the global interest in this topic, as mentioned in the introduction, and shows that delay factors have been studied extensively. It is worth noticing that a previous study has been undertaken, a couple of years earlier than the study reported in this paper. As we will show later, this study was designed using input from clients, contractors and consultants with experience from construction projects in Iraq, but without studying specific case projects.

Table 1: Countries of analysis and sources of selected existing studies into delay factors

Country	Authors
Afghanistan	Gidado and Niazai (2012)
Australia	Wong and Vimonsatit (2012)
Bangladesh	Rahman et al. (2014)
Benin	Akogbe et al. (2013)
Botswana	Adeyemi and Masalila (2016)
Burkina Faso	Bagaya and Song (2016)
Cambodia	Durdyev et al. (2017); Santoso and Soeng (2016)
Egypt	Abd El-Razek et al. (2008); Aziz (2013); Aziz and Abdel-Hakam (2016); Ezeldin and Abdel-Ghany (2013); Marzouk and El-Rasas (2014)
Ethiopia	Zewdu (2016)

Ghana	Amoatey et al. (2015); Frimpong et al. (2003); Frimpong and Oluyowe (2003); Lugar and Agyakwah-Baah (2010)
Hong Kong	Lo et al. (2006)
India	Doloi, Sawhney, and Iyer (2012); Doloi, Sawhney, and Rentala (2012)
Indonesia	Alwi and Hampson (2003); Kaming et al. (1997)
Iran	Abbasnejad and Izadi Moud (2013); Fallahnejad (2013); Khoshgoftar et al. (2010); Pourrostam and Ismail (2011); Pourrostam and Ismail (2012); Saeb et al. (2016)
Iraq	Bekr (2015); Waheeb and Andersen (2022)
Jordan	Al-Momani (2000); Odeh and Battaineh (2002); Sweis (2013); Sweis et al. (2008)
Kenya	Seboru (2015)
Kuwait	Koushki et al. (2005)
Lebanon	Mezher and Tawil (1998)
Libya	Shebob et al. (2011); Tumi et al. (2009)
Malawi	Kamanga and Steyn (2013)
Malaysia	Abdul-Rahman et al. (2006); Alaghbari et al (2007); Mydin et al. (2014); Ramanathan et al. (2012); Sambasivan and Soon (2007); Tawil et al. (2013)
Nigeria	Aibinu and Odeyinka (2006); Akinsiku and Akinsulire (2012); Dlakwa and Culpin (1990); Mansfield et al. (1994); Odeyinka and Yusif (1997); Okpala and Aniekwu (1988); Omoregie and Radford (2006)
Oman	Ruqaishi and Bashir (2013)
Pakistan	Gardezi et al. (2014); Haseeb, Lu, Bibi et al. (2011); Haseeb, Lu, Hoosen et al. (2011); Rahsid et al. (2013)
Palestine	Enshassi et al. (2009); Mahamid (2013); Mahamid et al. (2012)
Portugal	Arantes et al. (2015); Couto and Teixeria (2007)
Qatar	Emam et al. (2015); Gündüz and AbuHas
Rwanda	Amandin and Kule (2016)
Saudi Arabia	Al-Khalil and Al-Ghafly (1999); Al-Kharashi and Skitmore (2009); Alkhathami 2004); (Assaf and Al-Hejji (2006); Elawi et al. (2015
Singapore	Ayudhya (2011); Hwang et al. (2013)
South Africa	Aiyetan et al. (2011); Baloyi and Bekker (2011); Oshungade and Kruger (2017)
South Korea	Acharya et al. (2006)
Syria	Ahmed et al. (2014)
Taiwan	(Yang et al. (2010); Yang et al. (2013); Yang and Wei (2010
Tanzania	Kikwasi (2013)
Thailand	Ogunlana et al. (1996); Toor and Ogunlana (2010)
Turkey	Arditi et al. (1985); Gündüz et al. (2013a); Gündüz et al. (2013b); Kazaz et al. (2012)
UAE	Faridi and El-Sayegh (2006); Motaleb and Kishk (2013); Ren et al. (2008); Zaneldin (2006)
Uganda	Alinaitwe et al. (2013); Muhwezi et al. (2014)
UK	Elhag and Boussabaine (1999); Nkado (1995)
United States	Tafazzoli (2017); Ahmed et al. (2003a); Ahmed et al. (2003b)
Vietnam	Kim et al. (2016); Le-Hoai et al. (2008); Luu et al. (2009); Luu et al. (2015)
Zambia	Kaliba et al (2009); Muya et al. (2013)
Zimbabwe	Nyoni and Bonga (2017)

Looking at details from some of these studies, Gould (2012) carried out a study into contractor responsibility for delay; a similar study was done by Keane and Caletka (2015). Enshassi *et al.* (2010) studied the causes of variation orders in construction projects in the Gaza Strip, which they considered one of the major delay factors. Other delays were caused by borders/roads closure leading to materials shortage, unavailability of resources, low level of project leadership skills, escalation of material prices, lack of highly experienced and qualified personnel, and poor quality of available equipment and raw materials, those were the major factors affecting delays.

Another study by Mahamid *et al.* (2012) in the Gaza Strip identified more than 52 causes of delay, where the top twelve were: (1) the political

situation; (2) segmentation of the West Bank and limited movement between; (3) lowest bid price; (4) delay payments ; (5) equipment shortage ; (6) owner decision making delays; (7) low of laborers productivity; (8) delay in approving sample materials; (9) poor communication by owner with other construction parties; (10) conflict between contractor and other parties; (11) lack of equipment efficiency; and (12) difficulties in financing project by contractor. Sepasgozar *et al.* (2015) investigated the major delay causes in Iranian construction projects and listed the top nine factors: (1) contractor organization attributes; (2) labor shortage; (3) external factors; (4) material deficiency; (5) owner attributes; (6) design issues; (7) technology restriction; (8) consultant attributes; and (9) project attributes. Compared to the many other studies, some of their factors are broader in description—for example, contractor organization attributes, this may mean poor planning, site management, etc. and in many other studies these factors are not grouped under contractor attributes as a single set; the same is the case for owner attributes.

Avoiding construction delays in developing countries may include the development and maintenance of planning, coordination, control, organizing, stimulating program resources, and supervising component projects. Akogbe et al (2013). Assaf and Al-Hajji (2006) found 73 causes of delay when they examined delays in large construction projects in Saudi Arabia, where the most common reason for delays was change orders. They also found that 70% of projects experienced a timeout and 45 out of 76 projects were considered late. Al-Khathmi 2004 examined the interrelationship between success and delay factors in construction management in the Kingdom of Saudi Arabia. It was found that sound organizational planning efforts and a competent and experienced project manager have a helpful role in avoiding many critical delay factors, while adherence to safety precautions and procedures, project team motivations and goal orientation was the least influential among the seven success factors. Hammadi and Nawab (2016) found that unexpected problems encountered during conception, design and construction often lead to undesirable delays to project completion and that the study of delay factors in Saudi Arabia resulted in this slowness and lack of constraints; incompetence. the design; market and appreciation; government financial capacity; And workers are the most important influencing factors that cause delays. Al-Aghbari et al. (2007) conducted a similar study, in Malaysia for 31 delay factors, where it was an inferential approach with predefined delay factors. The main delay factors from the survey results were financial and economic problems, contractor financial problems, late supervision and slow decision-making, material shortages, poor site management, construction errors and defective work, delays in delivery of materials to site, and shortages. From the consultant's experience. In their study of Libyan construction projects, Tommy et al. (2009) that the main causes of delays in construction projects are lack of proper planning, lack of effective communication, lack of materials, design errors, and financial problems. In Jordan Sweis et al (2008) identified the reasons for the delay and the results of their study showed that financial difficulties faced by contractors and many change orders by the owner are the main reasons for construction delays, Aziz (2013) found 99 factors that caused different types of delays in construction projects and categorized Factors and categories most contributing to delay due to their materiality index where delay in payments (finance problems) was the main delay factor attributed to the project owner.

The main causes of delays in the building construction industry have been identified based on their study in Florida Sid et al. (2003). The results of their study showed that issues related to the design (owner and consultant) were the main reason for the delay. Sambasivan and Soon (2007) conducted a study on the causes of delays in Malaysia and it was a survey and they submitted a questionnaire in which 150 respondents participated, the study identified the top ten reasons for delay from a list of 28. Al-Momani (2000) found based on research on construction delays for 130 public projects in Jordan , that weather and location are among the most

important factors causing delays in delivery, economic conditions and increase in quantity are the critical factors that cause construction delays in the Jordanian construction industry. It included 130 participants. Respondents generally agreed that financial group factors ranked first among the main causative factors. Also, Afram et al. (2015) examined the causes of delays in medium and high-construction housing projects in Ghana and found that obtaining a permit from local authorities was the first delay factor, followed by poor site management and supervision while the delay factors were rated at least insufficient for cost and related details from consultants. In Ghana, Frimpong et al (2003) found that monthly payment difficulties from agencies, contractor mismanagement, material procurement, poor technical performance, and escalating material prices were the main delaying factors and reasons for cost overruns in establishing groundwater projects.

Using the relative index to classify the sources of delay and according to their importance. Tawil et al (2012) found that the primary source of construction project delays in Malaysia is the lack of financial competence of the project contractor, late payments, delays in client or consultant approval of the study, other issues related to failed contractor management, scarcity of building materials and new instructions for additional construction work. . In Iraq (Bakr, 2015) it was found that delays were significant, even to the extent that projects are temporarily or permanently abandoned. Considering the delay factors presented by three stakeholder groups (clients, consultants and contractors), the most important causes of delay were found and from Chief among them are security reasons, government changes to regulations and bureaucracy, holidays (all three of these factors are external to projects), followed by low bid problems, design changes, payment delays, local community problems, and lack of owner experience. The latter is distributed to the three stakeholders in terms of being the source of problems, and in terms of the overall contribution to delay, clients are a more dominant source of delay than consultants and contractors. Waheeb and Anderson (2022) emphasized in their advanced methodological study, which included collecting project data from a questionnaire that was used to build statistical relationships between ratios

Time, cost and delay factors in post-disaster projects. They found in their study that the most important delay factors that were identified are contractor failure, re-designs and ill-thought-out planning, frequent change orders, security issues, low price assignment, weather factors, and owner failures. Some are in line with findings from similar studies in other countries and regions, but some are unique to the Iraqi project sample, such as security issues and the selection of low-price bids. While many studies have examined the factors causing delays and cost overruns, this study provides unique insights into the factors that should be considered when implementing post-disaster emergency reconstruction projects in areas affected by war and terrorism. Figure 1 represents the major delay factors most cited in the studies included in Table 1. However, it is very important to note that all studies in Table 1 contain a list of delay factors, the number of which varies from ten delay factors - eg. Amandin and Kule (2016) in Rwanda—to a list of over 80 workers, in South Korea—Acharya et al. (2006) and in Afghanistan Gidado and Niazai (2012). The frequencies in Figure 1 are based on the delay factors that are among the top ten delay factors in the original studies. If we go beyond that, the frequency changes: for example, “design changes during build/change orders” were mentioned in all studies, which means the frequency would be more than 77.

Figure 1: Most cited major delay factors

After having presented the data from our study, we will revert to the findings in Figure 1 when discussing the delay factors identified from our case project sample.

III. RESEARCH METHODOLOGY AND DATA COLLECTION

The main objective of this study was to identify, as well as investigate solutions, for different kinds of delays in construction projects in Iraq. Research of this type, like the studies reported in the previous chapter, must rely on empirical data from the field. The data can be of different types, typically:

- In the form of more objective, quantitative project data from case projects
- Or more subjective data collected from respondents, either quantitative or qualitative

- Observational data from case projects, typically more qualitative in nature Such data can be collected in various ways
- Taken from case project data registers, gathered either by the researchers themselves or the data is given to the researchers by the project organizations, often using a questionnaire or data collection sheet
- Through a survey, administered digitally, on paper or verbally
- Through interviews of some type, individually or with groups
- Case project observations, often through some kind of trailing or action research

Each of these has advantages and disadvantages and the choice of approach is often dictated by the access researchers have to different types of data. In our study, we created a design that combined two types of data collected through a survey. Case project data was collected from thirty case projects using a data collection form/questionnaire. The form partly requested background data about the case project, partly quantitative register data about planned and actual progress and cost, and information about quality problems during the project, and partly predominantly qualitative data about delay causes. The delay causes were not collected as free text, but by asking the case project representatives to select from a predefined set of delay causes identified partly in the literature review and partly in field studies of Iraqi construction projects. respondents were asked to rank the delay causes in terms of their importance in causing delays in the case projects.

Since different participants in a project often have differing views about these data points, the data was collected from more than one source in each case project. A total of 300 data collection forms was distributed to case projects in the Baghdad area. 250 completed forms were received and included in the data set; the remaining fifty were either not returned or returned incomplete and therefore rejected from the sample. The sample was designed to be comprehensive and to represent a varied sample in terms of what was being built, location throughout the city of Baghdad, and which agency was such as ministries of Industry, Education, Higher Education and scientific research, Science and Technology, Health, housing and rebuilding, Endowments, Displacement and Migration, Foreign Affairs, Interior, and Baghdad governorate (the project owner). The cost of these projects ranged between 95 million -120 billion Iraqi dinars, roughly USD 75,000-100,000,000. As we will explain shortly, this data was used to conduct statistical analyses about the occurrence and severity of cost overruns, time delays, and quality problems.

3.1 Data Analysis

Another aspect of the research approach pertains to the data analysis undertaken of the selected case project data. different types of statistical analyses were performed to understand the extent and causes of cost, quality, and time overruns/problems. To design the statistical analysis approach, we reviewed work done by other researchers in studies with similar purposes as ours.

In the cost estimation we find regression estimation models are widely used. They are effective due to a well-defined mathematical approach, as well as being able to explain the significance of each variable and the relationships between independent variables. Aiyetan et al. (2012) applied linear regression modeling to find the relationship between initial estimated and final achieved construction time in South Africa. In addition, Blyth and Kaka (2006) used this approach to forecast the cash flow in construction projects and they found an accurate result to predict cost of projects. Sonmez (2004) developed conceptual cost models for continuing care retirement community projects with regression analysis and neural networks, where the results obtained from the models were compared for closeness of fit and prediction performance. by using regression analysis and neural network techniques simultaneously It was shown that a satisfactory conceptual cost model (which fits the data adequately and has a reasonable prediction performance) could be achieved. Abu Hammad, et.al (2008) developed a model to predict project

cost and duration based on historic data of similar projects, allowing project managers to use the model in the planning phase to validate the schedule critical path time and project budget. Lowe et al. (2006) developed linear regression models in order to predict the construction cost of buildings, based on 286 sets of data collected. They identified 41 potential independent variables, and, through the regression process, showed five significant influencing variables such as gross internal floor area (GIFA), function, duration, mechanical installations, and piling in the United Kingdom.

It must be remembered that an estimated project cost is not an exact number, but it is an opinion of probable cost. The accuracy and reliability of an estimate is totally dependent upon how well the project scope is defined and the time and effort expended in preparation of the estimate. a parametric cost-estimating model for highway projects by using a neural network approach to analyze construction cost data developed by Hegazy et al , (1998), They introduced two alternative techniques to train the network's weight factors: simplex optimization (Excel's inherent solver function) and GAs (genetic algorithms).

In our case, we built a model using a statistical approach where liner regression was tested for the collected data in two models; the first one to reveal the relationship between the actual and the planned time and the second for the actual and planned cost. These two models represented a linear regression of the form:

$Y = a \pm bX$

Y is the estimated time or cost (dependent variable)

X is delay factors (explanatory variable)

A is the intercept (value of Y where X=0)

B is the slope of the line

to determine the strength of association of the observed data for X and Y Correlation coefficients were also calculated

3.2 Data Qualty

Social research methods are required in most construction research where they play a key role in representing data and showing how results are related (Abowitz and Tolle, 2009). Schensul et al (1999) and Abowitz and Tolle (2009) also stated that surveys, questionnaires, experiments, ethnographic observation, and unobtrusive techniques are all valuable research tools. If these tools are to be able to answer questions of the research from the collected data, the data must be valid and reliable (Golafshani, 2003; Frankfort-Nachmias and Nachmias, 2007). Therefore, data was collected using a survey and questionnaire approach assuming to construct a valid sample of case project data

A large and diverse sample of thirty projects was selected for the case study, and the geographical area of Baghdad was determined, and project data was collected from the persons responsible for each project. The collected data was tested, outliers were excluded, and abnormal questionnaire results were excluded.

VI RESULTS AND ANALYSIS

Waheeb RA 2018 found in its thesis that the main and secondary reasons for the delay were collected, as the main ones were caused by the failure and failure of the contractor, owner, consulting team (designer), legislative laws, official regulations and external factors. For each major cause, secondary causes and circumstances in the project, and as a result, the total weight of the delay weights in each project is the sum of the major and secondary causes.

