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## **Impact of International Trade On Economic Growth: The Granger Causality Test Approach**

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### **Abstract:**

The study analyzes the impact of international trade on economic growth in Nigeria. The study's specific objectives were used to achieve this, which is to investigate the impact of Nigeria's trade openness on the country's economic growth; to examine the extent to which trade balance has an impact on economic growth; and to find out how exchange rate affects economic growth. The time series data used for this study was sourced from CBN 2021. Using Granger Causality test it indicates that trade balance does not Granger cause real gross domestic product at 5% level of significance. It also indicates that the degree of trade openness does not Granger cause real gross domestic product at 5% level of significance. The regression result shows that trade is not statistically significant to economic growth. Also, the result shows that trade openness is not statistically significant to economic growth. It is recommended that there is need for effective foreign exchange management capable of ensuring optimal productivity in the critical sectors of the economy. This can be achieved by diversification of the economy away from oil with a view to expanding export of non-oil goods and services to strengthen naira exchange rate under the managed float regime.

**Keywords:** International Trade, Economic growth, Trade openness, Granger Causality test, Foreign exchange, Economic diversification

### **1. Introduction**

International trade enables a country or nation to broaden its market for goods and services that would otherwise be unavailable to its inhabitants. Foreign trade implies that total productivity includes domestic production, consumption, and international exchange of commodities and services (UNCTAD, 2018). Foreign trade, as a key driver of economic progress, must result in a constant rise in human status through broadening people's standards and preferences because no country has ever progressed without trade. Therefore, foreign trade is critical in reorganizing the economic and social characteristics of countries all over the world, particularly in developing countries (Muhammad & A., (2018)). Economists have long been fascinated by the factors that cause countries to expand at various rates and achieve varying levels of wealth. Trade is one of these factors (Mongoe & mongale, 2014).

Nigeria is essentially an open economy, with international trade accounting for a



sizable share of total output. Nigeria's economic progress is heavily reliant on the possibilities of her export commerce with other countries. Trade generates foreign exchange revenues as well as market stimulus, resulting in faster economic (Adenugba & Dipo, 2013). Nigeria has had this experience since the 1960s, despite the fact that the composition of trade has changed over time. Decision-makers, policymakers, and economists have all been interested in foreign trade. It allows countries to sell commodities produced locally to other countries around the world and a source of foreign exchange (Andabai & Maryann, 2018); (Yakeen A. a., 2016 ). Economists think that allowing international trade to flourish accelerates development (Shivneil & Priteshni, 2017 ). It's possible that the faster growth is a transition effect rather than a change in steady state growth rate. Clearly, the change takes several decades or more, thus it is more accurate to think of trade openness driving growth rather than only causing a one-time real income adjustment (Elias, Agu, & Eze, 2018). Following the notion that sustained commerce is the principal engine of economic growth, the relationship between trade and growth is envisioned through an export-led growth strategy (Shivneil & Priteshni, 2017 ).

## **1.2 Statement of Problem**

The macroeconomic policy changes arising from trade, which turned the country into an import-dependent economy, may be the major reasons why the benefits of international trade cannot be found to have a positive influence on economic growth (Afaha & A.O., 2012). Furthermore, foreign trade has not contributed significantly to economic growth because some of the goods imported into the country harm local industries by making their products appear inferior and thus causing neglect, resulting in a decrease in the rate of growth of such industries' output, which then affects the overall economy (Magaji & Saleh, 2010 ).

Given the benefits of international trade on economic growth, foreign trade has been viewed as a limitation to growth, particularly in emerging countries. This is because countries tend to rely too heavily on the foreign market, making them more vulnerable to market instability. As a result of the significant volatility associated with commodity exports, Nigeria's terms of trade, international trade balance, and economic development are all at risk (Magaji, I.R, & Abubakar, 2015 ). The basic problem of interest for this research is that why the economies of a developing country like Nigeria not growing as a result of international trade?

## **1.3 Research Questions**

The research is expected to provide answers to the following questions:

What is the impact of degree of trade openness on economic growth in Nigeria? To what extent does trade balance impact on the economic growth process in Nigeria? And does exchange rate affect economic growth significantly?

## **1.4 Objectives of the Study**

The broad objective is to analyze impact of international trade on economic growth in Nigeria. The specific objectives are:

To investigate the impact of Nigeria's trade openness on the country's economic growth, to examine the extent to which trade balance has impact on economic growth and to find out how exchange rate affect economic growth.

## 1.5 Statement of Hypotheses

H<sub>01</sub>: The degree of trade openness has no significant impact on economic growth

H<sub>02</sub>: Trade balance has no significant impact on economic growth

H<sub>03</sub>: Exchange rate has no significant effect on economic growth

## 2. Literature Review and Theoretical Framework

### 2.1 Conceptual Review

#### 2.1.1 International Trade

International trade is defined as the exchange of goods and services between citizens of one country and citizens of other countries. As a result, it is a mechanism that connects the world's nations through service flows, commodities trade, and factor movements (Alfred, 2018 ). International trade is also an alternate development strategy for improving human living situations without jeopardizing society's merit (Shivneil & Priteshni, 2017 ). According to this analysis, overseas trade provides a viable platform for growing domestic enterprises' market base and increasing domestic capacity utilization, both of which are important for supporting economic growth.

#### 2.1.2 Economic Growth

Economic growth can be described in two ways, according to (Mongoe & mongale, 2014). To begin with, economic growth is defined as long-term, consistent annual gains in an economy's real national income. To put it another way, economic growth is defined as an increase in the trend of net national product at constant prices. Some economists have criticized this description as insufficient and unsatisfactory (Sanusi, 2010); (Omoju & Adesanya, 2012 ). They suggest that while total national income may be rising, people's living standards may be declining.

Economic growth entails the extension of a country's productive base both domestically and internationally, in addition to an increase in domestic aggregates. Efforts to increase aggregate productivity must consider the elements of international competitiveness as well as the possible benefits of successful external positioning.

#### 2.1.3 Trade Openness

International trade openness is a channel through which FDI, capital inputs, goods and services flow to host countries or regions (Blanchard, 2009). These are sources of economic growth to developing countries. Trade can directly increase per capita income when countries specialize in producing goods in which they have a comparative advantage but it also can indirectly encourage development via other channels such as technology transfer, product diversity, increasing scale economies, efficient allocation and distribution of resources within the economy and interaction with trading partners. However, it should be mentioned that in cases where trading partners are asymmetric countries, with significantly different technologies and endowments, economic integration, even if it increases the worldwide growth rates, may unfavorably affect individual countries.

It is evident that the concept is important in terms of appreciating the level of exposure of the economy, in term of the volume of imports and exports, in relation to the magnitude of aggregate productivity in the economy. Import dependence or export dependence portends

significant consequence for the economy if it constitutes a sizable proportion of aggregate productivity. The concept of trade openness is therefore important in a bid to interrogate the interaction between foreign trade and economic growth in an economy.

#### **2.1.4 Balance of Trade**

The balance of trade (BOT), also known as the trade balance, refers to the difference between the monetary value of a country's imports and exports over a certain time period (Edoumiekumo & Opukri, 2013). A positive trade balance indicates a trade surplus while a negative trade balance indicates a trade deficit. The BOT is an important component in determining a country's current account.

The balance of trade forms part of the current account, which includes other transactions such as income from the net international investment position as well as international aid. If the current account is in surplus, the country's net international asset position increases correspondingly. Equally, a deficit decreases the net international asset position (Egbulonu & Ezeocha, 2018). The concept of trade balance reflects the relative strength of an economy in terms of international trade position. It measures the deficit, surplus of balance attributable to the interaction between a country's exports and imports. The concept is therefore important in measuring the net effects of a country's foreign trade on the aggregate productivity of an economy.

#### **2.1.5 Foreign Exchange**

### **2.2 Empirical Review**

The relationship between international trade and economic growth has been the subject of numerous empirical studies. (Elias, Agu, & Eze, 2018) focus on the influence of export trade on the Nigerian economy and the impact of import trade on the Nigerian economy. The main components of foreign trade were estimated using a multiple regression analysis technique. Using Central Bank of Nigeria (CBN) data, which covered the years 1980 to 2012, the study reveals that export commerce had a substantial impact on Nigeria's economic growth. The study recommends that the government make conscious efforts to fine-tune the major macroeconomic factors in order to establish an enabling environment for stimulating foreign trade and encouraging growth in the Nigerian economy, among other things.

(Egbulonu & Ezeocha, 2018) investigate the relationship between trade openness and economic growth. The study used the ARDL technique and covered the years 1990 to 2015. Economic Growth, Trade Openness, Foreign Direct Investment, and Gross Capital Formation all have a long-run link, according to the ARDL findings. In the short run, Trade Magaji an insignificant impact on the country's real gross domestic product. This backed up the link between foreign trade and economic growth. As a result, the study recommends that economic managers take steps to diversify the economy away from oil in order to boost the economy's development potential.

(Hasnain, 2018) investigates the impact of foreign trade on Bangladesh's economic growth. The study's goal was to find out the kind of relationship that exists between foreign trade and economic growth. The secondary data acquired for the purpose of the study was analyzed using Pearson Correlation and a Multiple Regression Model. The finding shows that international trade is closely connected with economic growth.



(Agbo, Agu, & Eze, 2018) investigates the influence of international trade on Nigerian economic growth with the only purpose of determining the impact of export trade and the impact of import trade on the Nigerian economy. Using multiple regression analysis, the study reveals that export trade has a substantial impact on economic growth. The study also shows that import trade had no substantial impact on economic growth. They recommend that the government should make conscious efforts to fine-tune various macroeconomic variables in order to provide an enabling environment for stimulating foreign trade by engaging in more export trade and, in effect, curtailing import trade, to cushion this negative effect on the economy.

(Afolabi, Danladi, & Azeez, 2016) work on the primary determinants driving economic growth through international trade. To determine the stationarity properties of the variables, they use the Augmented Dickey-Fuller (ADF) test in conjunction with the Phillip-Perron (PP) test of Unit Root Tests and employ the Ordinary Least Square (OLS) technique. GDP was utilized as a proxy for economic growth, with the exchange rate, government spending, interest rate, foreign direct investment, import, and export serving as independent variables. Finding shows that Government spending, interest rates, import and export are all positively significant, while the exchange rate and foreign direct investment are both adversely inconsequential in the Nigerian economy's growth process. They recommend that the Nigerian government should place a greater priority on agriculture specialization in order to diversify the country's production and export base and reap the full benefits of trade, including economic growth.

Using quarterly time-series data from 1981Q1 to 2010Q4, (Arodoye & Iyoha, Foreign trade-economic growth nexus: Evidence from Nigeria, 2014) investigate the relationship between foreign trade and economic growth in Nigeria. A vector autoregressive model is used to account for feedbacks completely. The findings suggest that foreign trade and economic growth have a long-term consistent link. The results of the variance decomposition demonstrate that the main causes of variation in Nigeria's economic growth are internal shocks and foreign trade innovations. As a result, they recommend that trade expansion policies be implemented as a means of increasing Nigeria's economic growth.

Employing a multiple linear regression model, (Adenugba & Dipo, 2013) analyze the performance of non-oil exports in Nigeria's economic growth from 1981 to 2010. The findings show that non-oil exports have underperformed expectations, casting doubt on the usefulness of the export promotion initiatives in place. They note that the economy is still a long way from diversifying away from crude oil exports, and that the crude oil sub-sector remains the economy's single most significant industry.

(Edoumiekumo & Opukri, 2013) investigate the contributions of international trade to Nigerian economic growth as assessed by real gross domestic product (RGDP). They employ Augmented Dickey-Fuller (ADF) test, Ordinary Least Square (OLS) statistical technique, Johansen co-integration test, and Granger Causality test to examine time-series data collected during a 27-year period. The finding reveals that international commerce and economic growth have a beneficial link. There is also co-integration between the variables. The Granger Causality test reveals a one-way relationship, with RGDP Granger causing export and import

Granger causing RGDP and export. This relationship may change with current data.

From 1980 to 2009, (Chima, 2013) looks at the impact of international commerce on Nigeria's economic growth. Using multivariate linear regression model Volume of export, volume of import, net export, and trade openness were the variables of interest. He regresses using secondary data and the Ordinary Least Squares (OLS) approach. The finding reveals that while net exports and import volume have a positive association with GDP, trade openness has a negative link with growth. However, causal relationship was not established.

(Ezike, Ikpesu, & Amah, 2012) investigate the macroeconomic impact of international trade on economic growth in Nigeria. Using the Ordinary Least Squares (OLS) regression technique and applying a combination of bivariate and multivariate models and the data covering the period 1970-2008 observed that the two predictors used in the study for trade, namely exports and foreign direct investment had a positive and significant impact on Nigeria's growth during the period.

(Omoju & Adesanya, 2012 ) use Nigeria as a case study to analyze international trade and economic growth in underdeveloped countries. They use secondary data from 1980 to 2010 and found that foreign trade, foreign direct investment, government expenditure, and the exchange rate all had a significant and positive impact on economic growth in developing countries when using the Ordinary Least Square (OLS) regression method on the specified multiple linear regression model. During the same period, (Afaha & A.O., 2012) investigate the impact of trade on Nigeria's economic growth Using Linear multiple regression technique in assessing various components of foreign trade. Secondary data were used for this study. The result shows that exports, exchange rate and per capital income are positively related while economic openness and imports are negatively related to output in Nigeria. They recommend that conscious efforts should be made by government to fine-tune the various macro-economic variables in order to provide an enabling environment to stimulate foreign trade.

Given the significance of international trade in the growth process, the lack of empirical consensus on the influence of international trade on economic growth and the causal relationship based on current data represents a vacuum that this study seeks to fill. To fill the gap in the literature, this study investigates the phenomena using current evidence, encompassing all important variables and updating the data used in estimating the regression model and employs Granger Causality test.

### **2.3 Theoretical Framework**

The Heckscher-Ohlin theory has been adopted as a theoretical framework for this study. The theory is deemed appropriate as a theoretical framework owing to its suitability in capturing contemporary trends in international trade. The theory relaxes some of the restrictive assumptions of the classical models (absolute advantage and comparative advantage) of international trade and captured the essential role of factor endowments in determining a country's comparative advantage and international trade position.

The Heckscher-Ohlin (HO) model of the patterns and determinants of international trade was developed by two Swedish economists, Eli Heckscher and Bertil Ohlin. Heckscher and Ohlin built their theory around two basic characteristics of countries and products.

Countries differ from each other according to the factors of production they possess. Goods differ from each other according to the factors that are required in their production. Given these features of the world, Heckscher and Ohlin argued that a country will be able to produce at lower cost (and therefore have comparative advantage in) those products whose production requires relatively large amounts of the factors of production (also known as factor endowments; namely, labor, land, capital, natural resources) with which that country is relatively well endowed.

As economists studying the model, suggest that it is capable of providing important insights into such issues as the effect of international trade on wages and other factor prices, and the impact of economic growth on the pattern of international trade (Chima, 2013). It also provides an explanation for the political behaviour of various interest groups in an economy. The HO theory is of profound importance to this study as it provides a robust theoretical basis for linking international trade to economic growth in a country. The theory posits that the factor endowments of a country can be leveraged as an instrument of economic growth through international trade.

### 3. METHODOLOGY

#### 3.1 Research Design

The research design for this study is Ex post facto design. The Ex post facto design involves examining how an independent variable, present prior to the study, affects a dependent variable. In ex post facto research, the researcher examines the data retrospectively to establish causes, relationships or associations, and their meanings. Ex post facto design can be used to test hypothesis about cause and effect or correlational relationships, where it is not practical or ethical to apply a true experimental or even a quasi-experimental design.

#### 3.2 Model Specification

The model for this study is a multiple linear regression model adopted from the works of (Elias, Agu, & Eze, 2018), Dumani Nelson and Siaisiai (2018) (Dumani, Nelson, & Siaisiai, 2018), as well as (Arodoye N. L., 2014). In a bid to empirically investigate the impact of international trade on economic growth in Nigeria, the Variables included in the model are; Real Gross Domestic Product, Balance of trade, Degree of Openness, Exchange rates, as well as Foreign Direct Investments. The dependent variable is Gross Domestic Product, while other variables are explanatory variables.

The functional form of this model can be specified as follows:

$$RGDP_t = F(BT_t, TO_t, ER_t, FDI_t) \dots \dots \dots 3.1$$

The linear form of the model can be expressed as follows;

$$RGDP_t: \alpha_0 + \beta_1 BT_t + \beta_2 TO_t - \beta_3 ER_t + \beta_4 FDI_t \dots \dots \dots 3.2$$

In order to allow for the inexact relationship among the variables as in the case of most economic variables, stochastic error term ‘ $\mu_t$ ’ is added to the equation. Thus, we can express the econometric form of the model as:

$$RGDP_t: \alpha_0 + \beta_1 BT_t + \beta_2 TO_t - \beta_3 ER_t + \beta_4 FDI_t + \mu_t \dots \dots \dots 3.3$$

**Where;**

- RGDP<sub>t</sub> = Real Gross Domestic Product;
- BT = Balance of Trade

TO = the Degree of Openness measured as trade to GDP ratio (import + export)/ RGDP;  
 $ER_t$  = Exchange Rates  
 $FDI_t$  = Foreign Direct Investment  
 $\mu$  = the stochastic error term.

In order to properly estimate the parameters of the postulated model, we rescale the dependent variable by logging it, thus, transforming it into a log-linear model as follows:

$$\text{LOG}(\text{RGDP}_t): \alpha_0 + \beta_1 \text{LOG}(\text{BT}_t) + \beta_2 (\text{LOG})\text{TO}_t - \beta_3 \text{LOG}(\text{ER}_t) + \beta_4 \text{LOG}(\text{FDI}_t) + \mu_t \dots\dots\dots 3.4$$

**3.2.1 A’ priori Expectations**

By theoretical postulation, the coefficients of Balance of trade (BT), Degree of Openness (DO), and Foreign Direct Investment (FDI) are expected to be positive while the coefficient of Exchange rates (EXR) is expected to be negative.

$$\alpha_0, \beta_1, \beta_2, \beta_4 > 0 \text{ and } \beta_3 < 0$$

**3.3 Nature and Sources of Data**

The research relied mainly on secondary data published by the Central Bank of Nigeria (CBN). These annual time series data for analysis relate to international trade and economic growth in Nigeria. The annual time series data with respect to RGDP, BT, TO, TBAL, ER and FDI were obtained from the statistical bulletin of the Central Bank of Nigeria (CBN). The period covered for this study is from 1986 to 2018 (CBN, 2021).

**4.0 DATA ANALYSIS**

**4.3 Unit Root Tests**

**Table 4.2: Summary of Unit Root Test Results**

Variables	ADF Statistic	5% Critical Values	Order of Integration	P-Values
RGDP	-2.119271	-1.955681	I(1)	0.0352
TBAL	-3.208255	-1.953381	I(1)	0.0024
TO	-4.605217	-1.953381	I(1)	0.0000
ER	-5.906005	-3.595026	I(1)	0.0003
FDI	-6.606964	-1.953381	I(1)	0.0000

**Source: Authors’ Computation from Eviews 9 Outputs (2020)**

To address the phenomenon of spurious regression usually associated with non-stationary time series data, the Augmented Dickey Fuller (ADF) unit root test was carried out to ascertain the stationarity status of each individual time series data.

Based on the outcome of ADF Unit Root test results shown in Table 4.2, after first differencing, the corresponding p-value to ADF statistic (0.0352) is less than 0.05 indicating a rejection of the null hypothesis that the time series data with reference to RGDP has a unit root at 5% level of significance. This implies that RGDP is not stationary at level but became stationary after first differencing.

With reference to the time series data on TBAL, after first differencing, the corresponding p-value to ADF statistic (0.0352) is less than 0.05 indicating a rejection of the null hypothesis that the time series data with reference to TBAL has a unit root at 5% level

of significance. This implies that the time series data on trade balance is not stationary at level but became stationary after first differencing.

Also, based on the outcome of ADF Unit Root test results shown in Table 4.2, after first differencing, the null hypothesis of unit root is rejected based on the p-value (0.0000) corresponding to the ADF statistic in respect of foreign direct investments which is less than 0.05. This implies that the time series data corresponding to foreign direct investments is also not stationary at level but became stationary after first differencing.

From the unit root test results with reference to the time series data on TO, after first differencing, the corresponding p-value to ADF statistic (0.0000) is less than 0.05 indicating a rejection, at 5% level of significance, of the null hypothesis that the time series data with reference to TO has a unit root. This implies that the time series data on trade openness is stationary after first differencing.

With reference to the time series data on ER, the corresponding p-value to ADF statistic (0.0000) is less than 0.05 indicating a rejection, at 5% level of significance, of the null hypothesis that the time series data with reference to ER has a unit root. This implies that the time series data on ER is stationary after first differencing.

The outcome of the unit root test implies that the time series data with reference to RGDP, TBAL and FDI, TO and ER were not stationary at level but became stationary after first differencing implying that the time series were integrated of order one I(1). This unit root test outcome is consistent with the theoretical assertion that most economic time series are not stationary at level, but become stationary after first differencing.

#### 4.4 Test of Cointegration

**Table 4.3a: Johansen Test of Cointegration**

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.702142	96.84816	69.81889	0.0001
At most 1 *	0.649698	62.93625	47.85613	0.0011
At most 2 *	0.463585	33.56541	29.79707	0.0176
At most 3 *	0.363192	16.12571	15.49471	0.0401
At most 4	0.117178	3.489683	3.841466	0.0617

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level

**Source: Authors' Computation from Eviews 9 Outputs (2020).**

From the result in Table 4.3a, the Trace test indicates four cointegrating equation at the 0.05 level of significance while the Max-eigen statistic indicates two cointegrating equations. The value of the calculated Trace statistic is more than the critical values with their P-values less than 0.05 (0.0401). This means that there is Cointegration which implies the existence of a long-run relationship among the variables.



#### 4.5 Granger Causality Test Results

**Table 4.4 Summary of Granger Causality Test**

Null Hypothesis	Observations	F-Statistic	Prob.	Remarks
ER does not Granger Cause RGDP	28	3.08572	0.0650	Accept Null Hypothesis
RGDP does not Granger Cause ER		2.66471	0.0910	Accept Null Hypothesis
FDI does not Granger Cause RGDP	28	4.52674	0.0220	Unidirectional Causality
RGDP does not Granger Cause FDI		1.42646	0.2606	Accept Null Hypothesis
TBAL does not Granger Cause RGDP	28	6.46827	0.0059	Reject Null Hypothesis
RGDP does not Granger Cause TBAL		4.18061	0.0283	Reject Null Hypothesis
TO does not Granger Cause RGDP	28	6.19500	0.0070	Reject Null Hypothesis
RGDP does not Granger Cause TO		4.87218	0.0172	Reject Null Hypothesis
FDI does not Granger Cause ER	28	0.35929	0.7020	Accept Null Hypothesis
ER does not Granger Cause FDI		2.57988	0.0975	Accept Null Hypothesis
TBAL does not Granger Cause ER	28	8.71806	0.0015	Reject Null Hypothesis
ER does not Granger Cause TBAL		7.52268	0.0031	Reject Null Hypothesis
TO does not Granger Cause ER	28	0.13215	0.8769	Accept Null Hypothesis
ER does not Granger Cause TO		0.66216	0.5253	Accept Null Hypothesis
TBAL does not Granger Cause FDI	28	0.89765	0.4213	Accept Null Hypothesis
FDI does not Granger Cause TBAL		9.17985	0.0012	Reject Null Hypothesis
TO does not Granger Cause FDI	28	3.73482	0.0394	Reject Null Hypothesis
FDI does not Granger Cause TO		2.63960	0.0929	Accept Null Hypothesis
TO does not Granger Cause TBAL	28	5.45154	0.0115	Reject Null Hypothesis
TBAL does not Granger Cause TO		0.63712	0.5379	Accept Null Hypothesis

**Source: Authors' Computation from Eviews 9 Outputs (2020).**

Table 4.4 comprises the results of the Pairwise Granger causality test. Based on the p-value associated with the F-statistic (0.0650), we do not reject the null hypothesis that exchange rates do not Granger cause real gross domestic product at 5% level of significance. Also, the F-statistic and the associated p-value indicate that we do not reject the null hypothesis that government real gross domestic product does not Granger cause exchange rates at 5% level of significance. The Granger Causality test therefore shows the absence of

causality running from exchange rates to real gross domestic product.

Based on the p-value corresponding to the F-statistic (0.0220), we reject the null hypothesis that foreign direct investment does not Granger cause real gross domestic product at 5% level of significance. However, the F-statistic and the associated p-value (0.2606) indicates that we do not reject the null hypothesis that real gross domestic product does not Granger cause foreign direct investment at 5% level of significance. The Granger Causality test shows unidirectional causality between foreign direct investment and real gross domestic product.

Based on the p-value corresponding to the F-statistic (0.0059), we reject the null hypothesis that trade balance does not Granger cause real gross domestic product at 5% level of significance. Also, the F-statistic and the associated p-value (0.0283) indicated a rejection of the null hypothesis that real gross domestic product does not Granger cause trade balance at 5% level of significance. The Granger Causality test showed bidirectional causality between trade balance and real gross domestic product.

Based on the p-value corresponding to the F-statistic (0.0070), we reject the null hypothesis that the degree of trade openness does not Granger cause real gross domestic product at 5% level of significance. Also, the F-statistic and the associated p-value (0.0172) indicate a rejection of the null hypothesis that real gross domestic product does not Granger cause the degree of trade openness at 5% level of significance. The Granger Causality test shows bidirectional causality between degree of trade openness and real gross domestic product.

Based on the p-values corresponding to the F-statistic, with reference to causality between exchange rates and the degree of trade openness, there is no causality between the degree of trade openness and foreign exchange rates.

Based on the p-value corresponding to the F-statistic (0.0015), we reject the null hypothesis that trade balance does not Granger cause foreign exchange rate at 5% level of significance. Also, the F-statistic and the associated p-value (0.0031) indicated a rejection of the null hypothesis that exchange rate does not Granger cause trade balance at 5% level of significance. The Granger Causality test showed bidirectional causality between trade balance and foreign exchange rates.

Based on the p-values corresponding to the F-statistic, with reference to causality between exchange rates and foreign direct investment, there is no Granger Causality between foreign direct investment and foreign exchange rates.

Based on the p-value corresponding to the F-statistic (0.0115), we reject the null hypothesis that the degree of trade openness does not Granger cause trade balance at 5% level of significance. However, the F-statistic and the associated p-value (0.5379) indicate an acceptance of the null hypothesis that degree of trade openness does not Granger cause trade balance at 5% level of significance. The Granger Causality test shows unidirectional causality between TBAL and TO.

Based on the p-value corresponding to the F-statistic (0.0929), we do not reject the null hypothesis that FDI does not Granger cause the TO at 5% level of significance. However, the F-statistic and the associated p-value (0.0394) indicated a rejection of the null



hypothesis that TO does not Granger cause FDI at 5% level of significance. The Granger Causality test showed unidirectional causality between FDI and TO. Based on the p-value corresponding to the F-statistic (0.0012), we reject the null hypothesis that FDI does not Granger cause trade balance at 5% level of significance. However, the F-statistic and the associated p-value (0.4213) indicated an acceptance of the null hypothesis that trade balance does not Granger cause FDI at 5% level of significance. The Granger Causality test shows unidirectional causality between FDI and trade balance in Nigeria during the period under review.

#### 4.6 Regression Results and Interpretation

**Table 4.5: Summary of Regression Result**

**Dependent Variable: LOG(RGDP)**

Variables	Coefficient	Std. Error	T-Statistic	Prob.
C	3.727432	2.118498	1.759469	0.0898
LOG(TO)	-0.066209	0.083066	-0.797059	0.4324
TBAL	5.06E-06	2.89E-05	0.175277	0.8622
LOG(ER)	0.249917	0.093075	2.685103	0.0122
LOG(FDI)	0.254571	0.095553	2.664203	0.0129
R-squared	0.827600			
Adjusted R-squared	0.802059			
F-statistic	32.40312			
Prob(F-statistic)	0.000000			
Durbin-Watson stat	1.610834			

**Source: Authors' Computation from Eviews 9 Outputs (2020).**

From the estimated regression results presented in Table 4.5, the Adjusted coefficient of determination (adjusted  $R^2$ ) from the estimated regression model showed that about 80% (0.802059) of the total changes in RGDP is explained by ER, FDI, TBAL and TO. This is an indication that a substantial proportion of the variations in real gross domestic product is explained by the variables explicitly captured in the regression model, implying that the regression model had a very good fit.

From the estimated regression result in Table 4.5, the Coefficients of TBAL, ER and FDI were all positive while the coefficient of the TO was negative. The evaluation of the signs associated with the estimated regression coefficient indicates that the coefficients of ER, FDI and TBAL conform to a-priori expectation while the coefficient of TO did not conform to a-priori expectation. The non-conformity to a-priori expectation of the degree of trade openness can be attributed to the unfavorable terms of trade associated with the Nigerian economy. Hence, evaluation based on economic a-priori criteria reveals that the estimated regression model is consistent with theoretical stipulations.

The regression result in table 4.5 shows that on the average, a unit change in TBAL will result in an average change in RGDP by 0.00000506 units, holding ER and FDI and TO



constant. The estimated coefficient of ER revealed that, a percentage change in foreign exchange rate will on the average result in a percentage change in RGDP by 0.249917units, holding FDI, TBAL and TO constant. The estimated coefficient of FDI shows that on the average, a relative change in FDI will result in a relative change in RGDP by 0.254571units, holding ER, TBAL and DO constant. Also, the estimated coefficient of degree of trade openness (TO) shows that on the average, a relative change in TO will result in a relative change in RGDP by -0.066209 units, holding ER, TBAL and FDI constant. The test of significance carried out based on the student's t-test for each of the parameter estimate in the model, the estimated coefficient of TBAL is not statistically significant at 5% level of significance. The corresponding p-value of 0.8622 is greater than the 0.05 critical value, hence we accept the null hypothesis that the coefficient of TBAL is not statistically significant at 5% level of significance. This implies that TBAL does not have significant impact on RGDP in Nigeria during the period under review.

The student's t-test on the coefficient of ER indicates that it is statistically significant at 5% level of significance. The p-value corresponding to the coefficient of ER is 0.0122 which is greater less than 0.05 critical values. Hence, reject the null hypothesis that the coefficient of ER is not statistically significant at 5% level of significance and accept the alternative hypothesis that the coefficient of foreign exchange rates is statistically significant at 5% level of significance. This implies that ER have significant impact on RGDP in Nigeria during the period under review.

The student's t-test on the estimated coefficient of TO reveals that the coefficient is not statistically significant at 5% level of significance with a p-value of 0.4324. This implies that TO do not have a significant impact on RGDP in Nigeria during the period under review.

However, the student's t-test on the coefficient of FDI is statistically significant at 5% level of significance. The p-value corresponding to the coefficient of FDI is 0.0129 which is lower than 0.05 critical values. Hence, we reject the null hypothesis that the coefficient of FDI is not statistically significant in favour of the alternative hypothesis that the coefficient of FDI is statistically significant at 5% level of significance. This implies that FDI does have significant impact on RGDP in Nigeria during the period under review.

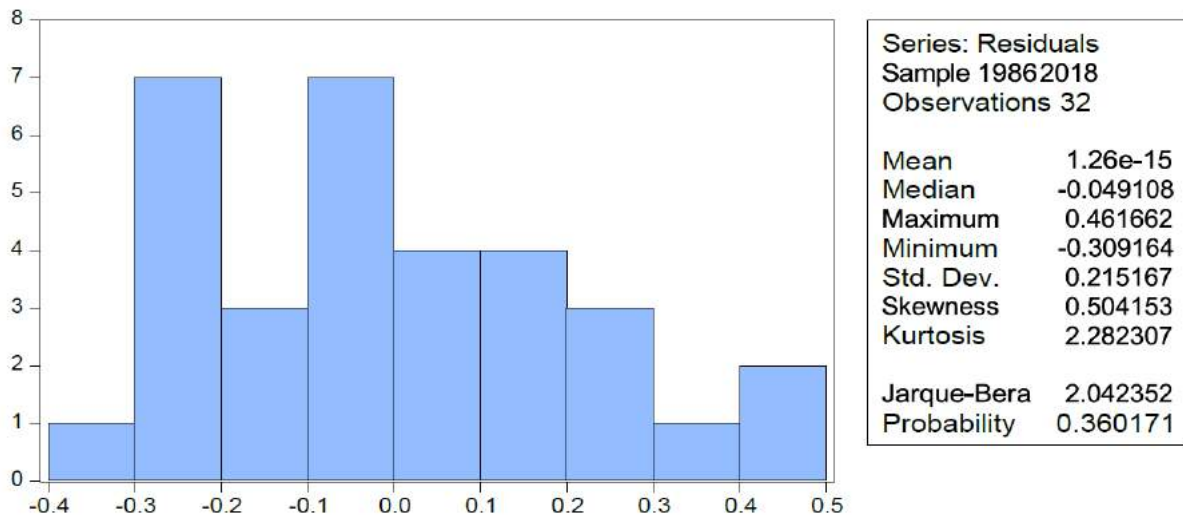
The Durbin Watson statistic corresponding to the estimated regression equation ( $D-W = 1.610834$ ) tends towards two (2) which represents the threshold for rejecting the null hypothesis of first order serial correlation. The outcome of the Durbin Watson test therefore shows that the regression model is devoid of first order serial correlation.

The F-Statistic (ANOVA) is used to test the equality of parameter estimates with a view to establishing the overall significance of the regression. The F-statistic corresponding to all the estimated regression parameters is 32.40312 and it statistically significant at the 5% significance level with a p-value of 0.000000. This implies that the equation or model employed is statistically significant which means that the relationship between RGDP and the indicators of foreign trade under consideration is statistically significant at 5% level of significance. This evaluation outcome revealed that although some of the explanatory variables explicitly captured in the regression model are individually not statistically significant, jointly, they are statistically significant



### Jarque Bera Test of Normality

Table 4.6: Jarque Bera Test of Normality



Source: Authors' Computation from Eviews 9 Outputs (2020)

The ordinary least square estimation technique is also hinged on the underlying assumption that the error term is normally distributed. The estimated regression model is therefore evaluated using Jarque Bera test of normality to determine if the error term is normally distributed. The normality assumption is of tremendous implications as all the test statistics (t-statistic and F-statistic) are hinged on the assumption that the error term is normally distributed.

Table 4.6 comprises the Jarque Bera statistic corresponding to the estimated regression model. The estimated Jarque Bera statistic is 2.042352 and the p-value value of 0.360171 implies that we do not reject the null hypothesis of normal distribution at 5% level of significance. This implies that the estimated residual is normally distributed at 5% level of significance. This outcome lends reliability to the estimated t-statistic and F-statistic in the test of significance.

### 4.8 Test of Research Hypotheses

The hypotheses of the study were tested using empirical evidence from the study. The results of the hypotheses testing are reported below:

**H<sub>01</sub>: The degree of trade openness has no significant impact on economic growth in Nigeria.**

In testing the first hypothesis of the study regarding trade openness and economic growth in Nigeria, the estimated regression result and the test of significance for each individual parameter in the specified model reveal that the coefficient of TO in the estimated regression model is not statistically significant at 5% level of significance. However, the outcome of the Granger causality test showed bidirectional causality running from degree of trade openness to real gross domestic product and from real gross domestic product to the degree of trade openness. Also the adjusted R<sup>2</sup> shows that about 80% of the total variation in real gross domestic product is explained by all the explanatory variables explicitly captured in the specified regression model. Hence, we reject the null hypothesis that trade openness

has no significant impact on economic growth in Nigeria and accept the alternative hypothesis that trade openness has a significant impact on economic growth in Nigeria during the period under review. The outcome of the test of hypothesis provides an empirical basis for understanding the relationship between the TO and the level of aggregate productivity in the Nigerian economy.

**H<sub>02</sub>: Trade balance has no significant impact on economic growth in Nigeria.**

In testing the second hypothesis of the study regarding the impact of international trade balance on economic growth in Nigeria, the estimated regression result and the test of significance for each individual parameter in the specified model reveal that the coefficient of TBAL is not statistically significant at 5% level of significance. Hence, we do not reject the null hypothesis that trade balance has no significant impact on economic growth in Nigeria.

**4.9 Discussion of Findings**

In this section, we discuss the major findings from the analysis of data relating to the relationship between The Impact of International Trade on Economic Growth in Nigeria. Related variables and indicators of foreign trade considered in the specified regression models included the degree of TO, ER, TBAL, as well as FDI. The empirical findings from the regression model reveal the fundamental role of international trade in stimulating productivity in the Nigerian economy. Specifically, FDI and ER were found to have significant positive impact on RGDP in Nigeria during the period under review. This finding is consistent with the findings of Egbulonu and Ezeocha (2018), as well as Rashid and Lin (2018) who also found significant relationship between foreign direct investments, foreign exchange rates and economic growth during the periods under consideration. TBAL and TO on the other hand were found to have no significant impact RGDP in Nigeria during the same period. The significant impact of FDI is an indication that the inflow of foreign capital into the real sector of the economy constitutes a major driver of productivity in the Nigerian economy.

The insignificant impact of the TO on RGDP in Nigeria is attributable to the unfavorable terms of trade that characterize Nigeria's international trade activities. Nigeria's exports are predominantly commodity exports with high internal price volatility and uncertainties, whereas her imports are made up of manufactured durable consumer goods and industrial machinery.

Thus, the findings of the study are instructive for domestic macroeconomic and foreign trade policies, with specific reference to the level of aggregate productivity in the Nigerian economy in relation to foreign exchange management policies, trade policies and the broad stabilization policies of government. Considering the fact that Nigeria is an import dependent economy in terms of the supply of durable and non-durable consumer goods as well as raw materials for industrial sector production, there are important implications of exchange rate management for settlements of international trade obligations as well as domestic productivity in the country. The structure and direction foreign investments inflow into the economy is also critical determinant of productivity in the economy. It is therefore imperative for government to realign her trade policy and stabilization policy mechanisms in consonance with the contemporary realities of globalization. The country's huge import dependence, even



for consumer goods and services that can be produced in the country, is therefore not sustainable for the attainment of optimal aggregate productivity and the creation of competitive advantages within the context of globalization. The findings of the study therefore support the need for sustained investment in infrastructure necessary for creating the enabling environment for domestic and foreign investments into the strategic sectors of the Nigerian economy.

### **5.1 Conclusion**

The findings of this study reveal that the degree of TO has a significant impact on economic growth in Nigeria indicating that TO is a major driver of economic growth in Nigeria during the periods under consideration. Based on the findings of this study, ER has significant impact on economic growth in Nigeria, indicating that ER is also a major driver of economic growth in Nigeria. Also, the findings of this study showed that FDI has a significant impact on economic growth in Nigeria during the period under consideration. This indicates that TO is a significant driver of growth in Nigeria. However, the results of this study shows that TBAL has no significant impact on economic growth in Nigeria during the period under review, indicating that Nigeria's terms of trade is not favourable as a driver of economic growth in Nigeria. The findings of the study were robust enough for the achievement of the stated broad as well as specific objectives of the study. Considering the findings of the study, the inherent patterns and trajectory of international trade as well as the dynamics of global economic environment have to be integrated into domestic policy making in order to guarantee the survival of the country's economy, considering the fierce competition that characterize the contemporary global economic environment. It should therefore be noted that the outcome of this study is instructive for both policy and planning as far as Nigeria's economic growth is concerned. Hence, there is a pertinent need for the finding of this study to be implemented with a view to increasing productivity and stimulating optimal performance of the Nigerian economy.

### **5.3 Recommendations**

Based on the findings of the study from the empirical investigation, the following policy recommendations are designed.

- i. There is need for effective foreign exchange management capable of ensuring optimal productivity in the critical sectors of the economy. This can be achieved by diversification of the economy away from oil with a view to expanding export of non-oil goods and services to strengthen naira exchange rate under the managed float regime. In addition, there should be heavy investment in infrastructural development to encourage industries and manufacturing companies to go into massive production of exportable goods and services with a view to boosting the country's foreign exchange earnings from non-oil sector. In this way, the degree of trade openness will optimally enhance the growth potentials of the Nigerian economy.
- ii. Adequate measures should be put in place by government to enhance the local sourcing of raw materials and manufacturing input through effective regulatory mechanisms and fiscal incentives. A technological policy aimed at developing a local engineering industry is also advocated. This is with a view to ensuring that the link between

- agriculture and the manufacturing sector will be established, leading to expansion of export base which would attract more foreign exchange into the country. This could culminate into high external reserves favourable terms of trade.
- iii. Domestic production activities should be encouraged by government by giving incentives and subsidies to local producers as well as improving the technological and infrastructure development with a view to reducing the outflow of foreign exchange and stabilizing the foreign exchange rate.
  - iv. The government should provide adequate regulatory framework and enhance the capacity of regulatory agencies to check the quality of products from domestic industries in ensuring they meet international standards in order to encourage international competitiveness.

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## **Corporate Governance and Firm Performance: Empirical Evidence from Pakistan Banking Sector**

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### **Abstract**

Corporate governance is important in developing a culture of integrity in an organization that enhances the performance of business resulting in sustainability in the business of the organization. The purpose of this study is to investigate the impact of corporate governance factors on bank performance in Pakistan. The data was collected from 15 banks from the period of 2010 to 2020. The data was collected from the financial reports of the banks. The dependent variable was returning on assets as a proxy of firm performance and the independent variables were corporate governance factors (namely, the board size, firm size, independent directors, CEO duality, and leverage). The technique was applied for this research included the Co-integration test, the Hausman test to determine Random or Fixed Effect, and the Panel Least Square Regression to check the relationship between variables. The result found that board size has a significant effect on return on assets indicated that optimum board size in an organization increases the ROA. The results found board independence has a significant effect on return on assets indicating the independency of directors is involved in creating greater value for shareholders. The results found that CEO/Chairman duality has an insignificant impact on return on assets. The results found leverage has a significant impact on return on assets indicating that having high leverage earns more profit. The results found a positive impact of firm size on return on assets. Results can be concluded that improvement in corporate practices increases the firm performance shows the positive revenue generates by the company and the company used its assets through business. Good CG practices make firm-healthy.

**Keywords:** *Corporate Governance, Firm Performance, Firm Size, Leverage*

### **1. Introduction**

Corporate governance is basically a system of practices, rules and process by which an organization is directed as well as controlled. It is involved in measuring the power as well as accountability of all the individuals working in the organization. Weil et al. (2004) defined corporate governance as a code of control for managerial conduct, organization, and corporate management. CG is important in developing the culture of integrity in an organization that enhance the performance of business result into sustainability in the business of organization (Brown & Caylor, 2004) ensure that CG imparts a significant influence on the performance of firm. According to him, there are six main pillars of corporate governance (CG) i.e, rules of law, effectiveness and efficiency, moral integrity, responsibility and accountability, transparency, and participation. All these pillars of corporate governance impart a significant effect in enhancing the firm performance FP.

(Fooladi & Nikzad Chaleshtori, 2011) explained that corporate governance is important in reducing the agency conflicts between both parties in a firm. This study explained that CG helped in aligning the goals of organization considering all stakeholders of firms to enhance its performance. This study explained that CEO/Chairman duality don't impart significant influence on the performance of organization. (Mashayekhi & Bazaz, 2008) explained that CG impart a significant effect on the performance of an organization. All the factors of



corporate governance board size, institutional investors, board independence, and board leadership impart a significant effect on all profitability indicators: ROA, ROE, and EPS of organization.

There are multiple factors of corporate governance impart its effect in performance of a firm, it has been noted that factors of corporate governance: size of firm, size of board, leverage of firm, duality of Chairman/CEO and independence of board impart its influence on FP. This study is done to measure the effect of CG on the performance of firm in the banking sector of Pakistan. The study of (Ajanthan, Balaputhiran, & Nimalathashan., 2013) explained that four aspects of CG: board meeting frequency, size of board, percentage of outside directors, and diversity of board significantly influence performance of banks.

The concept of CG has been studied in multiple studies i.e. (Inam & Mir, 2014), (Alodat, Salleh, Hashim, & Sulong, 2021), (Brown & Caylor, 2004), and (Fooladi & Nikzad Chaleshtori, 2011). Most of these studies have suggested that CG mechanism positively influence on the FP. However, in studies (Ajanthan, Balaputhiran, & Nimalathashan., 2013) and Ramiz ur Rehman et al. (2012) explained that corporate governance practices don't impart significant effect on the performance of banks in Pakistan. This research identified some gaps present in literature which indicate that performance of banks in Pakistan has enhanced due to presence of proper corporate governance. However, the appropriate implications of all factors involved in corporate governance mechanism to enhance the banking performance don't discuss in literature in detail. Thus, this research has been done to overcome the identified research gap. The study's basic purpose is to measure the impact of CG on the FP. Current paper includes literature review, methodology, data analysis and conclusion.