The delay factors for the case of the study in Iraq. Representatives of the thirty projects provided information about the delay factors present in their projects and categorized the existing factors according to the importance of the problems faced by the delayed projects. The reasons for the delay were analyzed based on the frequency of their occurrence in the case study projects and their cumulative importance across a complete sample of those projects. Define a set of twelve factors and as shown in Figure 2. Each factor is abbreviated with a literal symbol (used later to

save space) and the factors must be read from the "back" (safety condition being the most important factor) and clockwise to reduce significance.

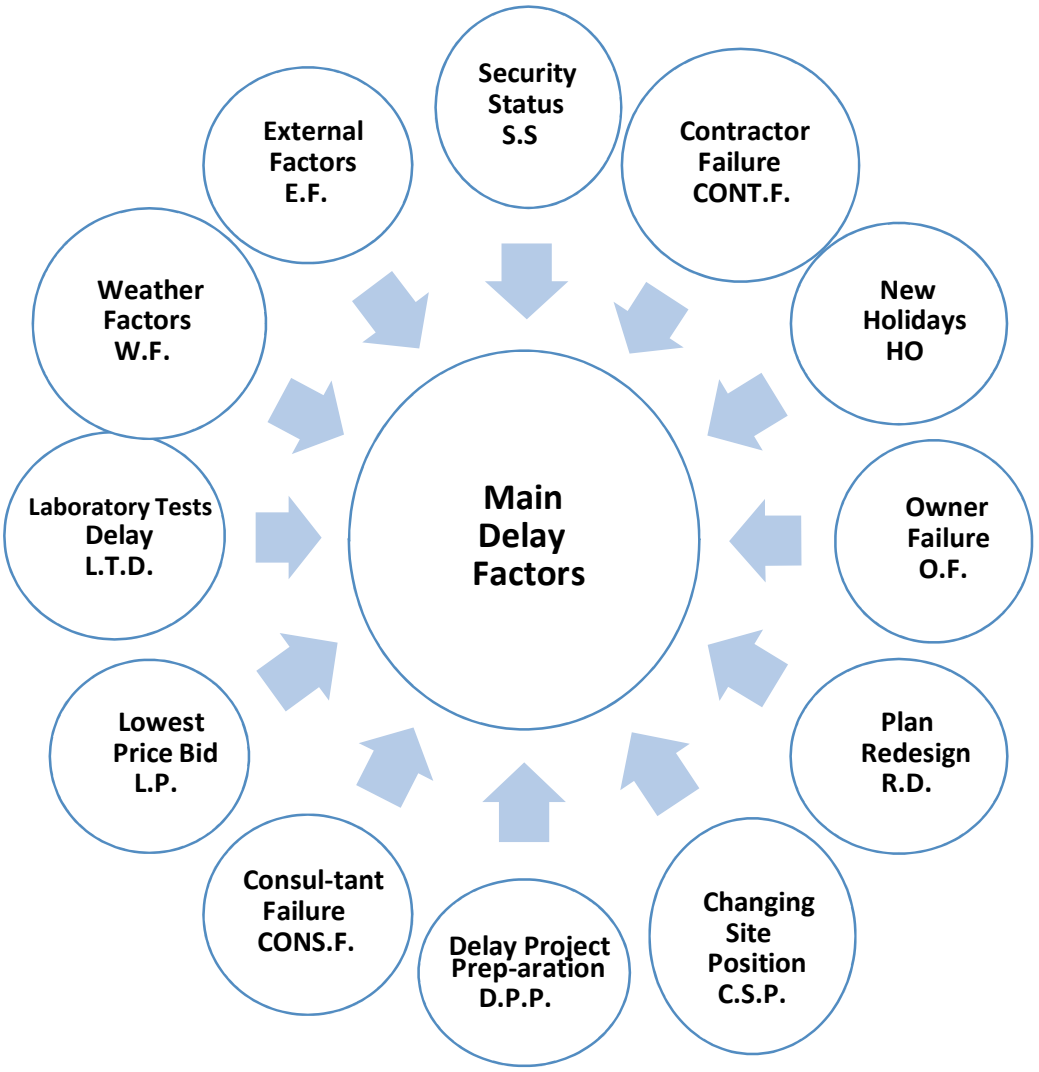

Figure 2: Most dominant causes of delays in thirty case projects in the Baghdad area

The factors are explained in more details as follows:

1. *Security status (S.S.)*, perhaps not surprising given that the sample of case projects was studied in a period of time where Iraq and the Baghdad area suffered from severe security issues after the collapse of the previous regime (post the war of 2003). Much sectarian violence and different terror activity by terrorists groups, such as ISIS, severely worsened the security context of construction projects throughout Iraq at the time of study.
2. *Lack of contractor's technical, administrative, and financial efficiency (Cont.F.)*, to some extent explained by the fact that after the war of 2003, it took a long time before the Iraqi government (and other project investors) were able to revive construction activity. In the meantime, the market was marked partly by contractors suffering from little work and resulting degrading performance and partly from contractors being attracted to a market expected to pick up. Many of these were poorly qualified, lacking technical, administrative, and

financial efficiency. Thus, when projects started to be implemented, there was a broad range of failures on the part of contractors.

3. *New public holidays established after the war of 2003 (HO)*, i.e., public holidays not observed prior to 2003 but added due to religious and sectarian affiliations. Iraq is a society formed from different kinds of religious and nationality-affiliated groups. Arabs and Kurds are the major nationality groups forming the society while Sunnis, Shiites, and Christian religious groups and their sub branches are the major groups in Iraq. Each has their own holidays and many of these were created as new national holidays, resulting in many forced pauses in project work.
4. *Owner-related project management failure (O.F.)*, issues in project management and governance stemming from the project owner. Entrepreneurs trying to scale projects within a fixed and fixed budget was a recurring factor.
5. *Redesigning and upgrading the original designs, sketches and plans of the project (R.D.)*, in most cases initiated by the beneficiary side, to make the project more suitable to their needs. This leads to late changes in the items list of the contract, causing delays.

Waheeb RA 2021, found The floor and failure that may occur due to wrong designs or old buildings and the possibility of using those connections to treat those joints and sections in reinforced or unarmed concrete facilities to preserve the safety of humans and buildings from sudden disasters and reduce risks, as well as qualitative control over the production of concrete connections and sections free from defects to the extreme. The reason for the occurrence of these delays is due to late changes in the list of contract clauses.

6. *Changing site position (C.S.P)*, i.e., changing the location or site of the project, which normally has a negative impact on both time and cost. If the new site presents more demanding building conditions, this is likely to be exacerbated.
7. *Conflicts over land ownership and issues with neighboring sites leading to delays in project preparations (D.P.P.)*, an example of such an issue could be a project to be implemented on a site that belongs to a different landowner where the latter is asking for either compensation or rejecting the whole project.
8. *Consultant failure (who works for the employer) (Cons.F.)*, where engineering consultants engaged to work on the project turn out to be lacking qualifications or demonstrating poor performance.
9. *Selecting bids based on lowest price (L.P)*, which often leads the contractor to save costs by using fewer people, cheaper materials, etc. that leads to time delays and cost overruns.
10. *Laboratory tests delay (L.T.D)*, in cases where materials or components require laboratory tests, as the basis for making decisions about how to progress. In some cases, these tests are delayed, thus it is a controlling factor that causes delay.
11. *Weather factors (W.F)*, that in Iraq include high temperatures, especially in the summer and fall seasons (which can reach more than 45 Celsius in the shade), but also rainfall in winter and spring time.
12. *External factors (E.F)*, such as a national power source shortage as the infrastructure was destroyed after the war of 2003, water unavailability that limits work on site, sewage problems, high ground water level, pest breakouts, etc.

Waheeb et al 2022 established a new approach by using AI artificial intelligence and they described machine layers and their processes to Ameliorate Management of Post Disaster Engineering Projects.

4.1 Analysis of cost overruns and time delays

For the thirty case projects, the collected data about planned and actual cost (C1 and C2 respectively) are presented, along with some background data, in Table 2. In addition, the cost deviation, C1-C2, as well as the deviation in cost as a percentage (%) have been calculated. After presenting similar data for time delays, these data are used for further analysis.

Table 2: Planned and actual cost of the case projects

No	Project Name	Planned cost C1 US Dollars	Actual cost C2 US Dollars	Cost Difference ΔC=C1-C2 US Dollars	Cost Deviation Yc=ΔC/C1* 100%
1	22 Presidential Houses	44000000	54000000	-10000000	-22
2	Emigration office	1424400	1568400	144000-	-10
3	Housing complex	76000000	84000000	8000000-	-10
4	Service office building	200000	240000	40000-	-20
5	Karkh Traffic office	720000	880000	160000-	-22
6	Ibn Sina hospital	7200000	11200000	4000000-	-55
7	Headquarters of the construction and housing department	1011984	1040000	28016-	-2.7
8	Preparation of Ziggurat building	14845.912	14984	138.088-	-0.9
9	Department of burns at Yarmouk hospital	3200000	4000000	800000-	-25
10	Temporary workshops	90515.2	92000	1484.8-	-1.6
11	Additional buildings, College of Law, Mustansiriya University	2383690.4	2800000	416309.6-	-17
12	Installation of complete washing machines in Baghdad Factory of Textiles	336000	353600	17600-	-5.2
13	Rehabilitation of treatment station(zonal development plan	805457.2	1264208	458750.8-	-56
14	The complementary phase of the classrooms project	224000	224000	0	0
15	Auditorium for College of education for women	96000	96000	0	0
16	College of Arts, university of Baghdad	2864000	3160000	296000-	-10
17	Construction of space and communications building	1060924.8	1192000	131075.2-	-12
18	The new headquarters building of the Ministry of Science and Technology	2800000	3000000	200000-	-7
19	Engineering affairs building	1555047.92	1921000.8	365952.88-	-23
20	Civil Defense Building	480000	494215.52	14215.52-	-3
21	Gate of Baghdad – Hilla project	4856667.6	5196634.4	339966.8-	-7
22	Gate of Baghdad – baquba project	4985208.8	5982250.4	997041.6-	-19
23	Gate of Baghdad – Kut project	5224811.2	6269773.344	1044962.144-	-19
24	12 classrooms School in a Al-rashidiya project	567455.2	576000	8544.8-	-1.5
25	Construction of the Mesopotamia building in Mahmudiya	630696.8	674844.8	44148-	-7
26	Gate of Baghdad – Mosul project	5551249.08	5939836	388586.92-	-7
27	Restoration and reinforcement of classrooms in Sumaya elementary school	157600	168000	10400-	-6.5
28	Building a model 18 classrooms school complex in husseiniya.	837344	837344	0	0
29	Building a model school complex in Basmayah, Nahrawan area	1487200	1487200	0	0
30	Building a model 12 classrooms school complex in Mahmudia	2400000	2400000	0	0

In Table 3, similar data is shown for time; planned time (T1), additional time granted to the contractor due to administrative issues or change orders (T2), and delay time (T3). Furthermore, the deviations in duration have been calculated, as the difference between the original planned duration and the actual duration, T4, which is the sum of T1, T2, and T3. As for cost overruns, percentage schedule overrun has also been compiled. The data shows that the majority of projects have experienced a delay in the planned duration.

Table 3: Planned and actual duration of the case projects

No.	Project Name	Planned time T1	Additional time T2	Delay periods T3	Actual time T4=(T1+T2+T3)	Difference in time ΔT =T4-T1	Time deviation % Yt =ΔT / T1
1.	(22)Presidential Homes	6	3	12	24	18	-300%
2.	Emigration office	15	2	1	18	3	-19%
3.	COMLEX HOUSING	36	3	3	38	6	-16%
4.	SERVICE OFFICE BUILDING	12	2	5	19	7	-57%
5.	KARKH TRAFFIC OFFICE	18	5	1	24	6	-32%
6.	IBN SEENA HOSPITAL	3	18	6	27	1	-811%
7.	The headquarters of the Department of Construction and Housing	12	1	1	14	2	-16%
8.	PREPARATION ZAKOORA BUILDING	15	15	0.5	17	2	-13%
9.	BURNING BUILDING	12	2	1	15	3	-24%
10.	TEMPORARILY ACTIVE	6	1.5	0.5	8	2	-30%
11.	ADDITIONAL BUILDING LOW BUILDING UNIVERSITY	23	4	2	29	6	-25%
12.	BAGHDAD FACTORY	4	3	1	8	4	-100%
13.	TREATMENT STATION PREPARATION	6	13	1	20	14	-230%
14.	ADDITIONAL STAGE OF STUDY HALLS	3	2	3	8	5	-166%
15.	GIRL UNIVERSITY PROTOCOL	2.5	0.17	0	1.67	0.17	-6%
16.	ETHICS COLLEGE	24	6	2	32	8	-33%
17.	SPACE & CONNECTIONS OFFICE	4	4.5	0.67	9.17	5.17	-129%
18.	TECHNOLOGICAL & SCIENCES OFFICE CENTER	12	3.5	1.5	17.17	5	-40%

19.	ENGINEERING AFFAIRS OFFICE	15	6.5	2.5	27	9	-50%
20.	CITIZEN DEFENCE OFFICE	8	5	1	14	6	-75%
21.	BAGHDAD GATE HILLA HIGHWAY	18	31	6	55	37	-200%
22.	Gateway project to establish a Baghdad - Baquba	18	24	4	46	28	-155%
23.	The establishment of the Baghdad-Cote de Gateway Project	18	24	3	45	27	-150%
24.	School construction site 12 in a row Rashidiya	4	18	6	28	24	-600%
25.	The establishment of Mesopotamia building in Mahmoodiyah	6	30	5.93	41.93	35	-600%
26.	The establishment of the Baghdad Gate-connector project	18	30	6	54	36	-200%
27.	Restoration and add rows in Primary School	4	6	2	12	8	-200%
28.	Restoration and add rows in Primary School The establishment of School 18 in a row Husseini.	5	0.67	0	5.67	0.67	10%
29.	Building a model school complex in Bismayah in Nahrawan	8	0	0	8	0	0%
30.	Building a model school with accessories row 12 in Mahmudia	12	0	0	12	0	0%

Combining the cost and time data, Table 4 is a composite of the two previous tables and with information about the delay causes found in each project, with assigned weight factors based on how important the delays causes were considered to be in each case project. For example, project 1 was a compound of 22 presidential houses, where the delay resulted from four different factors, namely contractor failure (weighted 0.7), newly added holidays caused 0.3 of the delay, low price bidder was assigned 0.2 , and finally the security situation was weighted at 0.1. These delay factors caused 22% cost overrun and 300% time delay, table shows that the most common delay causes in this sample of projects were redesigns of the project, contractor-related problems, and the security situation.

Table 4: Cost and time deviations assigned to delay causes with weight factors

Project No.	Delay Causes	Weight	% cost Deviation Yc=ΔC/C1	%time Deviation Yt=ΔT/T1
1	Cont. F.	0.7	-22%	-300%
	HO.	0.3		
	L.P	0.2		

	S.S	0.1		
2	R.D.	0.5	-10%	-19%
	C.S.P	0.5		
	S.S	0.2		
3	R.D	0.3	-10%	-16%
	D.P.P	0.5		
	LP	0.5		
	SS	0.1		
4	R.D	0.7	-20%	-57%
	D.P.P	0.3		
	O.F	0.5		
5	S.S.	0.7	-22%	-32%
	Cont. F.	0.3		
	R.D	0.2		
6	R.D	0.6	-55%	-811%
	S.S.	0.3		
	L.P	0.4		
7	D.P.P	0.5	-2.7%	-16%
	L.P	0.4		
8	R.D	0.8	-0.9%	-13%
	S.S	0.3		
9	R.D	0.6	-25%	-24%
	L.P	0.5		
	S.S	0.1		
10	C.S.P.	0.9	-1.6%	-30%
11	O.F	0.4	-17%	-25%
	R.D	0.8		
12	HO.	0.5	-5.2%	-100%
	E.F	0.3		
	O.F	0.3		
	CONT.F.	0.5		
	L.P	0.2		
	S.S	0.2		
13	O.F	0.5	-56%	-230%
	CONT.F	0.5		
	S.S	0.1		
14	L.T.D	0.2	0	-166%
	R.D	0.3		
	O.F	0.2		
	L.P	0.2		
	CONS.F	0.2		
	HO.	0.5		
	S.S	0.1		
15	W.F	0.4	0%	-6%
16	O.F	0.6	-10%	-33%
	S.S	0.3		
17	R.D	0.6	-12%	-129%
	O.F	0.5		
18	L.T.D	0.5	-7%	-40%
	W.F	0.2		
	HO.	0.4		
19	CONT.F	0.4	-23%	-50%
	O.F	0.3		
	HO.	0.3		
	L.P	0.2		
20	R.D.	0.5	-3%	-75%

	H.O.	0.3		
	W.F.	0.4		
21	R.D.	0.4	-7%	-200%
	CONT.F	0.5		
	E.C	0.2		
	S.S	0.4		
	L.P	0.1		
22	R.D	0.6	-19%	-155%
	CONT.F	0.3		
	E.C	0.3		
	S.S	0.3		
	L.P	0.2		
23	CONT.F	0.6	-19%	-150%
	R.D	0.3		
	C.S.P	0.4		
	S.S	0.2		
24	CONT.F	0.6	-1.5%	-600%
	D.P.P	0.3		
	S.S	0.1		
25	CONT.F	0.6	-7%	-600%
	E.C	0.2		
	RD	0.2		
	S.S	0.2		
26	CONT.F	0.4	-7%	-200%
	S.S	0.5		
	L.P	0.2		
27	CONT.F	0.8	-6.5%	-200%
	L.P	0.4		
	S.S	0.2		
28	O.F	0.2	0%	-10%
29	0	0	0%	0%
30	0	0	0%	0%

The next step of the analysis is the normalization for the importance of each delay factor, and Table 5 shows how it affects the project results and, respectively, for the time delay and cost overrun jointly for both parameters.