## **2. Literature Review**

CG is combination of process and rules by which an organization controlled all its actions. It is stated that CG is basically implication of process to ensure the safety of all rights of shareholders of an organization. The financial performance or profitability of banking industry of Pakistan is measured by using multiple profitability indicator: ROA, ROE, ROI, and many more. In this study the profitability of banking sector of Pakistan is measured by using return on assets. Multiple studies are conducted to measure the impact of CG on the financial performance and ROA of banking industry in Pakistan.

### **2.1 Banking industry in Pakistan**

The banking industry that involved in providing the financial services to the public. There are 31 banks present in banking industry of Pakistan from which five banks are public, four are foreign banks, and 22 are local private banks. The six banks of Pakistan are main competitors of Pakistan and hold almost 57% of deposits as well as 53% of advance in the economy of Pakistan. State Bank of Pakistan regulates the banking industry as it governs all local banks under its cost-effective regulations.

International Basel III Standards also implemented on all banks of Pakistan for proper regulation. The growth of banking industry of Pakistan is remarkable in some past years such as from 2009 to 2016 total assets of Pakistan has increased from 6,516 pkr billion to 15,134 pkr billion, and deposit rate has increased from 4,786 OJR billion to 11,092 PKR billion. In Pakistan multiple types of banks are present based on their function such as development finance institution, central banks, investment banks, financial banks, saving banks, micro-finance banks, exchange banks, Islamic banks, industrial banks, and commercial banks. With



the development of technology in Pakistan e-banking also increased at a great level. There are multiple advantages of e-banking are reduce the pressure on banks, easily pay bills, rare chances of errors, easily transfer of funds from one account to other account, and reduce the transaction costs.

## **2.2 Theoretical background**

There are multiple factors of CG such as board size, board independence, firm leverage, CEO duality, and firm size that have influence on the growth and performance of an organization. (Staikouras, Staikouras, & Agoraki, 2007) explained that board size of directors has negative influence on the performance of organization. Uribe-Bohorquez et al. (2018) has done a study to assess the relation of board independence on the performance of an organization. The findings of this study explained that board independence impart a significant effect on the performance of an organization. When all the directors present in board are independent they focused on the growth of organization, and enhance the performance of organization that result in the profitability of organization. (Inam & Mir, 2014) explained that firm leverage impart a significant positive effect on the performance of an organization.

## **2.3 CG and Firm performance**

CG imparts a significant effect in enhancing the financial performance of an organization. (Alodat, Salleh, Hashim, & Sulong, 2021) has done a study to measure the influence of CG on the financial performance. This study is done to measure the influence of attributes as well as ownership structure of director boards and the audit committee on the performance of an organization. There are multiple theories such as resource dependence as well as agency theory has explained the impact of CG on the performance of an organization. The study also outlined the provisions of the provision of ownership structures, particularly foreign ownership and institutional holdings, describing the part that reflects structural importance in explaining corporate performance.

Researcher of this study has implemented empirical approach for conduction of this study to measure the impact of CG on almost 81 non-financial organizations over a period of 2014 to 2018. The findings of this study measured that board of directors as well as audit committee impart a positive remarkable effect on the performance of an organization. It is also assessed that both foreign as well as institutional ownership have positive remarkable effect on the ROE and performance of an organization. Whereas, Tobin's Q led impart negative effect on the ownership as well as performance measures of an organization.

(Brown & Caylor, 2004) has done a study to measure the relationship present between the CG and the financial performance of organization. This study is conducted based on the dataset provided by the institutional shareholder service to measure the CG as well as Gov-Score. The Gov-Score is basically composite measure of almost 51 factors comprised of eight CG categories such as state of incorporation, audit, progressive practices, board of directors, ownership, charter/by law, compensation of directors and executive, and the education of directors. The findings of this study explained that the better governing of organization enhance the pay out, profitability, as well as value of organization towards their shareholder. This study measured that which category from these eight category majorly involved in enhancing the performance of organization. The findings of this study explained that good governance of an organization regarding the compensation of directors and executive are highly related to the effective performance of an organization.

(Fooladi & Nikzad Chaleshtori, 2011) has done a study to determine the impact of CG on the financial performance of an organization. This study is conducted based on the agency



theory explained that CG of an organization is important to reduce the agency conflicts present between the controller as well as individual who own the residual claims within the organization. CG is a mechanism that involved in aligning all the goals of management of an organization to its stakeholder to enhance the performance of that organization. The value creation by CG is also measured by the performance of organization. This study considered four main characteristics of board to explain the relationship of CG and financial performance of organization. The board characteristics taken in this study are board independency, board size, CEO duality, and the ownership structure. The regression analysis on data set of this study explained that CEO duality has a significant influence on the performance of organization whereas ownership structure, board independency, and board size don't have significant influence on the performance of organization.

(Mashayekhi & Bazaz, 2008) has done a study to measure the influence of corporate governance on the performance of organization in Iran. In this study multiple factors of corporate governance: board size, board investors, board independence, and board leadership used to measure their influence on ROE, EPS, and ROA of performance of banks. The analysis of this study is done by regression analysis and results ensure that board size impart negative effect on the performance of organization. It is concluded that institutional investors and board independence impart a positive significant effect on the performance of organization. There are multiple factors of CG that affect the performance of an organization. Some of these factors are board size, board independence, firm leverage, chairman duality, and firm size are discussed in this study.

### **2.3.1 Impact of board size on ROA of organization**

Board size is defined as the number of directors present in the board of an organization involved in decision making process and other important process of organization. Board size impart a significant impact on the firm performance and optimum board size is 8-10 directors of an organization. It is stated that smaller board size impart significant effect on performance of organization that result in the increase of ROA of organization. Whereas larger board size decrease the performance of organization which result in the reduction of ROA of organization. Multiple scholars have done their study to measure the effect of board size on the performance and ROA of an organization.

(Staikouras, Staikouras, & Agoraki, 2007) has done a study to assess the effect of board size on the performance of banks of Europe. The financial institutions including banks has faced multiple CG challenges. This study is done to measure the relationship of board size as well as proportion of non-executive directors on the performance of an organization. The researcher of this study has taken sample of 58 large banks of Europe over a range of 2002 to 2004. The results of this study explained that board size of directors impart a negative effect on the financial performance and profitability of organization. Whereas board compensation impart a negative effect on the performance of financial institution.

(Shakir, 2008) has done a study to determine the impact of board size, board composition, as well as property on the performance of an organization. The effective governance of the Asian economies has been a major problem in the context of the Asian financial crisis of 1997. When ownership is separated from management, difficulties develop with the agency. In CG, this circumstance posed the main question of how managers can efficiently monitor and control so that managers can act in the shareholder's best interests. This study explained that the existence of the board of directors very important for the monitoring as well as controlling of shareholders of an organization. Board composition is an important factor in assessing the size and in controlling of the interest of shareholders of

organization. The conducted survey of this study explained that good CG impart a significant effect on the performance of an organization. Thus, it is concluded that board composition as well as board size impart a significant effect on the performance of an organization.

### **2.3.2 Impact of board independence on ROA of organization**

Board independence is defined as the condition in which majority or all directors of a board don't have any relation with the organization. Board independence is very important for the performance of an organization as this independence is involved in creating the greater value for shareholders. The presence of board independence enhanced the reputation of organization and also increased the shareholders of organization that result into the increase in profitability of organization. Thus, board independence impart a significant effect on the profitability of an organization.

(Fuji, Halim, & Julizaerma, 2016) has done a study to assess the influence of board independence on the performance of organization. The Executive Board is a group body that must work in the best possible interest of its shareholders. In order to meet shareholder interests, the Board necessitates combining executive and non-executive directors. Unless they are independent from management and provide an unbiased company judgement, the non-executive directors on the board are unable to carry out their tasks successfully. Independent managers are responsible for representing shareholders and help to alleviate the problem of agencies. In addition, it is recommended that the membership of the board members be balanced, composed of independent directors, in the Code of CG and regulators. However, simple observance of the suggestions is not sufficient if the independent directors do not successfully perform their duties. A study on the independence of the Board and firm performance was conducted in a few countries. The findings showed that independent managers and company performance had a mixed link. While the corporations were the most independent managers, it would not ensure improved performance in the company. Thus, it is concluded that monitoring of independent directors is important to enhance the positive values of shareholder of an organization.

Uribe-Bohorquez et al. (2018) has done a study to assess the relation of board independence on the performance of an organization. In this study, researcher has implemented a new research approach to measure the relationship present between the board independence and the performance of organization. This study examined the institutional factors impart moderating effect on the performance of organization by enforcement of laws. In this study, a survey questionnaire was conducted based on 2185 organization over a range of 2006 to 2015. The analysis of collected data was done by truncated regression analysis to measure the efficiency in the performance of organization. The findings of this study explained that board independence in an organization impart a positive influence on efficiency in the performance of an organization. The implementation of laws regarding board independence also enhance the performance of organization. Thus, it is concluded that the performance of board independence is increased in organization that ensure the implementation of laws or any legal body regarding board independence.

### **2.3.4 2.3.3 Impact of Chairman Duality on ROA of organization**

Chairman duality is defined as the situation in which CEO of an organization also hold the position of chairman of board. CEO/ chairman duality also affect the performance of an organization because in this way the control as well a monitoring on all tasks of organization has reduced that result into the poor performance of organization. Some theories explained that chairman duality is good for the organization as it enhance the performance of organization.

(Arslan, Zaman, Malik, & Mehmood, 2014) has done a study to determine the effect of CEO duality as well as audit committee on the performance of oil and gas listed organization present in Pakistan. The basic aim of this study was to measure the relationship present between the mechanism of CG and the performance of an organization. Multiple factors such as audit committee as well as CEO duality of CG mechanism taken in this study to measure the ROE and profit margin as performance of organization. This study was conducted on 11 listed organizations of Pakistan over a time period of 2010 to 2011. The findings of this study explained that audit committee has remarkable positive influence on the ROE of organization. Whereas, CEO duality don't impart a significant effect on the ROE as well as profit margin of organization. The findings of this study also concluded the importance of both audit committee as well as CEO duality on the profitability of organization.

(Shrivastav & Kalsie, 2016) has done a study to determine the relationship present between CEO duality and the performance of an organization by using pane regression approach. There are two main theories of CG such as agency theory and the stewardship theory. Both of these theories explained that CG impart a significant effect on the performance of organization. The agency theory of CG explained that CEO duality impart negative effect on the performance of organization whereas stewardship theory suggest that CEO duality has positive influence on the performance of organization. This study was done based on previously conducted studies to assess the panel data of almost 145 non-financial organization listed on National Stock Exchange over a time period of 2008 to 2012. In this study, Tobin's Q as a market-based measure as well as ROE measure the performance of organization. The panel data analysis with fixed effect model including various variables has done in this study to assess this relationship. The findings of this study explained that CEO duality has negative influence on performance of organization when Tobin's Q is taken as the measure of performance.

### **2.3.5 Impact of firm size on ROA of organization**

The size of a firm is defined as the Firm size impart a positive effect on the performance of an organization that is measured by ROA. The size of an organization basically explained the experiencing growth as well as overall growth of the organization so that it has positive place in the market.

Abbasi et al. (2015) has done a study to determine the moderating effect of firm size on the financial performance of an organization. The basic aim of this study was done to measure the moderating effect of firm size on relation of growth as well as performance of an organization. The researcher of this study has developed null as well as alternate hypothesis as null hypothesis of this study ensure that firm size don't impart moderating effect whereas alternate hypothesis ensure that firm size impart moderating effect on the performance and growth of organization. The secondary cross-sectional tool was used to collect the data from almost 50 listed organizations of Karachi Stock Exchange. In this study, formality of stationary of data has also fulfilled before the application of regression equation model to analyze the data. The findings of regression analysis measured that alternate hypothesis of this study accepted whereas null hypothesis is rejected. Thus, it is concluded that firm size imparts a significant moderating effect on the growth as well as performance of organization.

(Azhar & Ahmed, 2019) has done a study to determine the relationship present between the firm size and profitability of organization present in Pakistan. This study is done to measure the relationship present between the firm size as well as profitability of an organization as the research on this relation on emerging economies is very limited. This study is done to explore this relationship in the textile listed organizations of Pakistan to

measure that how the firm size impart a significant effect on the performance of textile firms. The data for this study was collected from top 10 textile organization of Pakistan on the Pakistan Stock Exchange over the time period of 2012 to 2016. The profitability and performance of these organizations was measured by ROE as well as net profit ratio whereas the total assets as well as total sale of that organization measured size of organization. The data analytical techniques used in this study were correlation analysis as well as regression analysis. The results of this study explained that there is no as such remarkable relationship present between the firm size and performance of organization in the textile industry of Pakistan

### **2.3.5 Impact of firm leverage on ROA of organization**

Firm leverage is defined as the investment strategy of an organization to enhance its performance and profitability. The leverage of an organization is calculated by ratio of total company debts to shareholders equity. Firm leverage impart a significant effect on the performance of an organization.

(Iqbal & Usman, 2018) has done a study to measure the influence of financial leverage on the performance of organization. This study is done to measure the relationship present between the financial leverage as well as financial performance of the textile organizations present in Pakistan. There are 16 companies were selected from total Pakistan textile company and select the data of these companies from 2011 to 2015. The analysis of collected data was done by analytical techniques such as descriptive statistics, panel regression model, and correlation analysis. The findings of this study explained that financial leverage impart significant negative effect on the ROE whereas positive effect on the ROA of organization. This study further indicates that interest rate result in the decrease of the value of equity and impart a negative effect on the financial performance of an organization. While, on the other hand, financial leverage imparts highly positive effect on the performance of an organization.

(Inam & Mir, 2014) has done a study to determine the effect of financial leverage on the performance of organization present in fuel and energy sector of Pakistan. Fuel and energy sector impart a significant effect in supporting the economic development. This study explained that financial leverage is highly supportive in enhancing the financial performance of organization. The findings of this study ensure that firm leverage impart a positive significant effect on the financial performance of an organization. This study explained that all the energy and fuel organizations that have high profit also involved in improving the financial performance of these organization due to presence of liquidity conditions and firm leverage.

### **3. Methodology**

The methodological research approach for this study is deductive because in this study already present fact influence of corporate governance on the performance of an organization is measured. This is a quantitative data and involved in hypothesis development and then analysis of this hypothesis is done for verification. This study based on the positivism as this is a quantitative study and positivism involved in quantitative methods such as official statistics, surveys, and questionnaires. Research was carried out this research by implementing quantitative research strategy. This research strategy has been choosing due to the addressing of multiple areas of research numerically by using relevant statistical as well as mathematical methods such as graphs, central tendencies, as well as tabulations. In this study secondary data collection is used to collect the secondary data for proper analysis of study. This study is based on the analysis of performance of banks over last 10 years so that's why data for this study is collected by official government publications and annual reports of



those banks over last 10 years. There are multiple sources of secondary sources such as books, official government publications, annual reports, journals, websites, and newspapers. The collection of secondary data is quiet easy for researcher as compare for primary data collection because all data is available and gathered by use of internet easily. To analyze collected data following test were applied; Descriptive analysis, Panel Unit Root, Co-integration, and Hausman test. Panel Unit Root was run to found stationary/non-stationary data. Test of Co-integration was applied to check the relationship among variables. Fourth, Test of Hausman was applied to check the fixed/random effect between variables then fixed effect, Regression of Panel Least Square was performed to analyze the connection among governance of corporate and banks performance

#### 4. Data Analysis

Table 4.1 shows that the mean of ROA was 0.012, BS was 8.75, ID was 0.33, CCD was 0.14, FS was 8.78 and LEV was 0.07.

**Table 4.1**

Descriptive Statistics

Variables	Obs.	Mean	Median	Max	Min	St. Dev.
ROA	150	0.012666	0.011000	0.04170	-0.01360	0.007686
BS	150	8.753333	6.000000	15.0000	5.00000	2.231371
ID	150	0.332044	0.333333	0.60000	0.09090	0.089235
CCD	150	0.140000	0.000000	1.00000	0.00000	0.348149
FS	150	8.780028	8.811839	9.56154	7.68304	0.404859
LEV	150	0.072370	0.069450	0.14400	0.03580	0.025074

**Note:** ROA=Return on Asset; BS=Board Size; ID=Independent Director; CCD=CEO/Chairman Duality; FS=Firm Size; LEV=Leverage

The standard deviation of ROA was 0.007, BS was 2.23, ID was 0.08, CCD was 0.34, FS was 0.40, and LEV standard deviation was 0.02. In contrast, BS standard deviation was optimal than other variable that demonstrated that BS was optimally volatile during the period of sample. However, ROA was low volatile during the sample period. The results summarize in Table 4.2 shows probability value of ROA was lees than 0.05 in LCC, and ADF test at level but above 5% in IPS, indicated ROA was non-stationary at level. However, it became stationary at first difference. While, probability value of LEV and BS were above 5% at level in LLC, IPS and ADF Test demonstrated non-stationary at level.

**Table 4.2**

Panel Unit Root Test

Method	ROA		BS	
	Level	1st Difference	Level	1st Difference
LLC	0.03	0.00	0.06	0.00
IPS	0.09	0.05	0.64	0.00
ADF	0.05	0.03	0.63	0.00
PP	0.07	0.00	0.00	0.00

Level	ID		CCD		FS		LEV	
	1st	Level	1st	Level	1st	Level	1st	

Difference		Difference		Difference		Difference	
0.00	0.00	0.00	0.00	0.19	0.01	0.26	0.01
0.07	0.01	0.00	0.00	0.99	0.01	0.95	0.01
0.02	0.00	0.00	0.00	0.98	0.00	0.98	0.00
0.00	0.00	0.01	0.00	0.60	0.00	0.05	0.00

**Note:** ROA=Return on Asset; BS=Board Size; ID=Independent Director;  
CCD=CEO/Chairman Duality; FS=Firm Size; LEV=Leverage

Moreover, LEV and BS were became stationary at 1<sup>st</sup> difference. ID and CCD values were below 5% percent at level, indicated the variables are stationary at level. On the other hand, the probability values of FS in LLC, IPS, ADF and PP test were above than 0.05, indicated that non-stationary at level but after 1<sup>st</sup> difference it became stationary. In conclusion, all the variables probability values were below 5% at first difference, which indicated at first difference data became stationary. Pedroni (1999) methodology is used, to check the stability of long-term connection between variables. Table 4.3, the results show that the probability value of all estimation is less than 5%, suggest that alternative hypothesis is accepted as there is co-integration between variables. The results indicate that there is long-term connection among variables.

**Table 4.3**

Co-integration Test

Pedroni (Eagle Granger based) Panel Co-integration		
Estimates	Statistic	Prob.
Panel v-Statistic	-3.5092	0.0034
Panel rho-Statistic	-2.8469	0.0481
Panel PP-Statistic	-5.8738	0.0000
Panel ADF-Statistic	-5.2904	0.0000
Alternative hypothesis: individual AR coefficient		
Group rho-Statistic	-3.3911	0.0097
Group PP-Statistic	-4.8294	0.0000
Group ADF-Statistic	-7.6483	0.0000

First Hausman test was applied to check either random or fixed affect model is appropriate. The result shows in table 4.4. The value of probability is 0.06 that is above 0.05, which does not support the null hypothesis and indicated that model random effect is appropriate.

**Table 4.4**

Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	10.596105	5	0.060

Panel regression with random effect was performed to analyze the governances of corporate effect on ROA of banks. The results show by Table 4.5 that P-value of BS, ID, FS and LEV variables were less than 0.05, which indicated size of board, independent directors, size of firm and leverage significantly and positively effect on ROA. Hence, H 1, H2, H4 and H5 were supported by the findings. The results demonstrated that increases in size of board, leverage (capital ratio), number of independent directors and assets of firm



significantly increases the performance of firms (profitability). Moreover, CCD (CEO/Chairman Duality) has insignificant influence on ROA.

The value of Adjusted R-Squared shows how much the change in DV (dependent) occurs due to the IVs (independent) variables. In this case, the Adjusted R-Squared is 0.84 or 81%, which shows that the change in ROA was 81% due to its IVs that is substantial value of R-Squared. The value of Durbin-Watson was 1.58, indicated issue of autocorrelation was not found in that data. The F-statistics is 0.000 that demonstrated there were jointly effects of all IVs on DV.

VIF indicated the multicollinearity that represents correlation quantity among IVs. The result indicated no multicollinearity issue was found among the variables because VIF is below 10. In table 4.6, the results show that all variables' VIFs were less than 10, indicated that there were no multicollinearity issue in data.

**Table 4.5**

Panel Least Square Regression with Random Effect

Dependent: ROA					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	VIF
BS	0.001796	0.000317	5.659415	0.0000	3.07
ID	0.027856	0.006329	4.401336	0.0000	3.88
CCD	0.000191	0.003530	0.054044	0.9570	1.88
FS	0.031168	0.008153	4.401336	0.0002	2.98
LEV	0.107151	0.028775	3.723798	0.0003	2.55
C	0.021780	0.003574	6.094360	0.0000	
R-squared		0.842586			
Adjusted R-squared		0.816578			
F-statistic		32.39776			
Prob(F-statistic)		0.000000			
Durbin-Watson stat		1.682834			

**Note:** ROA=Return on Asset; BS=Board Size; ID=Independent Director; CCD=CEO/Chairman Duality; FS=Firm Size; LEV=Leverage

#### 4.1 Discussion

The discussions on findings in detail are mentioned below. The panel least square results present in table 4.6 shows the association among CG factors and ROA performance of firm. The study applied Panel regression to analyze the governance of corporate effect on ROA (performance of banks). The results show by Table 4.6 that P-value of BS, ID, FS and LEV were less than 0.05, which indicated size of board, independent directors, size of firm and leverage significantly and positively effect on ROA. Hence, H 1, H2, H4 and H5 were supported by the findings. The results demonstrated that increases in size of board, leverage (capital ratio), number of independent directors and assets of firm significantly increases the performance of firms (profitability).

##### 4.1.1 Relationship between Board Size and ROA

Board size has significantly positive effect on performance. Previously, researcher



suggested that the (BOD) act as important role in the connection among strategy of CG and practices (Balsmeier et al., 2014). Barroso et al. (2011) the maximum size of board means high knowledge level, abilities and skills with combine effect significantly influence performance of firm. Hence, huge boards enhance the performance of company. Orozco et al (2018) board and firm size are the financial and reputational indicators. (Staikouras, Staikouras, & Agoraki, 2007) found that board size of directors impart a negative effect on the financial performance and profitability of organization. The reason behind that 8 to 10 directors recognized as optimum board size in an organization. It is stated that 8 to 10 BS significantly effect on performance of organization that result in the increase of ROA of organization. (Shakir, 2008) argued that the existence of the BOD is very important for the monitoring as well as controlling of shareholders of an organization. Moreover, it is considered as an important factor in assessing the size and in controlling of the interest of shareholders of organization. The conducted survey of this study explained that good CG impact a significant effect on the performance of an organization. Thus, it is concluded that board composition as well as board size impart a significant effect on the performance of an organization.

#### **4.1.2 Relationship between Independent Directors and ROA**

Board independency is also important factors of good CG. It is mainly in the field of business, economic and financial management (Balsmeier et al., 2014). Uribe-Bohorquez et al. (2018) found that board independence in an organization effect positively on efficiency in the performance of an organization. It also enhances the performance of organization. (Fuji, Halim, & Julizaerma, 2016) argued that Independent managers are responsible for representing shareholders and help to alleviate the problem of agencies. The result found significantly positive impact of ID on performance ROA Thus, it is concluded that monitoring of independent directors is important to enhance the positive values of shareholder of an organization. The reason behind that independency of directors is involved in creating the greater value for shareholders. The presence of board independence enhanced the reputation of organization and also increased the shareholders of organization that result into the increase in profitability of organization. Thus, It has a significant effect on the profitability of an organization. (Alqatan, Chbib, & Hussainey, 2019)) argued that the board practices have a great influence on performance of corporate. However, meetings for (CG) practices are important to set and complete the task, enhance task effectiveness and achieve the set goals. Moreover, if (BOD) specifically independent directors meet with the set schedule, it makes possible to resolve the issue, problems, and management monitoring efficiently, thus (BOD) perform better duties regarding to manage interest of shareholders and coordination.

#### **4.1.3 Relationship between CEO/Chairman Duality and ROA**

CCD (CEO/Chairman Duality) has insignificant influence on ROA. In previous study, the presence of CEO/ Chairman Duality in an organization reduces the firm performance such as monitoring on all tasks of organization has reduced that result into the poor performance of organization (Alodat, Salleh, Hashim, & Sulong, 2021). While several studies argued that Chairman/CEO duality is good for the organization as it enhance the performance of organization (Brown & Caylor, 2004). In contrast, (Arslan, Zaman, Malik, & Mehmood, 2014) found that CEO duality has insignificant effect on the ROA as well as performance of organization. The results supported H3. (Shrivastav & Kalsie, 2016) found insignificantly affect of CCD on ROA. The strong reason behind that mostly banks (financial companies) of Pakistan do not have duality of CEO/Chairperson that is why it has insignificant impact on ROA

#### 4.1.4 Relationship between Firm Size and ROA

Abbasi et al. (2015) found that FS such as growth of the firm significantly effect profitability as well as performance of organization. (Azhar & Ahmed, 2019) found that the profitability and performance of non-financial (textile) sectors were measured by ROA that significantly affected by size of the firm. The reason behind that increases in firm size increases the profitability and performance of the firm. Thus, it has supported H4 and previous studies results. According to Shahwan (2015) improvement in CG practices and FS increases the firm performance shows the positive revenue generate by company and company used its assets through business. Large FS make firm healthy. Tylecote and Visintin (2007) results reveal governance of corporate is the main determinant for change of technology and innovation. (Wandari S. , 2021) argued that company growth increases if firm has large size. The reason behind that increases in total asset increases the sales and profit as well that enhance the performances of the firm also (ROA).

#### 4.1.5 Relationship between Leverage and ROA

Bui, T. (2020) found that leverage has both negative and positive effect on firm more leverage increases the performance of firm (ROA) that leads to increases the risk also. The findings indicated risky investments can be made by companies with high operational and high advantage. Further, if a firm has high operating leverage it makes fewer sales but has higher profit margins or return. (Iqbal & Usman, 2018)found that leverage significantly and negatively effect the ROE whereas positively effect ROA of organization. The results indicated high leverage increases the performance of the firm as well as risk, Thus supported H5 and previous studies results. (Inam & Mir, 2014) found that leverage positively and significantly effect the financial performance of an organization. The reason behind that all organizations that have high leverage earn more profit also involved in improving the financial performance of these organization due to presence of liquidity conditions and firm leverage.

#### 4.2 Hypotheses Summary

Hypothesis	Statement	Decision
H1:	BS significantly influence ROA	Supported
H2:	ID significantly influence ROA	Supported
H3:	CCD Significantly influence ROA	Not Supported
H4:	FS significantly effects ROA	Supported
H5:	LEV significantly effects ROA	Supported

#### 5. Conclusion

This research aims to investigate the influence of governance of corporate factors on performance of banks (ROA). The independent variables include size of board, independence of board, CEO/Chairman duality, size of firm, leverage and dependent variable is return on assets. Secondary data was collected from 15 banks of Pakistan. The ten years data is collected over the period of 2010 to 2020. The data was collected from state bank of Pakistan. The total number of observations were 150. This study developed hypotheses from previous studies results as BS, ID, CCD, LEV, FS have positive impact on ROA. To test the hypotheses of this research, following test are performed, Descriptive analysis, Panel Unit Root, Co-integration, Hausman test, and Panel Least Square with random effect. The finding of this study was supported the by theories were applied on previous studies study include agency theory, stewardship theory.

Furthermore, the results were supported H1, H2, H4 and H5. The results show that the relations among CG factors and ROA are significant and positive. The results demonstrated that increases in size of board, leverage (capital ratio), number of independent directors and assets of firm significantly increases the performance of firms (profitability). Moreover, CCD (CEO/Chairman Duality) has insignificant influence on ROA. The value of Adjusted R-Squared was 0.84 or 81%, which shows that the change in ROA was 81% due to its IVs that is substantial value of R-Squared. The Durbin Watson value was 1.58, suggested that there was no issue of autocorrelation.

Moreover, (Staikouras, Staikouras, & Agoraki, 2007) found that board size of directors impart a negative effect on the financial performance and profitability of organization. The reason behind that 8 to 10 directors recognized as optimum board size in an organization. Uribe-Bohorquez et al. (2018) found that board independence in an organization effect positively on efficiency in the performance of an organization. The reason behind that independency of directors is involved in creating the greater value for shareholders that result into the increase in profitability of organization. Shrivastav et al. (2016) found insignificantly affect of CCD on ROA. The strong reason behind that mostly banks (financial companies) of Pakistan do not have duality of CEO/Chairperson that is why it has insignificant impact on ROA

Further, Abbasi et al. (2015) found that FS such as growth of the firm significantly effect profitability as well as performance of organization. Wandari, S. (2021) found that company profit increases if firm has large size. The reason behind that increases in total asset increases the sales and profit as well that enhance the performances of the firm also (ROA). Inam et al. (2014) found that leverage positively and significantly effect the financial performance of an organization. The reason behind that all organizations that have high leverage earn more profit also involved in improving the financial performance of these organization due to presence of liquidity conditions and firm leverage. Results can be concluded that improvement in corporate practices increases the firm performance shows the positive revenue generates by company and company used its assets through business. Good CG practices make firm healthy.

### **5.1 Managerial Implication**

The managers will able to know about Agency theory challenge that successful corporate governance improve ability of company to face challenges and diminish the conflicts of agency. Furthermore, managers will able to verify that to compare the competent of directors, external directors are higher in proportion than internal directors. The agency Purposed that successful corporate governance enhance a corporate's authenticity & progress on performance of firm that will help managers of the firm to make strategies to increases the profit. Because increases the demand from stakeholders for development of corporate sustainability. The CG practices can decrease the problems of agency, which make by managers responsible for the stakeholders. Because the stakeholders' require to take details regarding to current actions which have enlarged extremely in the previous decades. They wait for firms to report non-financial and financial details. Moreover, business companies, the highest stakeholders are (BOD) and their task is to set the management's goal to their stakeholders. This research will provide the value to the firm's investors and other stakeholders. This study introduces the association among practices of governance of corporate and performance of banks.

Furthermore, this study will be helpful for the managers to believe on good governance as balancing mechanisms for better stakeholder management. Managers will be able to



understand the importance of CG practices that support benefits and purposes among the company managers and finance providers that's why past has a point of risk certainty to provide the funds for managers. The (BOD) have a link for owners and control of the daily operation of the firm, and it is stated as as the control decisions made by top body within (CG) (Adams et al., 2008). Corporate Governance system can be divided into outside (external or linked with different markets) and inside (internal or self-setup of company). Even though, various the former studies have investigated the impact of (CG) on the performance and value of firm. Tylecote and Visintin (2007) results reveal governance of corporate is the main determinant for change of technology and innovation. Therefore, by these study company's managers will innovate their company by different technology.

### **5.2 Future Recommendation**

This study has a quantity of executions for the firm's governance and performance. This study has only focused on internal control rather than external control system. Additionally, this research conducts in the context of financial companies (Banks) only. However, future research may conduct from non-financial companies of Pakistan such as textiles, automobile, fuel and energy, fashion industry etc. This research has focused on the financial companies of Pakistan. The study recommends that future research may conduct on different countries financial companies. Comparative research may conduct in future. This research was collected limited data due to the short period. In future, studies may collect large data. This study has used proxy of performance that was ROA only. However, future research may use different proxies such as ROE or profit margin as financial performance.

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## **Public expenditure return as a proposed accounting concept for the disclosure of social performance of governmental sector**

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### **Abstract:**

Although the primary goal of the governmental sector is a social goal that is to raise the level of social welfare of citizens, the International Public Sector Accounting Standards (IPSAS) did not regulate the process of recognition and accounting disclosure of financial information which enables of the evaluation social performance of this sector, the reason of that is the lack of a scientific concept that can be measured and disclosed as a financial information - in the governmental sector - express the social benefits obtained by citizens as a result of the public expenditure done by the governmental sector units. The researcher proposed the concept of public expenditure return as an expression of those benefits, which are considered as social revenue for governmental sector units, to be disclosed through an independent financial statement called the social performance statement. It must be approved as a financial statement that must be prepared by governmental sector units in addition to the four financial statements stipulated in IPSAS 1 which are represented in the statement of: (Financial Position - Financial Performance Change in net assets - financial flows).

**Key words:** Public Expenditure Return, Accounting Disclosure, Social Performance, Governmental Sector.

### **1. Introduction**

In his book *Financial Accounting and the Rise and Fall of Nations* in 2014, Jacob Soll stated that accounting is designed to produce high-quality information that supports sound economic decision-making and effective allocation of resources, and that the main role of the accounting profession is to provide appropriate information to decision-makers in order to achieve economic development at the macro and micro levels. (Venter, Gordon, & Street, 2018) achieving economic development at the macro level requires the government to make good use of resources through optimal allocation of public expenditures, but the efficiency of the allocation process is affected by a numbers of variables the most important of which is the absence of measurement and disclosure of the outputs of the allocation process, as the economic and social information system is unable to recording and evaluating the desired social outcomes, which are always in a state of change, and there has been an increase in dissatisfaction with the use of economic statistics alone to measure social performance. (McBain, 2014)

Which requires a quantitative measurement in a monetary form that shows the value of the social return, which is one of the most important necessary measures and challenges facing the governments of countries, especially after the global financial crisis and the funding

problems faced by countries, including, for example, the problems faced by the United States of America after 2009 with regard to Refinancing the same social programs year after year with the absence of a measurement of the returns of these programs, which cost them large debts estimated at the time at 4 trillion dollars (Saul, 2013)

It became necessary to answer an important question, which is what is the priority to be achieved in order to correct economic and social conditions and improve the quality of life for citizens, whether at work or at home? As well as the answer to the following question: Why is it not possible to obtain a good measure of economic and social performance? According to the findings of research studies in this regard, the priority to be achieved is the social welfare of citizens, or the so-called social welfare which reflects the social performance of the government sector.

But economic and social information systems will not be able to determine the objective level of social welfare achieved for citizens, and then the inability to disclose the social performance of the governmental sector through monetary quantitative information, so it is necessary to rely on a complementary information system capable of measuring and disclosing the monetary value of the social benefits achieved for citizens, which Through which policy makers are able to develop an integrated strategy from the aspects of public expenditure necessary to maximize the social benefit of society. (Moss, 1980)

The researcher believes that this system should be the accounting information system, due to the elements it possesses to achieve an objective measurement of financial information that expresses the social benefits achieved for citizens as a result of public spending by government sector units, as well as the ability to disclose the performance of these units in the form of information Financial statements through approved financial statements and reports, through which government performance both financial and social, can be evaluated.

The measurement and disclosure of financial information in the government sector is regulated by a number of controls called the International Public Sector Accounting Standards (IPSAS), which was first issued in 2000 by the International Public Accounting Standards Board (IPSASB), which was established by the International Federation of Accountants For the purpose of developing high-quality accounting standards for use by public sector entities in the preparation of general purpose financial statements, the term public sector refers to national and regional governments such as state, territory and district), local governments (such as city and town) and related government entities (such as agencies and councils). committees and projects.

These standards are concerned only with the measurement and disclosure of financial performance, and they did not provide a mechanism for disclosing the social performance of the governmental sector, due to the absence of measuring and estimating the revenues generated as a result of public expenditure in many cases where public goods and services have no selling value and are made available to citizens for free or in return Small fees that are not equal to their real value (that is what we can call social revenue), but on the contrary, these standards defined the revenue in paragraphs No. 11 and 12 of Standard No. 9 called: Recognition of revenue from exchange transactions, as "the total incoming flow of economic benefits or service potential during the reporting period when such inflows lead to an increase



in net assets or equity, except for increases in respect of owner contributions, and revenue includes only the total inflows of economic benefits or service potential that the governmental entity has received or can receive directly.

Both paragraphs 25 and 27 of the same standard stipulate that “revenue is not recognized when the value of the transaction cannot be reliably estimated and it is probable that the expenses incurred will not be recovered or revenue will only be recognized to the extent of the expenses recognized as recoverable.” Paragraph No. 15 of the same standard stipulates that revenue is measured by the fair value of the consideration received or receivable, taking into account the amount of any business commitments or reductions in quantity permitted by the entity.

Since the vast majority of public expenditure undertaken by governmental sector units is directed to satisfy citizens’ need for public goods and services such as defense security, health and education - which are services that the state does not sell to citizens - and it is difficult to measure the recoverable expenditures, the value of the benefits is not recognised for The social performance achieved by citizens as a result of this expenditure, in addition to not relying on the value of public expenditure absolutely as an expression of the reality of what these benefits were achieved as a result of many variables, the most important of which is the misallocation of expenditures. (Tamera, 2021)

Which means that the lack of accounting disclosure about social performance for the governmental sector, it is mainly due to the lack of monetary quantitative measurement of the social benefits achieved by this sector for citizens as a result of the difficulty of this measurement, and the lack of a scientific concept through which this performance can be expressed.

The researcher presents this paper as one of the contributions of the accounting literature to improving the level of disclosure and transparency in the financial statements of governmental sector units by avoiding the shortcomings in disclosure of the social performance of this sector, and in order to form a vision for answering the research question represented in: How can the social performance of the governmental sector be disclosed?

The researcher will further discuss and analyze numbers of research studies that dealt with the topic of measuring the social benefits achieved for citizens as a result of public expenditure as a main reason for not disclosing this performance. The researcher will also study a process based on the investigation of experts and those familiar with the field of research, in order to test the validity of the research hypothesis that was formulated in the light of the results of the discussion of numbers of previous research studies related to the causes of the research problem and how to overcome it. This hypothesis is represented in the following: - There is a significant relationship with statistical significance between the public expenditure return as a proposed accounting concept, and the disclosure of governmental sector social performance.

## **2. Literature Review**

The literature of scientific research in both the economic and accounting fields suffers from the lack of research studies that dealt with measuring the benefits achieved from public



spending in order to express the social performance of the governmental sector, and previous research efforts made several attempts to achieve this measurement using numbers of various measures according to the vision of existing study and the field of application.

It is clear to the researcher from the results of these studies that the research studies addressing the issue of measuring the benefits achieved for citizens as a result of the allocation of public expenditures was done at the level of specific economic sectors and not at the level of all macroeconomic sectors, which led to the absence of feedback on the process of allocating public expenditures at the total level of the state's general budget.

It is clear from the research studies that dealt with the subject of measuring the social benefits achieved for citizens as a result of public spending, that these studies use a number of methods of measuring social benefits, which started with the theory of homogeneous functions, which is one of the important topics in economic literature leading to the methodology of the social rate of return on investment (SROI), which is currently The most important and most commonly used measure in the field of measuring social benefits derives its philosophy from the principle of cost-benefit analysis and derives its mathematical formula from the mathematical framework of the rate of return on investment in commercial projects ROI.

Despite the number of methods used in trying to achieve an objective measurement of the social benefits achieved for citizens through the concept of social welfare, as well as the research efforts related to the development of methodologies for this measurement, these methods did not provide an objective measurement of these benefits, because they did not achieve a real and direct measurement of the change in the level of change. The social welfare achieved as a result of public spending, and the reason for this is due to many shortcomings in the methodologies used in the measurement, as well as a number of issues related to the concept of social welfare itself.

On the level of measurement methodologies, many aspects of criticism have been directed at these methodologies, especially the criticisms related to the social rate of return on investment (SROI) methodology with regard to how to determine social benefits, which are based on field surveys of a number of individuals who are assumed to be the beneficiaries of the implementation of social programs, as well as how to determine the financial value of these benefits.

As for matters related to the concept of social welfare as a reason for not achieving a real and direct measurement of the change in the level of social welfare achieved as a result of public spending, this may be due primarily to the difficulty of measuring the concept of social welfare in itself, which went through many stages of development during the period from 1970 until 1980 by a number of researchers, including Sen Starret, Blackorby, Donaldson (Geoffrey, 1990). Given the difficulty of measuring the concept of social welfare compared to output and the inability to achieve an objective measurement of the level of well-being despite numerous attempts by research studies governments resort to maximizing output instead of maximizing welfare. (Misch, 2013)

The difficulty of measuring the concept of social welfare is due to several reasons namely: This concept is based on the individual preferences of citizens and not society as a whole

(Weymark, 2013), as it is a multi-dimensional concept and context and is constantly modified to reflect the prevailing social realities, and it consists of a material dimension that includes some economic indicators such as income employment, level of education, social security services, and another personal dimension such as happiness, satisfaction, availability or general insecurity (Moss, 1980). In addition, this concept cannot be generalized as it does not take into account the different aspects of citizens' lives that require continuous review and evaluation to know what those aspects mean for each country and region so that this assessment reflects prevailing social realities and contributes to meeting the needs of citizens. (Martinez, Rodriguez, Lombe, & Rossi, 2017)

With the development of the business environment and social life, the concept of social well-being is no longer actually based on one dimension only, which is the economic dimension, but has become multi-dimensional and includes health education, employment, the environment and many other dimensions necessary to measure the well-being of the individual within society (Espina & Arechavala, 2013). This concept is also based on what individuals can do now and not on what they can do in the future (Fleurbaey, 2014)

Since the ability of individuals to meet their needs depends on what they get from income that enables them to meet them, social welfare has been defined by a number of researchers as "the available income after reducing it by the coefficient of inequality in the income distribution" and it was used as an indicator of inequality in income distribution by researcher Dalton in 1920 as the first researcher to use this concept to express inequality in distribution, and it was also used for the same purpose by researcher Atkinson in 1970, and from the studies that defined this content and used it as a measure to express the efficiency of resource allocation study (Villar, 2001). The study (Creedy & Héroult, 2012) defined it as "the average per capita disposable national income", and the study (Quentin & Shlomo, 2002) defined it as "the level of per capita income" in light of individuals' concept of well-being and based on their view and evaluation of what they receive. It is based on income or what they consume in comparison with others and not according to the absolute value of what they receive from income or what they consume.

The process of measuring the level of social welfare - given that it is defined as the disposable income after deducting it by the coefficient of inequality in the income distribution - faces a number of challenges, the most important of which are:

- Determining the transfers that will be made to individuals in order to improve the level of well-being, as well as the appropriate measurement tools. (Magdalou, 2018)
- Measuring the level of social welfare for society as a whole requires studying a number of variables, namely (employment and unemployment, income distribution, taxes and social expenditures, social security pensions, health care, education, housing poverty and social assistance. (Mesa-Lago, 2017)
- Studying the variables that have a fundamental impact on the level of well-being the most important of which are taxes, because of their impact on the level of economic and social life through the level of income (Selen and Karas; 2018), as well as the effect of corruption of government officials for their possession of most incentives, which leads to a

decrease in the amount transferred from incentives to individuals, which entails Inability to meet their needs (Toukan, 2017)

The researcher sees the existence of another matter related to the concept of social welfare as a reason In the failure to achieve a real and direct measurement of the change in the level of social welfare achieved as a result of public spending, which is related to the content of this concept itself, where the concept of social welfare - in the light of the welfare economy - expresses the preferences and priorities of society Social welfare "represents the weighted sum of the benefits obtained by individuals" (Suzumura, 2002), (Fleurbaey, 2014)), and therefore the concept of social welfare does not fully reflect the preferences of all members of society, and the choices of individuals for goods and services are not completely subject to free choice, and even Social welfare is fully representative of the preferences and desires of individuals. The preferences of the society as a whole for a commodity must be the same as the preferences of any individual in society (Haradhan, 2011)

Hence, the researcher believes that although the concept of social welfare is astrategic goal for public spending (Van de Walle, 1996), it is not considered an appropriate entrance to achieve an objective measurement of the benefits achieved as a result of this spending, due to the difficulty of measuring it and related to the difference of its real content from its philosophy. Therefore, it is necessary to work on finding the appropriate approach to achieve and make available financial information that objectively reflects the reality of the social performance of the government sector and enables policy makers and those in charge of privatization to rationalize privatization decisions by directing public spending towards aspects that maximize the public benefit of citizens at the level of all economic sectors.

### **3. Research Methodology**

The researcher discusses the concept of the return on public spending as a proposed methodology to avoid the lack of measurement of the social benefits that have been achieved for citizens as a result of the activities carried out by the government sector units in order to measure the social performance of these units and disclose it through the financial statements in order to contribute to the evaluation of the performance of this sector and help decision makers and decision makers Policies in determining the optimal mix of public expenditures that maximize the public benefit of citizens

The researcher will discuss the content of this concept and how to measure it, and this will be tested through a field study based on a survey of a number of experts in the countries registered with the International Monetary Fund database, in order to indicate the extent to which this concept is accepted or rejected in measuring and disclosing the social performance of the government sector.

#### **3.1 The concept of public expenditure return**

The researcher found the scarcity of the term "return on public spending" in research studies, and in the few studies in which the term "return" was mentioned in conjunction with one of the aspects of public spending, but it was mentioned missing the linguistic meaning of the word "return" which was defined in both Arabic and English as being "Revenue, income

or returns from trade or investment profit,” as this term was mentioned, missing the scientific content of the term return, which is based on comparing the income achieved with the cost spent to achieve this income according to the cost-benefit analysis principle as well as the accounting interview principle. Explicit as a term that expresses the return achieved by citizens from public spending at the level of all economic sectors in the country, and the economic and accounting literature did not include a specific definition of this concept.

The study (Benin, 2015) was one of the studies in which the term “return” was mentioned in conjunction with one of the aspects of public spending, which aimed to measure the impact of public spending on the agricultural sector in Africa. In this study, the researcher used a measure of the added value (the increase in productivity) per hectare of Agricultural land as a result of public spending in the field of agriculture. The term (return) was also mentioned in the study (Cappelen, Raknerud, & Rybalka, 2013) which was conducted with the aim of measuring the impact of spending by the Norwegian Research Council in the field of research and development by analyzing the performance of a group of establishments during the period from 2001 to 2009 using one of the Econometric models to analyze the relationship between worker productivity and spending by the Norwegian Research Council on research and development.

The researcher believes that the reason for the loss of the term (return on public spending) to its scientific content and linguistic meaning in the studies in which it was mentioned is due to the interest of those conducting these studies in measuring the impact of public spending in a particular sector through the productivity scale, without attempting to actually measure the value of the income achieved for citizens as an expression of return Public spending within this sector, and only the productivity indicator to express the return on this spending.

The researcher sees the possibility of using the term (return on public spending) as an accounting concept that reflects the financial value of the social benefits achieved for citizens, and at the same time reflects the value of the public money spent by the state to meet the citizens’ demand for public goods and services that brought them these benefits, especially since the strategic objective of public spending is In increasing the level of well-being of citizens (Van de Walle, 1996), and that the state’s role in economic activity, according to the theory of market failure, is to provide goods and services that are in the interest of society as a whole and that markets failed to provide to citizens as a result of individual preferences of market participants and their desire to achieve (Furton1 & Martin, 2019), and that the state’s social responsibility is to support its citizens and achieve social justice among them through the redistribution of income. (Khemani, 2017)

The researcher can then define the concept (return on public spending) from an accounting perspective - taking into account the determinants related to the objective of public spending and the role of the state in economic activity and its social responsibility - this definition is represented in “the improvement in the level of citizens’ welfare due to the increase in their income level or the achieved savings.” them to spend as a result of obtaining what the government provides of public goods and services, or what it provides of direct and indirect cash transfers.”

Bearing in mind that the citizens mentioned in the definition are the citizens who are entitled to the services, goods and cash transfers provided by the government according to the eligibility criterion determined by the competent authority in the country. Any improvement in their level of well-being occurs, such as if patients die in government hospitals or students fail in public schools and universities.

The researcher believes that in these cases, accounting must be recognized for what we can call public spending losses, which can be defined as “the cost of public goods and services and direct and indirect cash transfers obtained by citizens and did not lead to an improvement in their level of well-being. To complement the researcher’s discussion of the accounting measurement methodology for the return on public spending as a measurement methodology whose purpose is to objectively express and disclose the reality of the social performance of the government sector, the researcher will discuss in the next part how to achieve this measurement and then how to disclose.

### **3.2 The approach of achieving the accounting measurement of public expenditure return**

The researcher believes that the achieved part of the citizens’ aggregate demand for public goods and services, which we can call (Real Public Demand), represents the appropriate entrance to measure the term (Return on Public Expenditure), and this approach has been used before with regard to the unrealized portion of expression and measurement The so-called concept of social loss (SL) by researchers (Ben-David & Tavor, 2011)

The researcher believes that this approach enables those in charge of privatization to ensure that the full impact of government spending is transmitted to citizens, and it also expresses the content of the definition that was established for the return on public spending, as the achieved part of the total demand for public goods and services expresses the increase in citizens' income Or the savings achieved for them in spending due to obtaining goods and services provided by the state represented by its government without paying the financial return that they were willing to give up in order to obtain them from the markets, and then this leads to an increase in the level of social welfare for the citizens who obtain these goods and services.

And supports the researcher’s vision of using the entrance to the demand for goods and services provided by the state as an entrance to measure the return on public spending, is to use this same entrance to estimate the optimal volume of production for these goods and services, as a result of the restrictions imposed on the public budget and the lack of the economy of public goods and services to measure the return on production and load the citizen in This economy is a fixed percentage of the cost of producing any quantity of goods and services. (Van den Nouweland, 2018,)

The researcher’s vision also supports the effect of joint consumption, which means that public goods and services are used simultaneously by all consumers without excluding any individual, and for this reason, public goods and services are called collective goods or non-exchange goods, and consumers can obtain them without clarity of their preferences and consumption. Without paying for it, then consumers do not need to reveal their real demand

for public goods and services in the market, which means that there are no demand curves for public goods and services (Agiobenebo, 2004)

Hence, using the (demand for public goods and services) entry to measure the return on public spending achieves a double measurement, as it achieves data related to the outputs of the privatization process by measuring the return on allocation decisions, as well as achieving data related to the inputs of the privatization process through measuring the demand for public goods and services. Which is of great importance for policy makers in order to overcome the problem of the lack of a clear definition of the demand curves for public goods and services, as this entry serves to provide information that is absent from the government regarding the volume and quality of demand for goods and services that it can provide to citizens, as it entails On the availability of this information, the government should reconsider the combinations of production in order to achieve an adequate supply of goods and services that achieve balance at the overall level of the national economy and maximize the public benefit of citizens.

The researcher believes that achieving the accounting measurement of the return on public spending in light of the proposed approach to the measurement process requires discussing the variables that are compatible with this approach and achieving the measurement of the monetary value of that part of the total demand for public goods and services, which expresses the benefits achieved for citizens as a result of the allocation of public expenditures, and this is what will be discussed researcher in the next part.

### **3.3 The model of achieving the accounting measurement of the public expenditure return**

Achieving the accounting measurement of transactions requires that these transactions be quantifiable in cash, and this is the essence of the measurement process, which results in determining the monetary value of these transactions recording them in the accounting books and disclosing them in the financial statements and reports, and then the accounting measurement of the return on public spending requires a specification of the model variables. The benchmark that achieves the monetary value of this return through the proposed measurement approach.

In light of the proposed measurement approach, the researcher believes that these variables are represented in: (the total actual cost of producing one unit of the good or service provided by the state in a particular sector - the number of units of goods and services that the citizen obtains as a result of the demand for them in this sector), and then The mathematical function of the model to achieve the accounting measurement of the return on public spending for the citizen in one of the economic sectors is represented in:

$$\mathbf{Rg_{PS} = C_{S \text{ per Unit}} * T_{U \text{ Per Person}} \longrightarrow 1}$$

$$\mathbf{P = 1, S = 1}$$

The value of the return on public spending achieved in the sector can also be found by multiplying the variables of function No. 1 by the variable number of individuals who

actually obtained the goods and services of the sector P Real, as shown by the following function:

$$Rg_s = C_S \text{ per Unit} * T_U \text{ Per Person} \times P_{\text{Real}} \longrightarrow 2$$

S = 1

The researcher believes that both the actual cost variable of producing one unit of goods and services in a particular sector CS per unit and the variable number of units of goods and services obtained by the citizen in this sector TU Per Person work to achieve the value of the real demand for public goods and services as well as the monetary value Which expresses the increase in the level of well-being of citizens as a result of what the state, represented in its government sector, undertakes to spend to provide goods and services that meet their needs.

However, it requires government agencies to determine the nature of the good or service they provide, according to the nature of their activity in the economic sector in which they operate, and to use cost accounting systems to measure the actual cost of unit production of this good or service, where the unit production cost is the total spent of current expenses for the purpose of producing this unit, in addition to this unit's share of the depreciation of the existing capital assets in the production process, as well as its share of the administrative expenses necessary to ensure that the facility continues to provide its own good or service, provided that the administrative expenses include the annual depreciation of infrastructure, facilities and assets on The different types.

### 3.4 Recognition and disclosure accounting of public Expenditure return

The researcher's vision with regard to the accounting recognition and disclosure methodology for the return on public spending is: Recognizing this return as social revenue and disclosing it within the social performance statement, recognizing the same value as an asset and disclosing it within the items of the statement of financial position as one of the items of intangible assets under the name of human capital. This is illustrated by the following double entry:

Debit / asset

(Intangible assets - human capital)

Credit / Social Income (public expenditure return)

As for the accounting disclosure and recognition methodology for public expenditure losses, it is represented in recognizing the value of these losses as a reduction in the value of the social revenue achieved during the year and disclosing it within the social performance statement, and recognizing the same value as a reduction in the value of human capital in the statement of financial position, where the capital has already been increased Human money is the value of the goods and services that citizens obtain through the return on public spending (social revenue), and as a result of the lack of improvement in their level of well-being, whatever the reason for this human capital must be reduced by the amount it has been increased so that the disclosure of social performance is an objective disclosure.

Debit / Loss Public Expenditure

Creditor / Assets (Intangible Assets - Human Capital)

Hence, the researcher believes that the list of social performance is very important as it is a channel for disclosing the social performance of the administrative body and the general government, given that the return on public spending represents the social benefits that have been achieved for the community as a result of the state's expenditure of public money, which facilitates parliamentary and popular oversight and the competent authorities on government performance regarding It is related to achieving the objectives of the state's general budget and maximizing the public benefit of citizens.

The presence of this list within the other financial statements is also of great importance as it is a control tool that translates the achieved social benefits to the community in the form of monetary values that are compared with the monetary values in the financial performance statement and whether there is a good use of the available financial resources or there is a waste of these resources. This is in addition to being a digital disclosure tool for the annual contribution of the government sector to the country's human capital.

#### 4. The results of Practical study

The researcher presented the subject of the research for the survey inside and outside the Arab Republic of Egypt, where the original community of the study consisted of the group of member states of the International Monetary Fund, which numbered 183 countries, including the state of the Arab Republic of Egypt, and the researcher relied in obtaining the data for the study on survey lists sent to The sample items numbered (750) from the vocabulary of the study community, regardless of their field of work and scientific specializations. The participants in the study belonged to governmental and non-governmental agencies and international institutions. The number of lists that were answered reached (502) lists, and this represents a rate of 67%, of which the researcher excluded 25 lists due to their scientific and practical specialization in the field of the research topic under study, and thus the number of lists on which the statistical analysis was conducted is 477 lists, or 64%, by 366 List inside the Arab Republic of Egypt 109 List outside the Arab Republic of Egypt. The researcher faced a number of difficulties to obtain this number of responses, the most important of which is the small number of the target group with scientific and practical background in the subject of the research, and this is evident from the neutral responses to many of the survey statements. The results were:

##### Research Hypothesis

- There is a significant relationship with statistical significance between the public expenditure return as a proposed accounting concept, and the disclosure of governmental sector social performance.

##### First: the results of the research hypothesis test

###### Pearson's correlation coefficient for the research hypothesis

	number	average	Pearson Correlation	Sig. (2-tailed)
Public expenditure return	477	4.021	.612**	.000
.Disclosure of governmental sector social performance	477	3.7866		

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



We note from the previous table that:

The relationship between the achievement of the accounting measurement of the return on public spending, and the realization of the feedback to the process of allocating public expenditures is direct and highly statistically significant, as the value of the Pearson correlation coefficient reached 61% with a statistical significance level of 0.00, which is smaller than the level of significance 0.05, meaning that we are confident with a percentage of 95 % of the fact that achieving the accounting measurement of the return on public spending leads to the achievement of feedback on the process of allocating public expenditures and vice versa, and therefore we can accept the second research hypothesis which says that there is a significant statistically significant relationship between the achievement of the accounting measurement of the return on public spending, and the achievement of the feedback on the process of allocation of expenditures the public.

### **Second: The results of testing the effectiveness of the proposed definition of the concept of public expenditure return**

#### **T-test to evaluate the proposed definition of the concept of return on public spending**

One-Sample Test						
Test Value = 3						
	Number	average	standard deviation	T	Df	Sig. (2-tailed)
Definition	477	3.8205	0.59578	30.080	476	.000

We note from the previous table that:

The level of statistical significance corresponding to the T-test equals 0.00, which is less than the level of significance 0.05, and therefore we can accept the hypothesis that the average opinions of the sample members differ from the neutral mean of the five-point Likert scale equal to 3, and by noting that the average opinions of the sample members equal 3.82, which is Greater than the impartial mean of the five-point Likert scale, equal to 3, if we can judge that the real average of the opinions of the sample members is greater than 3, that is, they tend to agree with the proposed definition.

### **Third: The results of testing the effectiveness of the approach to measuring the concept of public expenditure return**

#### **T-test to assess the effectiveness of the approach to measuring the concept of public expenditure return**

One-Sample Test						
Test Value = 3						
	number	average	standard deviation	T	Df	Sig. (2-tailed)
approach of measuring	477	3.8172	0.58104	30.717	476	.000

We note from the previous table that:

The level of statistical significance corresponding to the T-test equals 0.00, which is less than the level of significance 0.05, and therefore we can accept the hypothesis that the average opinions of the sample members differ from the neutral mean of the five-point Likert scale equal to 3, and by noting that the average opinions of the sample members equal 3.82, which is It is greater than the impartial mean of the five-point Likert scale, which is equal to 3. If we can judge that the average opinions of the real sample members are greater than 3, that is, they tend to agree to the proposed approach to measure the concept of return on public spending.

#### **Fourth: The results of testing the effectiveness of the methodology for measuring the concept of return on public spending**

##### **T-test to assess the effectiveness of the methodology for measuring the concept of public expenditure return**

One-Sample Test						
Test Value = 3						
	number	average	standard deviation	T	Df	Sig. (2-tailed)
methodology for measuring	477	3.6990	0.59812	25.522	476	.000

We note from the previous table that:

The level of statistical significance corresponding to the T-test equals 0.00, which is less than the level of significance 0.05, and therefore we can accept the hypothesis that the average opinions of the sample members differ from the neutral mean of the five-point Likert scale equal to 3, and by noting that the average opinions of the sample members equal 3.7, which is greater than the impartial mean of the five-point Likert scale, which is equal to 3, so we can judge that the average opinions of the real sample members are greater than 3, that is, they tend to agree with the proposed methodology for measuring the concept of return on public spending.

#### **5. Summary**

Through this research, the researcher discussed how to disclose the social performance of the government sector, after discussing and picking up a number of research studies that discussed the topic of measuring the social benefits achieved for citizens as a result of public spending, and given the challenges surrounding the process of measuring social welfare that make it difficult to achieve a measure of social welfare. The real change in the level of citizens' welfare and then judge the performance of the government sector as a major contributor to achieving this welfare. The researcher proposed the concept of return on public spending to measure and disclose the social performance of the government sector, and the researcher used the entrance to the demand for public goods and services to achieve the measurement of this return.

To complement the research plan established by the researcher and for the purpose of accepting or rejecting his findings during the analytical study of some previous research efforts, the researcher conducted a practical study that included a field study to survey the opinion of those with knowledge and experience inside and outside the Arab Republic of Egypt regarding his research hypothesis. The results of this study came to accept the research hypothesis represented in the existence of a fundamental relationship between the return on public spending as a proposed concept and the disclosure of the social performance of the government sector.

The researcher sees the possibility of repeating this study in the future on a larger scale of the countries of the world in order to generalize the proposed concept and its validity with the different nature of the government sector from one country to another.

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## **The Accounting Regulations for the Non-Profit: A Comparative Study Between Egypt and UK**

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### **Abstract:**

The researchers have shed the light on the specific nature of NPOs by reviewing two models, the CAs in the Arab republic of Egypt and charities in the United Kingdom from legislative side and determine the most important organizational and financial aspects. And The Researchers found a rapprochement between the concept, characteristics and activities nature of both the CAs and charities, but the United Kingdom is more significantly regulated than Egypt in the legislative and accounting regulation, so the researcher will address in the next section the problems and challenges facing the NPS at the international level with a focus on the Egyptian CAs.

**Keywords:** Accounting Regulations/ NPOs / CAs/ Disclosure.

### **Introduction:**

During the last two decades, NPOs became the third sector (TSOs) in the economic and social systems beside public and private sectors (Albaz & Albaz, 2019) The third sector is usually seen in the middle between the two sectors – commercial sector where profit is the central aim, and the public sector. Where the economic and social reforms undertaken by many governments between 1980 and 1990, brought about significant shifts in the roles played by government and the third sector. A reduction in government provided services combined with increasing social needs has led to greater utilization of the NPS by governments for the delivery of social services (Saxton, Kuo, & Ho, 2012) internationally; this shift has seen the sector grow extensively in size and prominence, And its impact on the degree of the society's welfare. Where (Kirk & Beth Nolan, 2010) suggested that the growth of the NPS's role in society is due to the prevailing belief among the donors that these sector organizations are more cost-effective from the governmental bodies in the provision of social services. Therefore, the academic research attention tends recently to examine the current reality of the accounting regulation and the possibility of development in this sector's organizations. In this sense, the researcher in this chapter conducts a comparison between the current accounting Indigenization for the Civil Associations (CAs) in the Arab republic of Egypt and charities in the United Kingdom, in order to put forward accounting development proposals for these Egyptian CAs from an international view.

NPOs represent those institutions have been established in order to provide a public service to society (Saxton, Kuo, & Ho, 2012). And the CAs consider the Egyptian model of the NPOs where it's become necessary after 25 Jan 2011 and 30 June 2013 revolutions and the growth in size and role of these associations in the Egyptian society, to restructure this associations sector's role in order to contribute in establishing an appropriate economic and social system. On the other hand, charities consider the model of the NPOs in the United Kingdom. Despite the global recognition with the NPOs' role as one of the most important mechanism for achieving the economic and social development, yet so far, there is no generally accepted conceptual framework for this sector's organizations at the international level. In addition, Laws and rules which governing the NPO varies



from country to another. Based on this point, the Researcher in this section sheds light on the specific nature of the NPOs in general and the CAs operating in the Arab Republic of Egypt. According to the Egyptian civil associations and institutions law No.84 for 2002. And charities in the United Kingdom, according to the charity law for 2011. So, the researchers addressed in this Paper the following: First, The Nature of the NPOs, Second: The Current Scientific Framework of the Egyptian CAs from an Accounting Perspective, Third: The Current Scientific Framework of the Charities in United Kingdom from an Accounting Perspective, Fourth: A comparative study between Egypt and United Kingdom from regulatory and accounting perspective.

### ***First: The Nature of the NPOs:***

#### **1-The concept and characteristics of NPOs:**

NPOs have been appeared in the early of last century to help the governmental sector in providing social services as a result of the inability of the states to fill the gap in public services (Costa, 2014) where Copenhagen Conference (1995) considered the beginning of the international recognition with the NPOs' role. Where, the conference sets an initiative for a partnership between the governmental and private sector from side and the NPS from the other side as a strategy for the development. And recently, NPOs become an important part of the economic system in the developed countries. But First and most importantly, there are many definitions associated with the concept of NPOs in the accounting thought (Hooper, Sinclair, Hui, & Mataira, 2008) for instance.: " social entities engaged in a variety of activities with social, charitable and cultural nature, aimed to provide goods and services with a basic aim to arise the community welfare, without profit motive, and in case of achieving surplus. This surplus redirected for the development of social activities".

The Researchers set a definition for the NPO according to five considerations have identified by the United Nations as: (1) has formal regulation, (2) separate from the state, (3) not-for-profit, (4) self-management, (5) voluntary (United Nations, 2003). Where the first, second and fourth conditions points out that the organization must be a not-for-profit purpose; motive, with an official status and independent of the founders or the State authority. The third and fifth condition referred to its reliance on volunteer work, donations and without the profit motive from its operational activities. These considerations are also consistent with the definition of the financial accounting standard board (FASB) that is required to consider an organization as Non-profit: The main funding source dependent on donations and contributions from others. From the above definition, NPOs share important underlying characteristics that differentiate them from private and public sector organizations, and according to the literature, and the researchers concluded the most important features and characteristics of the NPOs in the following themes:

#### **The First Theme: Formal Regulation:**

- A. NPO has a legal and Organizational form according to laws, based on that; it has Independent personality from its founders or managers.
- B. The absence of the economic sense from the organization's equity - the lack of ownership interest - Where the equity is considered in the NPOs owned by a social entity. And the equity/capital does not transmit between individuals such as FPOs (profit-sharing). Moreover, the organization is managed by elections among its members and its managers are responsible to the relevant governmental authorities not founders or shareholders.
- C. Non-profit regulation is different from the traditional regulation with the traditional concept. Where this theme refers to the idea (regulation) which include the overall aspects of human life (social, cultural and economic).
- D. The NPO is subjected to special provisions and rules for its management, administrative, regulatory and financial structure and these rules are different from country to another according to the prevailing law of each country.

#### **The Second Theme: Separate from the state:**

1. NPOs are different from the governmental sector organizations. In the sense that these organizations are not related or following any governmental body/authority. But this point does not prevent the government authorities from overseeing the NPOs within the terms

established by the laws and take into account the principles of (Non-profit establishment and activities freedom).

2. Despite the similarities between the activities of the non-profit and public sector. But NPOs don't consider from the administrative bodies of the state. And they are not associated structural or administrative with the state that is Mean that the organization is institutionally separate from the state and not a part of the state administration.
3. Although the NPO receives support and funds from the government almost every year, the organization is fully independent with regard to the management of its affairs and therefore, the organization is self-managed and can control its activities according to its statute. Moreover, there is no competition market for its activities and services.

#### **The Third Theme: Not-For-Profit:**

1. The main purpose is providing public services and benefits to the society in general without the focus on profit motive (Mitchell, Van Buren, Greenwood, & Freeman, 2015) Thus the profit in these organizations is a technical term linked to the existence of a surplus of revenue over expenditure. So NPOs working under a Non-distribution constraint, meaning that these organizations have no residual claimants and therefore, all surpluses remain within the organization. So, the surplus does not distribute between founders or the Board of Directors (Costa, 2014) Simplifying a little, the organization may achieve profit (surplus) but is not available for distribution and this point distinguishes the Non-profit from FPOs, so the organization must exist for the public benefit, in other words, it must seek to benefit a wide range of people.
2. Donors don't expect to recover or get any economic benefits commensurate in value with the donated resources (Chueva, 2016) So the NPOs' funds consider as a public fund. Therefore, these organizations often audit by the relevant governmental authorities according to the prevailing laws in each country.
3. Despite the fact that Non-governmental organizations in some countries called NPOs. This Feature must be met in all Non-governmental organizations in order to distinguish them from the commercial organizations which the basis of its establishment is making-profit. While in the Non-governmental organizations the purpose of its establishment is providing services to the society. The other difference between the commercial companies and NPOs is profit-sharing, where commercial companies usually share the profits obtained by, but NPOs can carry out some profit-generating activities with a term that doesn't distribute profit to founders or managers and allocated again to carry out the activities that the organization has established for.
4. NPOs have governmental privileges and tax exemptions according to the prevailing law in each country.
5. NPOs do not seek to make profit and exempt from taxes (Aldoseri, Albaz, & Ghali, 2022) So the traditional accounting (commercial), including the accounting for income taxes considered inappropriate to adopt.

#### **The Fourth Theme: Self-Management:**

1. NPOs "self-governing" by a statute and internal procedures and don't follow any external entities where the organization governs by internal system which Considered as Constitution of its operations (Kingston, Furneaux, de Zwaan, & Alderman, 2020)) so NPOs are self-governing organizations formed to serve the society.
2. NPO has an independent legal personality (as mentioned in the first theme). But its independence doesn't preclude it from receiving grants, gifts and donations from any party whatsoever but these donations shouldn't have any conditional or associated with the imposition or restricted terms that make the organization lose its independence. As these organizations derive their independence in terms of being social organizations operating in the context of voluntary work.
3. The Decisions are made - particularly operational - by voting through the majority of the management board, and usually decision-making process is in public, and available to the media (Andreaus & Costa, 2014)



4. NPOs are not relatively subject to political pressures or state's general policy, where these organizations operate largely in isolation from the surrounding political conditions and have a greater degree of freedom in the choice of its activities from governmental organizations. Indeed, this freedom is one of the main reasons for governments to rely on the NPOs in carrying out some activities rather than the governmental organizations.

**The Fifth Theme: Voluntary:**

1. NPOs under the united nation's definition: its work is voluntary "not obligation", that's mean the membership in the Organization or donations or performing of any voluntary services, are not required or imposed by the law or specific legislation.
2. Voluntary participation is a for-free voluntary work. That includes voluntary participation in carrying out the organization's activities or management but that does not mean all or most of the resources provided to the organization must be through voluntary contributions or volunteers. In this sense, to say that the work in these organizations is voluntary work does not prevent from granting of bonuses and allocations; allowances for the individuals whose work or manage the organization.

**2- The impact of NPOs characteristics on the financial and operational sustainability:**

From the above, it became clear to the researcher, the unique nature and characteristics of the NPS from the for-profit and public sector. In this sense, NPOs' characteristics affecting the operational sustainability, which, (Albaz & Albaz, 2019) defined it as being able to survive so that it can continue to serve its constituency. And from another perspective, the operational sustainability is enhanced or undermined by the amount of financial resources and volunteer work available to the organization (van Puyvelde, Caers, du Bois, & Jegers, 2012) This argument confirmed by Epstein and McFarlan (Kaba, 2021) and supported by (Dmitrieva & Kharakoz, 2020) through demonstrating the relationship between fund's Diversification and operational sustainability.

Where, (Costa, 2014) observed that the greatest challenge in this sector is how to achieve the operational and financial sustainability at the same time of performing the social mission without making-profit. In the same way, (Connolly & Hyndman, 2013) shown the importance of revenue diversification to achive the financial sustainability in NPOs, where (Albaz & Albaz, 2019) summarized the Operational and financial sustainability in one word "survive".

From the financial sustainability's perspective, The NPOs are characterized by the funding-resources diversification, and these resources are different from FPOs. So the researcher here attempts to review the funding-resources in NPOs in order to identify the criteria which can guide the accounting treatments during the study in the light of the confirmation of many academic studies about the relationship between the fund-resources and the accounting practices in the NPOs.

From the operational sustainability's perspective, Funding is one of the most important factors influencing the operational sustainability in the NPOs because the activities' volume determines based on the amount of fund-resources. And this importance increased due to the nature of the available fund-resources which are often flexible and continuous fluctuation in addition to the competition between the sector organizations as a result of economic and political considerations.

**3-Fund-Resources in NPOs:**

NPOs subjected to two types of accountability (monetary; operational). The monetary accountability requires the provision of information about the fund-resources in terms of how it was used and the nature of the restrictions imposed on it. Also the Operational accountability requires the provision of information about the result of the utilization/exploitation of these funds. Therefore, the Distinguish between the fund-resources is necessary to meet the requirements of both monetary and operational accountabilities. So according to the literature, the Researchers have divided the fund-resources in NPOs based on its concept, nature and characteristics into three main groups as following:

**The First Group- Restricted Fund:**

Restricted fund units are used to account for the funds where there are some external conditions on how the fund can be used; the conditions arise by the donors in order to achieve specific objectives. So the organization's managers don't have the ability to make decisions that lead to use



these funds in any activities except that have allocated for by the donors, and the researcher has distinguished between three categories of restricted fund:

**A-Endowment Fund:**

Endowment fund units are the funds which used to account for the resources that usually in the form of cash or investments - which their donors required to maintain the fund's origin to either permanently or for a specified purpose and after that the organization can spend it but the main characteristic of these funds is that, it is non-spending resources. These funds also used to account for the gains generated from the investment of endowment funds that the organization able to spend or add it to the fund's origin and These gains may be restricted or unrestricted according to the donors' conditions and terms, such as endowment gifts or land and the donations to purchase fixed assets.

**B-Replacement and Expansion Fund:**

Replacement and Expansion funds are used to account for funds provided in the form of cash or investments or pledges. And the donors restrict these funds to use in the acquisition or replacement of capital assets. So these funds considered as additions to the permanent capital not as income or revenue. Also, the investment's revenue of these funds should be added to the Replacement and Expansion funds and when the organization purchases capital assets by these funds, it converts funds used in this acquisition process from the restricted fund to the unrestricted fund as an increase in the unrestricted fund balance not as income.

**C- Specific purposed fund:**

Some of the Specific-purposed fund are used to account for funds which their usage restricted to spend on specific operational purposes or activities. So these funds are considered from available-to-spend fund-resources. Therefore, cash and investments are usually the source to get these funds.

**The Second Group: Unrestricted Fund:**

Unrestricted funds are considered the main fund-resources in the NPOs, and usually called the operation-funds, public-funds or liquid fund. These funds used to account for the fund-resources which managers can make a decision about it without donors. And used for all revenues and expenses that generated from unrestricted funds (Ledgerwood & Morgan, 2012), so information about these funds Reflect the operational accountability. Because it's considered the result of managers' decisions to achieve the operational objectives, in this sense, unrestricted funds consist of:

- A. Operations and activities fund, which included available-to-spend fund that represents in short-term financial assets and resources, and unavailable-to-spend fund that represented in long-term financial assets and recourses.
- B. Funds that can be used by managers for operational purposes.
- C. Funds converted from restricted funds.
- D. Revenue from the organization's operations and activities.
- E. Grants, donations and membership subscriptions to the organization without any restrictions on its usage.

**The Third Group: Specific Nature Fund:**

- A. Legacies: cash, assets or Properties that donors Recommended to convert its ownership to the organization.
- B. Voluntary services or contributions: NPO relies on Volunteer services to achieve its activities such as Business Advisory, facilities and other. These services play a vital role in the operational sustainability of the NPOs. (Saxton, Kuo, & Ho, 2012) Pledges: pledges or account receivables are a pledge from donors to contribute with an amount of funds to the organization, where some donors pledge that they will pay their contribution with a specific value on annual or monthly payments, and these pledges are usually in the form of promissory notes, therefore, the recognition with these pledges in the financial reports requires a proof in the form of documents or any other means by which to validate these pledges
- C. Governmental grants and subsidies: Governmental funding is one of the main fund-resources which third sector depends on (Lopez-Arceiz, Bellostas, & Moneva, 2021) where the state budget includes grants and subsidies according to the laws for the NPS. In addition, there are some arguments in the accounting thought calls to consider tax exemptions and other financial privileges within the scope of government grants.

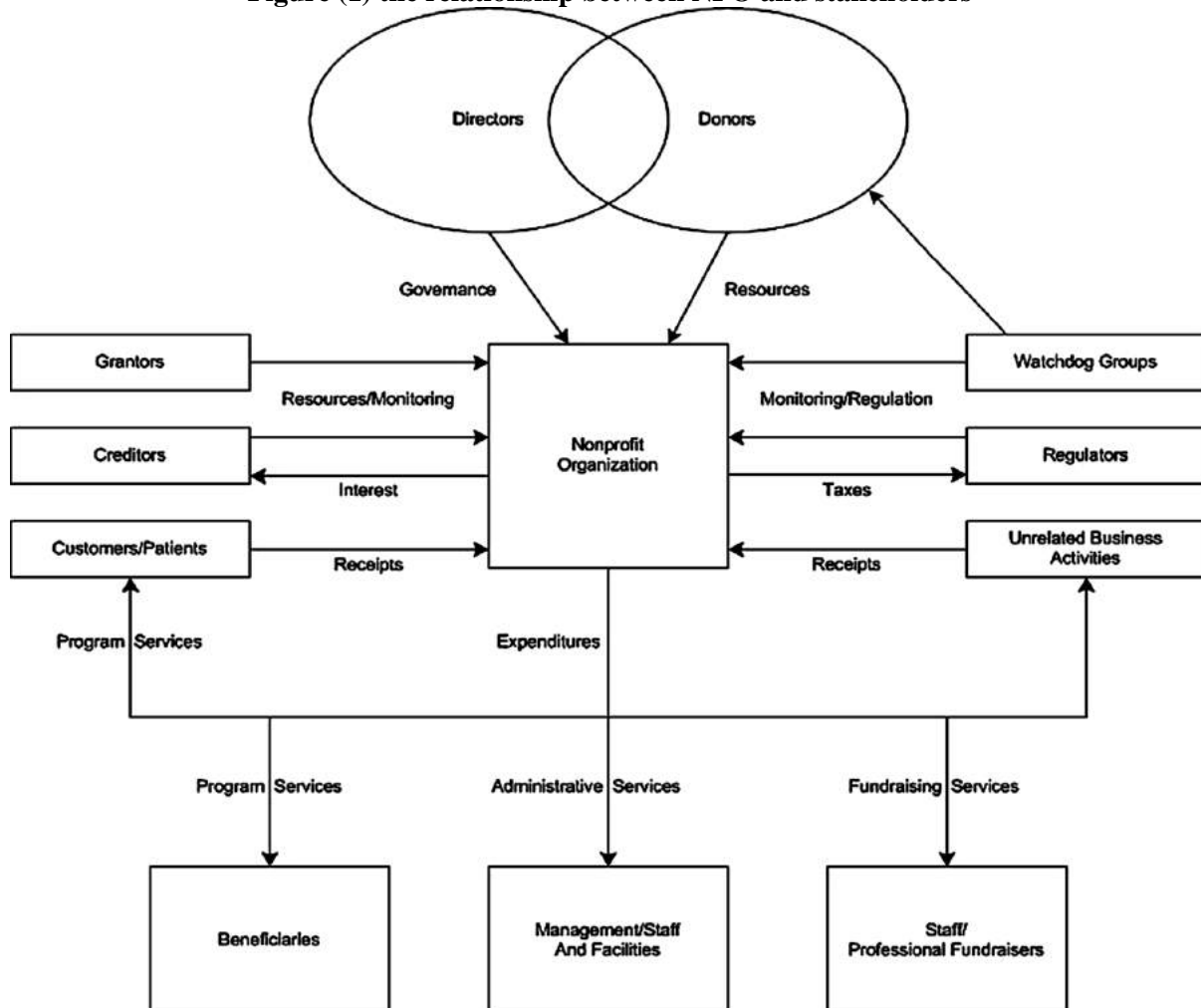
From the above, the researcher observed that the NPOs characterized by their reliance mainly on external fund-resources especially governmental fund and public fund (Breen, 2013) for example In the United States of America the volume of fund-resources increased from \$ 260 billion in 2009 to \$ 316 billion in 2013 and in the United Kingdom, it was estimated that about one-third of the total income of charities is derived from statutory sources, with the vast majority of those emanating from government contracts

From stakeholder theory perspective, Accounting and reporting compliance can be analyzed as a mean to safeguard the flow of resources to organizations (financial sustainability). And when organizations are convinced the governmental subsidies, public donations are linked with or depend on financial reporting compliance, they will make the necessary efforts to ensure that compliance. Where the degree of dependence increase with concentration and importance of providing resources, which means that organizations that depend heavily on one or very few resource providers are likely to experience stronger constraining influences from their environment.

#### 4-The relationship between NPOs and stakeholders:

The essence of accountability lies in the relationships between the organization and the society and/or stakeholder groups (Albaz & Albaz, 2019) and the diversity of these stakeholder groups for NPOs means they “have multiple accountabilities, both “downwards” to their partners, beneficiaries, staff and supporters, and “upwards” to trustees, donors and governments”. so NPOs characterized by multi-stakeholder, where stakeholders –in general- could be viewed in terms of groups or individuals who impact, or are impacted upon. and the following Figure can be summed the relationship between the NPOs and stakeholders:

**Figure (1) the relationship between NPO and stakeholders**



### ***Second: The Scientific Framework of the CAs from an Accounting Perspective:***

Third sector organizations play an important role in the provision of social services and the implementation of the development programs. Where these organizations' experience plays a complementary role to governmental sector. The term "third sector" refers to a large group of non-governmental, and NPOs. in the Arab Republic of Egypt, the third sector includes several organization forms (political parties; professional unions; CAs ; non-governmental organizations) (SIS), And the importance of this sector in the Egyptian society is due to what can be done by these organizations from an effective role in achieving the society's welfare.

Egypt has known the Volunteer work from a long time, as a result of a cumulative heritage "charity" concept. And there are more than 35000 CAs operating in the Egyptian society in different activity areas such as education, culture, public services and others Walks of life. For this reason, these associations considered as an important partner which cannot be ignored in the path of development and progress. So the state cleared the way to emerge as the state provided all means of financial support and legal protection available to begin its work Freely, Where the CA plays a mediating role between individual and state and it guarantees the improvement of individual by spreading knowledge, awareness, democracy, and the mobilization of individual and collective efforts to further social and economic development. Moreover, the influence of public policy and reinforce the concept of social solidarity.

The concept of CAs has been mainly emerged in Arab Republic of Egypt with the acknowledgement of Constitution of 1923; article No.30, The right of Egyptians in assembly and association. But the historical real emergence of the CAs in Egypt back to 1891 with the establishment of the first CA (the Greek Association in Alexandria). Indeed, the seventies of the past century considered as a real start for the CAs in Egypt with the modern sense.

From regulatory and supervisory perspective. Egyptian legislature concerned with setting a framework for the CAs – as NPOs – like For-profit organizations. Where the first law for CAs in Egypt No (49) of 1945 to the current law No (84) of 2002. In the same way, Egyptian legislature also concerned with the CAs in the Constitution of 2014, especially with its role in the Egyptian Society During the last period. So Egyptian legislature enacted two articles in this Constitution:

1. Article No.75 Stipulates that "All citizens shall have the right to form non-governmental associations and foundations on democratic basis, which shall acquire legal personality upon notification."
2. Article No.219 Stipulates that "The Central Auditing Organization shall be responsible for monitoring the funds of the State, the funds of the State public and independent legal persons and other authorities as specified by Law"

According to the CAs and institutions law. (84), Article No.1: "For the purpose of enforcing the provisions of the present law there shall be deemed as an association, each group of an organization continuing for a definite or indefinite period, comprising natural or judicial persons or both of them with a total of at least ten persons in all cases, and oriented to a purpose other than material profit. ". And according to article No.2: "It is a requirement for an association, to be founded that it shall have a written statute of its own signed by all founders and to possess an appropriate headquarters in the Arab Republic of Egypt". as article No.3 determines the components of the association's statute, fund-resources, how the association should use/spend it, invest surplus and the Financial monitoring. Thus, the CAs considered as a legal person under this law, and profit motive is not the purpose of its activities. So it's different from FPOs which its main purpose is making-profit. This implies, the CA is an accounting unit with a legal personality. it aims to provide economic, social and cultural services to the public society without any benefits to donors, hence the CAs considered according to the law, Non-governmental; NPOs in the international sense.

Moreover, in the beginning of this century the CAs' activities began to expand in all public fields (culture services; environment Protection; economic development; family issues; disables care; child care and Motherhood; etc.) as determined in the association's statute. But article no. (11) In law 84 of 2002 stipulated that Associations shall not be allowed to conduct any of the following purposes or activities:

1. Form military or Para-military formations or detachments.



2. Threaten national unity, violate public order or morality or advocate discrimination against citizens, an account of sex, origin, color, language, religion or creed
3. Practice any political or trade union activity exclusively restricted to political parties and trade unions.
4. Seek profit or practice any profit-oriented activity. However, adopting commercial controls to generate such income that contributes to the realization of the association's purposes shall not be considered a contravening activity.

On the other hand, the CAs in Egypt operating according to a set of rules, procedures and privileges stipulated in Law No. (84) Of 2002 and its executive regulations, which considered the only organizational law to the civil associations in Egypt, and according to this law as a civil societies and nonprofit organization for several features, according to article No.13, which stipulated that: Without prejudice to any privileges set forth under any other law, associations subject to the present law shall be eligible to the following privileges:

1. Exemption from registration and entry duties, payable by the association in all types of contracts to which it may be party to, such as contracts of ownerships, mortgage or other rights in kind.
2. Exemption from taxes and stamp duties currently or to be in future levied on all contracts, powers of attorney, printed material and records, etc.
3. Exemption from customs, taxes and other duties on the imported equipment, tools and production requirements as well as giveaways, donations and aids from abroad, under a resolution by the prime minister based on a proposal by the Minister of Social Affairs and presentation by the Minister of Finance, on condition that these objects are necessary for its main activity. Of these objects, it is prohibited to dispose of such durable goods as are identified under a resolution by the Minister of Social Affairs in agreement with the Ministry of Finance before the elapse of five years, as long as the taxes and customs duties due thereon remain unpaid.
4. Exemption of real property owned by the association from the real-estate tax.
5. A 25% reduction on railway transport duties for equipment and machinery.
6. Household telephone subscription and call tariffs shall apply for associations, which shall be defined under a decision by the administrative body.
7. A 50% reduction shall be given on consumption value of water, electricity and natural gas produced by the public authorities, public sector companies and any other government bodies.
8. Contributions given to associations shall be considered an income liability up to a maximum of 100%.

From an accounting perspective, the Egyptian legislator has set some articles to organize the accounting function of Associations and civil organizations operating in the Arab Republic of Egypt under law No.84 of 2002 as following:

1. Article No. (3) Paragraph (e) stipulated that, the statute of an association shall include fund-resources, and how the association should use and spend it, and in paragraph (h) includes the financial control system.
2. Article No. (4) stipulated that, in no case shall a statute of an association may stipulate for its property to devolve, upon termination, to any party other than NGO Assistance Fund or any other association or NGO or federations governed by the provisions of this law.
3. Article No. (19) stipulated that, the association shall keep at its management center the relevant documents, registers and correspondence. The executive regulations define such records and how to use them and the data contained. These records shall be stamped before being used by the administrative body.
4. Article No. (21) Stipulated that, An NGO shall have an annual balance sheet. and recorded in its accounts, and illustrate expenses, revenue, donations and fund resources according to the model of revenue and expenses account no (11) in the executive regulation of the law. But in case, if revenue or expenses exceeded twenty thousand Egyptian pounds, the financial report

must be audited by an external auditor and supported by documents and this report must be submitted before (The general assembly) at least one month.

5. Article No. (22) Stipulated that, the association undertakes to deposit with a bank or a saving fund, its cash funds in its same registered name. The association shall expend its own funds in such manner as may fulfill its purposes. It may invest its surplus income in areas of guaranteed gain that ensure a fixed source of income or reinvest same in its productive or service projects. In all cases, associations shall refrain from engaging into financial speculations.
6. The association may have records or other accounts in accordance with its activity needs, according to Article no. (61) Of the executive Regulations for Law No. (84).

From the above, the Researcher observed that law No.84 of 2002 and its executive regulation doesn't provide appropriate regulations for the accounting function dimensions in the CAs. Where the law was Limited to the legal aspects only. In addition, chapter two of the executive regulation regarding financial aspects was limited to list fund-resources and some models for accounting records such as revenue and expenditure record, general ledger, cash and bank, without any reference to the special nature of the CA's activities and its impact on the accounting function requirements. These reasons provide a logical explanation for the significant weakness in the accounting regulation and financial report in the CAs operating in the Arab Republic of Egypt.

### ***Third: the scientific framework to charities in the United Kingdom from the accounting perspective:***

Non-profit entities regulation returns back to many centuries in United Kingdom, which dating back to the 1601 AD "statute of charitable uses", the first law organizing the activities of these institutions and to the 1853 establishment of the charity commission, which had the purpose of regulation and control over the third sector (Kingston, Furneaux, de Zwaan, & Alderman, 2020) In many developed countries like the United Kingdom, certain types of third-sector organizations and Charities considered the largest part in this sector (Connolly & Hyndman, 2013)

Charities in United Kingdom are subject to the "Charities Act 2011", in the light of this law "charity" means an institution that is established for charitable purposes only, and subject to the control of the High Court in its exercise with respect to charities (Charities Act 2011, United Kingdom). the definition of "charity" technically relates to the purposes of a charity rather than its activities (Costa, 2014) According to the law, a charity purpose must first be included on a list of thirteen purposes guaranteed by law, and second the purpose shall be for the public benefit. Also there are also many organizational structures of charitable organizations that are subject to different laws according to the geographical location within the United Kingdom, and Researchers observed the difference of legal requirements in United Kingdom related to accounting and auditing requirements for charities: (The Auditing Practicing Board, 2011).