Table 5: Normalized importance of the delay factors' influence on cost and time deviations

Importance due to time deviation			Importance due to cost deviation			Importance due to time and cost deviation		
Delay factors	Importance	Normalized Importance	Delay factors	Importance	Normalized Importance	Delay factors	Importance	Normalized Importance
CONTF	0.161	100.00%	OF	0.147	100.00%	SS	0.15	100.00%
RD	0.154	95.50%	SS	0.139	94.60%	CONTF	0.14	93.60%
SS	0.11	68.20%	RD	0.137	92.80%	RD	0.139	92.90%
LP	0.108	67.20%	CONTF	0.132	90.00%	LP	0.133	88.70%
WF	0.09	55.60%	LP	0.13	88.30%	OF	0.112	75.20%
OF	0.076	47.40%	HO	0.065	43.90%	CSP	0.073	48.90%
CSP	0.072	44.50%	EF	0.057	38.40%	HO	0.064	42.70%
LTD	0.063	38.90%	CONSF	0.052	35.00%	LTD	0.054	36.10%
HO	0.056	34.60%	WF	0.045	30.70%	EF	0.05	33.20%
CONSF	0.055	34.20%	DPP	0.038	25.70%	WF	0.044	29.60%
DPP	0.029	18.10%	CSP	0.031	21.00%	DPP	0.041	27.40%
EF	0.026	16.30%	LTD	0.028	19.20%	CONSF	0.00	0.00%

Sorted in order of decreasing importance, Figure 3 shows the delay factors and their percentage of importance in causing time delays. When looking at the status of project No. 1, We find that the most important factor for delay is contractor failure, followed by re-designs, security situation, lower prices, weather factors, employer failure, site changes, delays in laboratory tests, induced failures, consultant failures, land disputes and external factors Contractor related problems may lead to many sub-factors that will eventually lead to project delays, e.g., Assaf et al (1995), Assaf and Al-Hejji (2003), Sambasivan and Soon (2007), Odeh and Battaineh (2002), and Enshassi et al (2006). Redesigns and changes accounted for 95.5% of the importance in affecting delays. This is in line with the findings of many sources reviewed, which point to impact especially in terms of time delays (Koushki et al, 2005; Assaf and AL-Hejji, 2006; Sweis et al 2008).

This is somewhat unique to projects being implemented in areas of war or terror, but often the security situation is so severe that work has to be stopped instead of jeopardizing the lives of workers on site. Inshasi et al. (2009) found that the security situation ranked third for the time delay in the Gaza Strip, an area that is not different from Baghdad in terms of the security situation. The lowest prices play a major role in the delay, with a significance of 67.2%. The main problem with low bids is that they often put the contractor in a situation of potential loss to the project. This either leads to affecting the quality of work, cheating in specifications, or total bankruptcy. Frimpong et al (2003) confirmed that some of the lowest bidders may lack the necessary management skills and less attention is paid to contractor's payment difficulties, material procurement, Material price escalation according to markets, technical performance, etc.

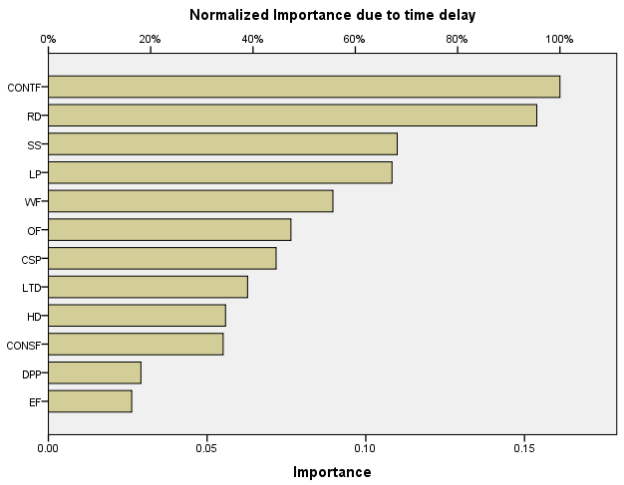

Figure 3: Normalized importance of causes of time delays

Turning to the normalized importance of the factors causing cost overruns, see Figure 4, owner failure came out on top. Owner failure was one of the main factors that caused financial problems as Alaghbari et al (2007) found. Not surprisingly, security issues factor heavily also here, as do redesigns and changing orders. The last factor of very high importance was contractor failure.

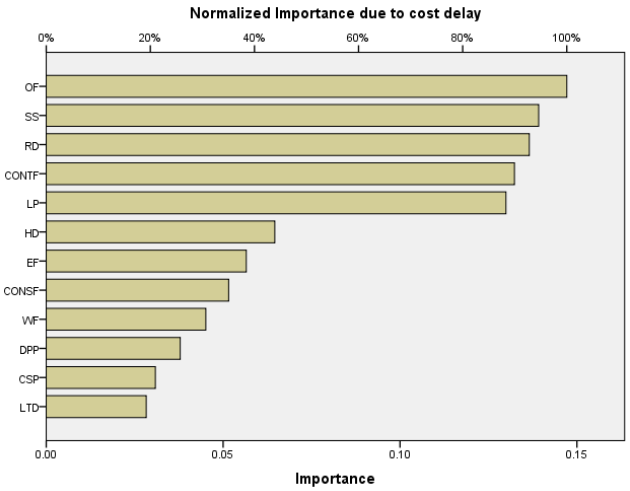

Figure 4: Normalized importance of causes of cost overruns

The ranking of the delay factors in terms of combined influence on overruns of both cost and schedule as shown on Figure 5. As mentioned already, the security situation in Iraq was the single most important factor causing problems in these projects. Most previous studies had not considered the security situation as a major factor and some of them have not included this aspect at all in their studies. The reason is, of course, that many of the countries studied are not facing acts of violence or terrorism as a common occurrence. Iraq is different and has gone through much security turbulence from wars, economical sanctions, violence, sectarianism, terror, and the war against terrorism. However, an unstable security situation is certainly not unique to Iraq and it is an important finding that in countries facing such problems, security issues trump all other factors. Next on the list are contractor failures, redesigns and change orders, and low price bids, all showing above 50% of normalized importance. The other factors all show less than 50% of normalized importance.

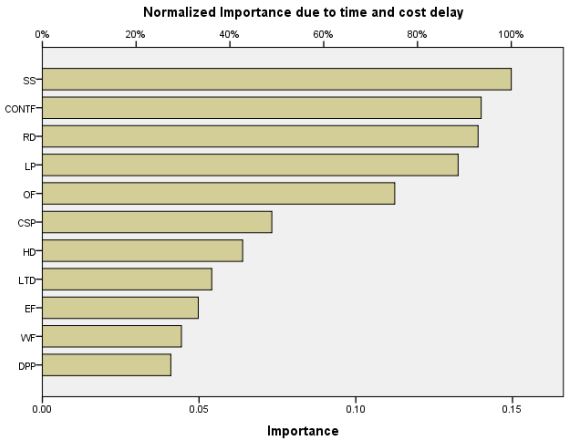

Figure 5: Combined normalized importance of the delay causes for cost overruns and time delays

Waheeb et al 2020 used ANN in emergency reconstruction post disaster projects, they identified the factors that affect the real construction period and the real cost of a project against the estimated period of construction and the estimated cost of the project. The case study is related to the construction projects in Iraq. Thirty projects in different areas of construction in Iraq were selected as a sample for this study.

In her study Waheeb RA 2022, innovated a model that can be used in difficult cases and sudden circumstances during the pandemic and post-disaster state Which can mitigate the difficult impact of the epidemic and develop digital risk management by improving information technology and the Internet of things by finding primary solutions and making the world look like a digital city that can be managed by the Internet.

V. DISCUSSION AND CONCLUSIONS

When it comes to the twelve dominant delay causes, found in our study, we will now provide a brief review of these, followed by a discussion of how they align with the findings from other studies.

Starting with the highest-ranking cause of time delays found in our study, we saw that this was contractor-related problems. This is a broad category of issues, where the following sub-issues were the dominant ones at a more detailed level:

- Lack of leadership capabilities and skills.
- Lack of standards for human resources management.
- Lack of education in what drives performance.
- Lack of skills in dealing with time limitations.
- Lack of building of harmonic work teams.
- Lack of vision of how to deal with the owner, external parties, and the work teams.
- Lack of strategic planning of the work performed by subcontracting companies.

These results are in line with what Assaf and al-Hejji (2006) found, where they saw that delays have a strong relationship with failures and ineffective performance of contractors. In addition, Sambasivan and Soon (2007) attributed delays in the Malaysian construction industry to contractors' improper planning.

Redesigns of plans was another major factor leading to delays. Changing of plans typically means postponing the start of tasks, which often has a cascading effect on later tasks. the most common cause of delay in construction projects in Saudi Arabia were change orders and redesigns of plans as Assaf and Al-Hejji (2006) found. Also, Al-Momani (2000) found that changes in plans introduced by designers and users were the most important factor that caused delays in the construction of public projects in Jordan, while Abd El-Razek et al (2008) found that change orders was the third most important factor causing delays in Egypt.

Combined for time and cost overruns, security issues were the most important factor of all the ones studied in our project sample. As we have mentioned, Iraq is not typical in terms of this factor, but also COAA (2009) and Enshassi et al (2009) found security problems and conflicts leading to delay in construction projects.

There is a clear link between contractor-related issues in general and problems stemming specifically from choosing contractors based on the lowest bid price, but when considering the low bid price delay factor, we are focused on issues that likely could have been prevented by choosing a more expensive and qualified bidder. The problems stemming from low price bids are usually caused by the contractor lacking skills and paying less attention to planning and quality (Frimpong et al, 2003). Enshassi et al (2009) also found that low bids could cause poor management and eventually delays. This is often due to what is known as pricing tactics (Nagle et al, 2016) where the contractor deliberately bids low to get the contract and is hoping to make money from change orders and not from successfully completing the project to the best of the owner.

Quite a few of the case projects experienced delays due to weather factors, such as heavy rainfall in the winter season and high temperatures in the summer season. Several other studies have found weather to be a cause of delays; Koushki (2005) found that weather caused 15% of the total delays in construction projects in Kuwait, due to the high temperature. In Jordan, severe weather conditions caused some delays in the winter season (Al-Momani, 2005). Kaming et al (1997) identified unpredictable weather conditions as one of those delay factors in their study of factors influencing construction time and cost overruns in high-rise projects in Indonesia.

Often, the project owner itself causes delays. Odeh and Battaina (2002) and Sambasivan and Soon (2007) found that owner-related issues are one of the factors that affect project progress, typically in the form of owner interference or slow decision making.

Another somewhat unique factor in our Iraqi projects was the factor of new holidays being introduced causing delays. However, also Enshassi et al (2007) found that holidays were a problem, both holding up construction progress and the supply of materials. Marzouk and El-Rasas (2014) found that official holidays caused much delay in Egyptian construction projects, and Lim and Alum (1995) found the same to be the case in Singapore, although not being the major delay factor in their study.

The issue of land/site disputes have been found in other studies; Burr (2016) talked about possession of the site or the right to access to the site was one of the problems discussed in the book of Delay and Disruption in Construction Contracts. Also, Ruqaishi and Bashir (2013) found that ownership as one of those factors affecting delay in construction projects, and it was a significant cause of delay.

External factors of delays found in our case project sample included power shortage, problems with the sewage system, and groundwater levels. Assaf and Al-Hejji (2006) found that power shortages and water supplies cause delays. Difficulties in obtaining work permits was another external factor, identified by Al-Ghafly (1995).

A few of the delay factors found in the case study portfolio we studied have not been found to strongly influence delays in other studies, at least not specifically as individual delay factors; the need to relocate the project site, delays in laboratory tests holding up work, and problems related to the engineering consultants.

In terms of our findings compared with those of Bekr (2015), who also studied delay factors in Iraq, albeit based on general survey data and not from case projects, the two studies are quite similar. His findings identified the main factors to be security issues, governmental changes, holidays and lowest price bid selection.

The first obvious issue to discuss is how the delay factors identified in the thirty Iraqi projects compared with findings from the extensive review of the global body extant literature into delay factors undertaken by Zidane et al (2018). That review looked specifically into factors causing time delays so the corresponding set of factors from our study is the list from Figure 3.The most important factor found in the Iraqi case projects was contractor failure, of different types. There are several related factors in the global literature; factor no. 6 in the Zidane et al review was “inadequate contractor experience/building methods” and factor no. 9 was “contractors1 financial difficulties”. Thus, contractor-related issues are important globally, but not to the extent that we saw in Iraq. The factor of second-most importance in our study, however, matches very well the global findings; redesigns, change orders and plan changes correspond directly to the no. 1 cause globally; “design changes during construction”, with “poor planning and scheduling” as factor no. 2.

For the third most important factor in our project sample, there is a clear difference from existing findings. Security issues were prominently present and causing delays in Iraq, but not mentioned at all as a factor when compiling findings from a large number of global studies into delays. When trying to improve delays in projects, this clearly indicates that special measures must be taken to address the unique challenges faced in regions of violence and rebuilding after wars. So far, research in this area has uncovered security-related issues as being important, but now work is needed to understand how these can be mitigated, especially since emergency reconstruction typically is time critical and delays have even greater negative consequences than in projects in safer parts of the world.

Next on the list of our factors was the selection of low-price bids. This is on one hand a rather specifically formulated factor, but on the other hand a factor that can be seen as a root cause of

other problems. On the global list, factors such as inadequate contractor experience, contractors' financial difficulties, problems related to subcontractors, and even the owner-oriented factor of poor contract management/bidding process could all be related to lowest-price bid selection. these problems could also be completely unrelated to the specific issue of choosing the lowest bidder so it is difficult to tell whether this is a unique finding in our project sample.

Weather conditions came next on our list, with a normalized importance of above 50%, and this factor was also found in thirty of the reviewed sources in the global set of delay factor research, but as low as ranked 17. Owner-related factors identified in our study find their counterpart in several factors on the global list, e.g, delays in payment of contractors /ranked third), sponsor/owner/client financial difficulties (ranked 14th), and even slow decision-making processes (ranked 16th). This is quite well in line with our findings.

The next factors found in our case projects, on the other hand, do not appear prominently in the global list, at least not as stand-alone items; the need to change project site, delays in laboratory testing, new public holidays, consultant failures, and conflicts over land ownership are unique to the Iraqi projects. Some of these might form part of factors mentioned in other studies, but it seems at least some of these, like security issues, are a special trait of Iraqi projects or projects in less stable countries marked by violence.

In the end, this study represents one more contribution to the body of empirical data investigating the extent of the problem of time delays and cost overruns and their causes. Being based on data from Iraq, a country of some unique and some commonly found conditions, it has partly confirmed previous studies into delay factors and partly supplemented these by identifying some unique causes of delays in Iraqi construction projects. Most notably, that security issues were the most dominant factor causing time delays. It is worth noting that we have already utilized the collected data to build an artificial neural network model that can be used to predict cost and time overruns based on the characteristics of the project being studied.

We would encourage other researchers to continue studying the phenomenon of overruns and their causes in settings and types of projects where little data exists, to allow us to further differentiate our understanding of what causes such problems in different contexts. Existing studies clearly show that different regions/countries/contexts pose different delay factors and it would be careless to assume that findings from one specific setting can be transferred to other settings.

In terms of implications for practice, we can infer some recommendations for the Iraqi authorities that would help alleviate the problems of delays and overruns:

- Putting in place a more systematic governance structure of public construction projects so as to avoid owner-related problems. This should also include a review of rules, laws, and legislation that deal with project implementation to prevent the engagement of unqualified companies.
- Working with the private sector to stimulate the development of a body of competitive and qualified contractors and engineering consultants, including facilitating workshops and lectures to educate them in the field of bidding and implementing better contracts.
- Supporting and improving construction test laboratories on a national level and opening more branches in different areas and provinces. Also, encouraging the private sector to open their own laboratories, as well as promoting the use of the in situ laboratories that are overseen by governmental institutes and directorates to avoid bias and fraud of sampling that might occur while translocating samples to different places for tests.
- Reviewing the models and evaluation criteria used by bidding committees in the selection of contractors, to avoid the extensive use of lowest price bid selection and extending the set of factors used to evaluate bids.