1. charitable companies: Companies Act 2006 (CA 2006)
2. Charities in England and Wales; the Charities Act 2011.
3. All Registered Charities in Scotland: The Charities (Scotland) Act 2005
4. charitable companies in Northern Ireland: The Charities Act (Northern Ireland) 1964, All registered charities in Northern Ireland with the Charity Commission for Northern Ireland (CCNI): The Charities Act (Northern Ireland) of 2008

according to study requirements, the researcher focused on charities in England and Wales, which are considered the largest proportion within the sector in the United Kingdom through number and Business volume, as noted the charities divided in to two main forms, charitable incorporated organizations (CIO) and charitable company (CLG company limited by guarantee), and these charities subjected to:

1. Charities Act, 2011.
2. Statement of recommended practices (SORP)
3. Charity Commission for England and Wales (CCEW)
4. the Companies Act 2006 (for CLG)



During the last two decades, the charity sector has become an essential component in economic system, as there are over 190,000 registered charities in England and Wales income of these associations exceeded £61 billion in 2012, In recent years, charity sector has extended considerably in the UK, with increased funding from donors, which led to increase of amounts of money flowing into this sector organizations, Hence accounting problems appeared with increased amounts of money flowing into this sector, so that stakeholders in the UK charity sector have advocated greater accountability for charity performance after they realized the weakness of accounting reporting and practice

From an accounting perspective, The Accounting Standards Board (ASB) is the official authority responsible for issuing accounting standards in the United Kingdom, and in 1960 it issued the first regulatory guide/manual for charities, then in 1988 issued statement of recommended practices (Saxton, Kuo, & Ho, 2012) So nowadays, charities adhere to (SORP), which set certain practices to prepare the annual financial reports, which considered as reflection and interpretation of the general accepted accounting principles in the united kingdom (UK-GAAP) to charities, as this statement provides an explanation of the mechanism of applying the related accounting standards, in addition to develop some accounting treatments for charities' special operations that have not addressed by the accounting standards, so this statement aimed to: (SORP, 2013)

1. Improve the quality of financial reporting by charities.
2. Enhance the degree of credibility and the ability to understand and compare of the information presented in charity accounts.
3. Provide clarification, explanation and interpretation of accounting standards and their application to charities and to sector specific transactions; and thereby
4. Assist those who are responsible for the preparation of the trustees' annual report and accounts.

From a supervisory perspective. Charities controlled by The Charity Commission which is the independent regulator for charities in England and Wales. Its overall mission is to ensure that charities work effectively in the society for the benefit of the public. For that the commission has strong legal powers to investigate and deal with fraud and dishonesty in charities, including the powers to protect and freeze charity assets, if a formal investigation establishes serious mismanagement or abuse. So Most charities in England and Wales must register with the Commission, and has main aims such as the public confidence in charities performance, through promoting compliance by charity trustees with their legal obligations in exercising control and management of the administration of their charities, and to enhance the accountability of charities to donors, beneficiaries and the general public. (The Charity Commission, WS).

In the following, researcher summarized the most important financial and accounting aspects for charities in the United Kingdom (England and Wales) according to (SORP), (UK-GAAP) and charities act 2011, in main points:

- 1- The 1990s was the beginning of real development in charity reports in England and Wales, as a result of mandatory accounting requirements in the Charity Act 1992 (Andreus & Costa, 2014). And the first issue of (SORP) in 1988.
- 2- According to the charities Act in 2011 chapter (8) part (1), Charities must ensure that accounting records are kept in respect of the charity which are sufficient to show and explain all the charity's transactions, and which are such as to disclose at any time about the financial position of the charity, (Charities Act 2011, Part 8 Chapter 1), and The accounting records must in particular contain:
  - A. entries showing from day to day all sums of money received and expended by the charity, and the matters in respect of which the receipt and expenditure takes place.
  - B. A record of the assets and liabilities of the charity.
  - C. The charity trustees of a charity must preserve any accounting records at least 6 years from the end of the financial year of the charity in which they are made.

- 3- The requirements of preparing accounting varies according to the size of income (If exceeded 6.5 million) and net assets (If exceeded 3.26 million), and in that case charities must subjected to An additional requirements, but generally the main financial statements are (statement of balance sheet SOBS; statement of financial activities SOFA; statement of cash flows SOCF), and prepared in according to statement of recommendation practice (SORP).
- 4- The financial report includes explanations on the significant events that have affected the financial performance and financial position of the charity during the reporting period. In particular, the report includes the following:
  - A. the financial effect of significant events;
  - B. The nature of financial and policy investments and objectives. And how much (if any) take into account the social, environmental or ethical considerations.
  - C. The factors which are likely to affect the financial performance or position going forward.
  - D. The main fund resources for the report prior, and explain how it effect in achieve the fundamental objectives of charity.
- 5 - Review of funding sources in the financial report as follows:
  - A. Referring to the amount of funding obtained by the charity until the end of the financial period
  - A. Referring to the amount of any funds which are restricted and not available for general purposes of the charity until the end of the financial period
  - B. Referring to all amounts expended until the end of the financial period
  - C. Referring to the amount of fund that can only be achieved by disposing of fixed assets or investments related to performance of charity.
  - D. Referring to the amount of reserves that owned by the charity at the end of the financial period after making allowance for any restricted funds, and define the financial sheets, commitments (not provided for as a commitment in the accounts) or the book value of the functional assets which the charity considers it reduce the reserves.
- 6- In particular, the report should provide the following:
  - A. A summary of the objects of the charity as set out in it's in its statute.
  - B. An explanation of the charities aims including the changes or differences it seeks to make through its activities.
  - C. An explanation of the charity's main objectives for the financial period of the report.
  - D. An explanation of the charity's strategies for achieving its main objectives.
  - E. A review of the significant activities (programmes, projects, services), that identified within the analysis note accompanying the charitable activities set out in the Statement of Financial Activities (SOFA).
- 7- Charity accounts may be prepared either on the receipts and payments basis or the accruals basis. Which of these is needed will depend on the income of the charity and whether or not it has been set up as (company or association): (Charity Commission, 2013A)
  - A. Receipts and payments: This is the easiest way to prepare financial report and may be adopted if a charity has a gross income of less than £250,000. It consists of an account summarizing all money received and paid out by the charity in the financial year, and a statement giving details of its assets and liabilities at the end of the year. Charitable companies are not subjected to company's law to adopt this method.
  - B. Accruals: charities with gross income of over £250,000 during the financial year, and all charitable companies must prepare their accounts on the accruals basis in accordance with the SORP. They contain a balance sheet, a SOFA and explanatory notes. These accounts are required in accountancy terms to show a 'true and fair view'
- 8- Since 2005, charities with an annual income in excess of £1 m must also file a 'summary information return ('SIR'). Acting as an executive summary, the SIR outlines a charity's key aims, activities and achievements. Providing information on factors that have affected performance, the SIR is intended to point readers to sources of more detailed information. (Breen, 2013)



***Fourth: A comparative study for CAs between Egypt and United Kingdom from regulatory and accounting perspective:***

The Researcher summarized the main accounting regulation aspects for CAs in Arab republic of Egypt and charities in the UK (England and Wales) in the following table:

Table (1) comparison between CAs and Charities from regulatory and accounting perspective

N	Main Aspects	CAs In Egypt	Charities In Uk
1	Financial statements	Balance sheet revenue and expenses account	Financial position (SOBS) Financial activities (SOFA) Cash flows (SOCF) and additional statements according to revenue and net assets volume
2	Management	Board of directors	Board of Trustees
3	Audit Authority	Central Auditing Organization Internal auditor and external auditor if revenue or expenses exceeded 20000 pounds	Depend on income: From 0 to 25000 approval of accounts by trustees only 25000 to 250000 independent examination by examiner of charity choice 250000 to 500000 independent examination by professionally qualified examiner more than 500000 full audit by a firm of registered auditors
4	Financial reports	Board director report Annual accounts auditing Report	Trustees annual report Annual accounts / Notes to the accounts Report of the auditor or independent examiner

**Conclusion:**

In the past 30 years, the NPS has become a key player in providing public and social services. And at the national level, The CA is considered a legal person, and in terms of the law, the association considered as an accounting unit (non-profit; non-governmental) with a legal personality, seeks to provide economic, cultural and social services for the public, without seeking to achieve benefits for donors. Where it doesn't have the profit motive. So the association provides mainly service activities but with the absence of market forces (demand; supply), and it faces difficulties in measure, control and assess its performance compared with FPOs. As the CA is not seeking to profit, it required to provide another standards and criteria to measure its performance. And by comparing the current situation for both of CAs in the Arab republic of Egypt and charities in the United Kingdom. The researchers found a rapprochement between the concept, characteristics and activities nature, but United Kingdom excels significantly on Egypt in the legislative and accounting regulation.



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## **The Accounting Measurement of Public Expenditure Return and its Impact on Accounting Transformation in governmental Sector.....**

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### **Abstract**

**Objective:** The research aims to identify the fundamental variables affecting slowing down the transformation of governmental sector institutions from the cash basis to the accrual basis, in addition to proposing the appropriate procedure that will work to speed up this transformation and increase the effectiveness of the accrual basis in the governmental sector.

**Research question:** Through this research, the researcher attempted to answer the research question related to how to increase the effectiveness of applying the accrual basis in the governmental sector and to speed up the adoption of this implementation? Especially in light of the adoption of this transformation by many international professional institutions as one of the important steps for reforming public financial management.

**Methodology:** The researcher conducted an analytical study of a number of previous research studies in the accounting literature, which dealt with discussion and analysis of the experiences of countries in which governmental sector institutions have transformed from applying the cash basis to the accrual basis, The researcher also conducted a practical survey-based study of a number of experts and those familiar with the field of research in a number of countries registered in the International Monetary Fund database, with the aim of testing the research hypotheses that were formulated, which the researcher sees as defining the research problem and how to solve it.

**Results:** The process of accounting transformation in the governmental sector is not an easy process, but rather a complex process that affects a number of variables such as (governmental intervention, technology systems, workers' opinions, the country's cultural environment, political orientation, economic performance and governmental size), in addition to the impact of institutional theory, Which, despite being the cause of the transformation of many countries, was the reason for the reluctance of other countries to achieve this accounting transformation in their governmental sector.

**Conclusion:** The researcher believes that in addition to the effect of the variables that slow down the transformation of the governmental sector in some countries to adopting the implementation of the accrual basis, the greater impact is due primarily to the adoption of the institutional theory instead of the positive theory, which led to some countries taking the decision to adopt or not adoption without consideration the suitability the accrual basis philosophy based on to the practical reality in the governmental sector, and not researching how to increase the effectiveness of this accounting basis in it's governmental sector, which eventually led to the existence of an expectations gap regarding the results of this accounting transformation, and there is no escape for the countries of the world This transformation, especially in light of the support of international professional institutions for this

transformation, and therefore it is necessary to look into how to activate and expedite it instead of just examining the justifications for it's delay.

**Key words:** accounting measurement, return on public expenditure, cash basis, accrual basis, governmental sector.

## 1. Introduction

Research studies that dealt with the history of the accounting system in the governmental sector indicated the existence of the so-called traditional accounting system and the modern accounting system. As for the traditional accounting system, it was concerned only with financial control and budget accounts, and this system has developed a limited development through the implementation of the accrual basis in relation to the preparation of cumulative data For the state, with directing the bulk of the operations of this system towards the processing of information related to cash (Monsen, 2008)

The accounting system in the governmental sector has recently witnessed a movement of reform and development in many countries of the world, whether in terms of transforming from traditional systems and relying on paper notebooks to computer systems and relying on digital ledgers, or in terms of transforming from relying on the implementation of the cash basis in the measurement process to Reliance on the accrual basis which has been adopted by many countries of the world in recent years and increasingly (Pollanen & Lapointe, 2012)

Accrual accounting has become an important part of the reform movements of many countries in the governmental sector, and the transform from the cash basis to the accrual basis is considered a development in the administrative aspects in order to achieve administrative efficiency in this sector (Falkman, 2008), but some research studies has indicated the ineffectiveness of this transformation and that it did not provide the governmental sector with the necessary information to achieve the required efficiency and effectiveness.

The researcher conducted an analytical study of a number of studies in the accounting literature that dealt with the experiences of adopting some countries to apply the accrual basis in their governmental sector. Therefore, the researcher presented this research in an attempt to contribute to answering the research question represented in: How to increase the effectiveness of the implementation of the accrual basis in the governmental sector and speed it up? In order to form a vision for answering this research question, the researcher further discussed and analyzed a number of research studies, from which he reached to formulate the following research hypothesis: There is a significant relationship with statistical significance between the achievement of the accounting measurement of the public expenditure return and the governmentl sector transformation from applying the cash basis to accrual basis, This hypothesis has been tested through a survey-based study of experts and those familiar with the field of research in many countries of the world registered in the International Monetary Fund (IMF) database.

### 1.1 Literature Review

Some research studies dealt with the issue of the transition from applying the cash basis to the accrual basis in the governmental sector, including the study (Ferry, Zakaria, Zakaria, &

Slack, 2017) which discussed the adoption of the Malaysian state of the accrual basis, and concluded that the implementation of the accrual basis helps in achieving more governance and fighting corruption, It is one of the most important components of the Global Partnership Program, and that the reform of the social and economic aspects in Malaysia begins with the implementation of the accrual basis.

It has helped increase the adoption of the accrual basis by governments, as it has a greater ability than the cash basis in measuring the financial performance of institutions, and it's ability to provide a comprehensive picture of both the financial position and the financial performance of governmental sector units, in light of the need for governments to measure the financial performance of their government institutions; Because of it's great role in maintaining and managing public money, and despite the difficulty of applying accrual accounting in privet business institutions, it has become more common for implementation in the governmental sector in many countries of the world, which were pioneered by New Zealand, Australia and the United Kingdom (Nesbakk, 2011), (Salleh, 2014), (Mason, 2018)), it was the One of the reasons that prompted some countries - such as Estonia - to adopt the implementation of the accrual basis in their governmental sector is the need to increase information transparency in the governmental sector and to provide decision makers and financial management officials in this sector with better information than before. (Hyndman & Connolly, 2011), (Tikk, 2010)

The transformation from the cash basis to the accrual basis has become seen by many governments as part of a plan in order to reach a new form of governmental sector management and focus on effective performance. Supporters of this transformation believe that the accrual basis provides more appropriate information for decision makers. However, this transformation is not an easy process and requires a lot of time and it's results are not fast and not noticeable significantly, and one of the indications of this is that this transformation was announced in the United Kingdom in the early nineties, but the tangible results of it were very limited over ten years (Hyndman & Connolly, 2011), and The International Federation of Accountants ( IFAC ) has supported this transformation by establishing the International Public Accounting Standards Board (IPSASB) which has taken the accrual basis as the basis for the set of accounting standards related to implementation in the governmental sector and an approach to achieve the quality of financial management in the governmental sector.

Some research studies discussed the adoption of these standards and what are the benefits resulting from this adoption, which supports the idea of switching to the implementation of the accrual basis. Among these studies is the study (Ilie, 2012); which discussed the adoption of these standards in Romania, and this study concluded that international standards Accounting in the public sector works on comparability with internationally recognized general accounting principles for reporting annual accounts, as it would lead to increased transparency and the quality of financial management, as some accounting activities in the governmental sector before the implementation of standards do not provide insight into the real status of assets, This makes it difficult to evaluate performance accounting systems and disclose it on a large scale to both the public and politicians, and the study found that these standards provide assistance in public administration and represent the basis for effective



control and monitoring processes, and these standards help improve the quality of financial information, and simplify Internal control and monitoring of public institutions and adding value to financial information related to economic profitability.

Although a number of research studies have achieved good results from the adoption of the implementation of the accrual basis in the governmental sector, some other research studies have found an expectation gap regarding the results of this adoption and the tendency of countries towards the inability of this adoption, one of these studies is a (Falkman, 2008) which concluded that the reasons for this gap are due to the limited impact of this adoption on accounting practices, given that the adoption of the accrual basis was the result of following the institutional theory as happened in the experience of the State of Sweden, as well as the State of Ireland, in which the results of this adoption were very weak (Hyndman & Connolly, 2011)

The study (Lassou & Hopper, 2015) also found that the governmental sector's benefit from this adoption is doubtful. And the study (Pernica & Hanušová, 2015) found that despite the transfer to the accrual basis and charging each year with its own expenses and revenues, but one of the important accounting principles was not applied which is the principle of precaution and caution, especially if it is related to the depreciation of assets. The study (Maimunah, 2016)- which was conducted with the aim of evaluating the experience of the accounting transformation in the governmental sector through a field survey of the applied reality - concluded that the accrual basis was not applied in all governmental sectors in the countries that adopted this basis, as the percentage of the governmental sector that adopted the implementation of the accrual basis reached only 68.8% in some countries that have adopted it.

Another important finding that supports the trend of opposing the adoption of the accrual basis in the governmental sector is the findings of the study (Adhikari & Nesbakk, 2016) which aimed to build a new institutional theory through a study of the adoption accrual basis by a number of OECD member countries, The study concluded that there is a gap between the results expected to be achieved in theory and the results actually achieved, The goal of countries adopting the accrual basis in the governmental sector is to achieve more transparency in the allocation of resources and the measurement of the full costs of government activities, but this goal was not achieved due to a number of factors which are (the cultural environment of the country, political orientation, economic performance and the size of the government). These variables represent important and vital determinants to achieve the appropriate climate for the effective implementation of the accrual basis in the governmental sector. The (Adhikari & Nesbakk, 2016) called for an expansion in future studies to try to answer the important question: What is the procedure must to be implemented to ensure effective implementation of the accrual basis in the governmental sector?

In view of the impact of adopting the accrual basis of accounting on the state's general budget, the study (Monteiro & Gomes, 2013) discussed the importance of accrual budget during the period in which Brazil adopted the accrual basis and was on the way to change the public finance laws, especially since there is a scarcity of research studies that It addressed

and discussed the issue of the transformation of the governmental sector from applying the cash basis to applying the accrual basis, as well as the lack of research studies that discussed the development of the public debt of countries that adopted the implementation of the accrual basis in their governmental sector, The study of (Monteiro & Gomes, 2013) called for the need to expand future studies to discuss the accrual budget and comparing the countries that adopted the implementation of the accrual basis with those countries that still apply the cash basis in order to find out the appropriate accounting system to implement in the governmental sector implementation.

In view of the failure to achieve the results that were expected from the full adoption of the implementation of the accrual basis in Malaysia by the end of 2015, the study (Ahmad; 2016) discussed the factors that oppose the implementation, which were (1) top management board (2) information technology systems (3) employee opinions (4) Self-efficacy (5) External issues, and the results of the study showed that each of the technology systems and employee opinions have a fundamental impact on the users in opposing the implementation of the accrual basis, this result was very important for the Malaysian government in order to reduce the employees' resistance to the transition process towards applying the basis of The accrual basis.

the matter is not much different in Malaysia than in Germany, where a study (Becker, Jagalla, & Skærbæk, 2013) concluded that the transition to the accrual basis is not straightforward and easy, and it also led to accountants entering into great challenges, helped by the establishment of the German government in overcoming these challenges. By linking them to the accrual budget approach which prevented sharp stagnation in the transformation project, and the results of this study confirmed that many groups of accountants faced great challenges in order to switch to the accrual basis.

A number of other research studies discussed the results of adopting the International Public Sector Accounting Standards (IPSAS), which are based on accrual basis, In spite of these standards gaining an international reputation with regard to their implementation, no strong evidence was found to evaluate the results of this implementation, especially With regard to the experience of the state of Spain, and the adoption of the implementation of these standards by some countries was in accordance with the institutional theory and this should be an area for future research (Brusca, et al.; 2013), and a study (Brusca, Villegas, & Montesinos, 2016) discussed the results of adopting These standards are in Latin American countries, and the study concluded that despite the increase in the number of countries that adopt these standards, there are difficulties that prevent the achievement of the goal of the accounting transformation, that situation is not different from that in Colombia, as for the situation in Peru, the difference between the theoretical reality is great and applied, which requires more effort in order to reach the effective implementation.

the institutional theory was a motive for some countries to adopt the implementation of the accrual basis in their government sector, but the institutional theory itself was a motive for rejecting this adoption, and this was evident in the case of some developed countries that refused to adopt the accrual basis in their government sector where these countries were comparing the situation in other countries before and after the implementation, and according



to it's findings, the decision is taken to adopt or refuse to adopt, and this is what happened in Finland when compared the situation before and after adoption in the Nordic countries. (Oulasvirta, 2012)

### **1.2 Discussing the results of Literature Review**

The results of research studies that dealt with the accounting transformation in the governmental sector showed a discrepancy in the effectiveness of the governmental sector's adoption of the accrual basis, despite the fact that a number of studies reached results confirming the improvement in the quality of the information of accounting system in the governmental sector as a result of the shift to the implementation of the accrual basis instead of the cash basis, However there are some other studies that have concluded that there are challenges to this transformation, and the increasing difficulty of these challenges as a result of some variables and as a result of the lack of enthusiasm of some countries for more of this transformation due to the expectations gap they have, which the researcher believes that the reason for this is primarily due to the lack of following those Countries for the positive theory approach in accounting, and following the institutional theory approach represented in the adoption by some countries of applying the accrual basis in the governmental sector, following the trend of major international institutions and other countries without examining - before actual implementation - the suitability of the theoretical and philosophical basis of the accrual basis to the practical reality of this sector and its goal.

Hence, the countries that adopted the implementation of the accrual basis did not pay attention to the need to develop the adoption process in line with the entity and objective of the governmental sector and work to find a mechanism that clarifies the causal relationship between the achieved public revenue and public expenditure, bearing in mind that the majority of public expenditure is directed towards the service side and the provision of subsidy and grants, and this aspect of expenditure is difficult to measure the revenue it achieves because it's services are not sold and have no selling value, as well as it's indirect return represented in achieving social justice among citizens, increasing security and safety rates in the country, improving the public health of citizens, raising the level of knowledge, culture and other non-monetary descriptive matters. All of which will lead to an increase in the level of welfare of citizens.

The researcher also believes that the International Public Sector Accounting Standards (IPSAS) did not provide a mechanism for measuring and estimating the revenues generated as a result of public expenditure in many cases where public goods and services have no sales value and are made available to citizens for free or for a fee that is not equivalent to their real value, And then this, in addition to the findings of previous research studies, leads to the ineffectiveness of applying the accrual basis in the governmental sector and the occurrence of the expectations gap which in turn leads to a slowdown in activating the transition to the accrual basis, and the countries that oppose this adoption find themselves in the crossfire of pressure international professional institutions and major countries to achieve this adoption.

Therefore, the success of countries in continuing the reform path and improving the applied reality of the accounting system in their governmental sector and reducing the gap in their expectations regarding the results of adopting the accrual basis in this sector and



accelerating towards its activation depends on the implementation of measures that activate the accrual philosophy and limit the decline of the corresponding principle in the macro economy, which has declined already recently in microeconomics as a result of the change in accounting standards as well as the change in economic activities to which the bulk of this decline is due. (Donelson, Jennings, & McInnis, 2011), (He & Shan, 2016)

## **2. An approach to increasing the effectiveness of adopting the merit basis in the government sector**

The researcher believes that achieving the accounting measurement of the public expenditures may be one of the procedures that may contribute to activating the adoption of the accrual basis in the governmental sector by activating the principle of matching between the expenditures and revenues of governmental units, as it is a social revenue achieved for citizens as a result of public spending and is equivalent financial revenues what the governmental units could have obtained in the event of selling the services to citizens. In the following parts, the researcher deals with this concept and how to measure it in accounting.

### **2.1 The concept of public expenditure return**

The researcher found the scarcity of the concept “public expenditure return” in research studies. It was mentioned in conjunction with one of the aspects of public expenditure, but it was reported missing the linguistic meaning of the word “return,” which was defined in both Arabic and English as “revenue, income, or returns from trade or investment profit.” This concept was also mentioned missing the scientific content of the term return, which is based on comparing the income achieved with the cost expended to achieve this income according to the principle of cost-benefit analysis as well as the match principle. The concept of public expenditure return was not explicitly stated as a term that expresses the return achieved by citizens from public expenditure at the level of all economic sectors in the country, and the economic and accounting literature did not include a specific definition of this concept.

The study (Benin, 2015) was one of the studies in which the term return was associated with one of the aspects of public expenditure and was expressed using the measure of value added (increase in productivity) per hectare of agricultural land as a result of public expenditure in the field of agriculture, and the term (return in the field of agriculture) was mentioned. ) also in the study (Cappelen, Raknerud, & Rybalka, 2013), which was conducted with the aim of measuring the impact of expenditure by the Norwegian Research Council in the field of research and development, and it was also expressed in the productivity of workers.

The researcher sees the possibility of using the concept (public expenditure return) as an accounting concept that reflects the financial value of the social benefits achieved for citizens, and at the same time reflects the value of the public money spent by the state to meet the citizens’ demand for public goods and services that achieved these benefits for them, especially since the strategic objective of public expenditure is increasing the level of welfare of citizens (van de Walle, 1996), and that the state’s role in economic activity, according to the theory of market failure, is to provide goods and services that are in the interest of society as a whole and that markets failed to provide to citizens as a result of individual preferences of market participants and their desire to achieve profits (Furton and Martin; 2019), and that

the state's social responsibility is to support its citizens and achieve social justice among them through the redistribution of income. (Khemani, 2017)

Then the researcher can define the concept (public expenditure return) from an accounting perspective - taking into account the determinants related to the objective of public expenditure and the role of the state in economic activity and its social responsibility - this definition is represented in "the improvement in the level of citizens' welfare due to the increase in their income level or the achieved decrease in spending as a result of obtaining what the government provides of public goods and services, or what it provides of direct and indirect cash transfers.

## **2.2 An approach to achieving the accounting measurement of the public expenditure return**

The researcher believes that the part that has been met from the total demand of citizens for public goods and services which we can call (Real Public Demand) represents the appropriate approach to measure the concept (Public Expenditure Return), and this approach has been used before with regard to the unmet part of real public demand to measure the social benefits loss (SL) by researchers (Ben-David & Tavor, 2011).

and supports The researcher's vision of using this approach, the using same approach before for estimateing the optimal volume of production for public goods and services, as a result of the restrictions imposed on the general budget and the lack of the economy of public goods and services the measureing of the return on production and charge the citizen in this economy a fixed percentage of the cost of producing any quantity of goods and (Van den Nouweland, 2018), and supports The researcher's vision the effect of joint consumption feature which means that public goods and services are used simultaneously by all consumers without excluding any individual, and for this reason, public goods and services are called non- individual goods or non- exclusion goods which Consumers can get it without being clear about their preferences and consume it without paying for it (Agiobenebo, 2004)

The researcher believes that achieving the accounting measurement of the public expenditure return in light of the proposed approach to the measurement process requires discussing the variables that are proportional with this approach and achieving the measurement of the monetary value of that part of the total demand for public goods and services which expresses the benefits achieved for citizens as a result of public expenditures by the state through its governmental sector, and this is what the researcher will discuss in the next part.

## **2.3 the accounting measurement model of the public expenditure return**

Achieving the accounting measurement of financial transactions requires that these transactions be quantifiable in cash, and this is the essence of the measurement process, which results in determining the monetary value of these transactions, and recording them in accounting notebook and disclosing them in financial statements and reports, Hence, the accounting measurement of the public expenditure return requires a specification of the variables of the standard model that achieve the monetary value of this return through the proposed measurement approach.

According to the researcher, in light of the proposed measurement approach, these

variables are represented in: (the total actual cost of producing one unit of the good or service provided by the state in a particular sector - the number of units of goods and services obtained by the citizen as a result of the demand for them in this sector - the number of citizens obtaining on the sector's goods and services) and then the mathematical function of the model to achieve the accounting measurement of the return on public expenditure for the citizen in one of the economic sectors is represented in:

$$Rg_{P S} = C_{S \text{ per Unit}} \times T_{U \text{ Per Person}} \longrightarrow 1$$

$P = 1, S = 1$

**Whereas:**

$Rg_{P S}$	public expenditure return for the citizen
$C_{S \text{ per Unit}}$	the total actual cost of producing one unit of the good or service
$T_{U \text{ Per Person}}$	the number of units of goods and services obtained by the citizen
$P$	Number of citizens
$S$	Number of sectors

The following function shows the return achieved for the same citizen within all sectors of the national economy:

$$Rg_P = \sum_{P=1, S=1:n} Rg_{P S} \longrightarrow 2$$

The following function shows the return achieved for all citizens within a sector:

$$Rg_S = \sum_{P=1:n, S=1} Rg_{P S} \longrightarrow 3$$

The following function shows the value of the public expenditure return achieved in the sector using the number of individuals who actually obtained the goods and services of the sector  $P_{Real}$ :

$$Rg_S = C_{S \text{ per Unit}} \times T_{U \text{ Per Person}} \times P_{Real} \longrightarrow 4$$

$S = 1$

By aggregating the return achieved for all citizens, as well as aggregating the return achieved in all sectors, the return on public expenditure achieved at the level of the national economy is produced, as illustrated by the following function:

$$Rg = \sum_{P=1:n} Rg_P = \sum_{S=1:n} Rg_S \longrightarrow 5$$

### 3. The practical study

The researcher put forward the research topic for a general survey in order to test the research hypothesis that was formulated, and the community for the study was represented in the group of 183 member countries of the International Monetary Fund. In obtaining the data for the study, the researcher relied on survey lists that were sent to the sample items, which numbered (750) items from the study community, according to their different fields of work and scientific specializations, The participants in the study belonged to governmental, non-governmental and international institutions. The number of lists that were answered reached (502) lists, and this represents a rate of 67%, The researcher excluded from them 25 lists due

to their scientific and practical specialization in the field of the research topic under study, and thus the number of lists on which the statistical analysis was conducted is 477 lists a rate of 64%, The researcher faced a number of difficulties to obtain this number of responses, the most important of which is the small number of the target group with scientific and practical background in the subject of the research, and the results were:

**Pearson's correlation coefficient for the research hypothesis**

	numbers	average	Pearson Correlation	Sig. (2-tailed)
<b>Achieving the accounting measurement of public expenditure return</b>	477	4.0025	.839**	.000
<b>The governmental sector transformation from cash basis to accrual</b>	477	4.009		

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

- We note from the previous table that:
- The relationship between achieving the accounting measurement of the return on public spending, and the transformation of the government sector from applying the cash basis to accrual is direct and has high statistical significance, Where the value of the Pearson correlation coefficient was 84% with a statistical significance level of 0.00, which is smaller than the level of significance 0.05 In other words, we are 95% confident that achieving the accounting measurement of the public expenditure return will lead the government sector to shift from applying the cash basis to accrual, and vice versa, Thus, we can accept the research hypothesis that there is a significant statistically significant relationship between the achievement of the accounting measurement of the public expenditure return. And the government sector shifted from applying the cash basis to accrual.

**4. conclusion**

The accounting system in the governmental sector has recently witnessed a fundamental change in many countries of the world, by shifting towards adopting the accrual basis instead of applying the cash basis, as it is one of the reform measures required by the governmental sector, and many research studies that dealt with the experiences of some countries with regard to this accounting transformation found a discrepancy in the results of this transformation.

Some studies have found an improvement in the quality of financial information as a result of applying the accrual basis in the government sector, and some other studies have found that this adoption is ineffective, with an expectation gap in some countries regarding the results, and the most of these studies agreed on the need to implement procedures that would increase the effectiveness of the adoption and expedite the achievement of this transformation, but these procedures were not precisely defined. This motivated the researcher to do this research in order to contribute to the research efforts related to the

adoption of the accrual basis in the governmental sector.

The researcher's goal was to try to answer the question about how to activate this adoption, especially in light of the governmental sector's lack of interest in achieving financial profits as a result of the state's commitment to its social responsibilities towards its citizens and working to provide goods and services for an inexpensive return or even without a sales value at all, which leads to the absence of financial revenue for these entities that can be compared with what has been spent in order to evaluate their performance, and this is in contrast to the philosophy on which the accrual basis is based, which is based on the principle of matching between the achieved revenues and the expenditures that were a reason for achieving these revenues.

The researcher believed that the expectations gap related to the results of adopting the merit basis in the government sector in some countries was the result of the influence of the institutional theory. These countries have adopted the accrual basis without examining the suitability of this accounting basis to the practical reality of their governmental sector and its goal and how to activate it, for this reason, the researcher suggested achieving the accounting measurement of the public expenditure return as a measure that governmental agencies must implement in order to activate the adoption of the accrual basis. The philosophy of this procedure is to consider the return on public expenditure as a social revenue for these entities, representing the value of the social benefits achieved for citizens as a result of what governmental agencies have expended, and use this social revenue instead of the financial revenue - which does not exist in these entities from the ground up - to achieve the principle of matching and to reach an objective measurement of business results and then achieve the appropriate evaluation of performance. In light of this vision, the researcher formulated a research hypothesis that there is a substantial relationship with statistical significance between achieving the accounting measurement of the public expenditure return and the transformation of the governmental sector from applying the cash basis to applying the accrual basis.

The result of the practical study confirms the validity of this hypothesis, and then the countries that strive to delay the achievement of this accounting transformation - for fear of the cost related to this transformation without achieving the required return from it - can reconsidering the completion and acceleration of this transformation in light of the results of this research. Therefore, the researcher believes the possibility of repeating this study in the future on a larger scale of countries so that the results can be more generalized, and considering the accounting measurement of the public expenditure return as a new target for the accounting system supported by specialized professional institutions through the requirements of accounting measurement and disclosure.



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## **Validity and Reliability: The Functionality of Knowledge Seeking Behavior and Theory Building**

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### **Abstract**

The scientific approach to knowledge generation hinges in the collection of valid and reliable data about the phenomenon being investigated. These quests for knowledge claims not only satisfy the human curiosity in the need to know but also emphasize the systematic application of science in the investigation of social phenomenon. However, the functionality of knowledge seeking behaviour rests on the sustenance of the human quest for valid and reliable knowledge. These knowledge only become meaningful when they stand to explain the purpose, nature, meaning and shortfalls of the human element which is the centre of inquiry in the behavioural science research. Thus, an understanding of this phenomenon gives insightful knowledge into the kind of data to be collected that would aid in theory building which is the tool for explaining the knowledge that researchers anchors their philosophical assumptions upon. And since theory building in the behavioural science domain requires the collection of accurate and reliable data in order to make salient epistemic claims and generalization, researchers need to uncover the phenomenon under investigation and such understanding must be taken into consideration. These considerations would inform researchers on the approach to be adopted. Based on these the paper concluded that researchers need to understand the human ontological nature which gives rise to epistemological consideration because human behaviour is unpredictable.

**Keywords:** Epistemology, knowledge seeking, ontology, theory building.

### **Introduction**

In the past, scholars had made attempt to explore the concepts of validity and reliability as fundamental instruments in research practice (Abowitz & Toole, 2010); (Mohajan, 2017); (Roberta & Alison, 2015); (Thatcher, 2010); (Zohrabi, 2013) yet scanty evidence exist on its functionality to knowledge seeking behaviour and theory building. Although, research by nature is judged for its intellectual strength and rigor based on the duo concepts of validity and reliability such that knowledge seeking behaviour seems ineffective if these concepts are not considered relevant in research practice. However, the implicit assumption in this view is that the soul of any intellectual domain rests on the sustenance of the quest for valid and reliable knowledge (Eketu, 2018). This quest for knowledge, not only satisfy the human curiosity in the need to know but equally emphasizes the systematic application of science to



the investigation of the human environment (Akinyoade, 2013) in order to seek clear understanding of man's behaviour.

Unfortunately, rather than focusing in understanding the human phenomenon which is the centre of inquiry in the behavioural sciences that would enhance better data collection (Burrell & Morgan, 1979); (Kiabel, 2020), most researchers have often place emphasis on methodological celebrations which has often lead to epistemological errors (Eketu, 2018) These errors remained clogs in the wheels of knowledge because the proximity of research outcomes to the truth not only hinges on the thoroughness of statistical applications but more on the relevance of the statistical choice to the nature of the investigation and the study purpose (Eketu, 2018); (Fubara & Mguni, 2005); (Musthafa, 2014). However, since the scientific approach to knowledge generation lies in the collection of valid and reliable data about the phenomenon being investigated, it therefore implies that the process must reflect rigor and relevance that should fulfill the purpose of explaining the nature, meaning and challenge of the phenomenon so that researchers can use such knowledge to understand and act in a logical and more informed manner; (Lynham, 2002); (Marsick, 1990).

In this way, the underlying assumptions about the human phenomenon which is the center of inquiry especially in the behavioural science research can give meaningful insight into the kind of data to be collected by researchers that would give credence to knowledge generation; (Kivunja & Kuyini, 2017). The idea is that this understanding will support researchers to establish firm faith in the data collection process which is the prerequisite to gaining knowledge about the social phenomena being investigated (Ule, 2021). Hence, the paper seeks to examine the philosophical assumptions underlying the human behaviour because it is the only medium through which valid and reliable data can be obtained that would give credence to knowledge generation and or theory building. And in an attempt to achieving this fit, the study will uncover the need to understanding the phenomena under investigation which is the very bases of epistemic claims and generalization of research outcome.

### **Nature of Validity and Reliability**

Validity and reliability are concepts developed in the natural (Ritchie & Lewis, 2003) and are significant constructs in the measurement of research variables (Baridam, 2001). Validity concerned itself with the extent to which a test measure what it intend to measure while reliability focus on precision and accuracy. The constructs as used in the pure sciences proved to be unsuitable for qualitative investigation and as such caused substantial misunderstanding when applied (Ritchie & Lewis, 2003) though in their extensive conceptualization, the concepts mean well-grounded and sustainable for research as they aid in defining the strength of data. It is on this premise that this paper is devoted to exposing how these constructs can be comprehended in the conduct of qualitative and quantitative enquiry.

### **Concept of Validity**

The concept of validity has been viewed differently by scholars in terms of qualitative and quantitative research despite its relevance in evaluating sufficiency and efficiency of criterion measures. The concept (Validity) is an important criterion for effective research thus the requirement for both qualitative and quantitative research (Baridam, 2001); (Cohen, Manion, & Morrison, 2007). In the latter, validity component is seen as a concept or measurement instrument that measures what it intends to measure accurately (Roberta & Alison, 2015); (Thatcher, 2010) and these measures might be enhanced through careful sampling, proper instrumentation and statistical treatment of data (Cohen, Manion, & Morrison, 2007). Whereas validity in the qualitative perspective is an account that represent the accuracy of findings and facial appearance of the observable fact that is intended to



explain what is based on facts as a matter of dependability and (Creswell, 2014); (Hammersley, 1992); (Kirk & Miller, 1986); (Zohrabi, 2013).

Whether qualitative or quantitative, validity represent the degree at which the result of a given research are truthful. (Ritchie & Lewis, 2003) have asserted that there is an emerging trend in the qualitative writings to shift from validity conceptualization to a more appropriate term of correctness in qualitative evidence. Perhaps the reason, Maxwell (1992) earlier suggested an understanding to be more suitable than the term validity in qualitative research. He further argued that qualitative researchers need to be cautious as not to work with the positivist agenda thereby insisting for the necessity to show predictive, concurrent, criterion related, external and internal validity. Although the validity of measurement is primarily connected to quantitative research with positivist approach and it is kindly recognized as key issues to qualitative research (Ritchie & Lewis, 2003). Undeniably, validity remains the hallmark of all forms of research because it is considered the most relevant and has two significant parts (internal and external validity) that both quantitative and qualitative methods can be addressed.

Internal validation seeks to reveal the justification of a particular issue, event or set of data that a section of research provides that can actually be sustained by data (Cohen, *et al.*, 2007). It addresses the question of whether the predictor variable in a given research creates meaningful change in the criterion variable and the degree to which these change is measurable unambiguously (Dunn, 2001); (Kiabel, 2020). In some degree, internal validity concerns accuracy (Arksey & Knight, 1999) which can be useful to both qualitative and quantitative research practice. External validity concerned itself with the extent to which the outcome in a given study can be generalized to a broader population, context or settings (Last, 2001); (LeCompte & Goetz, 1982); (Lincoln & Guba, 1985). Thus, it addresses the issue of whether such result can be generalized to other people in other places at different times (Kiabel, 2020) because it is at the level of generalization that such results could be considered scientific and useful for expanding knowledge (Dunn, 2001) frontiers. Although, the issues of generalization is difficult as it is based on comparability and transferability hence, Validity demands a reliable measurement instrument whereas such instrument maybe reliable without being valid (Kiabel, 2020); (Kimberlin & Winterstein, 2008) once it is not satisfactory.

### **Typologies of Validity**

The validation component is basically categorized into four forms with each concerning different aspect of measurement (Baridam, 2001). These include content, concurrent, construct and predictive validity. (Mohajan, 2017) argued that discriminant and convergent validity are sub validity taken from the construct validity whereas criterion related validity gave rise to predictive and concurrent while content validity gave rise to face validity. (Cohen, Manion, & Morrison, 2007) believed that the kind of validation to be adopted in any research is a function of the nature of the study to be performed. The scholars came up with ecological, cultural, catalytic and consequential validity to add to content, construct and criterion related validity. These are discussed below.

**Content validity:** The content validity represents the extent at which a sample of a test item represents the content that the test is intended to measure (Baridam, 2001). To exhibit this form of validity, the questionnaire item must indicate it has widely covered the area or item it alleged to cover. (Mohajan, 2017) assert that content validity guarantees the instrument includes adequate set of items that tapped into the concept and to effectively evaluate this? (Crocker & Algina, 2006) outlined four step procedures as identifying the domain of interest, matching methodology, gather resident domain experts and analyze outcome from the

matching task. Content validity is divided into sampling and face. The sample validation concerned itself with whether a given populace is adequately sampled by the measuring instrument in question which is anchored on expert judgment whereas the face validation represents the extent to which it measures that which it is supposed to measure according to the subjective evaluation of the researcher (Mohajan, 2017) (Baridam, 2001). Content validity can assume face validation whereas face validation does not guarantee content validation.

**Predictive validity:** This refers to the degree at which a test predicts future behaviour of an individual (Allen & Yen, 1979). Predictive validity can be seen as the correlation between the results of a given measurement with an external criterion as it depicts the ability of the measuring tool to differentiate among persons with reference to future measure.

**Construct validity:** As a compound word, construct validity tends to seek the validity of the entire whole as it is employed to refine a theory for making forecast about test scores in various situations and settings (DeVellis, 2006) A construct is an abstract, implying that its conformity is sought on the operationalization forms clarifying what it means when using the construct. (Mohajan, 2017) argued that this validity is a decision that is often based on the gathering of evidence from several works using specific measuring instrument. Scholars have long suggested that construct validation can be addressed by discriminant and convergent validity (Huck, 2007); (Cooper & Schindler, 2001); (Brock-Utne, 1996); (Campbell & Fiske, 1959). The discriminant focus on using similar approach for researching different construct that yield relatively low or lack correlations among measures which theoretically should not be related (Cohen, Manion, & Morrison, 2007); (Sperry, 2004); that is to say the construct should be able to discriminate if used same to measure another construct. Convergent signify that different approaches for investigating the same construct should give relatively high relationship (Mohajan, 2017); (Cohen, Manion, & Morrison, 2007).

**Concurrent validity:** The validation that focuses on the level at which scores on a measurement instrument and criterion available at the same time correlate (Ary, Jacob & Razavieh, 1979 in (Baridam, 2001). It signifies if the measures correlate with the measures of the same construct.

**Ecological validity:** Ecological validity tends to give exact portrayals of the realities of social situations in their own terms, conventional or natural setting (Cohen, Manion, & Morrison, 2007). Unlike the quantitative research where variables are manipulated and controlled, the qualitative researchers do not try to manipulate variables in that situations occur naturally. Ecological validity is mostly of naturalistic research settings as it tries to demonstrate salient factors of a given situation as possible.

**Catalytic validity:** The catalytic validation strives to ensure that research leads to actions suggesting an agenda. (Kincheloe & McLaren, 1994) opined that the outline for catalytic validation is tied to supporting individuals comprehend their world in order to transform it.

**Consequential validity:** The consequential validity according to (Cohen, Manion, & Morrison, 2007) holds the fact that the traditions in which research data are used in terms of keeping with the capability or intention of the research do not exceed the ability of the investigator and the action related consequences which are both justifiable and satisfied. However, investigations should not be used in ways not intended to be used such as exceeding the capacity of the research data to make illegitimate epistemic claims or support.

**Cultural validity:** Cultural validity depicts an acceptance of the cultural values of those being researched (Morgan, 2005)). It represents the level of understanding to the participants' culture and conditions being studied. (Joy, 2003) perceived cultural validity to be the extent at which a study is suitable to a particular cultural setting where investigation is to be conducted. Cultural validity is a subject in intercultural, comparative and cross cultural kind



of investigation where the intention is to mould research such that it would be apt to the culture of the researcher and the researched. However, cultural validity tends to understand the cultural attitudes to research by reviewing appropriate target language as well inspecting the understanding and translations of data with native speakers and awareness of researchers' own cultural filters (Morgan, 2005)

### **Concept of Reliability**

The meaning of reliability differs in qualitative and quantitative research though; the concept point to the degree at which it is error free and so insures consistent measurement across the various item in the instrument. Quantitatively, reliability represents consistency, dependability and replicability over time, instrument and groups of participants. (Mohajan, 2017) maintained that in the quantitative research, stability, consistency and repeatability of research outcome is considered reliable if dependable outcomes are obtained in identical situation at different circumstances. Reliability here signify accuracy and precision whereas in the qualitative approach, reliability tends to be viewed as the fit between what was recorded as data and what really occurred in the natural setting rather than accurate measurement between different observation (Sharma, 2010).

Generally, reliability is understood to concern itself with the replicability or trustworthiness of research outcome and whether or not they would be reproducible using same or similar methods (Baridam, 2001); (Chakrabartty, 2013) though the degree at which duplication occur in qualitative approach of investigation has been queried severally. Lincoln and Guba (1985) argued that the concept of replication in qualitative investigation is naive, given the likely complications of the phenomenon being studied and the unavoidable impact of the context. Due to the concerns in qualitative research dynamics, the idea of seeking reliability in this perspective is frequently voided (Ritchie & Lewis, 2003). However, (Kimberlin & Winterstein, 2008) opined that reliability be it in quantitative or qualitative research is used to assess the stability of measures administered at different intervals to the same individual and the uniformity of set of items from the same test. That is to say accurate result which increases the chances of making correct decisions can be obtainable if better reliability is performed (Mohajan, 2017). This is not to say it is wholly possible to give an exact calculation of reliability (Roberta & Alison, 2015) but an estimate can be achieved through several measures. Reliability has two dimensions (internal and measure stability). Internal reliability or consistency addresses the issue of whether the indicators that make up the scale are consistent and homogenous or correlated while measure stability emphasizes consistency of result if same measurement scale is repeated on same person (Kiabel, 2020). Internal reliability include Cronbach's alpha, split half technique, and so on while measure stability include test-re-test seen below!

### **Forms of Ensuring Reliability**

In order to ensure reliability in the utilization of research instrument for measurement, three basic principles must be considered. These principles are the attributes of reliability which include stability, internal consistency and equivalence.

**Stability:** Stability is an assessment of consistency over similar samples (Mohajan, 2017); (Cohen, Manion, & Morrison, 2007). A reliable instrument for a piece of investigation tends to yield similar data from similar participants over time. The implication is that, researchers seeking to express this form of reliability must have to choose a suitable time scale between the test and retest. Stability is the consistency of outcome using an instrument with repeated testing method (Roberta & Alison, 2015). The method has two approaches test retest and parallel approach. The latter (parallel) is obtained by sharing different form of the original instrument to the same group of individuals (Mohajan, 2017); (Roberta & Alison, 2015). It

scrutinized whether or not the items within the scale are all the same (DeVellis, 2006). The former (test-retest) is obtained by repetition of same measure on the participants more than once under similar conditions (Roberta & Alison, 2015); (Graziano & Raulin, 2006) (Cooper & Schindler, 2001) argued that in ensuring reliability using the test retest approach, time should be considered prominent because long time duration may give rise to situational factors or change as short period may also give rooms for participants to remember previous test.

**Internal consistency:** Internal consistency evaluates the level at which different test items using to probe same measure produce likely results. It is assessed using items such as Kuder-Richardson coefficient, split half technique and cronbach alpha (Kiabel, 2020). Kuder-Richardson gives an estimate of the reliability of a single test from a single administration. (Baridam, 2001) assert that information needed for this kind of test is the number of items in the test which is estimated through the determination of how the items in the test associate to all other items to the test as a whole. As a more complicated version of the split half, Kuder-Richardson is more accurate than the split half as it involves the process of combining all possible average in order to determine the correlation which is between 0-1 (Roberta & Alison, 2015).

In the split half, results of a given test are divided into half and their correlation is calculated comparing both halves (Baridam, 2001); (Roberta & Alison, 2015). As an easy and quick way to establishing reliability, split half can only be useful with large questionnaires in which the construct is measured with same items (Chakrabartty, 2013); (Mohajan, 2017). Cronbach alpha is analytical software used to test reliability of research instrument (Kiabel, 2020). The instrument here is keyed into the software and the system gives result that comes in different range. The cronbach alpha gives a coefficient of inter item correlation where the average of all correlations in every combination of split half is determined (Roberta & Alison, 2015). The alpha coefficient value ranges between 0 and 1 where 0.7 is an acceptable score of reliability (Nunally, 1978)

**Equivalence:** Equivalence form of reliability is a process of determining the level of agreement between two or more observers (Roberta & Alison, 2015). It demands dual form of measuring instrument that maybe considered parallel. The dual approach is administered to a sample of individuals where the two sets of measures are correlated to get an estimation of reliability. These forms of reliability can be achieved through inter rater and equivalent forms. The inter rater concerned the very extent to which collected data are obtained in a consistent manner, that is to say if more than one investigator is involved in a piece of research then there should be an agreement among the researchers on the ways data is to be collected or entered (Cohen, Manion, & Morrison, 2007); (Keyton, King, Mabachi, Manning, Leonard, & Schill, 2004). The equivalent form depicts a scenario where the instruments yield similar results when applied simultaneously to matched samples. The challenge with this form of reliability technique is that it is difficult to construct two forms that are truly equivalent.

### **Theory Building Process in Behavioural Sciences**

Theory is a tool for explaining reality which research revolves around (Akinyoade, 2013); (Kiabel, 2020) thus, validity and reliability hold unique place in its building process as they form the very bases of epistemic claims and generalization of research outcome. Perhaps, the reason some scholars hold the view that theory fulfils the primary purpose by virtue of its application which summarizes existing body of knowledge that provide procedures for carrying out research and interpreting new information (Gelles & Levine, 1999 in



(Akinyoade, 2013). These guidelines are used to linking the philosophical foundations comprising the ontological assumptions and epistemological considerations to empirical data collection (Akinyoade, 2013)

In this way, validity and reliability remained central to theory building because they give credence to appropriate data collection methods and processes. These methods give rise to two kind of knowledge namely process and explanative knowledge (Lynham, 2002). The former (Process knowledge) concerned itself with the form of increased understanding of how things work and what it means while the latter (Explanative knowledge) involves the predictive and explanative nature of knowledge. Whatever method adopted by behavioural science researchers, theory building remains a purposeful process of recurring circle by which logical descriptions, explanation and representation of observed phenomena are generated, confirmed and refined. These issues are critically observed and understood and as such forms the basis of developing a system of ideas that is informed from the human experiences. Nevertheless, theory building remained an ongoing process of generating, confirming, applying and adopting theory (Lynham, Theory building in the human resource development profession. , 2002)) to understanding the human phenomenon and his environment.

### **Validity and Reliability as the Functionality for Knowledge Seeking**

Going by the increasing quest to expanding knowledge frontier, individuals continually seek for knowledge expansion that will enable them fit into society as well solve organizational problems. In seeking this knowledge, the place of validity and reliability is not left out as the concepts set the foundation for data collection which is fundamental to generating knowledge. The essence of interrogating these concepts in research methodology is to gather relevant data about social phenomena that gives credence to a more functional understanding of society and its environs devoid of biases as well increases transparency in methodological approach (Roberta & Alison, 2015); (Singh, 2014). As the functionality of knowledge seeking behaviour and theory building, validity and reliability tends to improve the accuracy in the evaluation and assessment of research outcome (Travakol & Dennick, 2011). The evaluation and assessment becomes relevant as it ensures data collected are sound and give accurate information whose results can be replicated to expand knowledge seeking (Mohajan, 2017)

Following the work of (Burrell & Morgan, Sociological Paradigms and Organizational Analysis., 1979), there are the assumptions of an ontological nature and epistemological orientation whose concerns were on the fundamental nature of social phenomena and the very bases of knowledge. Individuals seeking for knowledge must first of all understand the essence and nature of the phenomena being investigated. It is only at this level of understanding the phenomena under investigation that valid and reliable data about individual actions and behaviour can be meaningful when collected. The ontological nature helps researchers to conceptualize the forms and nature of reality and what is believed to be known about that reality. These knowledge enable individuals to understand the kind of data needed that will make meaning (Kivunja & Kuyini, 2017) as well solve the problems for with which it was collected. How researchers go about gathering these data profoundly affect how they go about uncovering knowledge about the social world which is the bases for knowledge expansion.

Obtaining valid and reliable data constitute the very bases for gaining knowledge and as such scholars put in the question of how this knowledge can be acquired and communicated to others become relevant (Kivunja & Kuyini, 2017). In answering these epistemic questions, Kivunja and Kuyini further assert that researchers quest for knowledge expansion has enable

them established firm faith in data which has affected the way they go about uncovering knowledge in the social context.

In as much as validity and reliability are relevant to increasing knowledge seeking behaviour, it equally has some threats. These threats ranges from instrumentation, selection bias, error in methodological selection, research implementation, statistical testing, inadequate operationalization of variables, lack of representativeness of available and target population, etc (Cohen, Manion, & Morrison, 2007); (Eketu, 2018); (Mohajan, 2017). It is crystal clear that these threats cannot be totally eliminated in research practice therefore; researchers need to put in their very best in trying to minimize these threats in a logical manner.

## **Conclusion and Implication**

Research is judged for its intellectual strength and rigor based on the duo concept of validity and reliability such that knowledge seeking cannot be effective if these concepts were not considered relevant in research practice. In achieving this fit, researchers need to understand the phenomena under investigation which is the very bases of epistemic claims and generalization of research outcome that is essential and or an influencing factor to decision making process. The implication of these assumptions is to enable researchers make salient decisions on how to acquire knowledge as well communicate the information to others which is a function of seeking behaviour. This behaviour requires an accurate understanding of the individual and his environment which is required through the collection of valid and reliable data.

In as much as researchers try to uncover the truth about social phenomena that give credence to theory building, validity and reliability remains cardinal. The essence is that in trying to extract valid and reliable information from participants which forms the bases of knowledge seeking and theory building, the duo concepts ensures accuracy and reliability in terms of data collection. And since human behaviour becomes unpredictable we conclude that researchers need to understand the human ontological nature which gave rise to epistemological consideration. This consideration forms the bases of understanding the human nature which remained the precursors to determining the methodological approach of inquiry into the knowledge domain. The idea is to take sound epistemological position that would give researchers the foundation for accurate data collection process for conducting and interpreting new information that would explain human behaviour within a specified framework.

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## **Empirical Assessment of Public Expenditure on Education and Manpower Development in Nigeria**

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### **Abstract**

Poor funding of the education sector and low school enrollment in Nigeria has been affecting the manpower development of the citizen. This study is an empirical assessment of public expenditure on education and manpower development in Nigeria for the period of 30 years (1990-2019). Secondary source and time series data were used and the variables such as; human development index, public capital expenditure on education, public recurrent expenditure on education, primary school enrollment, secondary school enrollment and tertiary school enrollment were employed for the study. The data were sourced from Central Bank of Nigeria (CBN) statistical bulletin of 2019 and World Bank Database. Data was analyzed using Ordinary Linear Square (OLS) techniques with the aid of E-views version 09. The various analyses that were used are unit root and regression. The findings revealed that public recurrent expenditure on education (PREE), primary school enrollment (PSE), and tertiary school enrollment (TSE) are statistically significant on the Human development index (HDI) while public capital expenditure on education (PCEE) and secondary school enrollment (SSE) are not statistically significant on the Human development index (HDI). It was concluded that if public expenditure on education if managed will improve manpower development in Nigeria. The study recommended that government should create awareness about school enrollment especially at primary and secondary level so that the citizen will know the importance of grass-root education.

**Keywords:** Manpower development, human development index, public expenditure on education, school enrollment.

### **1.0 Introduction**

Education is one of the important areas where governments in both developed and developing economies direct its resources. The belief is that the result from education expenditure will go a long way in transforming human, social, economic, cultural and other aspects of the people's lives (Obi & Obi, 2014). However, the paradox accompanying this belief is that, despite the huge investment in education, there exist no strong evidence of growth-promoting externalities of education in Nigeria, but rather, it further deepens social inequality and inculcate negative social changes such as cultism, rent seeking, sexual harassment, sorting, result racketeering, industrial disputes as well as brain drain among other social vices in the Nigerian school system and the society at large (Obi & Obi, 2014)

Education is the process that facilitates learning, or the acquisition of knowledge, skills, values, beliefs, and habits (Denis, 2015). According to (Omojomite, 2010), the education sector in Nigeria has passed through two phases of development, the phase of rapid expansion in the growth of the sector (1950-1980) and the second phase of rapid decline in the sector in terms of growth (1981-2009). Educational curriculum at this first period was not local oriented. It was based on colonial ideology by the British. It must be noted also that at the initial phase of educational development no effort was made to select school curricula that would meet the long-run developmental needs of the Nigeria society and emphasis was placed on numeracy and general intellectual capacity while technical and practical skills were

neglected. The university college Ibadan which was the only university in Nigeria before 1960 had no facilities of engineering, law and technology.

Public spending on education falls under the fiscal policy which involves the use of public revenue and expenditure variables to control or influence the behavior of the economy or that of the macroeconomic variables of the nation. It is a complement to monetary policy. Since the time of the "Keynesian Miracle" that pulled the global economy out of a hopeless depression, emphasis has heightened on the role of government intervention in the economy in saving it from total collapse in times when the market fails. One of such interventionist approaches adopted by the government is the use of public expenditures through its constitutional responsibility of annual budget formulation and execution (Urama, Itanwu, Ogbonna, & Obodoechi, 2018).

Manpower is the labour force or work force of a country. In its broad concept, it includes all who are potentially employable, ranging from unskilled to the most highly skilled workers and development involves change for better. Thus, in this study, manpower development is described as all the processes involved in making individuals acquire knowledge, skills and capabilities which dispose them to be engaged in or for readiness for productive activities (Samu, 2010). Statistics recently released by the United Nations Human Development Index (HDI) ranks Nigeria 26th out of the 54 African countries and 13th out of the 16 West African countries on education. The HDI rating was based on four critical macroeconomic variables of education, literacy, life expectancy and standard of living. It also ranked Nigeria 156th out of the 187 countries that were surveyed (Olure-Bank & Olayiwola, 2017)

Manpower development involves quantitative and qualitative training of person to carry out job in the society. It is an important factor in the economy of every nation and no serious nation can afford to ignore it. In Nigeria, it has been a major concern of the government since independence. It was clear to the government that political independence without economic self reliance would bring about no meaningful development (Samu, 2005). In recent times, there has been increase in public expenditure yearly in Nigeria which includes expenditure on education. Despite the increase on the education expenditure, the manpower development in the country is nothing to write home about. Nigeria has been ranked poorly by the United Nations Human Development Index (HDI) and this has led to the essence of this research work to know why public education expenditure has not been having significant effect on manpower development in Nigeria.

The growth of the education sector over the last three decades is been affected by the global economic crisis and the more recent Covid-19 pandemic as well as fiscal stringency due to over dependence on oil. This has left both the lower and higher-education institutions in Nigeria short of funds for their operations with respect to the demand imposed on them (Oriakhi & Ameh, 2014). The idea that education is a form of investment in manpower development is one of the most important developments in economics and it has had considerable impact on educational planning both in developed and developing countries. Since the start of democracy in Nigeria, the funding of education as been poor and this has led to poor state of infrastructure in federal and state schools in Nigeria. The Nigeria's government budget has been low especially the percentage of budget allocated the education sector which is below the 15% to 20% that was recommended by United Nations Educational Scientific and Cultural Organization (UNESCO). The under-funding of the education sector has led to strike by academic union staffs of universities and polytechnic in recent years (Greg & Agboro, 2014). From the foregoing, the objective of the study is to examine public expenditure on education and manpower development in Nigeria.



## 2.0 Literature Review

### Concept of Public Expenditure

Public expenditures are the costs that are usually incurred by the government for the provision and maintenance of itself as an institution, the economy and society. Public expenditures usually tend to increase with time as the economy becomes large and more developed or as a result of increase in its scope of activities. (Ogboru, 2010) identified recurrent and capital budget as one of the major types of budget in an economy. It is sometimes referred to as revenue budget and it covers recurrent items or expenditure. The capital budget has to do with expenditures necessary to procure capital assets.

According to (Taiwo, 2011), public expenditure is a fiscal instrument which serves a useful role in the process of controlling inflation, unemployment, depression, balance of payment equilibrium and foreign exchange rate stability. In the period of depression and unemployment, government spending causes aggregate demand to rise and production and supply of goods and services follow the same direction.

The five ways of classifying public expenditures are: by levels of government, by ministries, extra-ministerial departments and parastatals, by economic life span, by object of expenditure and by sectoral economic functions. In Nigeria, public expenditures are functionally classified into four, namely Administration, Economic services, Social and Community services as well as Transfers with capital and recurrent expenditure compositions (C, 2018).

### Reasons for the Rise in Public Expenditure

According to (El Atmani, 2021), the main objective of government increase in expenditure is to improve the efficiency and effectiveness of public expenditure management processes, to enhance the quantity and quality of public service delivery. Below are four reasons for such incremental policies:

- i. Improve Public Service:** Higher government spending can lead to improved public services like health, education, and transport. These are important for increasing the quality of life and economic well-being.
- ii. Increase Productivity Capacity of the Economy:** Some types of government spending can help to overcome market failure. For example, education can help increase labour productivity and reduce structural unemployment. If the education spending is well targeted, it can help to increase the long run trend rate of growth. However, not all government spending is guaranteed to increase government spending, it may be subjected to government failure and inefficiency.
- iii. Expansionary Fiscal Policy:** Increased government spending without higher taxes is likely to increase aggregate demand. It will cause a budget deficit however, the increased government spending is an injection of spending to the economy and could help to increase the rate of economic growth.
- iv. Reduce Inequality:** A significant percentage of government spending is spent on social security. This includes benefits, such as unemployment benefits, income support, child benefit, and housing benefit. The majority of these benefits are means-tested, this means they are targeted to those on low income. The aim is to reduce relative poverty and inequality.

### Concept of Education

Education is a way of imparting or possessing general knowledge, developing the powers of reasoning and judgment, and to prepare oneself or others intellectually,

psychologically and socially for a mature and responsible life style (Ajimuse & Babalola, 2020) According to (Denis, 2015), education is the process that facilitates learning, or the acquisition of knowledge, skills, values, beliefs, and habits.

Education is very important for sustaining and developing the people. With education, people are able to endure, mature and acquire experience, wisdom and capability to fend for themselves as well as serve their communities and nation (Ajibola, 2016). He further stated that education is both an instrument of stability and of change, a tool for inculcating moral values in the citizen. The role of education in human development cannot be over emphasized. It has been described as an important tool in any human society, which makes man to develop faster than other creatures. Education is the bedrock of all human sectors, political, medical, agricultural, security, etc (Idogbo & Imonike, 2016). Education in Nigeria is directed towards self- realization, better human relationship, and individual and national efficiency, effective citizenship, National consciousness, and national unity, social, cultural, economic, political, scientific and technological progress (Famade, 2015).

### **Concept of Manpower Development**

Manpower Development is a systematic process of training and growth by which individuals gain and apply knowledge, skill, insights and attitude, manage work and personnel effectively. It involves the estimation of the demand for the supply of management staff for the organization in future. It is the involvement of efforts aimed at improving the quality as well as the number of management staff (Dialoke, Ukah & Ikoro, 2016). Studies showed that many workers fail in organizational expectations because the training needs were not identified and provided for. Development may help to build confidence in the workers and make him work more efficiently and effectively. Human development is a strategy to improve human skills, create avenues for people to make better choices that boost a healthier, longer and fulfilled lives. The predominant aim of every public's spending is to guarantee a long and healthy life for the citizens, ensure they are knowledgeable and enjoy a decent standard of living (Omodero, 2019).

### **Education Expenditure as a form of Human Capital**

Investment in education is as important as the plan for nation-building. It has the capacity to boost the human capital assets of individuals and fosters economic advancement for increased welfare and livelihood (Odigwe & Owan, 2019). Human capital itself refers to investment in human persons that improves productivity and growth. Shina (2017) conceptualized education expenditure as an investment. From the foregoing, it is obvious that both school enrollment and educational attainment are greatly influenced by educational expenditure.

In conceptualizing human capital broadly and educational expenditure specifically, the works of Theodore Schultz, Gary Becker and Jacob Mincer among others remains fundamental in their view of human capital "as investments made on human persons in form of education, training, health among others which in turn boost the productive capacity of the individual for economic development. Muse (2015), however stressed that a primary motivation for schooling was developing the general skills of individuals and therefore, that it made sense to measure human capital by the amount of schooling completed by individuals (school attainment).

## **3.0 Theoretical Review**

### **The Wagner's Law-Theory of Increasing Activities of State**

This law is named after the German economist Adolph Wagner (1835-1917). It was propounded in the year 1880. Wagner noted that there are inherent tendencies for the activities governments (for instance, in Nigeria we have the federal, state and local governments) to continually increase, over time, both intensively and extensively. These



increases in state activities necessitate increase in public expenditure. In the light of the above, a functional relationship was postulated to exist between the growth rates recorded by an economy and the growth rates of activities performed by government to such an extent that the government sector grows faster than the general economy. That is, that there is a long run tendency for public expenditure to rise as per capita income increases. He observed a tendency for public expenditure to increase directly with the level of industrial output and therefore called for increased allowance for “social consideration” in the conduct of industry with anticipation of continuous expansion of the public sector. Wagner explained the development of public expenditure in its various categories such as expenditure on law and other (police services), justice, education, health and welfare services, recreation and culture, information, among others to the development of the economy and its derivatives, also relevant are the changes in these expenditure categories mirrored by their income elasticity’s of demand. Wagner and Musgrave have shown these services are income elasticity. That is, public expenditure revealed that changes in the income elasticity of demand for public goods in the ranges of per capita income. They submitted that at when the level of per capita income is low, demand for public services tends to be very low, because such income is committed to satisfying main needs and that when per capita income starts to rise, the demand for services supplied by the public sector such as education, health, and transport starts to rise, thereby forcing government to increase expenditure on them. While, when the level of per capita income is high, the rate of public sector growth tends to fall because the more basic wants are satisfied.

This theory revealed that when the level of per capita income is low, demand for public services tends to be very low, because such income is committed to satisfying main needs and that when per capita income starts to rise, the demand for services supplied by the public sector such as education, health, and transport starts to rise, thereby forcing public to increase expenditure on them. While, when the level of per capita income is high, the rate of public sector growth tends to fall because the more basic wants are satisfied.

### **Empirical Reviews**

(Ajimuse & Babalola, 2020) examined public expenditure as major determinant tools on the management of tertiary education in Nigeria. It looked at the concept of education and education system, concept and overview of tertiary institution. It also highlighted financing higher education and public expenditure in education budgetary allocation to education sector (2010-2017). It gave an insight on the effect of inadequate budgetary allocation to universities, cost control and management of funding allocation in Nigerian universities, way forward suggested as recommendation. It however concluded that government should improve on adequate funding, upward review of pay package of workers, and grant full autonomy to tertiary institution for the management in Nigeria.

(Jibir & Aluthge, 2019 ) examined the determinants of public expenditure in Nigeria the study employs a slightly modified version of Wagner’s law by incorporating new variables such as oil revenue, trade openness, public debt, exchange rate, oil price, taxation and inflation to examine their effect on public expenditure size. The study uses time series data for Nigeria spanning between 1970 and 2017. Time series data were analysed using Autoregressive Distributed Lag (ARDL) model. The findings of the study reveal that oil revenue, GDP, population, trade openness, oil price, taxation and inflation are important determinants of the size of Nigeria’s public expenditure. The study recommends among others that the revenue base of the country should be diversified beyond oil sector, strengthening of fiscal and monetary policies to ensure stability in price level and exchange rate, the use of fiscal rule through excess crude oil account should also be strengthened to

create buffer against fluctuation in oil price and as well appropriate population reduction policies should be undertaken to curtail rapid population growth.

(Urama, Itanwu, Ogbonna, & Obodoechi, 2018) investigated the impact of capital and recurrent public education expenditure on economic growth in Nigeria so as to ascertain which component contributes more to economic growth. The study applied ordinary least squares technique on time series data for the period, 1981- 2016 and found that capital component of the total education expenditure had stronger impact (17%) on the nation's economy (GDP) than its recurrent counterpart (13%). The Granger Causality test showed that while capital education expenditure granger causes economic growth in Nigeria, recurrent education expenditure does not. This work therefore recommends that Nigerian government should step up her yearly budgetary allocation to education from the current single digit averaging about 7% of the total budget to double digits so as to boost the growth of her economy and that such allocation should pay more attention to the capital component as it promotes growth more than its recurrent counterpart.

(Echekoba & Amakor, 2017) research work explores the impact of public expenditure such as expenditure on General administration, Defense, Education and Health on GDP of Nigeria (1983-2016) the work identifies that despite the continuous increase in public expenditure, there is still a persistent economic backwardness in Nigeria. The researcher sought to determine the relationship and impact of the identified variables on the economic growth of Nigeria. Time series data were generated from the Central Bank of Nigeria (CBN) statistical bulletins of various years spanning from 1983 to 2016. The Ordinary Least Square (OLS) method of estimation was used in the multiple regression analysis. The result showed that expenditure on General Administration has a positive impact and significant relationship with economic growth; Expenditure on Defense has a negative impact but significant relationship with GDP; Expenditure on Education has a positive and highly significant relationship with economic growth; and Expenditure on Health has a positive but insignificant impact on GDP. Among the recommendations were that government should ensure that her expenditure whether capital and recurrent should be managed and monitored at the implementation stage to enhance comparable achievement viz-a-viz on economic growth.

(Elumah & Shobayo, 2017) investigated effect of expenditures on education, human capital development and economic growth in Nigeria. This study covers the period of 1970-2015, employing an ex-post facto research design using time series data. The data used for this study are obtained mainly from secondary data which is quantitative in nature. The study employs descriptive statistics to assess the contributions of public expenditure on education, public expenditure on health, tertiary school enrolment, secondary school enrollment, primary school enrolment on gross domestic product. Also, Unit Root Test is conducted on the series to ascertain if they are stationary while co-integration test follows suit, to also ascertain the long run relationship between expenditure on education and human capital development on economic growth. The Johansen Co-integration test and Error Correction Mechanism estimated model found that that there is no significant effect of expenditure on education and human capital development on economic growth in Nigeria. Therefore based on the findings of this study, the study concludes that the level of human capital of Nigeria can be develop if the standard of education and health are not just maintained but improved on to meet the modern economy of the world.



#### 4.0 Methodology

For the purpose of this study, secondary data source will explore in presenting the fact of the situation. These data was sourced from Central Bank of Nigeria Statistical Bulletin 2019 and World Bank Database. Data collection on this subject matter covers a period of 30 years starting from 1990-2019. The 2019 bulletin was downloaded from the official website of Central Bank of Nigeria and World Bank Database. The variables employed for the study is; public capital expenditure on education, public recurrent expenditure on education, primary school enrollment, secondary school enrollment and tertiary school enrollment (independent variables) and manpower development proxy by human development index (dependent variable). Data shall be analyzed using Ordinary Linear Square (OLS) techniques with the aid of E-view version 09.

#### Model Specification

The model that will be formulated include;

$$HDI = f(PCEE, PREE, PSE, SSE, TSE)$$

$$HDI = \beta_0 + \beta_1 PCEE + \beta_2 PREE + \beta_3 PSE + \beta_4 SSE + \beta_5 TSE + \mu$$

Where

HDI = Human Development Index

PCEE = Public Capital Expenditure on Education

PREE = Public Recurrent Expenditure on Education

PSE = Primary School Enrollment

SSE = Secondary School Enrollment

TSE = Tertiary School Enrollment

$\beta_0$  = constant term

$\beta_1 - \beta_5$  = Coefficient of Independent Variables

$\mu$  = error term.

#### Results and Interpretation

**Table-1: Unit Root Test At Level**

Group unit root test: Summary

Series: HDI, PCEE, PREE, PSE, SSE, TSE

Date: 07/23/22 Time: 21:07

Exogenous variables: Individual effects

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	1.63861	0.9494	6	174
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.12198	0.8691	6	174
ADF - Fisher Chi-square	13.8144	0.3127	6	174
PP - Fisher Chi-square	12.1447	0.4341	6	174

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi

-square distribution. All other tests assume asymptotic normality.

#### Source: Authors computation using E-view 9.0 version

Macro and financial time series usually exhibit trends which would result in non-stationary of data. However, auto-regressive data must be transformed to stationary form



before any meaningful analysis can be done. This study examines the unit root property of the variables in the model to determine their time series properties or characteristics, that is, whether stationery or non- stationary/ trend stationarity using ADF and PP test. The estimation of unit root test is essential to avoid spurious regression results (Gujarati, 2014).

However, Augmented Dickey-Fuller will be discussed extensively for the purpose of this study, because it tests the null hypothesis whether or not a unit root is present in a time series sample. It relies on rejecting a null hypothesis of unit root test (when the variables are non-stationary) in favour of the alternative hypothesis of stationary. Result however can be stationary or non-stationary at level, first difference or second difference as the case maybe.

The result in the table above shows that the independent and dependent variables under study i.e Human development index (HDI), Public capital expenditure on education (PCEE), Public recurrent expenditure on education (PCEE Primary school enrollment(PSE), Secondary school enrollment(SSE), and Tertiary school enrollment (TSE) are not stationary at Level at 0.05 (5%) since the probability is higher than 5%.

**Table-2: Unit Root Test At First Difference**

Group unit root test: Summary

Series: HDI, PCEE, PREE, PSE, SSE, TSE

Date: 07/23/22 Time: 21:13

Exogenous variables: Individual effects

Method	Statistic	Prob.**	Cross-Sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-11.2368	0.0000	6	168
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-11.0077	0.0000	6	168
ADF - Fisher Chi-square	110.438	0.0000	6	168
PP - Fisher Chi-square	127.222	0.0000	6	168

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

**Source: Authors computation using E-view 9.0 version**

Macro and financial time series usually exhibit trends which would result in non-stationary of data. However, auto-regressive data must be transformed to stationary form before any meaningful analysis can be done. This study examines the unit root property of the variables in the model to determine their time series properties or characteristics, that is, whether stationery or non- stationary/ trend stationarity using ADF and PP test. The estimation of unit root test is essential to avoid spurious regression results (Greg & Agboro, 2014).

However, Augmented Dickey-Fuller will be discussed extensively for the purpose of this study, because it tests the null hypothesis whether or not a unit root is present in a time series sample. It relies on rejecting a null hypothesis of unit root test (when the variables are non-stationary) in favour of the alternative hypothesis of stationary. Result however can be stationary or non-stationary at level, first difference or second difference as the case maybe.

The result in the table above shows that the independent and dependent variables under study i.e Human development index (HDI), Public capital expenditure on education (PCEE),



Public recurrent expenditure on education (PCEE), Primary school enrollment (PSE), Secondary school enrollment(SSE), and Tertiary school enrollment (TSE) are stationary at first difference at 0.05 (5%) significance level since the probability is less than 0.5.

**Table-3: OLS Regression**

Dependent Variable: HDI

Method: Least Squares

Date: 07/24/22 Time: 06:35

Sample (adjusted): 2003 2019

Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.482667	0.011317	42.65155	0.0000
PCEE	-3.43E-05	5.05E-05	-0.679918	0.5106
PREE	0.000121	2.21E-05	5.485305	0.0002
PSE	-0.000221	8.53E-05	-2.587137	0.0253
SSE	0.000278	0.000145	1.919516	0.0812
TSE	-0.001387	0.000532	-2.608407	0.0243
R-squared	0.943351	Mean dependent var	0.499647	
Adjusted R-squared	0.917601	S.D. dependent var	0.028242	
S.E. of regression	0.008107	Akaike info criterion	-6.521620	
Sum squared resid	0.000723	Schwarz criterion	-6.227545	
Log likelihood	61.43377	Hannan-Quinn criter.	-6.492389	
F-statistic	36.63536	Durbin-Watson stat	1.892905	
Prob(F-statistic)	0.000002			

**Source: Authors computation using E-view 9.0 version**

From the above regression output on table 2, the Durbin-Watson Statistics 1.892905 is approximately 2 which show that there is no presence of positive serial correlation which could render the estimated model result biased. Thus, the results are reliable, as meaningful economic and standard inference can be made.

Hence, From the equation of best fit estimated above, it could be deduced that the regression equation depicting the linear relationship between Human development index (HDI), Public capital expenditure on education (PCEE), Public recurrent expenditure on education (PCEE), Primary school emolument (PSE), Secondary school emolument(SSE), and Tertiary school emolument (TSE) can be stated as:

$$\text{HDI} = 0.482667 - 3.43 \text{ PCEE} + 0.000121 \text{ PREE} - 0.000221 \text{ PSE} + 0.00028 \text{ SSE} - 0.001387 + \text{Et}$$

$$\text{S.E: } (0.011317) \quad (5.05) \quad (2.21) \quad (8.53) \quad (0.000145) \quad (0.000532)$$

$$\text{T.ratios } (42.65155) \quad (-0.679918) \quad (5.485305) \quad (-2.587137) \quad (1.919516) \quad (-2.608407)$$

$$\text{Prob. } (0.0000) \quad (0.5106) \quad (0.0002) \quad (0.0253) \quad (0.0812) \quad (0.0243)$$

The figures in the first set of parentheses are the estimated standard errors of the regression coefficients, the figures in the second set are estimated t-ratios, and the figures in the third set of parenthesis are the estimated p-values.

From the estimated regression model above, it can be deduced that Public recurrent expenditure on education (PREE), and Secondary school enrollment (SSE) of 0.000121 and 0.000278 respectively maintain positive relationship with HDI while Public capital expenditure on education (PCEE), Primary school enrollment (PSE), and Tertiary school enrollment (TSE) of -3.43, - 0.000221 and -0.001387 maintains negative relationship with HDI.

Thus since Public recurrent expenditure on education (PREE) and Secondary school enrollment (SSE) maintain positive relationship with HDI, it follows that for every 1% variation or changes in PREE, SSE will result to about 0.000121 and 0.000278 respectively which in turn result into increase in the average or mean value human development index (HDI).

Contrarily, Public capital expenditure on education (PCEE), Primary school enrollment (PSE), and Tertiary school enrollment (TSE) of -3.43, 0.000221 and - 0.001387 maintains negative relationship with HDI, thus, for any 1% variation in PCEE, PSE and TSE will result to about 3.43, 0.000221 and 0.001387 decreases in the value of HDI. The intercept of the model which is 0.484667 represents the value of the dependent variable; Human development index (HDI); should all the explanatory variables be held constant.

The multiple correlations co-efficient (R) which is the square root of  $R^2$  is 0.943351 indicates a very strong linear positive relationship between the independent variables and the dependent variable since the value is approximately 1. This indicates that about 94% of the variation in the dependent variable; HDI can be accounted for by the independent variables; PCEE, PREE, PSE, SSE, and TSE while the remaining 6% is accounted for by other extraneous factors not captured in the model but represented by stochastic term. This figure however increases the goodness of fit of the regression model. This implies that the specified model is affected significantly by the removal or addition of variables to the specified model.

### **T –statistics and Probability (Sig.)**

The column of T-statistics and probability sig. are the evidence that shows if estimated coefficients are asymptotically normally distributed and also the significance level of the variables.

Public recurrent expenditure on education (PREE), and Secondary school enrollment (SSE) of 5.485305 and 1.919516 respectively maintain positive relationship with HDI while Public capital expenditure on education (PCEE), Primary school enrollment (PSE), and Tertiary school enrollment (TSE) of -0.6799, - 2.587137, and - 2.608407 maintains negative relationship with HDI.

Probability value of the t-statistics was considered to determine the significance level of each variables in the model. Hence, since the p value of Public recurrent expenditure on education (PREE), Primary school enrollment (PSE), and Tertiary school enrollment (TSE) of 0.0002, 0.0253 and 0.02 respectively are lesser than 0.05 percent level of significant, it can be concluded that the variables are statistically significant on the Human development index (HDI) level of the country under study.

Contrarily, Public capital expenditure on education (PCEE) and Secondary school enrollment (SSE) of 0.5106 and 0.0812 respectively are greater than 0.05 percent level of significant, it can be concluded that the variables are not statistically significant on the Human development index (HDI) level of the country under study.

### **F-Statistic**

The F- stat of 36.63536 is relatively low and with probability value of 0.0000002, this reveals that jointly, the included independent variables explain variation in the dependent variable; that is, the percentage of variation in the dependent variable, accounted for by the



explanatory variables is true and not due to chance or error.

### **Conclusion and Recommendations**

Based on the results, the study discovered that public recurrent expenditure on education (PREE), primary school enrollment (PSE), and tertiary school enrollment (TSE) are statistically significant on the Human development index (HDI) while public capital expenditure on education (PCEE) and secondary school enrollment (SSE) are not statistically significant on the Human development index (HDI). However, the f-statistic results indicate that the combine variables have significant impact on human development index. It can be concluded that if public expenditure on education is managed the way, it will improve the human capital development in Nigeria.

Based on the findings, the following recommendations were provided:

- i. The public capital expenditure on education should be properly managed in order to improve the infrastructural facilities in school which will eventually lead to improvement in human capital development in Nigeria.
- ii. The government should create awareness about school enrollment especially at primary and secondary level so that the citizen will know the importance of grass-root education.
- iii. There is need for government to increase budgetary allocation on education expenditure in general in order to improve its human capital development.
- iv. The government should persuade and corporate bodies that make contributions towards education to increase their financial participation in funding education.
- v. Also, it is imperative to embark on radical diversification of the Nigerian economy to other viable and productive sectors of the economy, such as human development.

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#### APPENDIX- 1 – DATA PRESENTATION

YEAR	HDI	PCEE	PREE	PSE	SSE	TSE
1990	N/A	2.1	2.4	83.04525	24.72	N/A
1991	N/A	1.49	1.26	86.4916	N/A	N/A
1992	N/A	2.13	0.29	85.6465	N/A	N/A
1993	N/A	3.58	8.88	89.7045	N/A	N/A
1994	N/A	4.99	7.38	93.8185	N/A	N/A
1995	N/A	9.22	9.75	93.6067	N/A	N/A
1996	N/A	8.66	11.5	89.3006	N/A	N/A
1997	N/A	6.9	14.85	78.6635	N/A	N/A
1998	N/A	23.37	13.59	N/A	N/A	N/A
1999	N/A	17.25	43.61	N/A	23.55	6.12489
2000	N/A	27.97	57.96	94.1129	24.61	N/A
2001	N/A	53.34	39.88	98.6895	27.03	N/A
2002	N/A	32.47	80.53	96.3756	29.61	N/A
2003	0.452	55.74	64.78	98.0053	0.00	9.71426



2004	0.462	30.03	76.53	99.4671	35.00	9.93078
2005	0.467	71.36	82.8	100.677	34.96	10.49106
2006	0.474	78.68	119.02	101.365	34.47	N/A
2007	0.479	150.9	150.78	102.108	31.87	N/A
2008	0.485	152.17	163.98	93.31	35.39	N/A
2009	0.491	144.93	137.12	84.1386	39.23	N/A
2010	0.484	151.77	170.8	85.1179	44.22	9.57
2011	0.494	92.85	335.8	90.6712	45.56	10.1744
2012	0.502	97.4	348.4	92.0911	47.18	N/A
2013	0.52	154.71	390.42	94.1185	56.21	N/A
2014	0.523	111.29	343.75	90.1036	45.62	N/A
2015	0.527	82.98	325.19	N/A	46.78	N/A
2016	0.528	68.8	339.28	84.7256	42.00	N/A
2017	0.533	167.66	403.96	N/A	N/A	N/A
2018	0.534	203.42	465.3	N/A	N/A	N/A
2019	0.539	264.69	593.33	N/A	N/A	N/A

**Source:** Central Bank of Nigeria Statistical Bulletin 2019 and World Bank Database 2019

## **What changes the Iraqi economy has undergone?**

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### **Abstract:**

Research and economic studies in all their aspects show that uncertainty has significant consequences in all areas of the economy. In recent years, the Iraqi economy has gone through difficult economic conditions as a result of exacerbations of structural imbalances and the global health crisis. The global economy witnessed a significant recovery in 2021 as a result of the improvement in the health situation, the increase in vaccination rates around the world, and the decline in Covid-19 infections. Economic growth in Iraq has begun to gradually recover in the wake of the downturn caused by the Corona pandemic during the past year, partly due to the increase in non-oil economic activity. As for the recovery of the oil sector, it has had the most prominent impact in changing the course of the Iraqi economy, and it is expected that the improvement in the conditions of the global oil market will lead to enhancing economic growth in the medium term and achieving financial surpluses that contribute to reducing the accumulated debts. Although the economic conditions in Iraq have gradually improved with the recovery of international oil markets, this recovery is fraught with major risks posed by structural obstacles, including public investment management restrictions that affected the provision of public services, the slow repayment of overdue debts, especially those related to public wages, and the burden of owned banks. The state and the Central Bank of Iraq's sovereign debt burden. In addition to the fragility of the political situation, the weakness of the health care system, and the rampant financial, administrative and political corruption in various state institutions. In order to orient ourselves better, we need to look carefully at ways of perceiving the challenges facing the Iraqi economy as a necessary condition for the country's development. However, despite the improvement in the prospects of the Iraqi economy and the recovery of global oil markets, the repercussions of the Corona virus and the challenges of climate change constitute new risk factors. The economy is expected to recover gradually against the backdrop of high oil prices and an increase in the production quotas of the "OPEC +" alliance, which is scheduled to be phased out in 2022. Oil GDP will be the main engine of growth in the medium term. There is a lot of research on the state of Iraq from international and local organizations and institutions. Everyone has proven that the most serious challenge for development in Iraq is insecurity. In fact, with this material we have to answer the main question: what is the country facing and what problems are there to solve?

**Keywords:** Iraq, USA, security, causes, challenges, measures, government.

## **1. Reflections on the Iraqi economy**

The Iraqi economy enjoys enormous potential and enormous natural resources through which it can become a major player in the Middle East region. In recent years, the Iraqi economy has gone through difficult economic conditions as a result of exacerbations of structural imbalances and the global health crisis.

Iraq's economy faces a number of economic challenges that threaten Iraq's future and its economic, political and social security, such as poverty, unemployment, inflation, destroyed infrastructure, high production costs, administrative and financial corruption, environmental pollution, water problems, and the deterioration of agricultural, industrial and other production. What increases the seriousness of these challenges is that they intertwine, overlap and expand, inconsistent with the adoption by the state of strategies that will develop appropriate and appropriate solutions to address these challenges due to their security and terrorism concerns, which requires the development of an integrated strategy to address these challenges. The Iraqi economy is going through a critical phase in which it is impossible to withstand the contradictions and adventures of the various political parties.

Following the announcement of the results of last October's legislative elections, the country expects a government from the womb of these results, which will not be able to "judge and err" in diagnosing and treating economic crises.

Despite the enormous wealth of Iraq, it has suffered for years from a number of structural imbalances in the economic structure, which have recently been reflected in the sharp rise in unemployment and poverty.

Experts attribute the reasons for the decline and the difference between large investments of national resources and modest results to per capita income and guarantees for the economic future, poor planning, the spread of corruption and the loss of a productive mind.

Many of the complications that hinder the lost stability in Iraq are crowded at various levels, but the economy is the cornerstone, otherwise all the consequences remain, experts say.

In the years 2020 and early 2021, the Iraqi economy faced major challenges related to the fall in crude oil prices as a result of the outbreak of the Covid-19 pandemic and the closure restrictions imposed by the decline in global economic activity.

Oil accounts for more than 85% of Iraq's total raw materials, making the country's rent-producing economy vulnerable to fluctuations in the crude market in the absence of consolidating state imports and finding alternatives.

These challenges have led to major risks that have burdened the Iraqi economy in the pre-pandemic crisis, such as high debt levels, doubling internal and external structural and structural problems, high budget deficits and increasing the fragility of public finances, which is generating monetary pressure. policy and exchange rate stability.

According to many researchers: "Iraq has obligations signed with the International Monetary Fund and the Bank that require the country to find solutions so that it can communicate with the outside world through its economic system and not, as some imagine, that the issue is limited to the needs of the interior and the arrangement of the local scene.



Iraq cannot tolerate more mistakes. Diseases have reached a dangerous stage, and diligence or experimentation will not help.