And while this sounds easier on paper than in real life, improving both the security situation and external factors such as power, water, and sewage would aid in the more successful implementation of projects.

REFERENCES

1. Abd El-Razek, M. E., Bassioni, H. A., & Mobarak, A. M. (2008). Causes of delay in building construction projects in Egypt. *Journal of construction engineering and management*, *134* (11), 831-841.
2. Abowitz, D. A., & Toole, T. M. (2009). Mixed method research: Fundamental issues of design, validity, and reliability in construction research. *Journal of construction engineering and management*, *136* (1), 108-116.
3. Adeyemi, A. Y., & Masalila, K. (2016). Delay factors and time-cost performance of construction projects in Gaborone City Council, Botswana. *Journal for the Advancement of Performance Information & Value*, *8* (1).
4. Afram, S. O., Bangdome-Dery, A., Eghan, G. E., & Kwofie, T. E. (2015). Analysis of causes of delay in middle and high income self-build housing projects (SBHPs) in Wa, Ghana. *Journal of Building Construction and Planning Research*, *3* (04), 171.
5. Aiyetan, A. O., Smallwood, J. J., & Shakantu, W. (2012). A linear regression modeling of the relation-ship between initial estimated and final achieved construction time in South Africa. *Acta Structilia*, *19* (1), 39-56.
6. Akintoye, A. S., & MacLeod, M. J. (1997). Risk analysis and management in construction. *International journal of project management*, *15* (1), 31-38.
7. Akogbe, R.K.T., Feng, X. and Zhou, J., 2013. Importance and ranking evaluation of delay factors for development construction projects in Benin. KSCE Journal of Civil Engineering, 17 (6), pp.1213-1222.
8. Akter, S., Rahman, M. M., Abe, S. K., & Sultana, P. (2014). Prevalence of diabetes and prediabetes and their risk factors among Bangladeshi adults: a nationwide survey. *Bulletin of the World Health Organization*, *92*, 204-213A.
9. Alaghbari, W. E., Razali A. Kadir, M., Salim, A., & Ernawati. (2007). The significant factors causing delay of building construction projects in Malaysia. *Engineering, Construction and Architectural Management*, *14* (2), 192-206.
10. Alaghbari, W. E., Razali A. Kadir, M., Salim, A., & Ernawati. (2007). The significant factors causing delay of building construction projects in Malaysia. *Engineering, Construction and Architectural Management*, *14* (2), 192-206.
11. Al-Ghafly, M. A. (1995). *Delay in the construction of public utility projects in Saudi Arabia* (Doctoral dissertation, King Fahd University of Petroleum and Minerals).
12. Al-Momani, A. H. (2000). Construction delay: a quantitative analysis. *International journal of project management*, *18* (1), 51-59
13. Amandin, M. M., & Kule, J. W. (2016). Project delays on cost overrun risks: A study of Gasabo district construction projects Kigali, Rwanda. *ABC Journal of Advanced Research*, *5* (1), 21-34.
14. Assaf, S. A., & Al-Hejji, S. (2006). Causes of delay in large construction projects. *International journal of project management*, *24* (4), 349-357.
15. Assaf, S. A., Al-Khalil, M., & Al-Hazmi, M. (1995). Causes of delay in large building construction projects. *Journal of management in engineering*, *11*(2), 45-50.
16. Aziz, R. F., & Abdel-Hakam, A. A. (2016). Exploring delay causes of road construction projects in Egypt. *Alexandria Engineering Journal*, *55*(2), 1515-1539.
17. Bagaya, O., & Song, J. (2016). Empirical study of factors influencing schedule delays of public construction projects in Burkina Faso. *Journal of Management in Engineering*, *32* (5), 05016014.
18. Bekr, G. A. (2015). Causes of delay in public construction projects in Iraq. *Jordan Journal of Civil Engineering*, *9* (2).
19. Bekr, G. A. (2015). Causes of delay in public construction projects in Iraq. *Jordan Journal of Civil Engineering*, *9* (2).
20. Bosher, L. S., Dainty, A. R., Carrillo, P. M., Glass, J., & Price, A. D. (2006). The construction industry and emergency

management: towards an integrated strategic framework.
21. Burr, A. (2016). *Delay and disruption in construction contracts*. Informa Law from Routledge.
22. COAA. 2009. Larry Sondrol, Stephen Revay. Benchmarking and the Alberta Report – a Government/Industry Partnership Alberta Report Phase I Results. Workshop Benchmarking PhaseII with CII. Presentation. https://www.coaa.ab.ca/COAA-Library/BPC-2009-PRS-12-2009-v1%20Workshop%20Benchmarking-Alberta%20Report%20Phase%201.pdf
23. Doloi, H. (2012). Cost overruns and failure in project management: Understanding the roles of key stakeholders in construction projects. *Journal of construction engineering and management*, *139* (3), 267-279.
24. Durdyev, S., Ismail, S., & Bakar, N. A. (2012). Factors causing cost overruns in construction of residential projects: case study of Turkey. *International Journal of Science and Management*, *1* (1), 3-12.
25. Durdyev, S., Omarov, M., & Ismail, S. (2017). Causes of delay in residential construction projects in Cambodia. *Cogent Engineering*, *4* (1), 1291117.
26. Elhag, T. M. S., & Boussabaine, A. H. (1999, September). Evaluation of construction costs and time attributes. In *Proceedings of the 15th ARCOM Conference* (Vol. 2, No. 15-17 September, pp. 473-80). Liverpool John Moores University.
27. Enshassi, A., Al-Najjar, J., & Kumaraswamy, M. (2009). Delays and cost overruns in the construction projects in the Gaza Strip. *Journal of Financial Management of Property and Construction*, *14*(2), 126-151.
28. Enshassi, A., Mohamed, S., & Abushaban, S. (2009). Factors affecting the performance of construction projects in the Gaza strip. *Journal of Civil engineering and Management*, *15* (3), 269-280.
29. Flin, R. (1998). Safety condition monitoring: lessons from man-made disasters. *Journal of Contingencies and Crisis Management*,*6* (2), 88-92.
30. Frankfort-Nachmias, C., & Nachmias, D. (2007). *Study guide for research methods in the social sciences*. Macmillan.
31. Franklin, B. (1970). Observations concerning the Increase of Mankind, Peopling of Countries, etc. *Perspectives in Biology and Medicine*, *13* (4), 469-475.
32. Frimpong, Y., Oluwoye, J., & Crawford, L. (2003). Causes of delay and cost overruns in construction of groundwater projects in a developing countries; Ghana as a case study. *International Journal of project management*, *21* (5), 321-326.
33. Fugar, F. D., & Agyakwah-Baah, A. B. (2010). Delays in building construction projects in Ghana. *Construction Economics and Building*, *10*(1-2), 103-116.
34. Gidado, K., & Niazai, G. (2012). Causes of project delay in the construction industry in Afghanistan.
35. Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The qualitative report*, *8*(4), 597-606.
36. Guide for Major Hazard Facilities: Emergency Plans 2012.
37. Hammad, A. A. A., Ali, S. M. A., Sweis, G. J., & Bashir, A. (2008). Prediction model for construction cost and duration in Jordan. *Jordan Journal of Civil Engineering*, *2* (3), 250-266.
38. Hegazy, T., & Ayed, A. (1998). Neural network model for parametric cost estimation of highway projects. *Journal of Construction Engineering and Management*, *124*(3), 210-218.
39. Hwang, W. Y., Fu, Y., Reyon, D., Maeder, M. L., Tsai, S. Q., Sander, J. D., ... & Joung, J. K. (2013). Efficient genome editing in zebrafish using a CRISPR-Cas system. *Nature biotechnology*, *31* (3), 227.
40. Kamanga, M. J., & Steyn, W. J. (2013). Causes of delay in road construction projects in Malawi. *Journal of the South African Institution of Civil Engineering*, *55*(3), 79-85.
41. Kaming, P. F., Olomolaiye, P. O., Holt, G. D., & Harris, F. C. (1997). Factors influencing construction time and cost overruns on high-rise projects in Indonesia. *Construction Management & Economics*, *15*(1), 83-94.

42. Koushki, P. A., Al-Rashid, K., & Kartam, N. (2005). Delays and cost increases in the construction of private residential projects in Kuwait. *Construction Management and Economics*, *23* (3), 285-294.
43. LeCompte, M. D., & Schensul, J. J. (1999). *Designing and conducting ethnographic research* (Vol. 1). Rowman Altamira.
44. Lim, E. C., & Alum, J. (1995). Construction productivity: issues encountered by contractors in Singapore. *International journal of project management*, *13* (1), 51-58.
45. Lo, T. Y., Fung, I. W., & Tung, K. C. (2006). Construction delays in Hong Kong civil engineering projects. *Journal of construction engineering and management*, *132*(6), 636-649.
46. Lowe, D. J., Emsley, M. W., & Harding, A. (2006). Predicting construction cost using multiple regression techniques. *Journal of construction engineering and management*, *132* (7), 750-758.
47. Malalgoda, C., Amaratunga, D., & Pathirage, C. (2010). Exploring disaster risk reduction in the built environment.
48. Marzouk, M. M., & El-Rasas, T. I. (2014). Analyzing delay causes in Egyptian construction projects. *Journal of advanced research*, *5* (1), 49-55.
49. Maxwell, J. A. (2012). *Qualitative research design: An interactive approach* (Vol. 41). Sage publications.
50. Mertens, D. M. (2014). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods*. Sage publications.
51. Mezher, T. M., & Tawil, W. (1998). Causes of delays in the construction industry in Lebanon. *Engineering, Construction and Architectural Management*, *5* (3), 252-260.
52. Nagle, T. T., & Hogan, J. E. (2006). The Strategy and Tactics of Pricing: A Guide to Growing More Profitably 4th.
53. Odeh, A. M., & Battaineh, H. T. (2002). Causes of construction delay: traditional contracts. *International journal of project management*, *20* (1), 67-73.
54. Ruqaishi, M., & Bashir, H. A. (2013). Causes of delay in construction projects in the oil and gas industry in the gulf cooperation council countries: a case study. *Journal of Management in Engineering*, *31*(3), 05014017.
55. Salunkhe, A. A., & Patil, R. S. (2014). Identification of critical construction delay factors. *Int. J. Latest Trends Eng. Technol*, *3* (4), 256-261.
56. Sambasivan, M., & Soon, Y. W. (2007). Causes and effects of delays in Malaysian construction industry. *International Journal of project management*, *25*(5), 517-526.
57. Seboru, M. A. (2015). An investigation into factors causing delays in road construction projects in Kenya. *American Journal of Civil Engineering*, *3* (3), 51-63.
58. Sweis, G. J. (2013). Factors affecting time overruns in public construction projects: The case of Jordan. *International journal of business and management*, *8* (23), 120.
59. Tawil, N. M., Khoiry, M. A., Arshad, I., Hamzah, N., Jasri, M. F., & Badaruzzaman, W. H. (2013). Factors contribute to delay project construction in higher learning education case study UKM. *Research Journal of Applied Sciences, Engineering and Technology*,*5* (11), 3112-3116.
60. Waheeb, R.A., 2018. Identification of Delay Causes in Construction Projects and Emergency Reconstruction' 'Iraq as a case study".
61. Waheeb, R.A., Andersen, B.S. and Suhili, R.A., 2020. Using ANN in emergency reconstruction projects post disaster. *International Journal of Engineering Business Management*, *12*, p.1847979020967835.
62. Waheeb, R.A. and Andersen, B.S., 2022. Causes of Problems in Post-Disaster Emergency Re-Construction Projects—Iraq as a Case Study. *Public Works Management & Policy*, *27* (1), pp.61-97.
63. Waheeb, R.A., 2022. APP innovation to Control Projects Risks Management during Crises. *EAI Endorsed Transactions on Internet of Things*, *8* (30), pp.e1-e1.
64. Waheeb, R.A., Wheib, K.A., Andersen, B.S. and Al-Suhiili, R., 2022. Impact of Pandemic SARS COVID-19 on Different Construction

Project Management: Problems and Solutions. *Public Works Management & Policy*, p.1087724X221113579.
65. Waheeb, R.A., 2021. Strength & Conduct of Reinforced Concrete Corner Joint under Negative Moment Effect. *Journal of Architectural Environment & Structural Engineering Research*, *4* (4).
66. Waheeb, R., Wheib, K., Andersen, B. and Alsuhili, R., The Prospective of Artificial Neural Network (ANN's) Model Application to Ameliorate Management of Post Disaster Engineering Projects. *Available at SSRN 4180813*.
67. Wong, K., & Vimonsatit, V. (2012). A study of the factors affecting construction time in Western Australia. *Scientific Research and Essays*, *7* (40), 3390-3398.
68. Zewdu, S., Suryabhagavan, K. V., & Balakrishnan, M. (2016). Land-use/land-cover dynamics in Sego Irrigation Farm, southern Ethiopia: A comparison of temporal soil salinization using geospatial tools. *Journal of the Saudi Society of Agricultural Sciences*, *15* (1), 91-97.
69. Zidane, Y. and Andersen, B., 2018. Causes of Delay and their Cures in Major Norwegian Projects.
70. Zidane, Y. J. T., & Andersen, B. (2018). The top 10 universal delay factors in construction projects. *International Journal of Managing Projects in Business*, *11* (3), 650-672.

A Cry for Resolution: Measuring the Effectiveness of Conflict Management and Resolution Processes in Ghana: A Case of Kusasi-Mamprusis Chieftaincy Conflicts

Lawrence Opoku Agyeman,Justice Kufour Owusu-Ansah, Hopeson Agbemabias & Matilda Ayeltige

ABSTRACT

Despite the application of several dispute management and resolution strategies in the Bawku Traditional Area, the Bawku conflict has not yet been resolved. This study assessed the current interventions and suggested one to end the conflict. The study employs a sequential explanatory design within the pragmatist paradigm. The study found that the continued use of Track 1 interventions was unsuccessful in resolving the Bawku conflict. The formed Bawku Inter-Ethnic Peace Committee has proposed a symbolic burial of the okro stick to end the conflict. The results support the hypothesis that the traditional conflict resolution mechanism can serve as a remedy for chieftaincy conflicts in Ghana. The study recommended that the Government of Ghana, through the National Peace Council adopts the Gacaca conflict resolution approach to resolve the Bawku conflict. The government and other stakeholders must support the Bawku Inter-Ethnic Peace Committee with allowances, permanent offices, and logistics to work effectively.

Keywords: conflict resolution, bawku traditional area, bawku inter-ethnic peace committee, ghana.

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I. INTRODUCTION

The world is becoming more and more violent. Countries such as Syria, Libya, Nigeria, Afghanistan, Ukraine, and Iraq are responsible for most of the worsening trends in armed conflict (Gates et al. 2016). Ghana has seen its share of violent clashes. A typical example of these conflicts is the Bawku chieftaincy conflict. The Bawku conflict is a struggle between Kusasis and Mamprusis over the occupancy of the Bawku throne as Bawkunaba (see Awedoba, 2009; Agyeman, 2021).

The available literature attributes the conflict to factors such as colonialism, access to farmland, ethnicity, struggle for chieftaincy, politics, urbanization, restoration of identity and recognition (Kendie et al., 2014; Osei-Kuffour et al., 2016). The conflict began in 1957, with flare-ups in 1980, 1984, 1985, 2000, 2001, 2007, 2008, and 2009. Despite the application of several dispute management and resolution strategies in the Bawku Traditional Area, the Bawku conflict has not yet been resolved. This study assessed the current interventions and suggested one to end the conflict. This study argues that the traditional conflict resolution mechanism can serve as a remedy for chieftaincy conflicts. The study was divided into four sections. Section one provides the background to the study. It sheds light on the current debates on conflict management and resolution. Section two examines the study context and methodological approaches. Section three presents the findings and discussions of the study and concludes the study.

II. LITERATURE REVIEW

It is crucial to analyze the conflict management and resolution literature to situate the study in the

context of local and global academic debates. According to Neuman (2000), a researcher must define terms to avoid ambiguity. The significant ideas at the heart of the study are covered in this part. The fundamental distinction between conflicts and disputes is that the former is more intense than the latter and less amenable to settlement. Conflict and dispute are both parts of the same continuum.

Groups start conflicts to further their objectives. The motivations for conflict may include entitlement, command over the state's institutions, access to resources, identity, recognition, and respect for or adherence to ideals. According to Braham (2013), conflict develops through the following phases: latent, escalation, de-escalation, and settlement. Tensions between the parties and their growing awareness of the issue are features of the latent phase (Tona, 2016). Conflicts grow and get violent if they are not resolved at this point. The following features describe the conflict rising stage: Increased use of litigation tactics by the parties, issues raised throughout the dispute, a fundamental question that was formerly specific has now become broader, and the parties' motivations.