According to many researchers, the current data confirm the recurrence of the government scenario. It strongly warns: "We will face catastrophic predictions, the smallest of which will be a torn map or a bloody uprising, both of which are bitter and costly options."  
(27/4/2020 Shaho Alkaradagi).

Iraq's Spring 2020 Monitor, entitled "Sailing in a Big Storm" again - Discusses Recent Economic Developments and Policies and highlights some of the country's macroeconomic policy challenges. The report says pre-crisis conditions in Iraq will limit its ability to manage and mitigate the economic and social effects of low oil prices, reduced oil quotas and obstacles created by isolation measures to counter the Covid 19 virus. The dependence of the large Iraqi economy on oil and the broad role of the public sector in economic and trade activities are hampering the creation of jobs that are needed in the private sector for the population, most of whom are young people. In addition, growing public dissatisfaction with poor service delivery, rampant corruption and job losses is still relevant and even combined with the political stalemate over the formation of a new government. According to Saroj Kumar Ja, Mashreq's regional director at the World Bank "Fiscal consolidation and economic diversification through increased private sector involvement are crucial to reducing Iraq's vulnerability to external shocks. The adoption of a reform-oriented growth program will help sustain efforts to restore and sustain the positive improvements made in the electricity and agriculture sectors over the past year. Such a program is essential to create the jobs that young people need and to restore the confidence of Iraqi citizens.

It is imperative that Iraq launch a comprehensive, forward-looking economic reform agenda to enable the private sector to stimulate growth and create diversity and job opportunities. Such a program can be based on two pillars - first: tackling comprehensive barriers to private sector-led diversification through financial sustainability and economic governance, financial sector reforms, business environment reforms, improving human capital outcomes, and social labor protection and system The second: improving governance and strengthening private sector participation in selected manufacturing sectors such as agriculture, the food industry, electricity and gas.

The Iraqi Economic Monitor's report also includes a special section highlighting the importance of Iraq's digital transformation and the urgency behind it. The benefits of a strong digital economy are numerous, and using it will help Iraq improve its economic opportunities, especially for its young people, and thus meet the demands of its citizens. The digital transformation of the Iraqi economy requires economic reforms and long-term development priorities that cover the five pillars of the digital economy framework to provide affordable high-speed Internet access, achieve widespread cashless payments, provide digital government services and improve data access and raising the level of skills of young people by providing them with technological knowledge and expanding the digital ecosystem for entrepreneurship. The recent adoption of innovative digital solutions in the fight against the COVID-19 pandemic in different parts of the world is an example of the importance and urgency of digital transformation.

### **Typical problems to solve**

The development of the Iraqi economy has faced many problems of a complex nature, namely:

**First:** the collapse of oil prices.

The Iraqi economy is a rent-seeking economy that relies mainly on oil for 95% to meet the country's needs, and oil accounts for almost 99% of Iraq's exports and with falling oil prices, Iraq will suffer from a real economic crisis in the absence of any Another source of revenue generation is oil, as Iraq has failed to diversify its sources of income in recent years despite persistent requests.

Iraq's oil minister confirms that Iraq will reap half of what it earned in 2019 from oil sales in 2020, since last year Iraq earned \$ 78 billion from oil sales worth \$ 61 a barrel. while this year the amount will drop to 40 billion.

It is clear that the decline in oil prices will affect the budget for 2020, which amounted to (135 billion dollars) with a financial deficit of (40 billion dollars), which estimates the price of one barrel at 56 dollars, while today, the price of a barrel has plummeted to around \$ 20, with expectations that it will be difficult to rise again in light of the current crises, the spread of the Corona virus and declining oil demand due to the disruption of life in most countries.

What is happening today is a natural result of the economic policies that Iraq has pursued in recent years, as it has relied entirely on oil without thinking about the future or preparing for scenarios of falling oil prices, even though Iraq is moving in previous crises, especially in 2014, when oil prices fell.

**Second:** Pervasive corruption and lack of transparency: Iraq ranks 162nd out of 180 countries in Transparency International's 2019 Corruption Perceptions Index.

Official statistics confirm that Iraq lost more than \$ 500 billion as a result of corruption from 2003 to 2019, and it is certain that corruption has doubled these official figures because the government does not take seriously the disclosure of corruption files and real numbers. which prove the participation of all political parties in this case.

The most notorious corruption files are the smuggling of oil through parties and militias, the salaries of officials, defenders and advisers, the economic services of political parties, the seizure of state property, arms deal and foreign exchange auctions, in addition to the files of fictitious or foreign officials. who receive more than one salary and represent a constant bleeding of the state budget.

Corruption affects not only the economic aspect, which in turn leads to the accumulation of wealth for several people at the expense of the majority, who will suffer from poverty, destitution and need, but will gradually lead to violence, political and security problems and weaken public institutions, and government measures to fight corruption in Iraq are for immediate government responses to hold corrupt minors accountable before the election to win votes or respond to popular demands in order to numb and calm the streets, while strategic steps need to be taken within a comprehensive national plan to diagnose and control corruption.

Here it is important to mention Singapore's experience in this area. When Lee Kuan

Yew, the founding father of modern-day Singapore, arrived, he decided to launch a strategic campaign to cleanse the country of all forms of corruption, from the election stage to the formation of a government and other stages. Because, according to Lee Kuan Yew, pure government mainly starts from the election stage, and the dirtier the money is the source of the political position, the greater the corruption in the government, because the high cost of elections and political positions pushes the parties that reach the government to get back the money spent on the position and to prepare new money for the next campaign, using the influence and getting closer to officials and influencing them through dirty deals. As a result of these policies, this campaign has succeeded and reflected positively on the state and has become the most developed country in the region and the world.

**Third:** Suspension of reconstruction projects and foreign investment.

After the end of Islamic State in Iraq and the Levant (ISIL), economic losses to Iraq were estimated at more than \$ 100 billion, while the World Bank estimated the cost of rebuilding devastated areas at \$ 88.2 billion, despite a promise from the international community. to give Iraq \$ 30 billion at a conference in Kuwait in 2018, but countries that have pledged aid have failed to meet their obligations due to poor security conditions, militia proliferation, extortion operations and armed factions and groups with large impact in ISIS-exempt areas.

Survival and concentration of militias in liberated areas hampered efforts to rebuild those areas, and due to smuggling operations and security breaches in the shadow of militias, ISIS has been able to reorganize its ranks in many areas and resume terrorist attacks against people and security forces. this means a lack of stability in these areas in the next phase, which will disrupt all internal and external efforts to restore life in these devastated areas in the war on terror.

In addition, Iraq has become an environment that expels national capital and fails to attract foreign capital to Iraq due to security problems, corruption and the reluctance of foreign companies to enter Iraq due to the many obstacles and problems they face.

Iraq is ranked 172 out of 190 countries in the World Bank's 2020 Ease of Doing Business Index for 2020, which is based on a variety of evaluation criteria, including Ease of Starting a Business, Protecting Investors, Paying Taxes and Dealing with default.

In addition to the main challenges, Iraq faces the challenge of external and domestic debt, estimated at more than \$ 130 billion, a high poverty rate of up to 20%, equivalent to 7 million citizens across Iraq, the spread of unemployment among young people's dependence on foreign imports and many other challenges, which is facing the Iraqi economy and requires real efforts to overcome them amid escalating popular anger.

## **2. Choice of options to deal with emerging challenges**

Deteriorating economic problems put Iraq's decision-makers to the real test of rescuing Iraq from collapse. Iran is the first beneficiary of the continuation of the situation in Iraq as it is, as relations between the two countries are based on draining the Iraqi economy in favor of reviving the Iranian economy, and Iraqi leaders need to reconsider the nature of relations with Iran rebuild on the basis of common interests and friendship based on mutual respect, and put



an end to the current equation, which is causing great damage to Iraq.

In connection with this step, which also strengthens national sovereignty, the next Iraqi government must take serious steps towards reforms, fighting corruption, increasing transparency, punishing corruption, trying to recover money looted abroad, controlling border crossings and an end to oil smuggling in order to regain confidence on the Iraqi streets and give a positive image to the outside world, with a real will for reform and change in Iraq, and we need to benefit from global experience and seek help from an external expert, to help get out of the current crises.

The next step requires more courage in the process of making critical decisions by political decision-makers in Iraq. It is important to focus on national interests at the expense of personal and party interests and the foreign agenda, and if the Iraqi government fails to deal properly with these crises, the waves of challenges, Iraq's ship could be sunk.

Despite improving the outlook for the Iraqi economy and the recovery of global oil markets, the effects of the Corona virus and the challenges of climate change are new sources of risk. The economy is expected to recover gradually amid high oil prices and increasing production quotas of the OPEC + alliance, which is planned to be phased out in 2022. Oil GDP will be the main driver of growth in the medium term. Despite expectations (Hussein Al tome 2021) of improving oil-free GDP, it will remain at an average growth rate below (3%) over the years (2021-2023) due to the modified generations of the Coronavirus pandemic, in addition to the challenges facing the Iraqi economy, most notably of water and electricity, which affects agriculture and industry

Finally (Z. Ali Alali 2018), it can be said that Iraq's national security system faces a number of challenges that can be categorized as visible and invisible challenges, the most dangerous of which are those that appear in the invisible image. This would affect strategic security (of the individual and the state), which means that these challenges involve most governmental and non-governmental sectors and institutions that revolve around the basic infrastructure of the state to achieve citizens' cognitive security, and these challenges vary from cyber threats to the state's digital system, the population is growing without this increase being affected by strategic planning, which is in line with developments and challenges facing formal and informal state institutions, which pose a major challenge to Iraq's strategic security system; therefore, there was an urgent need to focus and dominate research and anticipation efforts in this area, especially in light of the marked increase in the challenges facing Iraq's strategic security system.

Iraq is facing and continues to face the greatest and most dangerous security threats and challenges since 2003 that no other country in the world has faced . However, it still achieves brilliant victories on many levels, including the fight against terrorist organizations and their sleeping cells. The final victory will be achieved and the Iraqi state will be rebuilt on new and developed foundations that will lead to the maintenance of Iraq's national security and the strengthening of the work of its institutions and agencies in order to achieve the supreme strategic goals of the state and interests..

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**Measuring the impact of social responsibility on the effectiveness of the mandatory international financial reporting standards (IFRS) adoption according to the price crash risk**

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**Abstract**

Demand for information on corporate social responsibility (CSR) and international financial reporting standards (IFRS) has progressively increased in tandem with the growing interest in sustainable investments. Numerous studies have established that the adoption of IFRS has often improved the information quality offered to many users through providing highly relevant, reliable and understandable information, as well as allowing companies' accounting data to be compared to that of other companies for various periods. Crash risk is a major concern for investors and may result in higher compensation for holding higher-risk securities. This research seeks to examine the impact of corporate social responsibility on the effectiveness of adopting mandatory international financial reporting standards according to the price crash risk. To achieve this, the descriptive approach and a systematic review of previous studies, research, and literature related to the research topic and its variables were used. The results confirmed the existence of a correlation between CSR and IFRS in the financial market. Finally, the research recommended the necessity of conducting more research, analytical and empirical studies with regard to measuring the correlation among CSR and IFRS.

**Keywords:** corporate, crash, risk, social, responsibility, financial, international.

**1. Introduction**

Corporate social responsibility (CSR) is a hot area in academic fields in recent years. Nevertheless, research reveals that there is no unanimity on the relationship between financial performance and corporate social responsibility. According to several studies, socially responsible businesses adhere to better ethical standards, financial reporting openness, and less bad news hoarding. Firms participate in CSR initiatives with the purpose of increasing revenue (Lee, 2016) and improving operational performance (Liang & Huang, 2013). Socially responsible businesses utilize fewer management of earnings in all reporting of financial in organization, reveal more financial data, and are fewer affected by unwelcome news than other businesses (Kim, Park, & Wier, 2012); (McCarthy, Oliver, & Song, 2014). CSR activities may be linked to a lower risk of a stock price drop, according to these studies (Y., H., & S., 2014).

Demand for information on CSR and international financial reporting standards (IFRS) has progressively increased in tandem with the growing interest in sustainable investments (Cohen & Simnett, 2015); (Amel-Zadeh & Serafeim, 2018). Numerous studies have established that the adoption of IFRS has often improved the information quality offered to many users through providing highly relevant, reliable and understandable information, as well as allowing companies' accounting data to be compared to that of neighboring firms for various periods (DeFond, Gao, Li, & Xia, 2019). Reliance on IFRS is necessary to ensure economic integration and stability in the world (Drobetz et al., 2019), as well as to attract investors to invest outside of their home nations where financial information has been

relevant, trustworthy, equivalent, and timely (Lin, Riccardi, Wang, Hopkins, & Kabureck, 2019); (Bui, Le, & Dao, 2020). As a result, IFRS adoption may boost a company's ability to obtain external funding as well as investor confidence in the capital market.

### **1.1. Research problem**

Collapse risk is a major concern for investors (Y., H., & S., 2014), considering this risk as the frequency of negative stock returns in companies, and thus resulting in higher compensation in the company for holding many higher-risk securities (Conrad, Dittmar, & Ghysels, 2013); (Kelly & Jiang, 2014). According to previous studies, the financial reporting environment is a significant factor in crash risk (DeFond, Hung, Li, & Li, 2015). When dozens of countries mandated the adoption of IFRS at the same time in 2005, the financial reporting environment for thousands of public corporations throughout the world altered dramatically. This event provides an ideal context for determining if changes in the financial reporting environment have an impact on the risk of company-level crash in institutional settings and a number of industries. Despite the importance of social responsibility and IFRS according to the price crash risk in the financial market, these concepts have not received much attention from researchers and scholars. Through the research and exploration conducted by the researcher, he noticed a dearth of studies that link the concepts of social responsibility and international financial reporting standards. Therefore, he decided to conduct the current research to examine the correlation of social responsibility with IFRS according to the price crash risk in the financial market.

### **1.2. Research aim and objectives**

The current research seeks to examine the effect of CSR on the effectiveness of the adoption of mandatory IFRS in accordance with the price crash risk, and in addition to this, the following objectives will be achieved:

- Shedding light on the concepts of CSR and the IFRS.
- Investigate the benefits of IFRS.
- Investigate Challenges of IFRS.
- Shedding light on the relationship between CSR and the adoption of IFRS.

### **1.3. Research significance**

In contrast to previous studies on corporate social responsibility, which dealt with little attention to the effect of corporate social responsibility on the volatility of stock prices for listed companies, the researcher in this research investigated the correlation between social responsibility and the effectiveness of adopting mandatory IFRS standards in companies according to the risks of price collapse in them. More importantly, the effects of internal controls on CSR and stock prices were studied. Because stock price crash risks are obsessed with downside risk and are essential to many corporate risk management and investment decisions, the current research will provide a reference for stakeholders, shareholders, government regulators, and corporate managers to understand whether CSR reduces price crash risk. At the same time, our findings provide evidence for all stakeholders to assess the effectiveness of adopting mandatory IFRS.

### **1.4. Research methodology**

To address the research problem and achieve its objectives, the descriptive approach and systematic review of previous studies, research and literature related to the research topic and its variables were used.

## **2. Literature review**

### **2.1 Corporate social responsibility**

Corporate social responsibility (CSR) is a company's responsibility to its customers, environment, as it makes a profit and fulfills its legal obligations towards its employees and



shareholders. Furthermore, CSR needs companies to overcome and go beyond traditional methods of profit, emphasizing the significance of people in the process of production and contributing to the society, consumers, and environment. It plays an indispensable function in strengthening the company's reputation and accomplishing the company's long-term development as the core of its sustainable development strategy. The CSR incorporation in a decision-making and company operations may help the firm not only increase its competitiveness, nevertheless defend its brand, identify new market prospects, and maintain ongoing profitability, assuring the company's long-term viability. Excellent businesses are capable of not just exploiting societal demands to generate economic value, but also of actively fulfilling their obligations, and creating importance value for society in collaboration with others. As a result, the beneficial connection between the social and economic worth of firms is understood, and enterprises' and society's long-term development are supported. The CSR movement began to grow in Western industrialized countries in the 1980s (Hao, Qi, & Wang, 2018).

CSR is appealing to businesses because it can improve consumers' impressions of a company's integrity and moral standards, as well as promote economic and social development and enhance environmental or social situations (Hsu, Chen, & Tseng, 2013). As well as, more significantly, (Argenti & Druckenmiller, 2004) state the reputation influence, which argues that corporations seeking to create and retain excellent reputations should be excited about CSR initiatives (Hillenbrand & Money, 2007), as well as (Fombrun, 2005), support their arguments. According to their claims, CSR companies have better financial performance (Lee, Liu, & Yang, 2011), profitability of product (Lee, Liu, & Yang, 2011), (Bagnoli & Watts, 2003); (Bhattacharya & Sen, 2004), and quality of (Milgrom & Roberts, 1986). Furthermore, (Chih, Miao, & Chuang, 2014) and (Liang & Huang, 2013) suggest that expanding CSR activities improves operating performance since such activities do not diminish business profitability. Furthermore, CSR has the potential to boost the value of a company (Harjoto & Jo, 2015)

In recent years, many researchers from around the world have focused on the importance of practicing social responsibility and publishing. According to this research, CSR can boost stakeholder satisfaction, enhance image of corporate brand, rise company value, as well as minimize the capital cost. (Lin & Dong, 2018) state companies with a track record of good corporate performance are fewer for bankruptcy when they are in serious financial trouble and are more likely to recover quickly. Firms with superior CSR, according to Cai, (Cai, Cui, & Jo, 2016), are less hazardous, and data suggests that CSR is absolutely associated to business value. Correspondingly, (Al-Hadi & Chatterjee, 2019) show that CSR performance is linked to a optimistic valuation influence, and (Poddi & Vergalli, 2016) conclude that corporate social or environmental responsibility and financial performance are linked in their meta-analysis of prior quantitative research. Maintaining social responsibility is a factor in their company decisions and procedures, as well as the strength of their relationships with other stakeholders of the company (Nguyen, 2018).

Furthermore, corporations employ CSR as an assurance mechanism; while it does not immediately boost company success (Klein & Dawar, 2004); as well as, CSR is probable to be valuable to businesses since it may mitigate the effects of negative news. Some results are in accordance with CSR's insurance influence. As a result, CSR enterprises have improved accounting information quality, better financial disclosure, and greater financial reporting transparency (Kim, Park, & Wier, 2012). Because of their duty to maximize shareholder value, managers can boost business value by improving CSR, according to (Freeman, 1984) stakeholder theory. Based on findings, (Y., H., & S., 2014) explore the correlation between



CSR and stock price crash risk in the United States from 1995 to 2009. As well as, they discover that the practices of CSR decrease stock price crash risk through recompensing for certain firms' poor corporate governance (Lee M. T., 2016)

## **2.2. International Financial Reporting Standards (IFRS)**

The International Accounting Standards Board (IASB) created the International Financial Reporting Standards (IFRS) to serve as a guide for all companies in preparing and organizing financial statements that provide all financial and non-financial information clearly and truly. These reports benefit both stakeholders and investors in order to make many economic decisions in companies. Due to the globalization of the global capital market and the increase in global trade, the implementation of these standards has become critical (de Villiers, Venter, & Hsiao, 2016); (Brabec, 2014). Many countries around the world have accepted the criteria for preparing their financial statements (Cameran, Campa, & Pettinicchio, (2014)). The guidelines attempted to set a global standard for business matters to enhance and improve the quality of financial statements and financial disclosure to investors (Donnelly, 2016). The ultimate goal was to make this data on global financial markets clear, comparable, relevant and trustworthy. Investors benefit from enhanced openness, transparency, comprehension, and comparability of financial data, which reduces information asymmetry and increases investor willingness to capitalize (Matari, Swidi, & Fadzil, 2014).

Enhanced high-quality data disclosure has a number of advantages, including lower capital costs, more efficient resource allocation, higher economic growth, enhanced economic effectiveness, and better analyst forecasts (Santos, Ponte, & Mapurunga, 2013). Investors' assessments of a firm's financial performance and readiness to invest more are enhanced by increased disclosure and quality of information, because the more reliable and appropriate the evaluation result of financial data in companies, the higher the volume of investments at the same time (Matari, Swidi, & Fadzil, 2014). Moreover, the performance of Financial is the development in a company's economic activity over time as measured by profit or loss.

IFRS explains all the key concepts that are important to the creation and presentation of financial statements in a clear and understandable way to an external audience. In addition, IFRS "serves as a guide for the board of directors in companies for the development of international financial reporting standards at present and in the future, and is considered an important guide for solving many accounting problems within companies that are directly related to the International Accounting Standard or the International Financial Reporting Standard or Interpretation (IASplus) (Amelio, 2016).

## **2.3. The Benefits of IFRS**

There are numerous obvious causes why the IFRS can enhance financial statements quality in companies. First and foremost, IFRS requires that all financial transactions in a company reproduce their nature rather than their legal forms and addresses, allowing an accurate and consistent depiction of organizations' performance. To put it another way, businesses cannot freely conceal information for specific objectives. The Board of Directors must be more accountable to present and prepare financial statements in line with the IFRS, investing more time to analysis, investigation, and review to reproduce economic activities nature. This aids in the improvement of management quality, transparency, and information relevance. The information gap between internal and external stakeholders will be reduced as a result.

Companies that adopt the IFRS save money and time by not having to spend extra time and money explaining information to management agencies or partners when they ask for it. As a result, businesses will be able to more accurately assess and compare their financial and activities situation in company. Consequently, they will have a well understanding of their



clienteles, competitors, and suppliers – particularly that have accepted the IFRS. Second, the IFRS is one of the important and necessary conditions that may confirm that accounting principles are applied consistently in the preparation of financial statements by firms and organizations all over the world. In other words, variations between country financial statements can be minimized, improving comparability. As a result, it can assist investors in lowering accounting data processing costs and reducing differences in accounting standards across countries (Bui, Le, & Dao, 2020).

Furthermore, Uyar and Güngörmüş (2013) state that higher-quality information combined with greater transparency will lower investor risks. In Bangladesh, research was undertaken (DeFond, Hu, Hung, & Li, 2011), (Bhattacharjee & Hossain, 2010) to analyze the advantages and challenges of IFRS applying. The findings revealed that using IFRS has a number of advantages, including lower capital costs, improved financial statement quality, and easier access to capital markets in the world. Moreover, these findings are in line with those of (Kiliçaa, Atamanc, & Uyar, 2014), (Ritsumeikan, 2012) who conducted study in rising countries for example Indonesia, Malaysia, and Singapore, as well as (Chen, Tang, Y., & Lin, 2010), (Gastón, García, Jarne, & Gadea, 2010), and (Alkhtani, 2012) in Saudi Arabia.

The IFRS adoption assists investors, partners, particularly foreign investors, in learning, comparing, and evaluating financial data in accordance with international standards in order to make informed judgments. When a government implements the IFRS, it can minimize political pressure on international investment. Indeed, presenting and preparing financial statements with IFRS is a requirement for accessing financing sources on the international capital market. Furthermore, because small or new international investors do not have to pay extra fees to "change data," the implementation of IFRS provides "equality" for them. According to (John, 2018), (Herath & Alsulmi, 2017) after implementing the IFRS, some countries have managed to attract foreign investment and diversify in the fields of their economies and provide many job opportunities for young males and females. Choi and Meek (2011), (Ritsumeikan, 2012), (Joshi, Yapa, & Kraal, 2016) have taught studies in Indonesia, Malaysia, and Singapore; (Dimitropoulos, Asteriou, Kousenidis, & Leventis, 2013) conducted study in Greece established that IFRS implementation makes it easier for originalities to access international and domestic capital, as well as listing on foreign stock exchanges. (Gastón, García, Jarne, & Gadea, 2010), (Chen, Tang, Y., & Lin, 2010), (Cirkveni, 2011) did research in United Kingdom and European Union; as well as (Chand & Patel, 2010) conducted a study in Fiji. Thus, the findings showed that the IFRS encourage international investors to engage in mergers and acquisitions.

The use of fair value accounting is one of the IFRS' features. As a result, the use of IFRS will assist companies and financial statement users in gaining a more reasonable and authentic assessment of a company's present financial status, activities, and fair value. (Joanne, George, & Ioanna, 2016), (Kapoor & Ruhela, 2013), and (Atik, 2010) conducted research in Bangladesh, Turkey, and India, and found that firms that embraced IFRS had superior control systems because the sources of information were more credible. According to research conducted in Ghana and Nigeria by (Okpala, 2012) (Boateng, Arhin, & Afful, 2014), and (Ocansey & Enahoro, 2014), the deployment of IRFS permits organizations to increase the internal audit efficiency and better risk control, lowering the auditing cost more than 7.7%. Furthermore, (Alkhtani, 2012) did research in Saudi Arabia, (Chand & Patel, 2010) conducted research in Fiji, (Artikis, Ballas, Skoutela, & Tzovas, 2010), and (Dimitropoulos, Asteriou, Kousenidis, & Leventis, 2013) conducted research in Greece. (Ritsumeikan, 2012), (Kiliçaa, Atamanc, & Uyar, 2014), (Joshi, Yapa, & Kraal, 2016), and Choi and Meek (2011) studied in rising countries comprising Malaysia, and Singapore. The

findings revealed that the IFRS assisted enterprises in lowering capital expenses and raising stock prices.

(Okpala, 2012), (Boateng, Arhin, & Afful, 2014), and (Ocansey & Enahoro, 2014) found that IFRS can improve the competitiveness of businesses in Nigeria and Ghana. In Romania, (Girbina, Mihaela, Bunea, & Sacarin, 2012) and (Mihai, Ionaşcu, & Ionaşcu, 2012) performed research that found that adopting IFRS reduces political pressure on multinational firms compared to using national accounting standards, and that adopting IFRS fosters a favorable investment environment for international enterprises. Small and medium-sized firms were studied by (Bohušová & Blašková, 2011), (Bunea, Săcarin, & Minu, 2012), (Mulyadi, Soepriyanto, & Anwar, 2012), and (Joanne, George, & Ioanna, 2016). The findings revealed that international organizations can benefit greatly from using IFRS in their local setting. Because IFRS is regarded as a worldwide language, its implementation allows professional accountants to work in a variety of nations (Kim et al., 2011; (DeFond, Hu, Hung, & Li, 2011). Choi and Meek (2011), (Ritsumeikan, 2012), (Kiliçaa, Atamanc, & Uyar, 2014) conducted research in countries that demonstrated the advantages of eliminating the multi-standard financial reporting system and making accountants' jobs easier by provided that more see-through and easy-to-clear and understand all information (John, 2018), (Adejoh & Hasnah, 2014), (Odia & Ogiedu, 2013)

#### **2.4. Challenges of IFRS disclosure**

Due to the fact that many countries have high expectations of IFRS disclosure, there are many difficulties and concerns related to the manipulation of financial statements within companies (Xu & Lei, 2011), and the disclosure of many related party transactions (RPTs), (Lo & Wong, 2016), and the lack of transparency and disclosure of the entities' main financial positions (Odoemelam, 2016). Moreover, IFRS is based on principles and focuses on minimizing the challenge of accounting alternatives to obtain real and fair profits in representing a company's economic performance (Barth, Landsman, & Lang, 2008). On the one side, accountants and company executives have been accused of withholding significant information that could influence the economic decisions of investors and other members of society.

Financial manipulation of data negates the goal of transparency for investors who rely on accurate accounting information to evaluate a company's financial performance and other factors. On the other hand, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) have been reprimanded for their lack of standards (Pelger, 2016). Other writers have linked all of these issues to corporate governance failures, economic instability, and financial crises (Norwani, Mohamad, & Tamby, 2011). In recognition of the inherent problems related to the disclosure of significant information in financial statements, the International Accounting Standards Board (IASB) has continued to develop several IFRSs that aim to improve the information quality contained in entities' published accounts and make their financial statements (Santos, Ponte, & Mapurunga, 2013); (Ofoegbu & Okaro, 2014). More specifically, FASB and IASB have sustained to work on projects aimed at improving the decision-making utility of reports of financial instrument for users of financial statements (Whittington, 2005) (Hassan, 2015).

Financial manipulation of data defeats the purpose of transparency to investors, who rely on accurate accounting information to assess a company's financial performance and other factors. The International Accounting Standards Board (IASB) and the Financial Accounting Standard Board (FASB), on the other hand, have been chastised for their lack of standards (Pelger, 2016). Other writers have linked all of these issues to corporate governance failures, economic instability, and financial crises (Norwani, Mohamad, & Tamby, 2011); (Qiong, 2010). In recognition of the inherent problems associated with the



disclosure of critical information in financial statements, the International Accounting Standards Board (IASB) has continued to develop several IFRS aimed at improving the quality of information contained in published accounts of entities and making their financial statements comparable (Ofoegbu & Okaro, 2014); (Santos, Ponte, & Mapurunga, 2013). More specifically, the IASB and FASB have continued to work on projects aimed at improving the decision utility of financial instrument reporting for financial statement users (Hassan, 2015); (Whittington, 2005).

### **2.5. The relationship between CSR and IFRS**

Financial statements equipped in line with IFRSs give information to many users. They do, however, primarily address the information demands of financial players, particularly current and lenders, creditors, and potential investors (van der Laan Smith, 2009). Full IFRS adoption, (Leone, 2009)(as referenced in (van der Laan Smith, Gouldman, & Tondkar, 2014), necessitates almost fore thousand financial disclosures, although it does not openly urge any environmental or social disclosures. Despite this, recent research has found that the shift in the mandated financial disclosure environment is putting additional pressure on companies to report more corporate social information. The general growth in corporate social disclosures over time has created pressure for more social disclosures (J., 2009). (KPMG., 2018) 95% of the 250 largest firms issued business social disclosures, up to 35% in 1999. As a result, it is sensible to imagine that IFRS convergence, as a result of its impact on the current disclosure environment, will boost CSR reporting. Furthermore, due to the increased emphasis paid to CSR disclosure, such a rise in CSR reporting subsequent IFRS convergence can be more evident.

(Avwokeni, 2016a); (Lee M. T., 2016) research' outcomes help us comprehend the relationship between mandated financial disclosure and voluntary disclosures including social and environmental declarations. In the literature, there are two points of view on the relationship between mandated and voluntary disclosure. One school of thought contends that mandated disclosure could be a viable alternative to voluntary disclosure (Bagnoli & Watts, Financial reporting and supplemental voluntary disclosures. , 2007). As a result, if obligatory disclosure is increased, voluntary disclosure may be reduced. According to (Li & Yang, 2016), the improvement in quality of earnings following the adoption of the IFRS reduces asset value uncertainty, reducing the demand for volunteer disclosure. Furthermore, they claimed that the adoption of the IFRSs would have little influence on voluntary disclosure in nations with code law, anywhere the framework of institutional is more oriented toward stakeholders.

Another line of research indicates that mandatory disclosure rules and regs, including the adoption of IFRS, may raise the voluntary disclosure level (Avwokeni, 2016a); ; (Li & Yang, 2016); (Bruslerie & Gabteni, 2010); (van der Laan Smith, Gouldman, & Tondkar, 2014); (Marzagão & Carvalho, 2016). Thus, these investigations uncovered a number of avenues via which IFRS adoption could increase voluntary disclosures, comprising environmental and social data. Firstly, the introduction of the IFRSs is linked to a rise in foreign investment (ovrig, Defond, & Hung, 2007), which raises request for information of voluntary (Ajinkya, Bhojraj, & Sengupta, 2005). Furthermore, a rise in foreign ownership, particularly among investors from countries with strong environmental and social commitments, could have an incremental impact on companies' social and environmental performance (Dyck, Lins, Roth, Wagner, & Evidence, 2018). As a result of the increased push from international institutional investors for greater openness and disclosure as a result of IFRS convergence, companies adopting the Ind ASs, where converge considerably with IFRSs, are likely to raise their CSR disclosure.

Moreover, past research has linked the implementation of the International Financial Reporting Standards (IFRSs) to rise in analyst coverage (Tan, Wang, & Welker, 2011). As well as, a main consumer of financial data, the expansion of analyst coverage can create demand for other public disclosure (Cotter, Tuna, Wysocki, & Callen, 2006). Security analysts are increasingly paying attention to corporate social information and incorporating it in security appraisal (Luo, Wang, Raithel, & Zheng, 2015). As a result, if analyst demand for other public disclosure changes as a result of IFRS convergence, companies' voluntary disclosure incentives may shift, increasing CSR disclosure.

Furthermore, adopting or converting to the IFRSs can boost a company's visibility, particularly for large companies, and depiction them to political risks (Bruslerie & Gabteni, 2010). Moreover, positive accounting theory, implies that politically prominent businesses are more likely to reveal social data in order to avoid public and political scrutiny (Milne, 2002). As a result of the increased visibility that comes with IFRS convergence, as well as the potential political consequences, corporations may be compelled to publish additional voluntary information, including social information, as a remedial measure. Bruslerie and Gabteni (2010) used these arguments to show that once the IFRSs were made mandatory in France, voluntary disclosure rose. Furthermore, due to the complementing effect of required and voluntary disclosure, the disclosure of social and environmental information may grow following IFRS convergence. Companies may disclose additional voluntary information in certain circumstances (Bruslerie & Gabteni, 2010), according to (Dye, 1985), to increase the dependability of obligatory information. Moreover, a number of interpretations and IFRSs are tied to environmental and employee issues in some way.

(Li & Yang, 2016) on the other hand, identified many ways in which IFRS adoption could increase voluntary disclosure. They stated that companies that embrace the IFRSs, which are principle-based accounting standards, might face increased lawsuit risk, resulting in more voluntary disclosure. Additional potential avenue they mentioned is the enhanced financial reporting quality following the application of the IFRS, which can include more voluntary disclosure to assist investors in making timely judgments (Li & Yang, 2016). CSR disclosure appears to benefit from companies' efforts to deliver high-quality financial reporting. For example, (Martínez-Ferrero, Garcia-Sanchez, & Cuadrado-Ballesteros, 2013) discovered a correlation between high-quality financial data and CSR data. (Chen, Srinidhi, Tsang, & Yu, 2016) also stated that a company's dedication to high-quality financial reporting could lead to the publication of CSR reports. Finally, rising peer pressure following the implementation of the IFRS could lead to more voluntary disclosure. Applying a unified set of financial reporting standards across enterprises and countries can boost peer pressure and, as a result, increase voluntary disclosure (Li & Yang, 2016).

More crucially, the attitude of a country toward shareholders' vs non-shareholding stakeholders may influence whether or not voluntary disclosure increases or decreases (van der Laan Smith, Gouldman, & Tondkar, 2014); (Li & Yang, 2016). According to countries with a strong shareholder focus and domestic accounting standards that are comparable to the IFRSs can have the same amount of mandated disclosure as the IFRSs. Following the adoption of the IFRS, corporate managers in these nations would not experience a greater urgency linked with shareholding stakeholders.

### **3. Conclusion**

Numerous studies have established that the adoption of IFRS has often improved the information quality offered to many users through providing highly relevant, reliable and understandable information, as well as allowing companies' accounting data to be compared to that of other companies for various periods. Convergence to IFRS is critical to promoting economic integration and stability in the world, as well as encouraging investors to invest



outside of their home nations where financial information is acceptable, trustworthy, timely, and comparable. As a result, IFRS adoption may increase a company's capacity to get external funding and boost investor confidence in the capital market.

The adoption of the IFRS has been linked to a number of advantages in the literature. Financial reports made according to IFRS are usually considered as being more complete than those generated according to standards of local accounting and provide important information to corporate decision makers. As well as, it improves comparability and openness, as well as the quality of reporting and accounting systems, all of which help to promote economic growth. The IFRS application is beneficial since it reduces the cost and time required to establish current local standards, increases stock market productivity, and ensures more effective and easy-to-read financial statements. Local cultural, political, and economic constraints, on the other hand, may make harmonization extremely difficult.

Despite the fact that there are limited studies related to the impact of IFRS on CSR reporting in corporate, various studies have looked into the impact of corporate disclosure necessities on volunteer disclosure. These research' findings help us comprehend the link between mandated financial disclosure and voluntary disclosures including social and environmental declarations. In the literature, there are two viewpoints on the relationship between mandated and voluntary disclosure. Mandatory disclosure, according to one school of thought, could be a good substitute for voluntary disclosure. As a result, if obligatory disclosure is increased, voluntary disclosure may be reduced. According to the researchers, as earnings quality improves as a result of IFRS adoption, the value of assets becomes less uncertain, reducing the requirement for voluntary disclosure. Furthermore, they claimed that the adoption of IFRS in companies for all financial reporting will have little impact on voluntary disclosure in countries with a code of law, because the institutional framework is more stakeholder-oriented.

The association between the crash risk and CSR in the emerging market is investigated in this study. This is the first study that we are aware of that looks into the influence of CSR and IFRS on crash risk in emerging markets. The following are the results of this research: (1) CSR companies agree to stricter financial reporting transparency standards, resulting in less bad news hoarding. (2) More crucially, CSR has a greater impact on reducing the probability of a crash in companies with poor corporate governance. (3) When corporate governance is robust, CSR appears to have no impact on future collapse risk. (4) In the stock market, share price bubbles, firm expansion, and firm size all have favorable effects on crash risk. (5) For Taiwanese companies with strong corporate governance, return on assets is considerably and related to future risk of crash. In the context of these results, the researcher recommends the need to focus on and adopt the concept of CSR and IFRS in the financial market, in addition to the need to conduct more research and analytical and empirical studies regarding the relationship of CSR with IFRS.

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## The English Judicial Trends in Lifting the Corporate Veil

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### Abstract

The “separate legal personality” and “limited liability” are two main and fundamental principles of corporate law. The concept of a separate legal personality of the company originated from the case *Salomon v Salomon & Co Ltd*. The landmark case decided that when a company is registered, it attains a separate legal identity. A corporate veil is a concept that recognizes the separate corporate personality of the company from the shareholders’ personalities. In many circumstances, it happens that the corporate personality of the company commits fraud or any other illegal acts. It becomes impossible to believe that an artificial personality like a company commits any illegal act or fraud. In such cases, for the identification of the original wrongdoer, the veil of the corporation is pierced which is also called lifting the corporate veil. To highlight the English Courts' trends in lifting the corporate veil, this article unearths the canons of English courts' judgments to pinpoint the inconsistencies in their decisions. The paper inspects the exceptions to the Saloman rule that have been focused on and meticulously analysed in this research paper to highlight the evolution of these recognised exceptions including “Single Economic Entity, Fraud, and Facade, Sake of justice, and Agency.”

**Keywords:** Lifting the Corporate Veil; Separate Legal Personality; Limited Liability; Single Economic Unit; Fraud and Facade; Sake of Justice; Agency

### 1. Introduction

Lifting the corporate veil is a situation in which the courts have the power to ignore the distinction between the company’s personality and its members. Hence, the “veil of incorporation” is said to be lifted. Usually, the English courts use various terms for this process like “peeping, penetrating, piercing, lifting, or parting the veil of incorporation.” There are various circumstances in which the courts lift the corporate veil more specific among other circumstances is straightforward involvement of the shareholders' limitation of liability matters. Moreover, several of the circumstances involve corporate group structures. After the perusal of English courts’ jurisprudence, this piece is an endeavor to describe the concept and scope of lifting the corporate veil and highlights the aftermaths of the landmark *Salomon v Salomon*. Moreover, separate legal personality and limited liability principles have been critically scrutinised in order to pinpoint how the doctrine of lifting the corporate veil has been loosely, broadly, and inconsistently applied by English courts. Many issues related to misuse and exploitation of the companies to defraud the creditors have demanded the establishment of certain exceptions to the (*Salomon, 1897*) rule. Consequently, the English courts recognised this concern and delineated circumstances in which it became easy to lift the corporate veil to hold the exact culprits of fraud liable. To this end, this piece scrutinises the exceptions to lifting the corporate veil doctrine and provides a brief critical account of exceptions like “Single Economic Entity, Fraud, and Facade, Sake of justice, and Agency.”

### 2. Lifting the Corporate Veil Doctrine

Aftermaths of the *Salomon v Salomon* made it clear that the inflexible application of



separate legal personality doctrine in all the cases might promote injustice to the company's shareholders and creditors. That is why; the English courts endeavored to draw some exceptions to the doctrine of separate legal personality. The main purpose of seeking these exceptions was to lessen the effect of the strict application of the separate legal personality rule and to abrogate the rigid nature of the veil of incorporation. However, it is unbelievable after such a struggle of the English courts, there is still the existence of confusion in deciding under what circumstances the veil of a corporation can be pierced by the courts. The main issue that can be observed is that the English courts used to use divergent approaches while dealing with veil-lifting cases. It can also be observed that the English courts' jurisprudence on lifting the corporate veil is highly inconsistent. Veil-lifting seems to occur freakishly. Moreover, it is rare and unprincipled. This segment will critically scrutinise the English courts' jurisprudence evolved on lifting the corporate veil.

There is a need to inspect whether lifting the corporate veil is "peeping or looking behind the veil" and "ignoring or piercing it." The earlier phrase clearly infers about the examination of the shareholders' position and identity for the lawful purpose. On the contrary, the latter expression is "reserved for treating the rights and liabilities or activities of a company as the rights or liabilities or activities of its shareholders." Consequently, it was decided by the court that it is acceptable to "peep behind the veil" with a purpose. The purpose should be the determination of the company's legal character. This examination of such legal character will help determine and look at the individuals that are controlling and directing the company and hiding them behind the corporate veil. *Atlas Maritime v Avalon Maritime* can be cited in this regard. (*Daimler*, 1916) was instituted during the era of the First World War. In this case, the court determined the legal character of the company based on whether or not it was run by an enemy, which means the determination of the company's enemy character was based on the shareholders' nationality. In the views of the court, the company is incompetent of being loyal or hostile.

### **3. Exceptions to the Lifting the Corporate Veil Doctrine**

This segment of the article will critically examine the several exceptions that have been evolved by the English courts. This segment will investigate the invasive technique utilised for lifting the corporate veil. The exceptions that are discussed in this segment are enlisted as follows:

- Single Economic Entity
- Fraud
- Sake of Justice
- Agency

#### **3.1 Single Economic Entity**

The single economic entity is an expression used by the English courts for a holding company and its subsidiary or subsidiaries. Hence, this expression elucidates that the whole group of companies will be considered as a single unit and the liabilities and rights of every single company will be assigned to the whole group of companies. The English court considered that it is too technical to deliberate that the holding company and its subsidiary or subsidiaries are entirely distinct. The court further stated that the court of law must consider "the realities of this situation." (*Holdsworth*, 1955). can be cited. However, the court remained unsuccessful in describing when such a view of the court will be relevant or pertinent. Additionally, the scope of this verdict was limited to directors' duties.

The grounds of (Holdsworth, 1955) were sustained in the case *Littlewoods Mail v IRC*, Lord Denning stated that it is impossible to consider the holding company and its subsidiaries or subsidiaries distinct units. Lord Denning considered that the subsidiary is a puppet of the holding company. Kaminski LJ agreed with (Holdsworth, 1955) view of considering “the realities of this situation.” However, the court could rely on the legal position of companies as their separate entity rather than their factual position.

Lord Denning stated that when the subsidiaries are completely owned and are economically dependent on their holding company, in such circumstances they all will be considered as a single unit. The court stated that the technical defence of separate legal personality cannot defeat it. (Distributors, 1976) can be cited in this context. However, the court superficially and unconstructively declined the “separate legal personality” as a technical defence.

The court in (Woolfson, 1978) was doubtful whether the court in *DHN Food* had reasonably followed the principle that recognized a deviation from the landmark *Salomon* but only in extraordinary situations. However, (Adams, 1990) categorically described that no court of law can entertain the power or discretion of dismissing the difference between “members of the group as a technical point.” *Tokyo v Karoon* held that the court discusses and deals with the law rather than economics. Consequently, it is submitted that the court should encourage the application of law rather than the economic realities. Moreover, the concept of the single economic entity was highly criticised in (Ord, 1998), the court stated that a “single economic entity” is illogical and drastically inconsistent with *Salomon*. The single economic entity also derogates the basic concept of limited liability.

### 3.2 Facade and Fraud

The well-known and the most obvious ground for lifting the corporate veil is that the corporate is a fraud or facade. The veil has been ignored and there has been concealment of facts and figures. When the company has been utilised without bona fide intent and has been used for avoidance of any contractual liabilities then there are higher chances of lifting the veil of the company. (Jones, 1962) and (Motor, 1933). *Ltd v Horne*. There is no precise, concise and reasonable definition of the term facade as well as it has been sparsely defined in (Adams, 1990). The broader explanation of facade includes ways or methods of avoiding liability.