This stage is regarded as a feeling of sustainable peace, and a healthy power relationship is established between parties (Dudouet, 2006). This stage is mediated by institutions such as State Courts, Civil Society Organizations, Community Groups, and Opinion Leaders. Tona (2016) stated that conflict is a many-sided incident and may not occur in a linear form. For instance, protracted conflicts appear to be resolved for some time and re-occur. The process conceived conflict resolution as too flexible and one-dimensional. However, conflict is a dynamic process with different phases. Fisher et al. (2000) findings show five stages of conflict as follows: pre-conflict stage, which is a period when the goals of the parties are incompatible, which could lead to open conflict. The second stage is the stage of hostility. This is characterized by sporadic aggression and a search for allies by parties, mobilization of resources, tense rapport, and divergence. The third stage is the stage of crisis, which represents the highest degree of conflict. The fourth stage is the outcome stage. At this stage, a third party intervenes to resolve the conflict. At this stage, the level of intensity declined and the parties tried to determine and fix the root causes of the conflict.

III. CONFLICT MANAGEMENT AND RESOLUTION

Practitioners and academics have varied definitions of conflict management and resolution. Conflict resolution is a process of resolving conflicts from adversarial, fact-based, and legally binding decisions. Conflict management is applied in times of war, and conflict situations. Activities aimed to settle conflicts to ensure a lasting peace are referred to as conflict resolution. To resolve a conflict and create lasting peace, it is essential to uncover its underlying causes. Conflict can be used to promote progress once it has been handled. Cultural and structural violence are addressed through conflict resolution. According to Kaye and Béland (2009), conflict resolution aims to determine the parties' requirements and turn those needs into beneficial solutions.

Conflict resolution has 1 to 9 tracks, and when used all together, they are referred to as multi-track. The tactics or strategies used to resolve conflicts are called tracks. Preventive diplomacy is what Track 1 is known as (Sandole, 2010). The Track-one is connected to the state as the authorized means of promoting peace (Davies & Kaufman, 2002). Consultations, special envoys, mediation, and discussions are all part of the diplomatic track-one activities. Track one's primary flaw is that it uses punishments and psychological intimidation against the parties (see Adjei, 2016). According to Kaufman (2002), proponents of track-one diplomacy serve as the mediator in dispute resolution without including the parties in the negotiating process. The activities of non-state actors looking to settle disputes are covered in track two. Track two consists of unofficial discussions between individuals from rival organizations or governments to formulate plans, sway public opinion, and allocate people and material

resources in ways that advance conflict resolution (Montville 1987). The track two interventions allow group representatives to settle disputes in a non-threatening, non-coercive, and non-confrontational way (Azar, 1991).

Track two interventions were divided into three phases (1991). Workshops for problem-solving make up the initial phase. The goal of these workshops is to encourage the parties to a conflict to consider additional options for resolving their issues. The objective is to transform the disagreement from a zero-sum to a win-win situation. The second stage of track two diplomacies, according to Azar (1991), is the use of public opinion to change the attitudes and perceptions of the parties. The second track focuses on civil society organizations' efforts to resolve conflicts. To address the requirements of the opposing parties, track three entails offering employment possibilities. Track 4 promotes peace via individual action (Sandole, 2010). The fifth track focuses on promoting peace through grassroots non-governmental organizations' research, training, and education. Track 6 is thought of as promoting peace through advocacy. The seventh track examines the role that religious institutions play in resolving disputes. The eighth track discusses promoting peace by supplying resources. The ninth and final track discusses the function of the media in resolving disputes.

IV. WESTERN CONFLICT RESOLUTION

Best (2006) asserts that the approach to settling a dispute is dependent upon understanding its root reasons. A mechanism that would most effectively address the root causes of conflict must also take into account cultural values and the nature of the dispute (Awedoba, 2009). Negotiation, mediation, conflict analysis, case evaluation, and arbitration are examples of Alternative Dispute Resolution (ADR) techniques. It entails the third party helping the parties in conflict reach non-binding conclusions. After a settlement has been reached. ADR is a non-traditional strategy that satisfies both sides (Best, 2006). Agyeman (2008) stated that intra-ethnic disputes benefit from conventional arbitration. An informal method of dispute resolution involving a third party's intervention is mediation. Typically, there is no winner and defeat. This suggests that mediation can encourage peaceful co-existence between the disputing parties. Any mediation process must begin with a conflict assessment phase.

Conflict analysis deepens our understanding of the conflict through the assessment of the dynamics, parties, and profile of the conflict. Conflict assessment helps the parties and other stakeholders to get an insight as to the causes of the underlying conflict. Conflict analysis enables development practitioners to offer planned responses to manage conflicts. Conflict assessment is anchored on the following perspectives: The Harvard approach (HA), the Human Needs approach (HNA), and the conflict transformation theory (CTT). The Harvard approach stresses the differences between positions and interests.

The Human Needs system (HNA) asserts that conflicts are caused by the deprivation of human needs. For the conflict to be resolved, those needs should be provided to the parties (Burton, 1990; Rosenberg, 2001). The CTT perceived conflicts as a functional or dye-functional process in society, which comes naturally from human interactions. Sandole (2010) opines that conflict analysis should be done from the perspectives of the structure, actors, and dynamics. Conflict analysis should emphasize the context to provide insight into all aspects of the conflict. The critical components of conflict analysis are as follows: The profile focuses on the political, socio-economic, and cultural context of the conflict. The actors have to do with the conflicting parties and their interests, goals, and positions in the conflict. Dynamics factors stress the scenarios that can be charted from the other vital components of the conflict analysis.

Arbitration is the ADR method with legal representation outside the court. The arbitrator award tends to produce a winner and a loser. This implies that arbitration cannot foster peaceful co-existence among the feuding parties. The award may be entered as a judgment of the court. To have a fruitful arbitration certain factors must be met. Those conditions are outlined as follows;

date for the arbitration hearing, venue, procedures, submission of claims, and inspection of relevant documents to enable the arbitrator to prepare adequately for the whole exercise. Finally, security arrangements must be made to erase fear from the parties during the arbitration exercise.

Arbitration facilitates the peaceful resolution of disputes by avoiding hostility among the parties. That implies that the parties reach mutually satisfactory agreements that will result in a long-term resolution of the conflict. Conflict resolution can be approached in three ways. These are the following:

- Adjudicating right- The determination of what is a legally enforceable right.
- Reconciling interest- Satisfying the needs, concerns, and fears of the feuding parties.
- Reacting on power- Coercing someone to act.

The unwillingness of the parties to engage in such initiatives is one of several challenges confronting Western conflict resolution efforts. The western approach's major flaw is that it ignores local resources and peace-building capacities.

V. TRADITIONAL CONFLICT RESOLUTION

Formal conflict resolution approaches can help us rebuild social trust in conflict-prone areas. Indigenous conflict resolution encourages parties to engage in dialogue to address their grievances. Formal conflict resolution is based on a win-win situation and strengthens the relationship between the parties. This also implies that the traditional conflict resolution mechanism is based on community participation, whereas the Western approach is based on litigation, which emphasizes the win-lose sum (Brock-Utne, 2001). Rwanda, Mozambique, and South Africa have used Gacaca, Amnesia, and Ubuntu to resolve conflicts (Issifu, 2015).

The analysis shows that traditional conflict resolution approaches encourage participation and provide a platform for conflicting parties to re-establish unity (Zartman, 2000). Indigenous conflict resolution promotes peaceful coexistence among groups and maintains social order (Yakubu, 1995). The following describes indigenous conflict resolution efforts in a few African countries. Gacaca is a village court where members meet to settle disputes. The trials are not presided over by qualified judges, but rather by elderly members of the communities. In the Gacaca approach, parties are allowed to present their case in an old-style courtroom in a non-threatening manner. This allows the survivors to assess the consequences of the crimes committed. The Gacaca conflict resolution approach can be dangerous because of the lack of security personnel.

VI. THE STUDY SETTINGS AND METHODOLOGY

The study was conducted in the Bawku Traditional Area (BTA) in Upper East Region. The BTA cut across six political, and administrative districts: Bawku West, Binduri, Bawku East, Pusiga, Garu, and Tempane (Ghana Statistical Service, 2012). The BTA is bordered by Burkina Faso to the north, the Republic of Togo to the east, the Nabdam District to the west, and the Mamprusis East District to the south in Ghana's North-East Region (Ghana Statistical Service, 2012). From pre-colonial times to the present, the BTA has been known as the Kusaug Traditional Area. The White Volta divides the Kusaug Traditional Area in two. The eastern half is known as Agolle, while the western half is known as Atoende (see Opoku-Afari, 1957).

The Kusasis and Mamprusis are the two major ethnic groups in the area. Other ethnic groups include the Bisa, Moshie, Hausa, Busanga, Frafra, Kasena, and Dagombas. However, the people of all other ethnic groups combined do not even come close to the Kusasis ethnic group. The Kusasis, make up 45 percent of the people, followed by the Mamprusis at 25 percent, the Moshie at 15 percent, and the Hausa at 10 percent. All other ethnic groups account for 5 to 5% of the total population (GSS, 2012). The main protagonists of the Bawku chieftaincy conflict are the two largest ethnic groups, the Kusasis, and the Mamprusis. BTA was selected as a study area based on media reports and existing literature on the Bawku conflict.

The study followed a sequential explanatory approach within the framework of the pragmatist paradigm to examine the research questions. The system provides insights into findings that a single design might miss (Creswell et al., 2003; Bowen et al., 2017). The research process began with an exploratory survey to establish a relationship for the primary data collection.

As part of the preliminary survey, secondary data on emerging trends in conflict resolution efforts were collected from the Bawku Inter-Ethnic Peace Committee (BIEPC) and the Kusaug Traditional Council (KTC). The data collected were used to design the interview guidelines and the questionnaire. First, a quantitative survey was conducted to assess the effectiveness of the conflict resolution and management processes in the BTA. The potential respondents were distributed as follows (see Table 1).

Table 1: Number of Households Surveyed in BTA

Selected communities	Number of households	Number of households surveyed	Kth house
Bawku	9,738	136	264
Pusiga	1,187	17	32
Mognori	580	8	16
Zebila	1,724	24	47
Garu	1,096	15	30
Total	14,325	-	-

Source, Authors Construct, 2019

Systematic sampling was used to select every kth householder for the survey based on the randomly selected first householder. The traditional authorities, mainly Chiefs, the Police, and the Belim Wusa Development Agency were selected for in-depth interviews to authorize the quantitative data. The data collected were analyzed for the pattern of subjects and were used as narratives in the study. The study adhered to research ethics and safety approvals (WHO, 2001). Ethical permission was obtained from Kwame Nkrumah University of Science and Technology (KNUST) before the primary data collection exercise began. Respondents were informed of the confidentiality and anonymity principles. The questionnaires were administered and analyzed without the household identities.

VII. RESULTS AND DISCUSSIONS

This section is organized around specific research themes. It included police interventions, the Courts and Commission of Inquiry, and the Bawku Inter-Ethnic Peace Committee. These issues are explored as follows.

3.1 Police Interventions

Issifu (2015) noted that the police are instrumental in peace-building processes in Ghana. The empirical data (see Table 2) show the effectiveness of police interventions in BTA.

Table 2: The effectiveness of Police Interventions in BTA

Ranking	Percentage
Poor	9.5
Average	21.5
Good	27.5
Very Good	25.5
Excellent	15.5
Total	**100**

Source, Field Data, 2020

Responses were obtained from the field using a five-point Likert scale index. The householders in each study area were given a scale of 1-5, where 1 = poor; 2 average; 3 = good 4 = excellent good, and 5 = perfect to measure the effectiveness of conflict resolution efforts in the area. 69% of households stated that they were satisfied with

the police operations. In an interview, one of the interviewees said,

"The immediate interventions by police have always been the imposition of curfew in Bawku and its surroundings. In most instances, people were given two 2 hours to go to the market and come back. The District Security bans the riding of motorbikes in Bawku and its surroundings for three years. The Police have instituted social marketing strategy to retrieve all weapons from the people, only two people have submitted theirs, and an amount of 2000 Ghana cedis were given to each person".

According to the officeholder, *"Police do not respond quickly whenever the conflict occurs and when you ask them, they will say that it is an ethnic matter, so we don't have to take sides. If they will not intervene, we will get the means of intervention by ourselves. God did not create their youth with iron and steel and created ours with clay and water. The police interventions do not touch the heart and minds of the people to resolve their differences. Thus, it only forces the masses to go and sleep when they are not willing to do so".*

Court and Commission of Inquiry

The laws of Ghana provide for a commission of inquiry (see Republic of Ghana, 1992). Article 280 subsection (2) states that the judgment of a commission of investigations is a decision of the High Court. In the empirical data (see Table 3), about 12% of households reported poor intervention by the Courts and Commission of Inquiry. This indicates that more than 60% of heads of household are satisfied with the Court's interventions.

Table 3: The effectiveness of Court and Commission of Inquiry Interventions

Ranking	Percentage
Poor	11.5
Average	22.5
Good	30.5
Very Good	19.5
Excellent	16.0
Total	**100**

Source, Field Data, 2020

The results show that a committee of inquiry was set up under Section 7(1) of the State Council (Northern Region) Order No. 5 of 1952 to investigate Abugurago Azoka's claims that he had been appointed head of the Kusaug traditional area. The committee reported that Abugurago Azoka was duly elected and installed as chief in the Kusaug Traditional Area. The governor-general issued a white paper supporting the committee's advice. Yirimea Mamprusi dismissed the commission's advice as he referred the matter to the Accra High Court. Accra High Court upheld Yirimea Mamprusis' allegation. The Commission also challenged the Accra High Court ruling by appealing to the West Africa Court of Appeal. The Court of Appeal overturned the Accra High Court's judgment. This allowed the then President of Ghana, Dr. Kwame Nkrumah, to enact the Chiefs Recognition Act 1959 to install the late Abugrago Azoka as Bawkunaba. However, on April 29, 2003, the Mamprusis filed a lawsuit against the Kusasis in the Supreme Court of Ghana.

Faced with overwhelming evidence against them, they later applied for permission to discontinue permission to go to court on the same matter at any time. The motion for discontinuity was granted without permission to go to court on the same issue under the Provisional National Defense Council (PNDCL) Act 75 and Articles 270 and 277 of the 1992 Constitution. The commission of inquiry and court systems give people a legally enforceable right, but still are not effective in resolving chief disputes because they produce a winner and a loser, and this has increased the emotional impertinence of the Kusasis and Mamprusis ethnic group. For the court and commission of inquiry to be effective in resolving chieftaincy disputes, they must satisfy the needs, viewpoints, and concerns of the feuding parties.

Bawku Inter-Ethnic Peace Committee

The available literature shows that countries such as Rwanda, Mozambique, and South Africa have used Gacaca, Amnesia, and Ubuntu for conflict resolution (see Francis, 2006; Issifu, 2015). In the case of BTA, the Bawku Inter-Ethnic Peace Committee (BIEPC) was formed to resolve the

Bawku conflict. It comprises 20 members. The breakdown is as follows; six Kusasi, six Mamprusis, and two representatives from the other minority tribes in BTA, namely the Moshie, Hausa, Bisa, and Dagombas. This shows the commitment of both parties to settle their differences. The strength of this intervention is that it creates a platform to involve all parties in the settlement process. Table 4 shows the level of effectiveness of the BIEPC interventions.

Table 4: The effectiveness of Bawku Inter-Ethnic Peace Committee Interventions

Ranking	Percentage
Poor	18
Average	21
Good	21
Very Good	14
Excellent	26
Total	**100**

Source, Field Data, 2020

Approximately 18% of households indicated they were dissatisfied with the interventions of the Bawku Inter-Ethnic Peace Committee. While 26% of households said they were happy with the interventions of the Bawku Inter-Ethnic Peace Committee. This implies that significant proportions of heads of households are happy with the interventions of the BIEPC.

According to the officeholder,

"The BIEPC has proposed a symbolic burial of the okro stick to resolve the conflict. The two groups, Kusasis, and the Mamprusis will make a promise and swear before a piece of okro that if in the course of their life they start a conflict, the tender should strike and kill them, after which they will burial the okro too end the conflict. The BIEPC has formed several committees to handle issues that trigger conflicts in the area, such as the land committee and festival committee. The committee has organized peace talks through churches and mosques, women's groups, and political parties on peacebuilding in Bawku".

Another respondent said that *"the activities of the BIEPC have sowed negative peace in the area since its inception in 2009. A serious dilemma facing the Committee has been the axiological positions of its members. That has erased the trust that people have in the Committee member. The committee has not been effective in injecting positive peace in BTA because it is faced with challenges such as permanent offices, logistical constraints, and lack of remuneration for its staffs".*

VIII. CONCLUSIONS AND RECOMMENDATIONS

The study evaluates the conflict management and resolution process in the BTA. The study found that the continued use of Track 1 interventions was unsuccessful in resolving the Bawku conflict. The formed BIEPC has proposed a symbolic burial of the okro stick to end the conflict. The two ethnic groups, Kusasi, and the Mamprusis will make a pledge and swear in front of a piece of okro that if during their lifetime they start the conflict, let the tender hit and kill them, after which they will bury the okro save the end conflict. The BIEPC interventions have sowed negative peace in the region since its inception in 2009. The results support the hypothesis that the traditional conflict resolution mechanism can serve as a remedy for chieftaincy conflicts in Ghana. The study recommended that the Government of Ghana, through the National Peace Council adopts the Gacaca conflict resolution system to resolve the Bawku conflict. Also, the government and other stakeholders support the BIEPC with remuneration, permanent offices, and logistics to work effectively.