(Tunstall, 1962) describes that the veil of the company can be lifted in cases where the facade has been proven. This ruling was accepted in various other cases without giving any further explanation. (Woolfson, 1978) can be cited. The court in *Adams* stated that the existing liabilities can be avoided by using the facade. However, a facade helps in avoiding the existing obligations but it is not helpful to evade future obligations or liabilities. The subsidiary will never be facade on the ground that it is undercapitalised or entirely owned. This decision of *Re Polly Peck* is inconsistent with the verdict of *Re FG Films*.

(Trustor, 2002) has evolved more explanation about the exception of the facade. The court described that facade will not be constituted on the mere ground of impropriety. However, impropriety will constitute a facade if it is concealed by misapplication and misuse of corporate structure. This seminal verdict has drawn a difference between impropriety done by the company and impropriety done by shareholders. But in both cases, impropriety has been concealed by using the company with no bona fide intention.

Now there is a need to describe how the motive is relevant to the facade. *Adams* says it is extremely substantial in reaching a verdict. However, *Adams* remains unsuccessful in describing how it is a prerequisite for the constitution of a facade and what kind of a motive



is required for constituting a facade. This was explained in (Ord, 1998), where the court stated that a facade will not be constituted if any transaction is made or done in the ordinary course of business, lacking an intent to defraud the creditors. Though, this statement made in *Ord* is not satisfactory. As in the case of the transformation of assets within the group companies, in such circumstances, the creditors' interests are usually prejudiced. To this end, the business prudence defence must be raised to vanquish a case of the facade.

(Creasey, 1992) is highly criticised. This case deals with the transformation of the informal asset into an existing associated corporation. An issue arose whether the application of facade is only possible in case when the corporation was made with a mala fide intent and fraudulent purpose. The Court of Appeal dismissed the case due to a lack of evidence for the happening of the facade transaction. (Hashem, 2009) stated that it is necessary to discern the presence of liability concerning the fraudulent use of the corporation. Consequently, a facade might be constituted even though the existence of the subsidiary before the arising of an obligation or liability. The court had also described the essentials leading with the exception of the facade as:

“In the first place, ownership and control of a company are not of themselves sufficient to justify piercing the veil. This is, of course, the very essence of the principle in (Salomon, 1897). Secondly, the court cannot pierce the corporate veil, even where there is no unconnected third party involved, merely because it is thought to be necessary in the interests of justice. Thirdly, the corporate veil can be pierced only if there is some ‘impropriety’: Fourthly, the court cannot, on the other hand, pierce the corporate veil merely because the company is involved in some impropriety. The impropriety must be linked to the use of the company structure to avoid or conceal liability. Fifthly, it follows from all this that if the court is to pierce the veil it is necessary to show both control of the company by the wrongdoer(s) and impropriety, that is, (mis)use of the company by them as a device or facade to conceal their wrongdoing. Finally, and flowing from all this, a company can be a facade even though it was not originally incorporated with any deceptive intent. The question is whether it is being used as a facade at the time of the relevant transaction(s). And the court will pierce the veil only so far as is necessary to provide a remedy for the particular wrong which those controlling the company have done. In other words, the fact that the court pierces the veil for one purpose does not mean that it will necessarily be pierced for all purposes.”

This is a well-celebrated decision as it only describes the fundamentals leading to the exception of the facade but also efficiently resolves the quagmire of (Creasey, 1992). The cases that are discussed have great ramifications in the applicability of the exception of fraud, more specifically, in the group companies.

### **3.3 Sake of Justice**

Generally, while lifting the corporate veil, an extraordinary ground is made that is in the interest of justice or for the sake of justice. This ground is criticised. It was held in (A, 1985) that the court will lift the corporate veil in the cases where justice requires the same. The court further stated that the courts will never regard the lawful effectiveness of the



structure of the corporation under consideration. Such type of grounds provides the support to unrestricted and unlimited utilisation of judicial discretion. An individual should validate the unjust situation to the court rather than encouraging that the situation is illegal. Otherwise, the legal corporate structure is presumed to be illegal when it is causing unjust results. This does not rest well and is inconsistent with (*Salomon, 1897*)*n*, in this case, despite the prima facie unjust result; the court held the separate legal personality of the company, as corporate form use was legal. The court in *Adams* held that the court should not deviate from the landmark ruling of *Salomon* on mere ground and consideration of justice.

There are various cases in which the justice exception was encouraged and the courts dismissed the ruling of (*Adams, 1990*). For example, the court in (*Creasey, 1992*) declined the applicability of the exception of fraud and stated that *Adams* did not restrict the scope of justice developed in the case (*A, 1985*). The court lifted the corporate veil on the justice exception. This verdict was inconsistent with (*Jones, 1962*) and (*Motor, 1933*) as it had factual resemblances with both of these cases.

However, (*Re, 1996*) validated the *Adams* principle. Moreover, this principle was also affirmed in (*Line, 1998*) *Investment*. Both cases criticised *Creasey* for not following the *Adams* ruling. However, the judgments of these cases were limited and they remained unsuccessful in resolving the issue between (*Creasey, 1992*) and (*Adams, 1990*). At last, the conflict between (*Creasey, 1992*) and (*Adams, 1990*) was resolved in (*Ord, 1998*). *Creasey's* decision was criticised and the court after comparing both points of view stated that (*Creasey, 1992*) wrongly pierced the corporate veil. (*Tunstall, 1962*)*v* *Smallbone* authenticated the decision of (*Ord, 1998*). The approach of dismissing the exception of justice was objective as it did not sit well with *Salomon's* verdict. Additionally, broadening the scope of discretion in the veil-lifting case will develop uncertainties.

### 3.4 Agency

Generally, for lifting the veil of corporate in cases of group companies, generally the English courts elucidate the association of the principal and agent. Jurisprudential illogicality can be generated in the circumstances when the court of law on one side considers the separate legal personality of the company as well as the court encourages the separate existence of such corporation and the court also supports the search for an agent for the company as well. While on the other hand, in the imposition of liability the court changes its attitude and considers the agent liable for the acts of the company. That is why; the agency is considered another ground or way for lifting the veil of the corporation. In contrast with the facade, the agency approach is also utilized to impose liability on the parent company for the subsidiaries' actions.

(*Salomon, 1897*) held that although a corporation does its businesses and transactions in the name of shareholders, however, this proposition will never infer that the company is an agent of the shareholders. This was concluded by Lord Herschell. A query arises about whether or not a company can act as an agent of shareholders. Prima facie and logically, the company enjoys the status of a separate legal personality as well as is a "juristic person." Hence, the company is independent and there is no impediment or illegality if the company enters into any agency contract under its name. (*Kodak, 1903*) had authenticated this logic. The case held that the company is competent to be an agent of its parent company. (*Gramophone, 1908*) can be cited in this regard. This decision also gives rise to various questions as the verdict was incomprehensive and did not give answers to various questions including what would be the factors that will assist in finding the presence of agency between the subsidiary and its parents.



(Smith & Knight, 1939) tried to resolve the question and recognised the six features that can help in determining who was actually carrying the business. The Atkinson J summarised these six points as:

“The 6 points deemed relevant for the determination of the question: Who was really carrying on the business? In all the cases, the question was whether the company could be taxed in respect of all the profits made by some other company, a subsidiary company, being carried on elsewhere. The first point was: Were the profits treated as the profits of the company? When I say ‘the company’ I mean the parent company. Secondly, were the persons conducting the business appointed by the parent company? Thirdly, was the company the head and the brain of the trading venture? Fourthly, did the company govern the adventure decide what should be done and what capital should be embarked on the venture? Fifthly, did the company make the profits by its skill and direction? Sixthly, was the company in effectual and constant control?”

However, it can be observed that these six points are pinpointing the functional control of the business. It can also be seen that features four to six are overlapping each other. Moreover, these points are establishing the agency test into one as a simple control. General tests of common law such as the capability of binding the representation and the principle are relinquished. They are declined or omitted in regard to the “putative principal’s control over his agent.” (Tyre & Rubber, 1957) lessened the bar by inferring an agency rather than managerial independence.

In (Maritime, 1991), it held by the court that “to hold that a wholly-owned subsidiary was rendered an agent merely because it was closely controlled would be to propound a revolutionary doctrine, and refused to so.” In (Adams, 1990), the court of law stated that it is impossible to attribute agency, in a case where the subsidiary is incompetent of having the authority to be bound by its parent company. Moreover, the agency would not be imputed in the case when the subsidiary remained unsuccessful in representing itself as an agent of its parent. The agency is formally more inaccessible, in cases “*where the formal corporate forms concerning the subsidiary had been observed.*” These aforementioned circumstances and cases had indirectly moved away from the “*ownership and control standard*” toward the common law agency test.

(Line, 1998) had authenticated the above verdicts. (Line, 1998) stated that the canon evolved in the (Smith & Knight, 1939) case was very broad. The court in (Line, 1998) held that besides ownership and control, the compulsory prerequisite is intended to create agency. The court further stated that the intent to create an agency suggests that the subsidiary intention was basically the opposite. This verdict was a watershed in agency law that is applied to the veil of a corporate body. This verdict established an intention test. Along with it, this decision had developed an assumption against the agency, particularly in the group companies’ cases. It is submitted that agency test for lifting the veil of the corporation would not regard the *Smith Stone and Knight v. Birmingham DC*, as well as much burden, will be placed on the claimant that will make it hard to prove.

#### 4. Conclusion

The English courts' jurisprudence evinces that the lifting of the corporate veil had been continuously evolving as demonstrated by the evolution of exceptions to the separate legal personality principle originating from the (Salomon, 1897). However, this doctrine had left a

minute scope and extent for reliability, precision, and stability. It is evident from (Tunstall, 1962) and (Woolfson, 1978), that the English courts dismissed the veil-lifting although the company was asking to lift the veil. On the contrary, the courts in (DHN, 1976) and (Holdsworth, 1955) had accepted the extension of the veil to be pierced. Hence, the English courts' trends regarding lifting the corporate veil are evolving, vague, imprecise, inconsistent, and sometimes contradictory. It is necessary to note that the English courts demonstrated encouraging signs and tried to achieve a degree of certainty while dealing with the cases of two enduring propositions that are agency and facade and English courts have settled these cases reasonably. It is necessary to acknowledge the recommended test of an agency that can assist in protecting the corporate structure.

Undoubtedly the separate legal personality doctrine is fundamental. It is a check that discourages the misuse of the legal personality of the company. And this doctrine has a great significance for corporate groups. To this end, it is necessary to apply this doctrine carefully and uphold it for regulatory protection of the legal personality of the company. Due to emerging economic transactions in the world, the significance of these doctrines will also increase in the development and evolution of corporate law.

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## **The Repercussions of the Donbass Crisis on Foreign Investment in Lugansk, Ukraine**

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### **Abstract:**

Luhansk region is one of the biggest industrial regions in Ukraine and has considerable economic potential, which attracts attention of foreign enterprises. Foreign economic activity of the region is realized both at the level of the region and at the level of individual enterprises. This work aims to shed light on the Donbas crisis and the reasons behind the recent disquieting developments. The research divided the beginning of the concept of the economic crisis and the repercussions of the Donbas, specifically the city of Luhansk, eastern Ukraine, before and after the crisis.

**Keywords:** Economic crisis, foreign investment, Lugansk, Ukraine

Jel Classification Codes : : F21, F43, C23, O47.

### **I. Introduction**

Economic problems have marked the recent history of eastern Ukraine. The region entered a phase of prolonged economic depression and structural problems in the early 1990s and was only just starting to recover from the fallout of the 2008 financial crisis when the armed conflict broke out in Spring 2014. Luhansk region had been one of the five most powerful industrial regions of Ukraine. Unfortunately, due to the partial annexation by the Russian Federation of Luhansk region, the traditional industrial relations have been broken down, and the regional investment climate has considerably deteriorated. However, powerful enterprises are continuing to manufacture competitive products in the Ukrainian government-controlled area. The regional authorities are putting significant efforts to support businesses: there are a programme for small and medium-sized enterprises, an ongoing dialogue with the management of large industrial enterprises, new approaches being applied to investment and image policies by the Regional State Administration, and the established Agricultural Producers' Association of Luhansk region. The priority investment directions for Luhansk region are to develop the agro-industrial complex, set up logistics centres and industrial parks, implement projects in the field of environmentally sound and energyefficient technologies, roll out alternative and renewable power generation as well as develop mining, chemical, pharmaceutical and machine-building industries.

### **The objective of the paper.**

The objective of this paper is to analyze foreign investment in Luhansk region Before and after the Donbas crisis as one of the most developed industrial regions in Ukraine.



### **Previous studies**

- ✓ **Cost of conflict: The consequences of war in Donbas, Ukraine (Artem Kochnev and Marica Valente,2021)**

War does not end with the last bullet unloaded or papers signed. Wars continue years after peace but in different ways: demining minefields, prosecuting criminals, fighting discrimination of minorities, and steering wartime narratives. Unfortunately, the longer a conflict goes on, the harder it is to achieve peace. Conflicts fragment societies by aggravating existing tensions among social groups and creating new ones. Understanding these harmful consequences is, therefore, a prerequisite for a realistic strategy of conflict resolution. This report provides an overview of the consequences (or ‘costs’) of the war in Donbas, Ukraine. It offers a concise overview of the key historical and economic developments surrounding the war. At times, the report sacrifices some depth of analysis, but only to achieve clarity of the main message, which has two points. First, the main costs in the region arise because of a policy driven humanitarian crisis. Despite being a highly militarized area, Donbas is no longer an area of active, large-scale military engagement. Donbas today is an area of a large-scale protracted humanitarian crisis affecting five million people. This crisis is, however, by far and large, a consequence of restrictive state policies imposed onto the separatist controlled areas. These policies, designed in the early days of the conflict to undermine pro-Russian sentiment in the region in the separatist-controlled areas, achieved little success but ruined economic connectivity of the region and forced involuntary pendulum migration of Ukrainian citizens from the separatist-controlled areas to mainland Ukraine, and back. Second, Ukrainian society is still polarized on critical issues. Prior to the war, the split was pronounced around the perspective of greater economic and political integration (EU or Russia). These days, however, the division line is most pronounced around a future peace deal: how should Ukraine restore Donbas, if at all?

- ✓ **An Assessment of the Donbas Region of Ukraine Strategic and Operational Recommendations for USAID’s Country Development Cooperation Strategy 2017-2022 (Ray Salvatore Jennings, Benjamin Long, Jacob Morrin, Oksana Grechko,2017)**

The purpose of this assessment is to explore the opportunities and constraints to early recovery and development assistance in the Donbas region of Ukraine. In the context of this analysis, the “Donbas” is defined as the entire territory of Donetsk and Luhansk oblasts, inclusive of Government-controlled and separatist-held areas. As part of USAID’s Country Development Cooperation Strategy (CDCS) for Ukraine 2017-2022, the mission seeks to understand the recovery and development needs in this region, beyond present commitments of humanitarian assistance. Moreover, the assessment will examine USAID’s comparative advantage in addressing the future needs of the region. The assessment team focused on answering two fundamental questions:

- Are there distinguishing features of the Donbas that require specialized and targeted programming; or can uniform national-level programming adequately address conditions in the region?

- How should USAID approach the transition between humanitarian assistance in the Donbas and longer-term development efforts and what are the critical recovery and development challenges in the fields of economic revitalization, governance, social cohesion, access to information, and infrastructure?

## **2. Theoretical and analytical framework for the assessment of ukraine's investment policy rame work: an over view**

The demise of the Soviet Union and the emergence of Ukraine as an independent state in late 1991 resulted in a dramatic transformation of Ukraine's foreign investment climate. Like most of the former USSR republics, Ukraine is now engaged in an ongoing transition from a centrally planned state to an open society and market economy. Faced with the task of establishing a comprehensive new legal, political, and economic system, Ukraine began this transition by making sweeping changes to its legislation: a new relatively liberal foreign investment law is now in force, a vast privatization program has been set in place, and a host of new commercial laws, in such areas as banking, trade, and tax, have been passed. Foreign investors may now invest, on the basis of these new laws, in numerous areas of the Ukrainian economy and may do so through a variety of forms including wholly owned subsidiaries, joint stock companies, and partnerships. In the authors' experience, however, the rules on the books in Ukraine are not always applied in practice as might be expected. Ukraine's transition to a market economy has to date been marked by significant declines in production levels, rampant inflation, and mixed support from the Ukrainian people on the direction

and pace of market reform. a. Liberalization of Scope of Foreign Investments Foreign investors may carry out a wide range of foreign investments: they may acquire all or part of the shares or interest in an existing Ukrainian enterprise; create new jointly owned or wholly foreign-owned enterprises; open a branch or representative office; acquire property; enter into production or cooperation arrangements; acquire limited rights in natural resources; and, more generally, make investments in any other forms of investment not prohibited by Ukrainian law. 9

### **2.1 The Legal Regime**

Since the beginning of 1991, and particularly since it became an independent state,( Ukraine declared its independence, 1991,) Ukraine has enacted a wide range of laws that either directly regulate or are relevant to foreign investment projects and commercial transactions. Although Ukraine continues to rely in certain limited cases on laws of the former USSR,( wo laws were adopted on, 1991), most relevant laws today are Ukrainian.

#### **2.1.1 The Ukrainian Foreign Investment Law**

The Ukrainian law "On Foreign Investments" (the Foreign Investment Law), promulgated on March 11, 1992, (Ukraine Law on Foreign Investments,1992), sets forth the general principles of the legal regime applicable to foreign investments, provides a number of significant tax incentives, streamlines the registration process, and codifies a number of standard principles of international law. The Foreign Investment Law applies to foreign investors and enterprises with foreign investment. Foreign investors are defined as foreign legal entities, nonresident physical persons, foreign states, and international organizations. An

enterprise with foreign investment is defined as an enterprise where a foreign investor owns at least 20 percent of the authorized capital or a share averaging at least \$100,000 in U.S. dollars throughout a calendar year.

### **1. Liberalization of Scope of Foreign Investments Foreign investors may carry out a wide range of foreign Investment :**

They may acquire all or part of the shares or interest in an existing Ukrainian enterprise; create new jointly owned or wholly foreign-owned enterprises; open a branch or representative office; acquire property; enter into production or cooperation arrangements; acquire limited rights in natural resources; and, more generally, make investments in any other forms of investment not prohibited by Ukrainian law . The Foreign Investment Law also establishes a number of special privileges, rules, and guarantees applicable to foreign investments, as discussed below. Foreign investors are also expressly permitted to provide for arbitration outside of Ukraine to resolve investment disputes with their Ukrainian counterparts. In addition, the Foreign Investment Law contemplates the creation of additional privileges in "priority branches of the national economy and social sphere pursuant to state programs for encouragement of foreign investments." Foreign investors considering projects in key sectors (such as agriculture, transportation, medicine, or defense conversion) should seek prior governmental approval of advantageous tax and other favorable terms for their projects.

### **2. Incentives for Creation of Enterprises**

with Foreign Investment the Foreign Investment Law contains the following incentives for enterprises with foreign investment:

#### **▪ Customs Rules**

Among the incentives provided are the following: property imported into Ukraine as a contribution of a foreign investor to the authorized fund of an enterprise with foreign investment is exempt from customs duties and import taxes (if imported within the time limits prescribed under the Laws on Business Partnerships). Enterprises with foreign investment are also entitled, license-free, to export their own production (goods and services), as well as to import products (goods and services) for their own needs.

#### **▪ Tax Benefits**

The Foreign Investment Law grants significant tax benefits to new and existing enterprises with foreign investment. An important distinction is made between wholly foreign-owned subsidiaries and enterprises with Ukrainian capital. Enterprises with foreign investment with participation of Ukrainian capital enjoy the greatest advantages. These rules are summarized as follows.

### **1. Enterprises with Foreign Investment and Participation of Ukrainian Capital**

- If not in wholesale or retail trade, or intermediary activities, these enterprises are exempt from Ukrainian taxes for five years following the first receipt of profits and must pay only 50 percent of subsequent taxes.
- If in wholesale and retail trade, these enterprises are exempt from taxation for three years, while enterprises engaged in intermediary activity are exempt for two years. " Enterprises



in these categories must pay 70 percent of taxes imposed after their periods of exemption expire.

- Such enterprises that were created prior to March 12, 1992, also enjoy the above tax holidays.<sup>7</sup>
- All such enterprises are exempt from the Value Added Tax (VAT) (currently 28 percent on most items) for a period of five years following their registration.
- 2. Such enterprises operating in "top-priority branches of the national economy" or covered by legislation on "special (free) economic zones" may be granted additional tax privileges.<sup>1</sup>
- 3. **Enterprises with Foreign Investment and No Ukrainian Capital**

Such enterprises (wholly foreign-owned subsidiaries) do not enjoy the above tax holidays. They are, however, entitled to deduct from taxable income the total value of paid-in contributions to the enterprise's authorized capital, which are "converted to the currency effective" in Ukraine. A carryover into future years of this deduction is also permitted. Wholly foreign-owned subsidiaries, however, do not enjoy an exemption from the VAT.

#### **All Enterprises with Foreign Investment**

Certain tax rules apply to all enterprises with foreign investment (with or without Ukrainian capital). For all such enterprises, a 15 percent withholding tax is deducted on profits repatriated abroad, unless reduced under a bilateral tax treaty. 22 All such enterprises are also entitled to a tax deduction for reinvestment in a business in Ukraine.

#### ▪ **Foreign Investment Guarantees**

The Foreign Investment law also contains several "guarantees," intended to provide some degree of comfort to foreign investors. The law provides that:

1. rules in effect at the time of registration may be relied upon by the foreign investor for a period of ten years;
2. foreign investments are exempt from nationalization, except in emergency cases and only if there is "prompt, adequate, and effective" compensation, and foreign investors may repatriate profits, or reinvest them in Ukraine and earnings in foreign currency made by enterprises with foreign investment from the export of their products (goods and services) remain at the "complete disposal" of the enterprise. It is important

#### **2.2 What is an economic crisis? Definition and examples**

An economic crisis is a situation in which a country's economy deteriorates significantly. We also call it a real economic crisis. In most cases, a financial crisis is the cause of an economic crisis. During the crisis, GDP is typically declining, liquidity dries up, and property and stock market prices plummet. It is an economic downturn that gets worse and worse. GDP stands for Gross Domestic Product. GDP is the sum of everything a country produces over a specific period. Economic downturn refers to slowing GDP growth or GDP contraction. During a downturn, property prices fall, joblessness rises, borrowing falls, and companies invest less. When an economic crisis is devastating, there is a depression. When it is serious, but not as devastating, it is a recession. Recessions and depressions are similar. In both cases, the economy declines, and unemployment rises. However, a depression is more severe and usually longer-lasting. "A situation in which the economy of a country



experiences a sudden downturn brought on by a financial crisis.” “An economy facing an economic crisis will most likely experience a falling GDP, a drying up of liquidity and rising/falling prices due to inflation/deflation.” Economists say that a recession is a normal phase of the business cycle. If we can manage the downturn properly, however, we can prevent it from becoming an economic crisis or depression.

### **2.2.1 Economic crisis vs. financial crisis**

We often see the terms economic crisis and financial crisis in history books, newspapers, and business journals. Although the two terms have similar meanings, they are not the same. (businessDictionary.com)

#### **1. Financial crisis**

A financial crisis typically involves problems in the banking and finance sector. Banks, financial institutions, the currency market, and the capital markets, for example, are part of the banking and finance sector. If a country's major bank collapses, this is a financial crisis, especially if other banks also start crashing. It is also a financial crisis if a significant number of borrowers default on their debts (fail to pay back what they borrowed). If these problems continue, the problem will start influencing macroeconomic conditions. Macroeconomics refers to things that span the whole economy, such as GDP growth, unemployment, and inflation. A significant rise in interest rates is also a macroeconomic issue. A global financial crisis is a financial crisis that affects several countries simultaneously. During global financial crises, financial institutions lose faith. Subsequently, they stop lending to each other and traders stop purchasing financial instruments. Most lending eventually dries up, and businesses suffer considerably. The last global financial crisis occurred in 2007/8. We call it the 2008 Global Financial Crisis or 2008 Financial Crisis. (BusinessDictionary.com)

#### **2. Economic crisis**

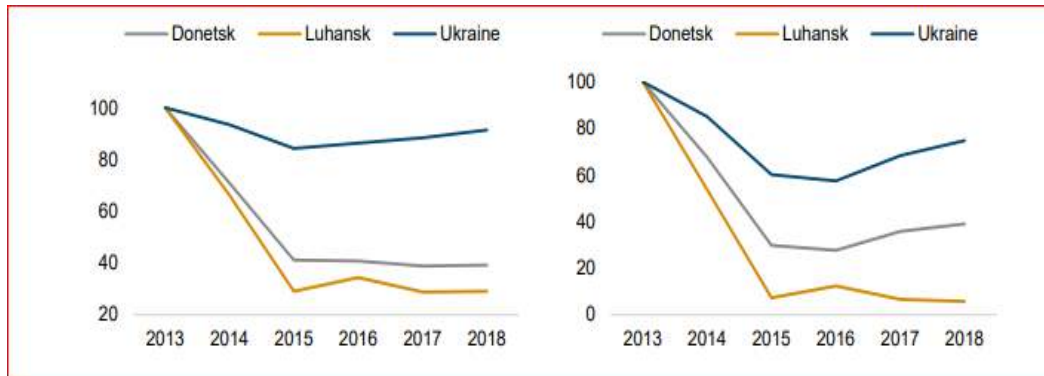
As mentioned above, if the financial crisis worsens and spreads, it will eventually affect macroeconomic conditions. When this happens, the financial crisis starts turning into an economic crisis. Unlike a financial crisis, which is limited to one sector, an economic crisis affects the whole economy. Unemployment rises, GDP stops growing or shrinks, and many other things go wrong. Put simply; if the authorities and those responsible do not address a financial crisis properly, it can turn into an economic crisis. (BusinessDictionary.com)

### **3. Donbass crisis on foreign investment in Lugansk, Ukraine**

#### **3.1 Impact Donbass crisis to growth of economics in Ukraine**

The armed conflict in Donbas has had a significant impact on the economy of the Ukraine. In 2014 and 2015, the Ukrainian economy contracted by 6.6% and 9.8%, respectively, with Donbas region undergoing even more severe economic decline. According to official statistics, in 2014 industrial production dropped by more than 40% in Luhansk, accounting for most of the 10% decline in Ukraine as a whole. Coal mining and the metals industry – both heavily concentrated in war-torn areas – were particularly hard hit: those industries dropped by 30% and 15%, respectively, while machine-building, whose main export market was Russia, also reported a strong decline (-20%). (State Statistics Service of Ukraine)

**Figure 2** Index of GDP growth, 2013=100 **Figure3** Index of goods exports, 2013=100



**Source:** State Statistics Service of Ukraine.

Exports to Russia, which used to account for a quarter of Ukraine's exports, plummeted by 35% in US dollar terms in 2014. Exports to the European Union increased by 12%, but that could not offset the decline in exports to Russia and the rest of the world. In 2015, the exports decrease continued, and over 2014-2015 the value of Ukraine's merchandise exports decreased cumulatively by about 40%. Yet export dynamics turned positive from 2017, as some exporters gradually reoriented themselves to different markets( State Statistics Service of Ukraine) .

### 3.2 Foreign investment in Lugansk

Luhansk, formerly Voroshilovgrad, Ukrainian Voroshilovhrad city, eastern Ukraine. It lies along the Luhan (Lugan) River at the latter's confluence with the Vilkhivka (Olkhovaya) River. The city dates from 1795, when a state iron foundry was established there to supply ordnance to the Black Sea fleet. Luhansk grew with the development of the Donets Coal Basin in the 1890s. The major branch of industry has been heavy engineering, dominated by a huge diesel-locomotive works. Steel tubes, coal-mining equipment, spare parts for motor vehicles, and precision instruments also have been made; coal has been mined in the city. There also have been food and timberworking industries. Luhansk has teacher-training, medical, agricultural, and machine-building institutes.( <https://www.britannica.com/>). Luhansk region has a sufficiently advanced industrial complex and potential for development of attractive proposals for investors. Priority areas for investment:

1. Development of agribusiness. Projects on processing of agricultural products and food production
2. Creation of logistics centres
3. Projects in the field of environmentally friendly and energy efficient technologies
4. Existent need to create enterprises to generate energy from alternative sources
5. Development of up-to-date technologies for extraction, processing and transportation of energy and other resources
6. Development of sectors such as extractive, chemical industry, machine-building, pharmacy and others

Before the military conflict, the region had been among the 5 most powerful industrial and economic regions of Ukraine, and its economy had been oriented towards the Russian Federation and the domestic demand of other industries. Luhansk region has preserved its

industrial capacity, in spite of some industrial facilities being located at the temporarily occupied territory. In the Ukrainian government-controlled area of Luhansk region, there are operational 489 industrial enterprises, comprising 48% of the total number of industrial enterprises before the hostilities. The main industrial enterprises are concentrated in the cities of Severodonetsk, Rubizhne, Lysychansk and Kreminna, constituting about half of the industrial production of the whole region. The industrial products are predominantly sold on the domestic market(europa.ua,2018).

### **3.3 The Foreign investment in Lugansk, Eastern Ukraine, Before The Donbas Crisis**

Luhansk region is one of the biggest industrial regions in Ukraine and has considerable economic potential, which attracts attention of foreign enterprises. Foreign economic activity of the region is realized both at the level of the region and at the level of individual enterprises. In the first case foreign economic activity of the region is directed towards establishment of the grounds of collaboration with the regions of other countries, creation of legal, trade and political mechanisms, which stimulate development and increase of efficiency of foreign economic connections of individual enterprises. For example, from the moment of proclamation of independence of Ukraine, Luhansk region authorities have signed 30 bilateral interregional agreements on trade-economic and cultural collaboration with different countries of the world (Transgranichnoye sotrudnichestvo Luhanskoy oblasti). This indicates the interest of foreign partners in social and economic development of Luhansk region enterprises. The rational foreign economic policy of Luhansk region authorities will contribute to the acceleration of scientific and technical progress, increase of concentration of production and efficiency of capital investments, increase of growth rates of individual enterprises' profit, which will influence the welfare of the society.

Foreign economic activity of an individual enterprise is a sphere of its economic activity, which is connected to the international production integration and co-operation, export and import of goods and services, foreign market entry, realization and receipt of foreign investments. Foreign economic activity is constituent of considerable quantity of Luhansk region enterprises. Luhansk region enterprises carry out import and export operations with partners from 117 countries of the world (Transgranichnoye sotrudnichestvo Luhanskoy oblasti) . Thus, in 2008 the export volume of Luhansk region enterprises was equal almost to 6361 million USD, and the import volume – 4462 million USD, which attests to the trade surplus.

The goods were exported by more than 220 enterprises in Luhansk region. The biggest export delivery volumes were carried out to Russian Federation - 26,4%, the United States of America - 10,5%, Turkey - 7,1%, Poland - 5,3%, Cyprus - 4,5%, Hungary - 4,1%, Italy - 3,9%, Virgin and British Island - 3,6%, United Arab Emirates - for 2,3%, and India - 2,3% [1]. The biggest import arrivals came from Russian Federation - 86,7%, United States of America - 2,2%, Germany - 1,5%, United Kingdom - 1,4%, China - 1,1% (Transgranichnoye sotrudnichestvo Luhanskoy oblasti) .To stimulate export by Luhansk region enterprises the Administration of Foreign Relations and Foreign Economic Activity of Regional State Administration developed the Plan of measures to stimulate export of the Luhansk region enterprises for 2009-2011 at the end of 2008 (Plan zahodiv shchodo stymulyuvannia eksportu

pidpryyemstvamy Luhanskoyi oblasti,2008). In particular, this Plan foresees creation and accompaniment of informative portal, which deals with export capacities of regional enterprises and questions related to realization of foreign economic activity, assistance of making an agreement on collaboration of enterprises-exporters and finance-credit establishments in the region, holding of information and consultation work in realization of export activity by enterprises of the region (including development and publication of information methodical materials regarding the conduct of foreign trade operations), organization of seminars dedicated to foreign economic activity, creation of information database on promotion of region's goods and services to the foreign markets, initiation of the development of a mechanism allowing to receive help from foreign, state and public organizations of Ukraine concerning defense of enterprises-exporters, etc ( Plan zahodiv shchodo stymulyuvannia eksportu pidpryyemstvamy Luhanskoyi oblasti,2008).

Besides the volumes of export and import of products, one of the indexes, which characterize foreign economic activity of enterprises, is index of volumes of foreign investments into the region and from the region. The volume of direct foreign investments of Luhansk region enterprises is presented in table 1.

**Table 1** Volume of direct foreign investments of Luhansk region enterprises (running total at the beginning of the year)

Year	Running total investments volume at the beginning of the year, million USD	
	Direct foreign investments into the region	Direct foreign investments from the region
1995	19,1	0,1
1996	22,9	0,6
1997	24,7	3
1998	27,9	4,5
1999	28,2	2,6
2000	28,3	2,4
2001	31,4	2,1
2002	39,3	2
2003	51,6	2,1
2004	57,5	2,3
2005	146,3	2,6
2006	268,7	2,5
2007	284,3	1,6
2008	309,1	1,7

**Source :** Transgranichnoye sotrudnichestvo Luhanskoy oblasti

According to the table 1, it is possible to draw the conclusion, that the volume of direct foreign investments into Luhansk region is increasing with every year, which indicates the growth of foreign capital volume in Luhansk region. In particular, the Russian investors invested 5 million 501 thousand USD to the economy of Luhansk region. Among them

38,1% were invested to Rubizhne, 26,4% - to Pervomaysk, 16,7% - to Luhansk. Among other cities, the enterprises of which received investments, can be named the following: Alchevsk, Lisichansk, Severodoneck, and also Antratsyt and Novopskovsk districts (Tendentsii rozvytku investytsiinyh procesiv (in Ukrainian)) . The total volume of direct foreign investments, received by the region by January 1 2008, was 309,2 million USD, which makes 129,3 USD per capita ( Tendentsii rozvytku investytsiinyh procesiv). At the same time the volume of direct foreign investments from Luhansk region decreases which attests to the drawing of the fund of Luhansk enterprises out of foreign countries and the decline in their foreign economic activity.

One of the most important problems of realization of foreign economic activity by Luhansk region enterprises is not only the poor information awareness of foreign market demand and possibility to make international contracts, and absence of steady connections with foreign enterprises, but, first of all, uncompetitive products which are produced, and lack of funds to increase its competitiveness. Often enterprises lack own investment resources for production rearrangement and introduction of new technologies which can provide the production of high-quality goods and their access to the foreign markets. However in connection with economic and political instability in the country foreign investors are not in a hurry to invest funds into industrial enterprises of Ukraine, in particular, Luhansk region. Thus, the policy, performed on the level of public authorities, concerning the increase of investment attractiveness of Luhansk region enterprises and stimulation of their export, has to be not just declarative, but foresee the measures, which promote activation of foreign economic activity of industrial enterprises.

### 3.4 The Foreign investment in Lugansk, eastern Ukraine, after the Donbas crisis

after the Donbas crisis The enterprises of Luhansk region carry out foreign trade operations with partners from 77 countries worldwide. The export structure is deregulated by product family and by country, In 2017, there was a reduction of 14.3 billion USD or 38.5% of industrial product turnover. The negative dynamics is due to the conservation of gas deposits located in the noncontrolled area and reduction of coal extraction.the volume of foreign trade in goods decreased due to the reduced demand for ferrous metals and mineral products, shutdown of individual enterprises, as well as restrictions on trade with the Russian Federation. Instead, the volume of exports of agricultural products, paper and cardboard, chemical products, polymer materials and textiles, optical and photographic devices and instruments, food products, construction materials is increasing

**Figure 2** Direct Foreign Investments



Source : ua.undp.org,2018

The most important countries to invest in Lugansk were - SPAIN \$ 9.2 bn, Industry, construction and real estate, hotels and restaurants , POLAND \$ 9.2 bn, Agribusiness, industry and trade , CYPRUS \$ 367.4 bn , Industry, agribusiness, construction, transport, services and trade , UNITED KINGDOM , \$ 23.4 bn, Industry, agribusiness, construction, OTHERS \$ 36.2 bn. (UA.UNDP,2018)

### **Conclusions.**

The significance of Luhansk region as a great industrial and agricultural location, increase in the financial capacity of local communities as well as the need to recover the damaged infrastructure are the main factors for investments to get increased in the regional economy. The effects of combat and partition have decimated the Donbas region's economy on both sides of the front line, weakened Ukraine's and siphoned funds out of Russia's. Although illegal and semi-legal trade, together with Ukrainian and Russian subsidies, have helped residents make ends meet, they have produced few genuine economic winners. The result is a stalemate. Kyiv has increased the war's cost to Moscow by placing Donbas's upkeep on its shoulders, but Moscow has complicated Kyiv's task of eventually reintegrating the region, by both posing as its patron and allowing the corrosion of what remained of its industries..

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## **The Effectiveness of the Use of Artificial Intelligence in the Internal Audit Process and its Impact on Risk Management, Control and Governance in the Palestinian Government Sector**

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### **ABSTRACT**

The study aimed to identify the effectiveness of the use of artificial intelligence in the internal audit process and its impact on the management and evaluation of risks, control and governance in the Palestinian government sector, and to answer the research questions and test the hypotheses of the study, the researchers relied on the descriptive analytical method, and distributed a questionnaire to the study community consisting of department managers and heads of departments and internal auditors working in the internal audit departments of the Palestinian government ministries and the number of (40) auditors, and the use of statistical analysis program(SPSS) to enter and analyze data.

The results of the study also showed that there is a significant impact on the use of artificial intelligence in the internal audit process on the management and evaluation of risks and regulatory systems, strengthening governance procedures and mechanisms, improving the efficiency and effectiveness of the audit process, increasing the quality of internal audit services and reducing risk in Palestinian government ministries.

The study also recommended the need to direct Palestinian government ministries to adopt the use of Artificial Intelligence applications in the internal audit process, because it provides a reduction in time and cost and increase the efficiency of performing internal audit tasks in light of the huge amount of data and complex reports and then help him reach rational decisions, and should enhance the awareness of internal auditors of the importance of the use of Artificial Intelligence technologies, its role in achieving the quality of the audit, conducting the risk assessment process, examining internal control systems, and strengthening the governance system in Palestinian government ministries.

**Key words:** Artificial Intelligence, Internal Audit, Risk, Internal Oversight, Governance.

### **1. Introduction**

Artificial intelligence is one of the main pillars of the technology industry in the current era, and is known for the ability of digital machines and computers to perform tasks that mimic those performed by intelligent objects, such as the ability to think or learn from past experiences or other processes that require mental processes, and has become the focus of business communities and economic institutions and the opportunities it creates.

Current trends suggest that AI will have the greatest impact on the global economy, according to a report by the McKinsey Global Research Institute;

AI is seen as a supportive strategy for the completion of audit procedures through technology to achieve the quality of the internal audit process, and the audit ing profession is one of the professions affected by modern technology, and has undergone many changes, with the emergence of AI technologies, the term "automation of automated processes" emerged as a new audit ing technique recently, some organizations have collaborated with AI providers to use these systems in the audit process, and frequent manual audit ing tasks such



as risk management and internal control testing can be automated. The auditing process helps with the use of AI technologies, improving the efficiency and effectiveness of internal audit, and completing internal audit tasks at the lowest time and at a lower cost, which contributes to improving the quality of audit services, supporting audit strategy and reducing audit risk (Al-Samarrai & Al-Sharda, 2020).

The auditing profession may now face many challenges, including how to deal with AI technologies that impose a new reality in the audit environment. Auditors must develop their own skills and expertise, through which they can possess scientific knowledge and professional experience to develop positive aspects of AI applications, innovative methods that support their efforts to support auditing, strengthen governance procedures, manage and evaluate risks, and examine and evaluate the internal control system.

## **2. Study problem**

The use of AI technology has affected the performance of the audit process, which has led to the emergence of professional auditing standards that guide and guide how to deal with this technology when conducting internal audit, as the audit process using AI technology can help improve the efficiency and effectiveness of the internal audit process, which will contribute to the management and evaluation of risks, the examination and evaluation of the internal control system, and the strengthening of governance procedures in the Palestinian government sector. Accordingly, the study's questions can be formulated as follows:

The main question:

What is the impact of the use of artificial intelligence on the internal audit process and its impact on risk management, control and governance in the Palestinian government sector?

The main question is branched out by the following sub-questions:

1. What is the impact of the use of artificial intelligence in the internal audit process on risk management and evaluation in the Palestinian government sector?
2. What is the impact of the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system in the Palestinian government sector?
3. What is the impact of the use of artificial intelligence in the internal audit process on strengthening governance procedures in the Palestinian government sector?

## **3. The objectives of the study:**

The main objective of this study is to find out the effectiveness of the use of artificial intelligence in the internal audit process and its impact on risk management, control and governance in the Palestinian government sector, which has been identified through the following sub-objectives:

1. To show the impact of the use of artificial intelligence in the internal audit process on the management and evaluation of risks in the Palestinian government sector.
2. To show the impact of the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system in the Palestinian government sector.
3. To show the impact of the use of artificial intelligence in the internal audit process on strengthening governance procedures in the Palestinian government sector.

#### **4. The importance of study:**

The importance of this study lies in the fact that it deals with one of the most recent topics that dealt with the link between several vital topics, namely the effectiveness of the use of artificial intelligence in the internal audit process and its impact on the management and evaluation of risks, the examination and evaluation of the internal control system, and the strengthening of governance procedures in the government sector in the institutions of the Palestinian National Authority, which constitutes a new scientific addition in the field of audit science.

1. This study contributes to the need to keep up with modern technological developments, especially in the process of internal auditing and internal control systems and governance, and training internal auditors on it by raising their professional competence, considering the process of using artificial intelligence techniques in the audit process of the basic requirements to control the quality of the audit process.
2. The importance of this study is highlighted in that it examines the effectiveness of the use of Artificial Intelligence in the internal audit process, the impact on the management and evaluation of risks, the examination and evaluation of the internal control system, and the strengthening of governance procedures through the use of digital auditing in the performance of audit services to provide high quality services more than others, because internal audit is an important sector that contributes to the confidence of financial statements.

#### **5. Study hypotheses:**

In order to achieve the objectives of the study and answer its questions, the following hypotheses have been formulated:

- **The main hypothesis:** What is the impact of the use of artificial intelligence in the internal audit process and its impact on risk management, control and governance in the Palestinian government sector.

#### **The main hypothesis is branched by the following sub hypotheses:**

- **The first sub-hypothesis:** there is an impact on the management and evaluation of risks in the Palestinian government sector.

- **The second sub hypothesis:** There is an effect on the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system in the Palestinian government sector.

- **The third sub-hypothesis:** There is an impact on the use of artificial intelligence in the internal audit process on strengthening governance procedures in the Palestinian government sector.

#### **6. Study variables:**

- **The independent variable:** The independent variable in this study is the use of artificial intelligence in the internal audit process.

- **Dependent variables:** The variables of this study are drunk in the following elements:

1. Audit risk management.
2. Examining and evaluating the internal control system.
3. Strengthening governance procedures.

## 7. Study model:

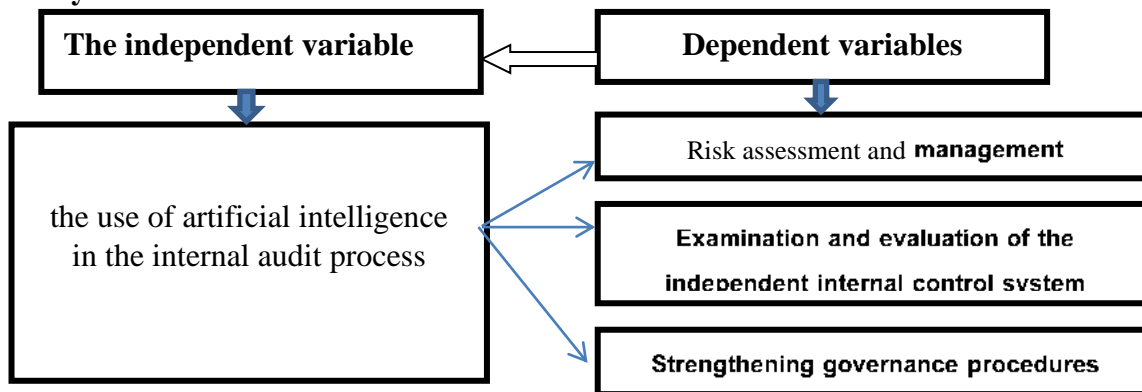


Figure 1: Study model

**The limits of the study:** The results of this study are determined by the following limits:

- **Time limit:** The period it takes to prepare this study during 2021.

Human limit: Director of audit department, head of audit department, and internal audit examiners.

- **Spatial limit:** Palestinian government ministries.

- **Objective limit:** Examining the effectiveness of the use of artificial intelligence in the internal audit process and its impact on risk management, control and governance in the Palestinian government sector.