REFERENCES

1. Adjei, J. K. (2016). *Tracking the Peace building Approaches in the Bawku Chieftaincy Conflict: Prospects and Challenges:* In Tona, S., & Anamzoya, A. S. (2016). Managing chieftaincy and ethnic conflicts in Ghana. Woeli Publishing Services. Also available at www.woelipublishing .com.
2. Agyeman, D. K. (2008). Managing diversity and ethnic conflicts. *Ghana Governance in the Fourth Republic*, 77-96. Accra, Ghana: Digibooks Ghana Limited.

3. Agyeman, L. O. (2021). Understanding the causes and dynamics of conflicts in Ghana: Insights from Bawku Traditional Area. *Ghana Journal of Development Studies*, *18* (2) ,97-116. DOI: 10.4314/gjds.v18i2.5.
4. Awedoba, A. K. (2009). *An Ethnographic Study of Northern Ghanaian Conflicts: Towards a Sustainable Peace: Key Aspects of Past, Present and Impending Conflicts in Northern Ghana and the Mechanisms for Their Address* (No. 3). African Books Collective. Accra, Sub-Saharan Publishers.
5. Azar, E. E. (2002). *Protracted Social Conflict and second track diplomacy*. In Davis, J. & Kaufman, E. (2002). Second Track/citizens Diplomacy: Concepts and Techniques for Conflict Transformation. Oxford, United Kingdom: Rowman & Littlefield Publishers, Inc.
6. Best (Ed.), *Introduction to Peace and Conflict Studies in West Africa:* A Reader. Ibadan: Spectrum Books, 272-294.
7. Bowen, P., Rose, R., Pilkington, A. (2017). Mixed Methods- Theory and Practice. Sequential, Explanatory Approach. *International Journal of Quantitative and Qualitative Research Methods*. Vol.5, No.2, pp.10-27.
8. Braham, E. (2003). Conflict stages. Online essay. In Tona, S., & Anamzoya, A. S. (2016). Managing chieftaincy and ethnic conflicts in Ghana. Woeli Publishing Services. Also available at www.woelipublishing .com.
9. Brock-Utne, B. (2001). Indigenous conflict resolution in Africa. In *A draft presented to weekend seminar on Indigenous Solutions to Conflicts held at the University of Oslo, Institute of Educational Research* (pp. 23-24).
10. Creswell, J. W., Plano Clark, V. L., Gutmann, M. L. and Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori, C. Teddlie (Eds.), Handbook of mixed thods in social and behavioral research. Thousand Oaks, CA: Sage, 209–240.
11. Davis, J. & Kaufman, E. (2002). *Second Track/citizens Diplomacy: Concepts and Techniques for Conflict Transformation*. Oxford, United Kingdom: Rowman & Littlefield Publishers, Inc.
12. Dudouet, V. (2006).Transitions from violence to peace: Revisiting analysis and intervention in conflict transformation. Available at https%3A%2F%2Fd-nb.info%2F1077106254%2F34&clen=972886.
13. Francis, D. J. (2006). *Peace and conflict studies:* An African overview of basic concepts. In: G.S. Best (Ed.), Introduction to peace and conflict studies in West Africa: A Reader. Ibadan: Spectrum Books, 15-35.
14. Galtung, J. (1996). *Peace by peaceful means: Peace and conflict, development and civilization* (Vol. 14). Sage Publications.
15. Gates, S., Nygård, H. M., Strand, H., & Urdal, H. (2016). Trends in armed conflict, 1946–2014. *Conflict Trends*, *1*, 1-4.
16. Gentles, S. J., Charles, C., Ploeg, J., & McKibbon, K. A. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. The qualitative report, 20(11), 1772-1789
17. Ghana Statistical Service (2012). *2010 population and housing census*. Accra: Statistical Service. http://www.ghanasta.
18. Government of Ghana. *The Constitution of the Republic of Ghana*; Asempa Publishers: Accra, Ghana, 1992.
19. Issifu, A. K. (2015). An Analysis of Conflicts in Ghana: The Case of Dagbon chieftaincy. *The Journal of Pan African Studies, 8(6), pp. 28-44*.
20. Kendie, S. B., Osei-Kuffour, P., & Boakye, A. K. (2014). *Mapping conflicts in Ghana*. Cape Coast: Faculty of Social Sciences, University of Cape Coast.
21. Lentz, C. (2007). *Ethnicity and the making of history in northern Ghana*. Accra: Woeli Publishing Services.
22. Longi, F. Y. (2014). The Kusasi-Mamprusi Conflict in Bawku: A Legacy of British Colonial Policy in Northern Ghana. *Ghana Studies, 17(1), 157-176*.
23. Montville, J. (1978). *The Arrow and the Olive Branch:* A case for Track Two Diplomacy. In J.W. McDonald & D. Bendahmane (Eds). *Conflict Resolution:* Track Two Diplo- macy. Washington, DCC Government Printing Office.
24. Murithi, T., & Pain, D. (2000). All-Africa conference on African principles of conflict

resolution and reconciliation, November 8-12, 1999, United Nations conference centre-ECA. *Ethiopia: Addis Ababa*.
25. Osei-Kuffour, P., Kendie, S. B., & Boakye, A. (2016). *Conflict, Peace and Development*: A Spatio-Thematic analysis of Violent Conflicts in Northern Ghana between 2007-2013. Conflict & communication online, Vol. 15, No. 2. Retrieved on 10, March, 2019 from www.cco.regener-online.de ISSN 1618-0747.
26. Sandole, D. J. D. (2010). *War and Conflict in the Modern World*. Peace building: Cambridge, UK: Policy Press, London.
27. Tona, S., & Anamzoya, A. S. (2016). *Managing chieftaincy and ethnic conflicts in Ghana*. Woeli Publishing Services. Also available at www.woelipublishing .com.
28. United Nations Ghana (2012). Enhancing human security through developing local capacity. United Nations Ghana.
29. WHO (2001). "Putting Women First: Ethical and Safety Recommendations for Research on Domestic Violence against Women". Geneva: World Health Organization, http://www .who.int/gender/documents/violence/who_fch _gwh_01.1/en/.
30. Zartman, I. W. (Ed.). (2000). *Traditional Cures for Modern Conflicts: African Conflict" medicine"*. Lynne Rienner Publishers.

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Sunday-Nwosu, Chukwudi Emmanuel

ABSTRACT

This research empirically studied the impact of entrepreneurship education on students' entrepreneurial intentions: a study of selected universities in Lagos, South-West Nigeria. The specific objective of this study was to determine the contribution of entrepreneurship education to the enhancement of entrepreneurial intentions in students to create new ventures as soon they complete their studies using some selected Universities in Lagos as a study area. The study was based on planned behaviour theory, a conceptual model to predict and explain behaviour across a wide range of different types of behaviour and in different disciplines. The filled and retrieved questionnaire from the sample of 660 were used. The hypotheses data were tested using the spearman rank order correlation coefficient. The results of this study indicate that the entrepreneurial education variables (entrepreneurial intentions, entrepreneurial drive and entrepreneurial competence) have a significant impact on students' intention of venture creation. It was recommended that entrepreneurial education should be a prioritised objective in the educational policy of the government and to promote role models.

Keywords: entrepreneurs, entrepreneurship, entrepreneurship education, entrepreneurial intentions, entrepreneurial drive, entrepre- neurial competence, new venture creation.

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I. INTRODUCTION

Entrepreneurship is the bedrock of the economic growth and development of nations. It is one of the factors in the production of goods and services which are key to human existence and has been identified as a key element in solving development imbalance globally (GEM, 2012). It is one of the essential sources of poverty alleviation, employment creation and wealth generation. Its contribution to a continuous increment of goods and services is phenomenal. Entrepreneurship is regarded as the engine room for every country's economic development because it is a sure way of generating employment, marketing and market factor growth, capacity building on the citizenry and resource distribution which are necessary platforms for sustainable development.

Barot (2015) state that entrepreneurship is a key to success and every individual that creates a new organisation of business means entering into a new paradigm of entrepreneurship. The new paradigm is to catalyse massive improvement of products and services that will enhance the standard of living of the nation. Entrepreneurship is a process undertaken by an entrepreneur to create incremental value and wealth by discovering investment opportunities, organising enterprises, undertaking risks and economic uncertainty and thereby contributing to economic growth (Abdulnasir, 2018). In a similar vein, Shane and Venkataraman (2000), defines entrepreneurship as the process whereby an individual or group of individuals use organised efforts to pursue opportunities to create value and growth by fulfilling wants and needs through innovation and uniqueness, no matter what kind

of resources the entrepreneur currently has. They perceived entrepreneurship as an opportunity -seeking exercise where the entrepreneur identifies areas of challenges or gaps in the environment and provides solutions to them. Entrepreneurship education is considered part of the solution to current economic situations (Audretsch and Thurik, 2001), and a driver of social development and innovation. It helps individuals to acquire resources through knowledge and information transfer. Policymakers also believe that increased levels of entrepreneurship can be reached through education (European Commission, 2006) and especially entrepreneurship education. They recognise the importance of entrepreneurship as the promoter of economic development and hence support instruments like entrepreneurship education to increase entrepreneurial activity (Fayolle, Gailly, & Lassas-Clerc, 2016). It includes instruction in opportunity recognition, commercialising a concept, managing resources, and initiating a business venture (Grecu and Denes 2017). Entrepreneurship is said to be the function of various factors, e.g., personality traits, education, experience, and social and economic conditions (Vij, & Sharma, 2013).

According to Joshi (2014), Entrepreneurship education evolved from a single course on entrepreneurship offered to business and engineering students, then more entrepreneurship concentration areas and finally evolved as a matured entrepreneurship education programme. Entrepreneurship education is a practical responsibility where someone has to design his education in a way that will make the students or recipients do it (Athanasius 2019). Entrepreneurship education is to transform an idea into a reality and teach individuals the practical aspect of entrepreneurship, creativity and innovative skills as well as management skill such as management, marketing, information technology and finance. Entrepreneurship education is based on the philosophy of increasing knowledge about business, training of skills required to establish a business, and positive attitude towards self-employment (Asghar *et al*, (2019). It can be assumed that if the students are provided with a set of knowledge and skills it will directly influence their decision to become an entrepreneur. Education increases self-confidence by providing training to control and change behaviour through knowledge and skills thus leading to higher intentions (Souitaris *et al.,* 2007).

It is about how to develop entrepreneurial attitudes, skills and knowledge which, in short, should enable a student to 'turn ideas into action' (European Commission, 2020). Entrepreneurship education's main focus is to provide students with the requisite skills and capacities needed in the world of work. It is meant to improve individuals with the ability to recognise commercial opportunities, self-esteem, knowledge, and entrepreneurs' skills to act on them. According to Indeed Editorial Team (2021), Entrepreneurship skillset includes leadership, business management, time management, creative thinking and problem-solving. These entrepreneurial skills are vital for promoting innovation, business growth and competitiveness. Developing these skills means developing many skills together. For example, to be a successful entrepreneur, you may need to develop your risk-taking skills and sharpen your business management skill.

The purpose of entrepreneurship education is "to shape ideas of what it means to be an entrepreneur, - and to create critical awareness that contributes to the accountability of entrepreneurs to society" (Rae, 2010). According to Wu and Wu (2008), through access to education people not only gain knowledge and develop abilities but also have more opportunities to improve their quality of life. This, importantly, has led to universities focusing on the offerings of entrepreneurship education to students. Entrepreneurship needs to be instilled in university students if new businesses are to be started up in the country Peterka *et al.,* (2015) believed that the education of entrepreneurship is one of the economic and developmental mechanisms of utmost importance worldwide. A strategy for entrepreneurship education is a strategy to strengthen the individual's ability to see and exploit opportunities in an economic, social and cultural context (Ndedi, 2012). He

further states that entrepreneurship education includes the development of both personal qualities and attitudes and of formal knowledge and skills that will give students competence in entrepreneurship.

The benefits of entrepreneurship are not limited to closing the poverty gap as it generates income, employment opportunities, wealth creation and manpower availability for industrial development. Entrepreneurship is important and relevant in today's economy because it identifies opportunities, and creates and innovates brands with technological advances in solving problems. They might create a new product that solves a burning problem or takes on the challenge of exploring something that has not been explored before and improving the world. Jones, and Iredale, (2014) quoting Gorman, Hanlon, and King, (1997) state that entrepreneurship is seen as the engine driving the economy and this has resulted in the growing interest in the development of education programmes that encourage entrepreneurship. Entrepreneurship education has generally proven increasing popularity in universities, schools, engineering and business schools, and educational institutions (Hattab, 2014) and creates links between academic and business communities (Grecu, V and Denes, C. 2017). Entrepreneurship education gives students the chance to meet famous entrepreneurs and influences their attitude towards entrepreneurship (Cho and Lee 2018). Entrepreneurship education can connect the network of world entrepreneurs and enhance mentorship. During exchange programmes, it allows the upcoming entrepreneurs to exchange views and thoughts on critical areas that can revolutionise the world. Stakeholders engaged in the process of entrepreneurship education including instructors and educators have expressed commitment in terms of emotional and intellectual investment in addition to passion. The growing number of research confirms that education plays a significant role in foisting entrepreneurship and new attitudes toward it (Vaicekauskaite, and Valackiene 2018). Entrepreneurship education is considered part of the solution to current economic situations (Audretsch and Thurik, 2001), and a driver of social development and innovation. It helps individuals to acquire resources through knowledge and information transfer. Policymakers also believe that increased levels of entrepreneurship can be reached through education (European Commission, 2006) and especially entrepreneurship education.

Since the first entrepreneurship course at Harvard Business School was delivered in 1947, entrepreneurship education programmes in higher education have grown rapidly and globally (Kuratko, 2005). Kuratko & Morris, (2018) suggest that more research is needed particularly in terms of the types, objectives and outcomes of these courses. It is expected that the outcome of entrepreneurship education should enhance student venture creation skills, knowledge, and attitudes, and graduate business start-ups and overall job creation (Greene, Katz, & Johannisson, 2014) to turn ideas into reality in real venture creation to contribute to the economic growth and development of the country. However, this has not happened so far, and the area needs further research to help bring about effective results (Tung, 2011). Most developing economies desire that their entrepreneurship endeavour is straightened through entrepreneurship education programmes to make a significant impact.

The growing numbers of unemployed youth especially among graduates suggest that the expected outcome of entrepreneurship education in terms of addressing the unemployment problem among the youth has not been achieved. Von Graevenitz *et al.,* (2010) argue that entrepreneurship education is ranked high on the policy agenda of several countries, but little research is available to assess its impact. While entrepreneurship education has been introduced and promoted in several countries and at many institutions of tertiary education, at this stage little is known about the impact of this entrepreneurship education (Von Graevenitz *et al.*, 2010). They reiterate the fact that the impact emanating from entrepreneurship education is still poorly understood, and the research on entrepreneurship education still has huge gaps. This study intends to assist in the closing part of

this gap to deepen the understanding of how entrepreneurial education increases the inclination to start to respond to some of these challenges and make some recommendations that will contribute to the expectation of entrepreneurship education. For these reasons, entrepreneurship education is very significant for starting new businesses, creating new jobs and for overall economic development. The most significant aspect is to analyse the impact on students' intention towards creating a venture by exploring the relevance of specific education characteristics which may be helpful to design effective entrepreneurship education programmes (Seth 2020).

II. LITERATURE REVIEW

Entrepreneurship is the process of creating value by bringing together a unique package of resources to exploit entrepreneurial opportunities (Stevenson & Jarilo-Mossi, 1996). Entrepreneurship leads to new product introduction or market entry and creates value through association with the discovery and exploitation of profitable business opportunities, (Shane and Venkataraman, 2000). It is acting on identified opportunities and ideas to transform them into value for others. An entrepreneur is an enterprising individual who builds capital through risk and with initiative, attempts to make a profit. That means that entrepreneurs are continuously chasing opportunities to generate value through the creation or expansion of economic activity. Entrepreneurship is an opportunity-based action as a function of applied knowledge.

III. CONCEPT OF ENTREPRENEURSHIP EDUCATION

Entrepreneurship education is defined as a whole education and training activity (whether it is an educational system or a non-educational system) that tries to develop a participant's entrepreneurial intention that affects the intention such as knowledge desirability, and feasibility of the entrepreneurship activity (Linan 2004). Learning about developing business plans and creating a company allows students to better understand and integrate finance, economics, accounting, marketing, and other business disciplines, offering them an integrative and enriching educational experience (Grecu, V and Denes, C. 2017). Education enables one to understand the outside world and equips him with the basic knowledge and skills to deal with day-to-day problems. In any society, the system of education has a significant role to play in inculcating entrepreneurial values. The Consortium for Entrepreneurship Education (CEE, USA, 2013) defined entrepreneurship education as a form of education that is out to seek the preparation of people, especially youths, to be responsible, enterprising individuals who will become entrepreneurs and entrepreneurial thinkers and who will contribute to economic development and sustainable communities. It has the inherent capabilities to create a change in a people to seek how to create employment, instead of seeking one. It provides learners with practical knowledge, entrepreneurial skills such as creative and innovative skills and motivation to pursue entrepreneurial activities. It aims to harness opportunities within society and reduce the risk associated with entrepreneurship thought and guide the enterprise successfully through its initial stage to the maturity stage. Meziobi (2013) defined entrepreneurship education as an educative process that creates in the individual the ability and skills to become self-reliant and to overcome the dynamic challenges posed by the harsh economy. It aims to develop key competencies (Area, *et al*. 2018) associated with specific learning. Entrepreneurship education has also been viewed as a learning process that imbibes in the learners/student traits and competencies such as team spirit, leadership, problem-solving, negotiation skills, self-direction and self-management, unlike traditional stereotype education, which places less attention on skills and practical needs of the world of work (Sofoluwe, 2007). Akhuemonkhan, Raimi, and Sofoluwe, (2013) support the above assertion that entrepreneurship education can be conceptualised as a specialised and all-round training programme designed by education authorities to change the worldview of students from job seekers to wealth creators by developing their latent talents and potential. Entrepreneurship is a discipline of

traits that can both be learned and taught (Vanevenhoven, 2013).

Entrepreneurship education can be divided into three aims which are: a) learn to understand entrepreneurship, b) learn to become entrepreneurial, and c) learn to become an entrepreneur (Hytti, 2002). It is about creating and nurturing a learning environment that promotes entrepreneurial traits and behaviours, such as becoming a creative and independent thinker, and risk taker, assuming responsibility, and valuing diversity. It seeks to prepare people, especially youth, to be responsible, enterprising individuals who become entrepreneurs or entrepreneurial thinkers and who contribute to economic development and sustainable communities. It is not based on a textbook course. Instead, students are immersed in real-life learning experiences where they have an opportunity to take risks and manage the results, using the learning-by-doing approach to entrepreneurship education.

Previous research believed that entrepreneurial education has an important role in improving the skills of the individual that stimulates business activities (Sun *et al.,* 2017). Yang (2014) remarked that entrepreneurial education has two key features. First, through entrepreneurial learning actions, it facilitates individuals to transfer knowledge, skills, and share experience of entrepreneurship. Second, entrepreneurial education through field studies motivates individuals to be a successful person in the future.

The Consortium for Entrepreneurship Education (CEE, USA 2013) concludes that the core knowledge created via entrepreneurship education includes:

- The ability to recognise opportunities in one's life.
- The ability to pursue such opportunities by generating new ideas and marshalling needed resources.
- The ability to create and operate a new venture.
- The ability to think creatively and critically.

Cho and Lee (2018) submit that to succeed, entrepreneurs should have the necessary skills to deal with entrepreneurial problems. Improved skills may increase students' confidence in entrepreneurship and promotes the chances of entrepreneurial success. It is all about enhancing students with the skills and resources that will enable them to become self-reliant after graduation. Entrepreneurship education is a veritable tool to reduce poverty and unemployment and enhances the nation's standard of living as it contributes to the economic development of the nation. They further opine that it is about increasing students' ability to participate and respond to societal changes. Entrepreneurship education develops and stimulates the entrepreneurial process, providing all tools necessary for starting up new ventures (Postigo and Tomborini 2002). It is commonly believed that entrepreneurship education is an imperative that would make a positive contribution to improving the entrepreneurship orientation of people, leading to the acquisition of skills, creativity, confidence, drive and courage, to create employment for self and others (Ekpoh and Edet 2011).

IV. CLASSIFICATION OF ENTREPRENEURSHIP EDUCATION

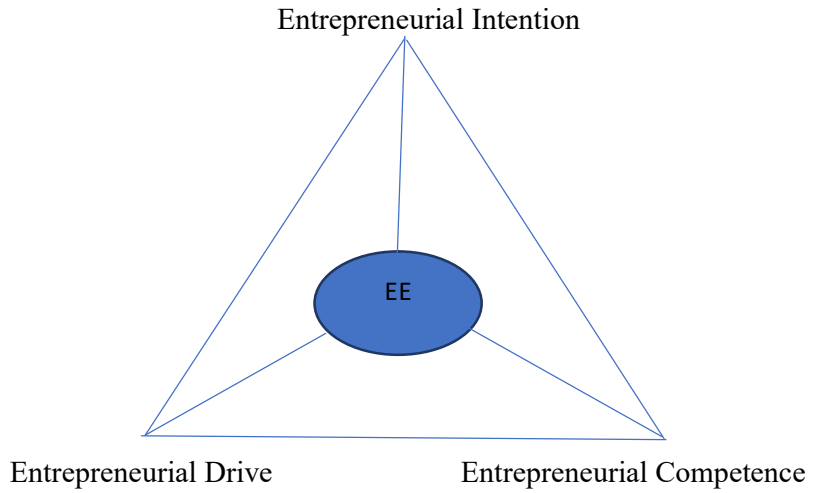
According to Linan (2004), there are four different kinds of entrepreneurship education programmes. The first, ''Entrepreneurial Awareness Education'', aims to increase knowledge about entrepreneurship and to influence attitudes that may impact intentions. The second category is described as ''Education for Start-up'' These programmes are geared toward people who generally already have an entrepreneurial idea and need to solve practical questions about becoming self-employed.

1. Entrepreneurial Awareness Education	3. Education for Entrepreneurial Dynamism
2. Education for Start-up	4. Continuing Education for Entrepreneurs

Figure 1 Source: Adopted from Linan 2004

Purposeful education is likely to enhance students' entrepreneurial efficacy by providing them with knowledge and skills to cope with the complexities embedded in entrepreneurial activities.

Dimensions of Entrepreneurial Education



Source: Prepared by author 2022

Figure 2: Model of Entrepreneurial Education

V. ENTREPRENEURIAL INTENTION

Krueger et al. (2000) suggest that entrepreneurial activity can be predicted more accurately by studying the intention rather than personality traits, demographic characteristics, or situational factors. According to Israr and Hashim (2015), Intentions are considered to be a very important step in the entrepreneurship process for people who wish to start a new business. Sheeran & Abraham (2003) opine that in social psychology intention is noticed to be the most immediate and significant antecedent of behaviour. Entrepreneurial intention is the motivational factor that influences individuals to pursue entrepreneurial outcomes (Hisrich, Peters, and Shepherd, 2017). An individual may have the potential of being an entrepreneur because of his/her competency and self-efficacy but may not make the transition into entrepreneurship because of a lack of intention (Krueger Jr *et al.*, 2000). Entrepreneurial Intention is the motivational factor that influences individuals to pursue entrepreneurial outcomes (Hisrich, Peters, and Shepherd, 2017). The intention is related to attitudes with perceived desirability of entrepreneurship and in this context, desirability relates to perceptions of the personal appeal of starting a business (Rankhumise, 2014). It is seeking knowledge that is necessary for business creation. Krueger (1993) explains that entrepreneurial intentions refer to a commitment to starting a new business. It emanates from motivation and cognition, which relate to intellect, ability and skills (Rankhumise, 2014), he further asserts that all these traits can be acquired through learning; hence the need for entrepreneurship education. Entrepreneurship education enhances the entrepreneurial efficacy of the students through business-related activities. Research posits that targeted education can contribute to developing self-efficacy (Mohammed & Aparna, 2011).

5.1 Entrepreneurial Competencies

The main goal of most entrepreneurial education is to develop some level of entrepreneurial competencies. According to Mukherjee (2016) competency is defined as the capacity that exists in a person that leads to behaviour that meets the job demand and in turn brings about desired results. European Union 2006 López-Núñez 2022 *et al,* quoting (Bacigalupo, 2016 *et al.,*) state that the European Council adopted the concept of entrepreneurship competencies as a set of abilities

with the potential of shaping society through value creation at a social, cultural, or financial level with the sense of entrepreneurship as one of the key competencies necessary for a knowledge-based society. Entrepreneurship competencies combine creativity, a sense of initiative, problem-solving, the ability to marshal resources, and financial and technological knowledge. These competencies enable entrepreneurs and entrepreneurial employees to provoke and adapt to change. They can be developed through entrepreneurship education and training that focus on promoting entrepreneurial mindset and behaviour (OECD 2018). Entrepreneurial Competencies are social, managerial and networking competencies. One of the aims of developing competencies in entrepreneurship is to reduce the fear of failure through a combination of measures focussed on awareness-raising, as well as providing knowledge and know-how that allow individuals to demonstrate resilience and persistence in the face of obstacles (OECD 2018).

5.2 Entrepreneurial Drive

Florin, Karri, and Rossiter (2017) define entrepreneurial drive as an individual's perception of the desirability and feasibility to proactively pursue opportunities and creatively respond to challenges, tasks, needs, and obstacles in innovative ways. Individuals with high levels of entrepreneurial drive are generally high achievers, possess high self-efficacy, question the status quo, and have a preference for innovative solutions. Entrepreneurial drive or internal motivation is a behavioural diversity that forces an individual to pursue opportunities to its logical conclusion, overcoming possible oppositions or challenges.

5.3 Empirical Review

Shah., Amjed, & Jaboob, (2020) studied 'The moderating role of entrepreneurship education in shaping entrepreneurial intentions and observed from the empirical results that entrepreneurship education effectively contributes to developing entrepreneurial intentions in the case of the Sultanate of Oman. Entrepreneurship education positively contributes to strengthening and channelling the entrepreneurial attitude toward entrepreneurial intentions.

Ariff, Bidin, Sharif, and Ahmad, (2010) studied Predicting entrepreneurship intention among Malay University accounting students in Malaysia. The study shows three factors that influence students' entrepreneurial intentions namely, attitude toward entrepreneurship, subjective norms and perceived behaviour. Out of these three factors, perceived behavioural control emerged as the strongest factor that had a strong influence on intention.

Liñán *et al.*, (2011) studied the factors that influence the level of entrepreneurial intention, and they reported that a high level of knowledge about entrepreneurship can contribute to a more realistic perception of entrepreneurial activity and will affect one's entrepreneurial intentions.

Empirical work done by Ekpoh and Edet (2011) on Entrepreneurship Education and Career Intentions of Tertiary Education Students in Akwa Ibom and Cross River States, Nigeria, shows that exposure to entrepreneurship education influences the career intentions of tertiary school students.

5.4 Theoretical Framework

The theory of planned behaviour was developed by Ajzen, (1985, 1991); A general model was to predict and explain behaviour across a wide range of different types of behaviour and in different disciplines Renko, *et al.,* (2012). The authors further opined that this is also true for entrepreneurship research since becoming an entrepreneur is considered to be a conscious activity and intention is taken to be a cognitive state. The Theory of Planned Behaviour (TPB) postulates three conceptually independent determinants of intention. The first is the attitude toward the behaviour and refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question. The second predictor is a social factor termed subjective norm; it refers to the perceived social pressure to perform or not to perform the behaviour. The third antecedent of intention is the degree of perceived behavioural control which

refers to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect experience as well as anticipated impediments and obstacles. The attitude towards the behaviour refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question.

5.5 Contribution to Knowledge

This research contributes to the field of entrepreneurship literature by providing evidence about the impact of entrepreneurship education on developing key competencies for entrepreneurial activity in two developing economies in the study area. It also reiterated how different components and dimensions of entrepreneurship education influence entrepreneurial intentions. It provides further insight into the effectiveness of entrepreneurial education programmes in training schools. The study affirms that entrepreneurship education inculcates in students the ability to harness opportunities and turn ideas into reality. It assists in the understanding of entrepreneurship education research.

VI. METHODOLOGY

The study was a survey research designed to determine the impact of entrepreneurship education on entrepreneurial intentions among final-year students of selected faculties to start new ventures as soon they graduate, using selected tertiary institutions in Lagos as a study area. The population of the study comprised all the students in the University of Lagos, Akoka, Lagos State University Ojo, Lagos State University of Science and Technology, Ikorodu, Caleb University, Imota, Pan African University Ajah, Anchor University Ayobo, all in Lagos State. A simple random sampling technique was used to select thirty (30) students each from eight (8) faculties in the University of Lagos, five faculties in Lagos State University Ojo, five faculties in Lagos State University of Science and Technology, Ikorodu, five faculties in Caleb University, Imota, five faculties in Pan African University Ajah, five faculties in Anchor University Ayobo, giving a total of seven hundred (840) respondents as the sample size. Seven hundred and twenty-seven returned. Out of this number, only six hundred sixty were correctly filled for usage, while sixty-seven were unusable because they were wrongly filled.

This study made use of a structured questionnaire to collect relevant data for the study. The researcher measured the values of data generated for the study with a 5-point Likert Scale, such as "Strongly Agreed" (SA) =5, "Agreed" (A)=4, Disagreed "(D)=3, Strongly Disagreed" (SD)=2 and undecided (U) =1. The questionnaire was structured in the form of close-ended questions and the close-ended questions were based on the options provided by the researcher. The validation of the research instrument was carried out by six (6) independent experts; 2 experts from entrepreneurship, and 2 experts each from measurement (in the education department) at the University of Lagos Akoka, and Lagos University of Ojo respectively. The internal consistency of the instrument was determined through the test re-test method.

A principal analysis of the Entrepreneurship items resulted in three components. The reliability items measuring entrepreneurship intentions, entrepreneurship drive, and entrepreneurship competence comprised the first, second, and third components, respectively. The internal consistency of the scales was satisfactory, as the Cronbach alpha value was 0.857 for entrepreneurial intentions, 0.765 for entrepreneurial drive and 0.785 for entrepreneurial competence. SPSS 23 version was used to analyse the responses from research participants. The statistical techniques used were descriptive analysis and the spearman rank order correlation coefficient.

VII. DATA ANALYSIS AND PRESENTATION ANALYSIS OF RESULTS

Sample description

Table 1 Gender

Table 1: Shows, out of the 660 respondents, there were 357 males with a percentage of 54.1%, while 303 was the number of female respondents with a percentage of 45.9%

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	MALE	357	54.1	54.1	54.1
	FEMALE	303	45.9	45.9	100.0
	Total	660	100.0	100.0	

Table 2: Entrepreneurship background

		Per cent	Per cent	Valid Percent	Cumulative Percent
Valid	YES	547	82.9	82.9	82.9
	NO	113	17.1	17.1	100.0
	Total	660	100.0	100.0	

Figure 92.1% of the respondents received one form of entrepreneurship education or training while 7.9% did not.

Brush (1992) found that men are more inclined towards entrepreneurial business than women with similar backgrounds. Research also supports the generally held perception that being an entrepreneur is a purely masculine character of the members of society (Lewis, 2006). Numerous studies revealed that these kinds of stereotypes regarding gender influence the intentions of men and women to involve and pursue entrepreneurial activities as their career (Gupta, 2008).

Table 3: Previous entrepreneurship training

Have you received entrepreneurship education before?

		Per cent	Per cent	Valid Percent	Cumulative Percent
Valid	YES	608	92.1	92.1	92.1
	NO	52	7.9	7.9	100.0
	Total	660	100.0	100.0	

According to table (3), concerning whether students have received entrepreneurship education or not, results indicated that 92.1.% of students were exposed to entrepreneurship education, while 7.9 %. of students were not exposed to such type of education

Decision Rule Where P < 0.05 = Reject the null hypothesis Where P > 0.05 = Accept the null hypothesis Table 1: Relationship between Entrepreneurship Education (EE) and Entrepreneurial intentions of students.

H1: There is no positive relationship between entrepreneurship education and the entrepreneurial intentions of students in the study area.

Table 4

Correlations

			Entrepreneurship Education	Entrepreneurial Intentions
Spearman's rho	EE	Correlation Coefficient	1.000	.555**
		Sig. (2-tailed)	.	.000
		N	660	660

	EI	Correlation Coefficient	.555**	1.000
		Sig. (2-tailed)	.000	.
		N	660	660

**. *Correlation is significant at the 0.01 level (2-tailed).*

H2: There is no significant relationship between entrepreneurship education and the entrepreneurial intentions of students

From data analysis of table 4, the result shows that there is a link between entrepreneurship education and entrepreneurial intentions, with a correlation value (rho) between the two variables at .555**where P = 0.000 (P < 0.05) indicates a significant level of relationship between the variables. This means that entrepreneurship intention can be considered statistically appropriate to create a new venture. The researchers, therefore, reject the null hypothesis that there is no relationship between entrepreneurship education and entrepreneurial intentions. This result is consistent with the findings of Caiazza & Vope (2016) that there is a link between entrepreneurship education and entrepreneurial intention. This was further corroborated by Seth, (2020) that entrepreneurship education course characteristics may increase the intention (and antecedents) of participants to start their ventures.

H3: There is no significant relationship between entrepreneurship education and entrepreneurship drive

Table 5

Correlations

			Entrepreneurship Education	Entrepreneurship Drive
Spearman's rho	EE	Correlation Coefficient	1.000	.639**
		Sig. (2-tailed)	.	.000
		N	660	660
	ED	Correlation Coefficient	.639**	1.000
		Sig. (2-tailed)	.000	.
		N	660	660

The study showed a strong significant relationship between entrepreneurship education and entrepreneurship drive (r=-0.639, p<0.001). As entrepreneurship education increases entrepreneurship drive also increases, so the null hypothesis is hereby rejected because there is a significant positive relationship between the two variables. The findings of the study prove that entrepreneurial education does enhance the entrepreneurship drive. The study explains the rationale for having entrepreneurship courses and workshops in the curriculum of business students, (Vij, & Sharma, 2013).

Table 6

Correlations

			EE	EC
Spearman's rho	EE	Correlation Coefficient	1.000	.520**
		Sig. (2-tailed)	.	.000
		N	660	660
	EC	Correlation Coefficient	.520**	1.000
		Sig. (2-tailed)	.000	.
		N	660	660

H3: There is no significant relationship between entrepreneurship education and entrepreneurship competence.

The study showed a strong significant relationship between entrepreneurship education and entrepreneurship competence ($r=-0.520$, $p<0.001$). As entrepreneurship education increases, entrepreneurship competence also increases, so the null hypothesis is hereby rejected because there is a significant positive relationship between the two variables.

VIII. CONCLUSION

This paper investigates the impact of entrepreneurship education programmes on students' entrepreneurial intentions, Florin, Karri and Rossiter (2017) argued that learning a relevant skill is not sufficient to promote action; students need to perceive that the application of the skill is feasible and that an entrepreneurial approach is desirable. That means that entrepreneurial education can turn ideas into action and produce students who will start their businesses upon completion of their university education. Entrepreneurship education programmes have a positive impact on students' entrepreneurial intentions, however, a lack of enabling environment can hinder their effectiveness. Entrepreneurship education seeks to provide students with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings. As tertiary institutions are playing critical roles in providing necessary training for students, to be effective in seizing opportunities, venture creation, creativity and innovation, that will help in the socio-economic development of society.

The study concludes that entrepreneurship education can play a significant role in the establishment of new ventures in Lagos, Nigeria. There is evidence of interest in entrepreneurship education by students in the study area. This is a great opportunity to improve the existing programme by policymakers. The findings have shown that entrepreneurship education has a high impact on the intention of students who are interested to become entrepreneurs or being involved in opportunity-influenced start-up businesses. Having received enhanced skills and knowledge to accelerate economic growth and improve the standard of living. Hence, it must be introduced into all the tertiary institutions in the country. This will help equip graduates with creativity, innovation, risk-taking and the ability to interpret successful entrepreneurial role models and identification of business opportunities. This may help reduce the rising unemployment situation in the country. That is why developing countries have placed great emphasis on entrepreneurship education. The notion that only government can provide jobs should be reduced through awareness campaigns by all stakeholders. Students must be encouraged to take entrepreneurship as a career rather than depending on the government and the private sector for employment.

IX. RECOMMENDATIONS

This analysis showed that entrepreneurial education programmes significantly influenced the entrepreneurial activity of some students. This implies that entrepreneurial education should be a prioritised objective in the educational policy of the government. The recommendations derived from these results are among others, to promote role models, continue supporting the financing of entrepreneurial initiatives through education and training, continue implementing government policies to support entrepreneurship, and evaluate the impact that these programmes have on skills acquired in the short and medium terms, as well as their maintenance over time.

REFERENCES

1. Abdulnasir A. M. (2018). Entrepreneurship and Enterprise Development Lecture Note Retrieved on 22 September 2022 from https://www.researchgate.net/publication/326190494.
2. Ajzen, I. (1991). The Theory of planned behaviour. *Organisational Behaviour and Human Decision Processes,* 50, 179-211.

3. Akhuemonkhan, I. A., Raimi, L. and Sofoluwe, A. (2013). Entrepreneurship Education and Employment Stimulation in Nigeria *Journal of Studies in Social Sciences* Volume 3, Number 1, 2013, 55-79.
4. Area, Manuel, Martín A. G, and Fernando V. (2012). *Alfabetización Digital y Competencias Informacionales*. Madrid: Fundación Telefónica.
5. Ariff, M.A. H., Bidin, Z., Shariff, Z., Ahmad, A., (2010). Predicting Entrepreneurship intention among Malay University accounting Students in Malaysia. *Unita Journal* 13(2), 21-29.
6. Asghar, M. Z., Gul, F., Hakkarainen, P. S., and Taşdemir, M. Z (2019). Validating Entrepreneurial Intentions Questionnaire to Assess the Impact of Entrepreneurship Education. *Education and Science* Vol 44, No 197.
7. Athanasius J (2019) Entrepreneurial Education and Its Objectives Retrieved from on 02 September 2022, https://www.slideshare.net.
8. Audretsch, D., and Thurik R, (2001). What's new about the new economy? Sources of growth in the managed and entrepreneurial economies. *Industrial and Corporate Change* 10:267-315.
9. Bacigalupo, M.; Kampylis, P.; Punie, Y.; Van den Brande, G. EntreComp: The Entrepreneurship Competence Framework. *In European Commission Scientific and Technical Research Reports;* Publications Office of the European Union: Luxembourg, 2016.
10. Barot, H. (2015). Entrepreneurship - A Key to Success. *The International Journal of Business*
11. *and Management*, Vol.3, No.1, January 2015; 163-165 as quoted in Diandra, D., & Azmy, A. (2020). Understanding the Definition of Entrepreneurship.
12. *International Journal of Management, Accounting, and Economics,* 7(5), 235-241.
13. Basu A and Virick M (n.d.), "Assessing Entrepreneurial Intentions amongst Students: A Comparative Study", available at http://nciia .org/conf08/assets/pub/basu2.pdf. Accessed on April 5, 2010.
14. Brush, C. G, (1992). "Research on Women Business Owners: Past Trends, A New Perspective and Future Directions", *Entrepreneurship Theory and Practice,* Vol. 16, No. 4, pp. 5-30.
15. Caiazza, R. and Vope, T. (2016). Innovation and its diffusion: process, actors and actions. technology *Analysis & Strategic Management,* 29 (2), pp.181-89.
16. Chandler, G. N., & Jansen, E. (1992). The founder's self-assessed competence and venture performance. *Journal of Business Venturing,* 7, 223-236.
17. Cho, Y. H., and Lee, J.-H. (2018). Entrepreneurial orientation, entrepreneurial education and performance. *Asia Pacific J. Innov. Entrep.* 12, 124–134. doi: 10.1108/ APJIE-05-2018-0028.
18. Consortium for Entrepreneurship Education (CEE). (2013) Entrepreneurship everywhere: The case for Entrepreneurship Education. Retrieved on 14 September 2021 from https://silo.tips/queue/entrepreneurship-everywhere-the-case-for-entrepreneurship-education-by-consortiu?&queue_id=.
19. Ekpoh, U. M., and Edet, A. S, (2011 Entrepreneurship Education and Career Intentions of Tertiary Education Students in Akwa Ibom and Cross River States, Nigeria. *International Education Studies* Vol. 4, No. 1.
20. European Commission (2014) Entrepreneurship Education: A Guide for Educators *ENTERPRISE & INDUSTRY MAGAZINE* Retrieve 10 September 2022, (http://ec.europa .eu/enterprise/magazine/index_en.htm).
21. European Commission. (2006). Entrepreneurship Education in Europe: Fostering Entrepreneurial Mindsets through Education and Learning. Brussels.
22. European Council. Recommendation of the European Parliament and the Council on Key Competencies for Lifelong Learning. *Off. J. Eur. Union* 2006, 10–18. Available online: http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:394:0010: 0018:en: PDF (accessed on 7 November 2021).
23. Fayolle, A., Gailly, B. I., & Lassas-Clerc, B. (2016). Assessing the impact of entrepreneurship education programmes, a new methodology. *Journal of European Industrial Training,* 30 (8/9). 701-720.

24. Florin, J., Karri, R., and Rossiter, N. (2007). Fostering entrepreneurial drive-in business education: an attitudinal approach, *Journal of Management Education*, 31 (1), 17-42
25. Global Entrepreneurship Monitor Consortium. (2012). GEM Global Entrepreneurship Monitor: Global Reports. Recuperado de: http://www. gemconsortium.org/report.
26. Gorman, G., Hanlon, D., and King, W. (1997) "Some research perspectives on entrepreneurship education, enterprise education and education for small business management: a ten-year literature review", *International Small Business Journal*, Vol. 15, No. 3, pp.56-77.
27. Grecu, V and Denes, C. (2017). Benefits of entrepreneurship education and training for engineering students *MATEC Web of Conferences* 121, DOI: 10.1051/matecconf/2017121 MSE 2017 12007).
28. Greene, P, Katz, J, Johannisson B. (2014) Entrepreneurship Education *Academy of Management Learning and Education,* Vol 3, 238-241.
29. Gupta V (2008), "An Inquiry into the Characteristics of Entrepreneurship in India", Journal of *International Business Research*, Vol. 7, Special Issue No. 1, pp. 53-70.
30. Hattab, H.W., 2014. Impact of entrepreneurship education on entrepreneurial intentions of university students in Egypt. *The Journal of Entrepreneurship,* 23 (1), pp.1-18.
31. Hisrich, R. D., Peters, M. P., and Shepherd, D.A. (2017). *Entrepreneurship*, 10th ed McGraw- Hill Education, New York, USA.
32. Hytti, U. (2002). State-of-the-art enterprise education in Europe: results from the entredu project. Retrieved on January 11, 2022 from http://www.academia.edu/3009093/State-of-art_of_enterprise_education_in_Europe.
33. Indeed editorial (2021 https://www.indeed.com/career-advice/career-development/professional-attitude retrieved September 30, 2022
34. Israr A., and Hashim N, (2015) Research on Entrepreneurial Intention: *An Academic Literature*. Review And Classification. *A Research Journal of Commerce, Economics, and Social Sciences* Vol. 9, No. 1, Pp. 43-62.
35. Joshi, R. (2014) Entrepreneurship education: Core, Context and Challenges. *Journal of Entrepreneurship and Management* Volume 3 Issue 2.
36. Jones, B, and Iredale, N (2014) Enterprise and entrepreneurship education: Towards a comparative analysis. *Journal of Enterprising Communities,* 8 (1). 34 - 50. ISSN 1750-6204 DOI:https://doi.org/10.1108/JEC-08-2012-0042.*Journal of Business Management & Social Sciences Research,* 2(11), 31-33.
37. Krueger, N. F. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship Theory and Practice,* 18(1), 5-22.
38. Krueger, N. F., Jr., Reilly, M. D., & Carsrud, A. L. (2000). Competing model of entrepreneurial intentions. *Journal of Business Venturing,* 15(5–6), 411–432.
39. Kuratko, D. F. (2005). The Emergence of Entrepreneurship Education: Development, Trends, and Challenges. *Entrepreneurship: Theory and Practice,* 29 (5), 577–597.
40. Kuratko, D.F. and Morris, M.H. (2018). Examining the future trajectory of entrepreneurship, *Journal of Small Business Management,* 56 (1), pp.11-23.
41. Lewis, P (2006), "The Quest for Invisibility: Female Entrepreneurs and the Masculine Norm of Entrepreneurship retrieved from retrieved on 14th October 2022, from https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-0432.2006.00317.x.
42. Liñán, F., Urbano, D., & Guerrero, M. (2011). Regional variations in entrepreneurial cognitions: Start-up intentions of university students in Spain. *Entrepreneurship & Regional Development,* 23, 187-215. http://dx.doi.org/10.1080/08985620903233929
43. Linan, F. (2004). *Intention-based models of entrepreneurship education*. The University of Seville.
44. López-Núñez, M.I.; Rubio-Valdehita, S.; Armuña, C.; Pérez-Urria, E (2022). EntreComp Questionnaire: A Self-Assessment Tool for Entrepreneurship Competencies. *Sustainability* 2022, 14, 2983. https://doi.org/10.3390/ su14052983.

45. Meziobi, K.A. (2013). *Contemporary issues in social studies education in Nigeria*. Owerri, Omama Publishers.
46. Mohammed, M. and Aparna, M.P. (2011). Entrepreneurial intentions of MBA students – a study in Hyderabad, *Entrepreneurial Practice Review*, 1 (4), pp. 20-37.
47. Mukherjee, S (2016) Entrepreneurial Competencies of women owning informal sector enterprises: A case of India. *Journal of Entrepreneurship Education* Vol. 19, No 2.
48. Nabi, G., & Liñán, F. (2011). Graduate entrepreneurship in the developing world: Intentions, education and development. *Education + Training*, 53, 325-334.
49. Ndedi, A. A. (2012). Challenges and perspectives facing the development of entrepreneurship
50. education and training in South Africa', *World Sustainable Development Outlook, pp. 055-065).*
51. OECD (2018), *Development Co-operation Report 2018: Joining Forces to Leave No One Behind*, OECD Publishing, Paris, https://doi.org/10.1787/dcr-2018-en.
52. Olorundare, S and Kayode, D. J, (2014) Entrepreneurship Education in Nigerian Universities:
53. A Tool For National Transformation Adekunle *Asia Pacific Journal of Educators and Education,* Vol. 29, 155–175.
54. Rae, D. (2010). Universities and enterprise education: Responding to the challenges of the new era. *Journal of Small Business and Enterprise Development,* 17(4), 591-606.
55. Rankhumise., E. M, (2014). Entrepreneurial intentions among students: a case of Tshwane University of Technology, South Africa. *Problems and Perspectives in Management, 12 (2).*
56. Renko, M., Kroeck, K. G. & Bullough, A. (2012). Expectancy theory and nascent entrepreneurship. *Small Business Economics,* 39, 667–684.
57. Sánchez, J. C. 2011. University training for entrepreneurial competencies: Its impact on
58. intention of venture creation. *International Entrepreneurship and Management Journal,* 7, 239-254.
59. Seth, K. P. 2020 The impact of Entrepreneurship Education on Entrepre- neurial Intention: An
60. Empirical study of entrepreneurship education's four key characteristics. *Dissertation.*
61. Shah, I, A., Amjed, S., and Jaboob, S (2020). The moderating role of entrepreneurship
62. education in shaping entrepreneurial intentions *Economic Structures (2020)* pp 1-15.
63. Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research, *Academy of Management Review,* 25 (1), 217-226.
64. Sheeran, P., & Abraham, C. (2003). Mediator of moderators: Temporal stability of intention and the intention-behaviour relation. *Personality and Social Psychology Bulletin,* 29, 205-215.
65. Sofoluwe A.O. (2007). University Education and youth entrepreneurship in Nigeria.
66. International Journal of Educational Management (IJEM) 5 (1) 117-126 University of Ilorin, Nigeria. Department of Educational Management, University of Ilorin, Nigeria. www.unilorin.edu.ng/ejournals/index.php/ijem/issue/current.
67. Souitaris V, Zerbinati S and Al-Laham A (2007), "Do Entrepreneurship Programmes Raise
68. Entrepreneurial Intention of Science and Engineering Students? The Effect of Learning, Inspiration, and Resources", *Journal of Business Venturing*, Vol. 22, No. 4, pp. 566-591. 43. Wilson F, K.
69. Stevenson, H.H., & Jarilo-Mossi, J.C. (1996). Preserving entrepreneurship as companies grow. *The Journal of Business Strategy*. 7(1), 10-23.
70. Sun, H., Lo, C. T., Liang, B., and Wong, Y. L. B. (2017). The impact of entrepreneurial education on entrepreneurial intention of engineering students in Hong Kong. *Manag. Decis.* 55, 1371–1393. DOI: 10.1108/MD-06-2016-0392.
71. Tung, L.C. (2011). The impact of entrepreneurship education on entrepreneurial intention of engineering students. *City*

University of Hongkong: Run Run Shaw Library.
72. Vaicekauskaite R., and Valackiene. A. (2018) The Need for Entrepreneurial Education at University 2018 *Journal of Teacher Education for Sustainability*, vol. 20, no. 1, pp. 82ñ92.
73. Vanevenhoven, J. (2013). Advances and challenges in entrepreneurship education. *Journal of Small Business Management*, 51 (3), 466-470.
74. Vij, S., & Sharma, P. (2013). Does Entrepreneurial Education Enhance the Entrepreneurial Drive of Business Students? *The IUP Journal of Entrepreneurship Development*, 10(2), 65-82.
75. Wu, S. and Wu, L. (2008). The Impact of higher education on entrepreneurial intentions of university students in China, *Journal of Small Business and Enterprise Development*, 15 (4), pp. 752-774.
76. Yamane, Y (1964). Statistics Introductory Analysis, New York; Harper and Row pub.
77. Yang, J. H. (2014). Effect of Entrepreneurial Education on Entrepreneurial Intention of University Students: Focused on mediating the effect of self-efficacy and Entrepreneurial motivation. *Asia-Pacific J. Bus. Ventur. Entrep.* 9, 65–77. doi: 10.16972/apjbve.9.6.201412.65.

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