## 8. Previous studies:

Previous studies and literature represent the basis on which the researchers draw the contents of their study, which dealt with the variables of the subject matter of the study as follows:

The (Mardini & Alkurdi, 2021)) study aimed at conducting an extensive review of a literature review on artificial intelligence and its impact on accounting, which identified the study's problems in critically using AI in accounting, which support researchers in investigating the study gaps in the near future and the methodology used. (Al bawwata & Frijat, 2021) Analyzes Auditors' Perceptions of AI and Its Contribution to Quality Audit, where AI systems have made significant changes in the audit process, yet opponents of the AI revolution view this growth as a step backwards as many auditors fail to adapt to this new environment and this will lead to their regression. This study also provides empirical evidence on how local corporate auditors in Jordan understand the use of artificial intelligence in auditing, while a study (Al-Samarrai & Al-Sharda, 2020) examined the role of AI techniques using digital auditing in achieving the quality of auditing and supporting the audit strategy used by auditing companies in the Kingdom of Bahrain, The study found that the use of Artificial Intelligence techniques contributes to the achievement of quality in the audit process, as well as contribute to supporting the implementation of the audit strategy in the Kingdom of Bahrain, and the progress of the use of ICT in business organizations in the Kingdom of Bahrain imposes on audit companies in the Kingdom of Bahrain a new reality that requires auditors to keep pace with this development, and to move towards the use of ICT in the provision of audit services, while the study (ucoglu, 2020) The results of the study revealed that the use of AI techniques led to the emergence of different ways to accomplish the tasks of the audit process, which affected the auditing profession, and despite these flaws, the application of AI technologies has many advantages, such as: increase efficiency and effectiveness through faster data analysis, high-quality auditing, reduced errors, early risk

identification, and creating a competitive advantage. The big four audit firms have developed several AI technologies that are used to manage the audit process, and automated auditing has been carried out in certain areas, such as cash auditing, data analysis, and risk assessment, as study (Munoko, Brown-Liburd, & Vasarhelyi, 2020) has addressed, The ethical implications of using Artificial Intelligence in the review, the study concluded that the four major audit firms reported the use of Artificial Intelligence (AI) in their audit and consulting functions, and in areas such as audit planning risk assessments, transaction testing, analysis, audit worksheets, and other uses and advantages of AI. In the audit profession, while the (Ghanoum & Alaba, 2020) study explored the role of artificial intelligence in enhancing the effectiveness of the audit process, the study found that Artificial Intelligence has a wide-ranging positive impact on the overall quality of audits, and AI enhances the quality of auditing by facilitating and enhancing effectiveness in key steps involved in the audit process. The field explored by this study is that the main link between Artificial Intelligence and the effectiveness of the audit process is to reduce errors that were causing auditors to repeat work, and AI reduces the time needed to categorize and compare transactions further, which is important because it contains useful reference tools in the analysis of transactions in the general ledger. Therefore, in the study sample, they prefer to use AI-based auditing systems rather than traditional auditing tools, and the Study (Al Jaber, 2020) discussed the impact of Artificial Intelligence In its dimensions (expert systems, representation of knowledge and inference, automatic learning) on the efficiency of accounting systems in its dimensions (accounting system integration, accounting information system interconnection, accuracy of accounting work, quality interpretation of accounting information, quality presentation of accounting information in Jordanian banks) and showed results The study showed the impact of the use of artificial intelligence on the efficiency of accounting systems in Jordanian banks, and a study (Taedit, 2019) showed the importance of adopting the ICT environment resulting from the modern digital economy in activating auditing work under accounting information systems using intelligence applications Industrial, the results of the study revealed that the use of the expert system in the field of accounting and auditing entails the preservation of knowledge and its transfer from experts arbitrators to new auditors and accountants, thus playing an important role in the development of performance and improvement of skills in decision-making, especially when there are no highly experienced professionals, as Expert systems play an important role in many areas of auditing, including improved efficiency and expertise, planning, internal control and reporting, and a study (Anbar, 2016) on the role of AI technology in improving the performance of auditing and documentation, In order to positively affect the auditing profession, determine the expected impact of relying on AI technology in improving the quality of the audit process, and prepare a proposed electronic program that conducts auditing work starting with planning, through sampling and documentation of work sheets, and ending with the preparation of the draft report and evaluation reports of the performance of the regulatory work, and based on the premise (the adoption of Artificial Intelligence technology in the stages of the audit process will lead to the success of the auditing profession and improve its quality, intelligence The study (Othman, 2012) talked about the possibility of using artificial intelligence techniques in controlling the quality of internal audit in Jordanian public joint stock companies, and concluded that there is an impact on the use of Artificial Intelligence techniques in controlling the quality of internal audit (professional care, management of internal audit activities, risk management evaluation, planning and implementation of the audit process, delivery of results) in Jordanian public joint stock companies.



### **8.1 Analysis of previous studies for the current study:**

Through the researchers' reading of previous studies and the extent to which they are used in the field of study subject of the study, it was found that the studies are distributed on the following axes and trends:

- 1- Identify the role of AI technologies in improving the performance of auditing work and documenting them, which positively affects the auditing profession, and determine the expected impact of ai technology in improving the quality of the audit process.
- 2- Demonstrating the importance of adopting the ICT environment resulting from the modern digital economy in activating auditing, under accounting information systems using artificial intelligence applications.
3. To show the impact of ai in its dimensions (expert systems, representation of knowledge and inference, automatic learning) on the efficiency of accounting systems in their dimensions (accounting system integration, accounting information system interconnection, accuracy of accounting work, quality interpretation of accounting information, quality presentation of accounting information).
4. Impact statement for the use of AI techniques in adjusting the quality of internal audit through (professional care, internal audit activities management, risk management assessment, planning and implementation of the audit process, delivery of results).

### **9.2 Therefore, what distinguishes this current study is:**

1. Create a theoretical and thought framework, and provide theoretical and field milestones for organizations about the use of artificial intelligence in internal audit.
2. This study, according to the researchers, is one of the first studies in Palestine that measure the effectiveness of the use of artificial intelligence in the internal audit process, and its impact on risk management, control and governance in the Palestinian government sector.
3. This study was characterized by the measurement of the use of artificial intelligence in the internal audit process through (risk management and evaluation, examination and evaluation of the internal control system, and strengthening governance procedures), where previous studies used other dimensions to measure them according to the researchers.
4. The time period of previous studies and the size of the sample selected, where the study addressed the opinions of internal auditors in the Palestinian ministries of the Palestinian National Authority.

## **9. Theoretical framework of the study**

### **9.1 First: Introduction to Artificial Intelligence:**

The term artificial intelligence appeared in the 50th century by the world (Alan Turing), means the assessment of the intelligence of the computer for its ability to simulate the human mind, and then attempts followed but did not achieve high-level progress for twenty years due to the limitations of computer capabilities, yet these attempts did not stop; Artificial intelligence aims to understand the complex mental processes performed by the human mind during the process of thinking and who seamounts have been translated into the corresponding accounting processes that increase the ability of the computer to solve complex problems (Al-Samarrai & Al-Sharda, 2020).

### **9.2 The concept and components of artificial intelligence**

The idea of artificial intelligence depends on the ability of the machine (computer) to communicate or communicate information to individuals (as feedback) as if they were dealing with the same sex, without realizing that they are communicating with a smart

machine (Rashwan, Alhelou, 2020), artificial intelligence (Tuomi, 2018) is known as "a machine that understands and interprets sounds and languages, works to solve problems, can diagnose medical conditions, control cars on roads, play chess, play chess. It is often a system that possesses the ability to perform tasks associated with living things" which is the intelligence manufactured by man in machines or computers and is a qualitative leap in the rights of theoretical and applied sciences and by which the intelligence of the human brain was transferred to computers (Atham, 2019), and is known as part of computer science aimed at designing intelligent systems that give the same characteristics that we know intelligence in human behavior, and it works based on the principle of Matching the formations by which things, events and processes can be described using their qualitative properties and their logical and computational relationship (Jamil, Osman, 2015), and i know it (Al Jaber, 2020) as a technique that contributes to the management of processes and tasks with more sophisticated and intelligent mechanisms than the man who created it and give sensuous knowledge and ingredients, helping it to learn spontaneously and self-development. (Hussain, 2018), has classified Artificial Intelligence into three types: narrow artificial intelligence, which is related to only one area, and the second: artificial intelligence, which relates to systems that operate on their own without human intervention, and the third: super-artificial intelligence, which is far beyond the capabilities and intelligence of humans.

The researchers believe that artificial intelligence is machines or systems that learn and acquire skills beyond the capabilities of humans, and perform complex tasks and have the ability to decipher sounds, analyze and interpret languages, and can think, lead and make decisions fully without human intervention.

### **9.3 AI technologies and systems**

AI is a method that corresponds to a certain extent with the human method of problem solving and data processing, and it also provides alternatives to human energy, and its characteristics are also: independence, prediction and the performance of complex tasks, as well as surveillance (Al Jaber, 2020), and the most prominent developments on artificial intelligence during the previous two years include the following (www.alarabiya.net):

- 1. Machine learning and deep learning:** it is one of the most important applications of artificial intelligence that allows the machine to learn and access a huge amount of data and then make decisions, such as prediction systems, classification, speech recognition, computer vision and self-driving cars.
- 2. The technique of converting a fixed image into a video:** through which a fixed image of a specific person is focused and the geometric shape of his face is recognized, and is added as a mask on the face of another person speaking in a video.
- 3. Writing content:** Through this technique, coherent text paragraphs are created and machine translation and answer questions.
- 4. AI-based treatments:** these are rapidly evolving treatments in terms of facial recognition, speech and machine learning, these are used in cars and healthcare and one of their most important features is saving human lives.
- 5. Artificial intelligence technologies adapted to human uses:** it specializes in speakers and the resulting areas of shopping by Google Home and Alexa, which are high-speed technologies in development and relate to smartphones, tablets, computers and Televisions.
- 6. Improving facial recognition technology:** an important and necessary technology in the field of airports, railways, shopping malls and financial services, which is a rapid technology in progress.



**7. Cloud Computing:** A technology developed through artificial intelligence that has facilitated data storage, retrieval and analysis to help reduce costs.

**8. Cyber security:** By relying on cloud computing and for fear of security breaches, companies have resorted to smarter ways of electronic insurance, so repeated neural networks have been used to address breaches.

#### **9.4 Adopt artificial intelligence in internal audit**

Internal audit is defined as an independent function within the organization carried out by persons affiliated with the institution, and their role is to periodically examine all information and financial and administrative data, which is the responsibility of the management of the institution and check whether the procedures in place and guarantees are sufficient, that the processes are legitimate and the information is sincere, and that all activities within the organization are conducted in accordance with the regulations established (Mohammed, 2018), where the audit procedures are processes that include the progress of activities to convert inputs, which consist of information that is audited to the outputs and outputs are the opinions of the auditors (Zhang, 2019), because the acceleration and abundance of data and daily transactions led to the reliance on modern technologies represented by expert systems and others in conducting internal audits in order to enhance the processing capacity of this data while maintaining the effectiveness and reliability of the audit process (Ghanoum & Alaba, 2020). Artificial intelligence in the audit process has three types identified by (Munoko, Brown-Liburd, & Vasarhelyi, 2020):

- 1. AI Assistive Systems:** Systems that help auditors in the decision-making process, where machines do repetitive daily work and tasks performed by the auditor on a daily basis, but the decision-making process is made only by auditors.
- 2. Enhanced AI systems:** These are analytical intelligence because they give the interaction between systems and their environment and learn from the checker, and therefore decisions are made in cooperation between the checker and the machine, and here the auditors and AI systems cooperate in decision-making.
- 3. Independent AI systems:** systems that operate without human intervention, in which case the systems adapt to a variety of conditions, and here the actions are taken independently by Artificial Intelligence without the intervention of the auditor.

AI systems have dramatically changed the vetting process, and auditors believe enhanced AI systems are easy to use for auditing, unlike independent AI systems, and as AI assistive systems have a high contribution to audit quality, independent AI systems are working to pass the entire decision-making process while a large part of them are passed if enhanced AI systems (Al bawwata & Frijat, 2021) are adopted. The importance of AI technologies in internal auditing is shown as follows:

- The adoption of AI technologies in internal audit invests time, in the sense of reducing the time and effort needed to plan the internal audit program by relying on expert systems and electronic auditing.
- Relying on digital and electronic auditing reduces the cost of conducting internal audits.
- The use of business technology technologies increases the efficiency and effectiveness of internal audit procedures.
- The use of electronic technologies in the internal audit process reinforces objectivity and non-bias in auditing public sector financial statements.
- The use of advanced accounting software and systems detects fundamental errors and protects public assets and property through electronic follow-up.



The (Noor & Mansor, 2019) study emphasizes that Artificial Intelligence enhances the audit process through the correct exchange of information between auditors and systems and exchange of conversation between all stakeholders involved in the audit process.

### **9.5 The use of artificial intelligence in internal audit and its impact on risk management and assessment**

A vast amount of information produced daily passes through the internal audit environment, which increases the risk and therefore data must be analysed in the context of managing these risks, which play a major role in decision-making, and to complete the internal audit process in the public sector efficiently, effectively and on time, artificial intelligence is used in the processing of natural languages, reading receipts and payments, contracts, registration bonds, financial matches, adjustments, etc., and then matching pre-defined texts by auditors to prepare samples for items of relative importance that are of relative importance. It needs special attention, because it is highly risky, and also uses artificial intelligence in the processes of data extraction, identification of exceptions or paradoxes, analysis of patterns and trends, sending custom warnings, and marking of risky data that relates to assessments, inventory and adjustments, and the role of auditors lies in extracting accounting and financial data from the institutional and financial systems of institutions and uploading them to artificial intelligence tools, which in turn identify errors in cases of anomalies, manipulation and forgery and the creation of dynamic panels of digital devices by using algorithms and comparing them with indicators identified by the auditor, and thus identify strengths and weaknesses, detect accounting irregularities, abuses and accurately assess risks (World Bank, 2020).

The use of Artificial Intelligence in the audit process is described as "a hybrid set of technologies that complement and change audits" (Isa, et al., 2016), and the adoption of Artificial Intelligence in internal audit facilitates the work of auditors and accelerates the completion of their tasks, and detects risks very quickly in the case of traditional audits. (Kokina, Davenport, 2017) confirmed that relying on artificial intelligence in the internal audit process accomplishes repetitive tasks and processes and analyzes large numbers of data in a small time, which facilitates the work of internal auditors (Luo et al., 2018).

### **9.6 The use of artificial intelligence in internal audit and its impact on the examination and evaluation of the internal control system**

Auditors are interested in Artificial Intelligence as a supporting system for the achievement of their multiple tasks depending on the multiplicity and diversity of companies, where relying on technology in the audit process to reach the highest quality, strengthening internal control and conducting the audit process in a timely manner, and to ensure that the internal audit process is carried out in a timely manner, requires an effective internal control system to ensure the reliability of information and ensure the effectiveness and integrity of internal controls (Shen, Chen, Huang, & Susilo, 2017) and to achieve this is based on the tools of artificial intelligence as follows:

- Internal auditors in the audit process rely on decision support systems, which are computer applications consisting of inputs, processes, outputs, and feedback, and collect and analyze accounting, financial and administrative data to assist management in decision-making.
- Relying on a robot as a kind of artificial intelligence to perform internal audits helps in risk assessment and planning for the internal audit process.
- Through expert systems and programming models, internal auditors are able to easily examine and evaluate the internal control system, plan the audit process, distribute tasks to auditors, analyze accounts and processes, assess relative importance, perform



analytical examination procedures, detect and identify problems, analyze budget deviations, evaluate performance, and form an opinion on the continuity of the facility.

- Internal auditors rely on neural networks as a type of AI tool in forecasting and looking ahead, assessing the company's financial position, selecting a review sample, detecting errors, fraud and any substantial financial or administrative irregularities.
- Through the use of AI tools, internal auditors ensure that the internal audit process is completed in high quality and in accordance with international and professional standards, in addition to the possibility of developing and updating the management of internal audit activities, and providing internal auditors with high skills in the preparation of internal audit programs and writing financial and administrative reports, according to which the company's critical decisions are made.

### **9.7 The use of artificial intelligence in internal audit and its impact on strengthening governance procedures**

The auditing method has shifted from documentary auditing to digital audit, which is a type of artificial intelligence, and has been relied upon through expert systems, computerized systems and accounting programs to facilitate the auditing process in major private and public institutions, reflecting on the possibility of administrative control over the assets and funds of public institutions directly, and this led to the devolution of powers and the emergence of an administrative pyramid based on an organizational method in which the work, objectives, duties and responsibilities required, implementation of strategic tasks and protection of public rights and interests, and maintaining the principle of transparency and accountability, and this This strengthens governance in the public (Al-Samarrai & Al-Sharda, 2020).

### **10 Practical framework of the study (field study):**

The researchers conducted the field study to test the hypotheses of the study and achieve its objectives as follows:

#### **10.1 The curriculum:**

The descriptive analytical approach has been used as the appropriate method for the study of social and human phenomena, and the collection of data is based on secondary and primary sources as follows:

**Secondary sources:** it consists of books, research, scientific messages, periodicals and the Internet.

**- Primary sources:** It consists of a questionnaire specifically prepared for this purpose to obtain the required information, and the Statistical Program (SPSS) is used to analyze the survey list and test the study assignments.

#### **Second: Study society:**

The study community consists of the director of the audit department, the head of the audit department, and the internal audit auditors in the 40-member Palestinian government ministries, and the method of comprehensive inventory was used for the small size of the society.

#### **10.2 The study tool:**

The study used the questionnaire list as a key tool in the field study, where the survey list was developed in the light of a comprehensive review of previous theoretical and scientific studies on the study variables, and the survey list included two main sections:

**- The first section:** consists of personal and functional data for the study community, and consists of 3 paragraphs.

- **Section 2:** It was divided into three axes as follows:

\* **The first axis:** risk management and evaluation, consisting of (8) paragraphs.

\* **The second axis:** the examination and evaluation of the internal control system, consisting of (6) paragraphs.

\* **The third axis:** strengthening governance procedures, consisting of (7) paragraphs.

**The answers to the paragraphs of the axes were according to the Five-Point Leckert scale, as described in the following table:**

**Table No..1: the Five-Point Leckert scale**

Classification	Too big.	Big.	Medium	A few.	Very little.
The degree of approval	5	4	3	2	1

**10.3 The validity of the questionnaire:** the questions of the questionnaire that were formulated measure what was developed to measure it, as it means by truth: the inclusion of the questionnaire for all the elements that must appear in the analysis on the one hand, and the clarity of its paragraphs and vocabulary on the other, so that they are understandable to all who use it, and the researchers measured the sincerity of the questionnaire in two ways:

**A- The honesty of the arbitrators (virtual honesty):** The researchers presented the questionnaire to a group of arbitrators made up of university professors specializing in accounting and statistics.

**B- The correct measurement:**

**1. Internal consistency of the resolution paragraphs:** The researchers calculated the internal consistency of the questionnaires on the 30-individual survey community by calculating the coefficient of correlation between each of the questionnaire paragraphs and the total grade of the same field.

- Table (2) shows the coefficient of correlation between each of the paragraphs of the first hypothesis "there is an effect of the use of artificial intelligence in the internal audit process on the management and evaluation of risks in the Palestinian government sector" and the overall degree of the hypothesis, which shows that the correlation coefficients shown range from (0.593 - 0.799), which is a function at a moral level ( $\alpha = 0.01$ ) and thus is considered to be true of what was set to measure it.

**Table No. (2) Pearson's correlation coefficient between each of the first hypothesis paragraphs and the overall degree of the hypothesis.**

Axis	Pearson Correlation Coefficient	Moral level
Internal auditing using AI technologies helps improve the efficiency and effectiveness of the audit process.	0.593**	0.00
The use of AI tools increases the quality of internal audit services and reduces risk.	0.799**	0.00
AI applications and innovative methods support internal audit, helping to manage and evaluate risks.	0.547**	0.00
AI technologies contribute to improved internal audit activities and the development of risk management and regulatory systems.	0.712**	0.00
Internal auditors determine the extent to which objectives and policies are achieved, and identify and report deviations.	0.673**	0.00



The use of AI tools in the internal audit process helps improve the means used to protect and control your organization's assets.	0.784**	0.00
In-house auditors are trained to keep up with technological developments in the audit process to improve their performance in risk management and evaluation.	0.722**	0.00
The use of AI technologies in the internal audit process helps to disclose the underlying risks.	0.741**	0.00

**\*\* Link D statistically at indication level ( $\alpha=0.01$ )**

- Table 3 shows the coefficient of correlation between each of the second paragraphs of hypothesis: "There is an effect on the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system in the Palestinian government sector" and the overall degree of the hypothesis, which shows that the correlation coefficients shown range from (0.547 to 0.841), which is a function at a moral level ( $\alpha=0.01$ ) and thus is considered to be true of what it has developed.

**Table No. (3) Pearson's correlation coefficient between each of the second hypothesis paragraphs and the overall degree of the hypothesis.**

Axis	Pearson Correlation Coefficient	Mora l level
AI tools are a supportive strategy for completing internal audit procedures by using technology to achieve the quality of the audit process.	0.708**	0.00
The use of AI technologies helps automate the audit, examination and testing of the internal control system.	0.547**	0.00
The use of Artificial Intelligence technologies in the internal audit process is one of the most important means used to verify the effectiveness of the internal control system.	0.841**	0.00
The efficiency of the audit process is utilized by using artificial intelligence to evaluate the financial and accounting system.	0.753**	0.00
The use of artificial intelligence in the internal audit process plays a critical role in correcting the deviations of the internal control system and providing timely advice and solutions.	0.696**	0.00
The use of artificial intelligence in the internal audit process helps identify weaknesses in the internal control system and develop appropriate solutions to eliminate them.	0.583**	0.00

**\*\* Link D statistically at indication level ( $\alpha=0.01$ )**

- Table 4 shows the coefficient of correlation between each of the third paragraphs of hypothesis" there is an effect on the use of artificial intelligence in the internal audit process on strengthening governance procedures in the Palestinian government sector" and the overall degree of the hypothesis, which shows that the correlation coefficients shown range from (0.522 to 0.774), which is a function at a moral level ( $\alpha=0.01$ ) and thus considers this hypothesis to be true to what it has been developed to measure.

**Table No. (4) Pearson's correlation coefficient between each of the third hypothesis paragraphs and the overall degree of the hypothesis.**

Axis	Pearson Correlation Coefficient	Moral level
The use of AI tools in the internal audit process requires attention to technical and administrative governance and the promotion of transparency and responsibility as their principles.	0.733**	0.00
The use of AI technologies in the internal audit process helps evaluate its governance system and risks.	0.774**	0.00
The use of AI tools contributes to internal auditing in the proper application of governance mechanisms.	0.648**	0.00
The use of AI technologies in the internal audit process contributes to the activation of the role of governance by assessing and achieving accountability, and instilling confidence in management processes and financial reporting.	0.646**	0.00
The use of AI tools in the internal audit process helps add value to the organization through the functions it is now performing under the governance system.	0.679**	0.00
The use of AI technologies in internal audit is a key pillar to ensure an effective governance framework.	0.522**	0.00
The use of AI tools in the internal audit process helps support the governance system to help your organization's management exploit its resources efficiently.	0.524**	0.00

**\*\*Link D statistically at indication level ( $\alpha=0.01$ )**

**2. The constructive honesty of the list areas:** the constructive honesty of the questionnaire paragraphs was calculated on the study community, by calculating the correlation coefficient between the total score of each axis and the total score of the questionnaire.

Table 6 shows that all correlation coefficients in all resolution axes are statistically functioning at a moral level ( $\alpha=0.01$ ), so that all resolution axes are considered to be true of what they were designed to measure.

**Table (6) Pearson correlation coefficient between the score of each area of resolution with the overall degree of resolution**

R.M.	Axis	Pearson Correlation Coefficient	Moral level
<b>The first</b>	Risk management and evaluation.	0.911**	0.00
<b>Second</b>	Examining and evaluating the internal control system.	0.908**	0.00
<b>Third</b>	Strengthening governance procedures.	0.863**	0.00

**\*\* Link D statistically at indication level ( $\alpha=0.01$ )**

The results of pearson link coefficients in table 6 in the previous table (6) indicate the availability of the sincerity of internal consistency in the area of the list of resolutions, with the highest correlation coefficient of 0.911 for the first axis, while the lowest correlation coefficient was 0.863 for the third axis.



#### 10.4 Khamsa: Stability:

The researchers tested the resolution stability by calculating the Cronbach Alpha correlation coefficient for each of the list areas, as shown in table 7:

**Table No. (7) Resolution stability results using alpha kronbach correlation coefficient**

R.M.	Axis	Number of paragraphs	Stability Factor (Alpha Kronbach)	Structural honesty laboratory
The first	Risk management and evaluation.	8	0.842	0.918
Second	Examining and evaluating the internal control system.	6	0.780	0.883
Third	Strengthening governance procedures.	7	0.768	0.876
<b>Total grade of all axes</b>		<b>21</b>	<b>0.913</b>	<b>0.956</b>

Source: The researcher's preparation based on resolution data, 2021.

It is clear from the previous table that the coefficients of Alpha Kronbach range from 0.842-0.768, while the transactions of honesty ranged from 0.876-0.918, which indicates that the resolution enjoys consistency and honesty, so that the researchers have confirmed the stability and credibility of the questionnaire, thus making them fully confident in the validity of the questionnaire and its validity to analyze the results, and to answer the study's questions and test its hypotheses.

#### 10.5 Sixth: Results of the field study:

##### - Descriptive statistics of the personal information of the sample:

Table 8 shows the personal characteristics of the study sample in terms of scientific qualification, specialization, job title, and years of experience:

**Table 8 shows the distribution of the sample according to their personal variables**

Statement		Iteration	Percentage %
Scientific qualification	Doctor	5	12.5
	Master	11	27.5
	Bachelor	24	60.0
<b>Total</b>		<b>40</b>	<b>100.0</b>
Job title	Director of audit	5	12.5
	Head of Audit	11	27.5
	Internal Auditor	24	60.0
<b>Total</b>		<b>40</b>	<b>100.0</b>
Years of experience	5 to 10 years	15	37.5
	11-15 years	17	42.5
	More than 15 years	8	20.0
<b>Total</b>		<b>40</b>	<b>100.0</b>

It is clear from the previous table that:

- The study community is represented by department directors, department heads and internal auditors working in the internal audit department of Palestinian government ministries, and is directly related to the nature of the use of artificial intelligence in the internal audit process in the Palestinian Ministry of Finance, which makes the society suitable for study.
- The scientific qualifications of members of the community range from ph.d., master and bachelor's degree, and the study community has great career experience in their work, making the study community representative of all practical qualifications and appropriate experiences.
- Years of working experience for community members are less than 5 to 10 years, from 11 to 15 years, and from 15 years and over, and the members of the study community have years of great experience in their work, making them the right experience to do their job to the fullest.

### 10.6 Statistical analysis of the results of the study and testing hypotheses:

**\* Analysis and testing of the first hypothesis paragraphs:** (There is an effect on the use of artificial intelligence in the internal audit process on the management and evaluation of **risks in the Palestinian government sector**), the Test (T) was used to determine the average response score reached the average score of (3) or not in the individuals of the sample, and the results are shown in the following table:

**Table No. (9) Results of statistical analysis of the first hypothesis paragraphs**

M	Phrases	Arithm etic mediu m	Standa rd deviati on	Relati ve weigh t	T test value	Probabi lity value (.sig)	Ord er
1	Internal auditing using AI technologies helps improve the efficiency and effectiveness of the audit process.	4.33	0.656	86.50	12.778	0.000	1
2	The use of AI tools increases the quality of internal audit services and reduces risk.	4.25	0.494	85.00	16.018	0.000	2
3	AI applications and innovative methods support internal audit, helping to manage and evaluate risks.	4.05	0.552	81.00	12.022	0.000	7
4	AI technologies contribute to improved internal audit activities and the development of risk management and regulatory systems.	4.20	0.648	84.00	11.704	0.000	4
5	Internal auditors determine the extent to which objectives and policies are achieved, and identify and report deviations.	4.18	0.636	83.50	11.685	0.000	5
6	The use of AI tools in the internal audit process helps	4.25	0.630	85.00	12.540	0.000	2



	improve the means used to protect and control your organization's assets.						
7	Internal auditors are trained to keep up with technological developments in the audit process to improve their performance in risk management and evaluation.	3.83	0.844	76.50	6.183	0.000	8
8	The use of AI technologies in the internal audit process helps to disclose the underlying risks.	4.18	0.712	83.50	10.436	0.000	5
<b>Total paragraphs</b>		<b>4.15</b>	<b>0.451</b>	<b>83.12</b>	<b>16.218</b>	<b>0.000</b>	<b>-</b>

The above table shows the following:

- The result of approval of the first area, where the average answers in the special paragraphs of the hypothesis range from (3.83) to (4.33).

Paragraph (1), which states that "internal auditing using AI techniques helps improve the efficiency and effectiveness of the audit process", has the highest computational average of (4.33), relative weight (86.50%), while paragraph (7) which states that "auditors are trained to keep up with technological developments in the audit process to improve their performance in risk management and evaluation" has obtained the lowest computational average of (3.83%) and relative weight (76.50%).

- The arithmetic average for all the hypothesis paragraphs (4.15) and a relative weight of 83.12.

**The result of the hypothesis test:** From the above it can be concluded that (T) is less scheduled than the calculated (T), which means rejecting the nihilistic hypothesis and accepting the alternative hypothesis that "there is an effect on the use of artificial intelligence in the internal audit process on the management and evaluation of risks in the Palestinian government sector."

The researchers believe as a result of the hypothesis test that the current study is consistent with the results of the study of each (ucoglu, 2020), (Munoko, Brown-Liburd, & Vasarhelyi, 2020), (Ghanoum & Alaba, 2020), (Othman, 2012) that there is an effect on the use of artificial intelligence in the internal audit process on the management and evaluation of risks that cause auditors to repeat their work, and determine early, but differ with the results of the study of both (Mardini & Alkurdi, 2021), (Al bawwata & Frijat, 2021), (Al-Samarrai & Al-Sharda, 2020), (Tasit, Araban, 2019), (Anbar, 2016).

**\* Analysis of the test of the second hypothesis paragraphs:**(There is an effect of the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system in the Palestinian government sector), the test (T) was used to determine the average response score has reached the intermediate score of (3) or not in the members of the sample, and the results are shown in the following table:



**Table No. (10) Results of statistical analysis of the second hypothesis paragraphs**

M	Phrases	Arithm etic mediu m	Standar d deviati on	Relati ve weigh t	T test value	Probabil ity value (.sig)	Ord er
1	AI tools are a supportive strategy for completing internal audit procedures by using technology to achieve the quality of the audit process.	4.18	0.712	83.49	10.43 6	0.000	2
2	The use of AI technologies helps automate the audit, examination and testing of the internal control system.	4.13	0.607	82.50	11.72 0	0.000	3
3	The use of Artificial Intelligence technologies in the internal audit process is one of the most important means used to verify the effectiveness of the internal control system.	3.83	0.813	76.48	6.418	0.000	6
4	The efficiency of the audit process is utilized by using artificial intelligence to evaluate the financial and accounting system.	4.25	0.588	85.00	13.43 7	0.000	1
5	The use of artificial intelligence in the internal audit process plays a critical role in correcting the deviations of the internal control system and providing timely advice and solutions.	3.98	0.768	79.52	8.034	0.000	4
6	The use of artificial intelligence in the internal audit process helps identify weaknesses in the internal control system and develop appropriate solutions to eliminate them.	3.95	0.677	79.00	8.869	0.000	5
<b>Total paragraphs</b>		<b>4.05</b>	<b>0.482</b>	<b>81.00</b>	<b>13.77 3</b>	<b>0.000</b>	<b>-</b>

The above table shows the following:

- The result of approval of the first area as the average of the answers in the special paragraphs of the hypothesis ranges from (3.83) to (4.25).

Paragraph sup allow (3) which states that "big data analysis helps reduce time, design and develop new products to achieve competition", and paragraph (7) which states that "big data analysis helps estimate the company's market share by determining the volume of sales to



maintain the same level of profits or perhaps higher levels of profits" has obtained the highest computational average of (4.25), the relative weight (85.00%), while paragraph (4) which states that "big data analysis enhances efficiency for operational activities, resulting in increased revenue and added value to the company" has the lowest computational average of (3.83%) and relative weight (76.48%).

- The arithmetic average for all the hypothesis paragraphs (4.05) and a relative weight of 81.00.

**The result of the hypothesis test:** From the above it can be concluded that (T) is less scheduled than the calculated (T), which means rejecting the nihilistic hypothesis and accepting the alternative hypothesis that "there is an effect of the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system in the Palestinian government sector."

The researchers believe that the current study is consistent with the results of the study of each (Tsaedit, Araban, 2019), (Anbar, Mohammed, 2016) that there is an effect on the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system and oversight work within institutions, and improve the efficiency of the internal control system, but differ with the results of the study of both (Mardini & Alkurdi, 2021) (ucoglu, 2020), (Munoko, Brown-Libur, & Vasarhelyi, 2020), (Al Jaber, 2020), (Ghanoum & Alaba, 2020), (Al bawwata & Frijat, 2021), (Al-Samarrai & Al-Sharda, 2020), (Mardini & Alkurdi, 2021).

**\* Analysis and testing of the paragraphs of the third hypothesis:** (There is an effect of the use of artificial intelligence in the internal audit process on the strengthening of governance procedures in the Palestinian government sector), the test (T) was used to determine the average degree of response has reached the average score which is (3) or not in the individuals of the sample, and the results are shown in the following table:

**Table No. (11) Results of statistical analysis of the third hypothesis paragraphs**

M	Phrases	Arith metic medi um	Stand ard devia tion	Relati ve weigh t	T test value	Proba bility value(. sig)	Ord er
1	The use of AI tools in the internal audit process requires attention to technical and administrative governance and the promotion of transparency and responsibility as their principles.	4.05	0.749	81.00	8.862	0.000	1
2	The use of AI technologies in the internal audit process helps evaluate its governance system and risks.	3.98	0.620	79.51	9.951	0.000	2
3	The use of AI tools contributes to internal auditing in the proper application of governance mechanisms.	3.90	0.591	78.00	9.639	0.000	6
4	The use of AI technologies in the internal audit process contributes to the activation of the role of governance by assessing and achieving accountability, and instilling confidence in management processes and	3.98	0.660	79.50	9.347	0.000	2

	financial reporting.						
5	The use of AI tools in the internal audit process helps add value to the organization through the functions it is now performing under the governance system.	3.95	0.597	79.00	10.064	0.000	5
6	The use of AI technologies in internal audit is a key pillar to ensure an effective governance framework.	3.90	0.545	78.00	10.437	0.000	6
7	The use of AI tools in the internal audit process helps support the governance system to help your organization's management exploit its resources efficiently.	3.98	0.660	79.50	9.347	0.000	2
<b>Total paragraphs</b>		<b>3.96</b>	<b>0.410</b>	<b>79.21</b>	<b>14.803</b>	<b>0.001</b>	<b>-</b>

The above table shows the following:

- The result of approval of the third area as the average of the answers in the paragraphs of the hypothesis ranges from (3.90) to (4.05).

- Paragraph (1), which states that "the use of AI tools in the internal audit process requires attention to technical and administrative governance and the promotion of transparency and responsibility as its principles", has received the highest average account of (4.05) and relative weight (81.00%), while the two paragraphs, paragraph 3, which states that "The use of AI tools contributes to the internal audit process in the proper application of governance mechanisms" and paragraph (6), which states that "the use of AI techniques in the internal audit process is one of the prerequisites for ensuring an effective governance framework" with the lowest computational average of (3.90) and relative weight (79.00%).

- The arithmetic average for all the hypothesis paragraphs (3.96) and a relative weight of 79.21.

**The result of the hypothesis test:** From the above it can be concluded that (T) is less scheduled than the calculated (T), which means rejecting the nihilistic hypothesis and accepting the alternative hypothesis that "there is an effect on the use of artificial intelligence in the internal audit process to strengthen governance procedures in the Palestinian government sector."

The researchers believe as a result of the hypothesis test that the current study is not consistent with the results of any previous study (Mardini & Alkurdi, 2021), (Al bawwata & Frijat, 2021), (ucoglu, 2020), (Munoko, Brown-Libur, & Vasarhelyi, 2020), (Al-Samarrai & Al-Sharda, 2020), (Ghanoum & Alaba, 2020), (Al-Samarrai & Al-Sharda, 2020), (Tasit, Araban, 2019), (Anbar, 2016), (Othman, 2012).

## 10.7 Analysis of the measurement regression of the study variables:

### 10.7.1 Regression analysis of the first child variable: (Risk Management and Assessment).

**Table (13) Slope Analysis of the Variable of the "Risk Management and Assessment"**

Independent variables	Regression coefficients	Regression R	Selection Factor R2	Value t	Probability value	Indication level at (0.05)
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					sig..	
Hard	0.752			1.48 2	0.147	
Risk management and evaluation	0.322	0.752	0.565	7.02 9	0.000	Slab
<b>ANOVA Contrast Analysis</b>						
F test value	49.41	R-2		0.55 4	Probability value	0.000

**\* Variable-dependent D-cost driving strategy at 0.05 indicative level**

To determine the impact of the use of Artificial Intelligence in the internal audit process on risk management and evaluation in the Palestinian government sector, regression analysis was carried out, and the previous table shows that the adjusted selection factor = 0.554, meaning risk management and evaluation (dependent variable) was explained by the change using Artificial Intelligence in the internal audit process (independent variable). The probability value (Sig.) Below the 0.05 level of indication  $\geq \alpha$  this indicates the effect of using artificial intelligence in the internal audit process to manage risk in the Palestinian government sector according to the following regression equation:

$$Y = -0.752 + 0.322X_1$$

This means that the use of Artificial Intelligence in internal audit affects the dependent variable (risk management and assessment) by 32.2%.

**10.7.2 Regression analysis of the second dependent variable:(examination and evaluation of the internal control system).**

**Table (14) Regression analysis of the variable of the "Internal Control System Examination and Evaluation"**

Independent variables	Regression coefficients	Regression R	Selection Factor R <sup>2</sup>	Value t	Probability value sig.	Indication level at (0.05)
Hard	0.650			3.201	0.003	
Inspection and evaluation of the internal control system	0.316	0.650	0.423	5.273	0.000	Slab
<b>ANOVA Contrast Analysis</b>						
F test value	27.801	R-2		0.407	Probability value	0.000

**\* Variable Affiliate Strategy Excellence D at 0.05**

To see the impact of the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system in the Palestinian government sector, regression analysis was carried out, and the previous table shows that the adjusted selection coefficient = 0.407, which means that the change in the examination and evaluation of the internal control system \_ so that the internal control system is reliable (dependent variable) (x-variable) was explained by the change in the use of Artificial Intelligence in the

internal audit process (independent variable), and the probability value (Sig.) Below the 0.05 level of indication  $\geq \alpha$  this indicates the effect of the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system in the Palestinian government sector so that it can be relied upon according to the following regression equation:

$$\text{And } 0.650 + 0.0316X_3$$

This means that the use of artificial intelligence in the internal audit process affects the dependent variable (internal control system check and evaluation) by 31.6%.

### 10.7.3 Regression analysis of the third dependent variable: (strengthening governance procedures).

**Table (9) Regression analysis of the variable of the affiliate "Strengthening governance procedures"**

Independent variables	Regression coefficients	Regression R	Selection coefficient R2	Value t	Probability value sig.	Indication level at (0.05)
Hard	0.663			1.501	0.139	
Strengthening governance procedures	0.321	0.663	0.586	0.592	0.000	Slab
<b>ANOVA Contrast Analysis</b>						
F test value	<b>36.25</b>	R-2		<b>0.545</b>	Probability value	<b>0.000</b>

#### \* Variable dependent D focus strategy at 0.05 indicative level

To determine the impact of the use of Artificial Intelligence in the internal audit process on strengthening governance procedures in the Palestinian government sector, regression analysis was carried out, and the previous table shows that the adjusted determination coefficient =0.545 means that the change in the strengthening of governance procedures (the dependent variable) was explained by the change in the use of Artificial Intelligence in the internal audit process (independent variable). Below the 0.05 level of significance  $\geq \alpha$  this indicates the effect of the use of artificial intelligence in the internal audit process on strengthening governance procedures in the Palestinian government sector according to the following regression equation:

$$\text{And } 0.663 + 0.0321X_3$$

This means that the use of Artificial Intelligence in the internal audit process affects the dependent variable (strengthening governance procedures) by 32.1%.

### Conclusions and recommendations

This study aimed at finding out the effectiveness of the use of artificial intelligence in the internal audit process and its impact on the management and evaluation of risks, control and governance in the Palestinian government ministries, as artificial intelligence technologies have imposed a new reality and challenge on the auditors and the audit profession as a result of the dependence of the activities and transactions of government ministries on the computer, which led to the need to keep up with the auditor. The internal architects of this technological development, and the internal auditors had to use modern tools to keep pace with that development in modern technology, one of the most important of



those tools that proved their ability and efficiency in practice artificial intelligence techniques, and based on the results of data analysis and test hypotheses, the study reached a set of results and conclusions, the most important of which:

- The use of artificial intelligence in the internal audit process has a significant impact on the management and evaluation of risks in Palestinian government ministries, and internal auditing using AI techniques helps improve the efficiency and effectiveness of the audit process, and contributes to increasing the quality of internal audit services and reducing risk by helping the company's management improve the means used to protect the organization's assets and control performance.
- There is a significant impact on the use of artificial intelligence in the internal audit process on the examination and evaluation of the internal control system and control systems in the Palestinian government ministries, and AI tools are a supportive strategy for the completion of internal audit procedures through the use of technology to achieve the efficiency and quality of the audit process, where the efficiency of the audit process is utilized in the evaluation of the financial and accounting control system, and the use of Artificial Intelligence in the internal audit process plays a critical role in identifying weaknesses and deviations related to internal control and providing advice and solutions appropriate to eliminate them.
- There is a significant impact on the use of Artificial Intelligence in the internal audit process to strengthen governance procedures and mechanisms in Palestinian government ministries, through the evaluation and realization of transparency and responsibility as their principles, and to give confidence to management processes and financial reports, as the use of AI tools helps in the internal audit process to support ensuring an effective governance framework to help the management of the institution to exploit its resources efficiently, making it indispensable to rely on it, which will prompt many government ministries to pay attention to improving and developing The performance of internal auditors, thereby raising the efficiency and effectiveness of the internal audit process. There are also many difficulties and greetings that limit the use of Artificial Intelligence technologies in the field of internal audit in Palestinian government ministries, including the high cost of purchasing or developing and developing specialized electronic auditing techniques and software. In addition, the electronic internal audit process needs to be regulated in terms of the issuance of professional laws and standards governing the use of electronic digital auditing.

In light of the objectives of the study, the nature of the problem and its findings and conclusions, the most important recommendations can be identified:

- The need to direct Palestinian government ministries to adopt the use of Artificial Intelligence applications in the internal audit process, as they provide reduced time and cost and increase the efficiency of the functions of the internal audit process in light of the vast amount of data and complex reports, and then help him reach rational decisions, and the need to enhance the awareness of internal auditors of the importance of the use of AI technologies, and its role in achieving the quality of the audit, conducting the risk assessment process, examining internal control systems, and strengthening the governance system in Palestinian government ministries.

The difficulties and greetings that limit the use of Artificial Intelligence techniques in the field of internal auditing in Palestinian government ministries must be overcome. These include the high cost of purchasing or developing and developing specialized technology and software in the field of auditing. In addition, the electronic internal audit process needs to be regulated in terms of the issuance of professional laws and standards governing the use of

electronic digital auditing. It is also worth focusing on training internal auditors in Palestinian government ministries to use AI technologies and programs to use their services in the audit process, so that they can see the latest technological advances in the field of artificial intelligence.

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# **Entrepreneurial Orientation and Firm Innovativeness A Study of Selected Fast Food Restaurants in Nigeria**

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## **Abstract**

This study investigated the relationship between entrepreneurial orientation and firm innovativeness in selected fast food restaurants in Nigeria using cross-sectional research survey. Ten fast food restaurants registered with Rivers State Ministry of Culture & Tourism was surveyed using simple random sampling technique. One hundred (100) fast workers were drawn from the fast food restaurants in Port Harcourt Metropolis. Sample size of eighty (80) was determined from the population with Krejcie and Morgan sample size determination table. Copies of questionnaire was used as instrument for data collection. Pearson Product Moment Correlation Coefficient (rs) was used to analyze the hypotheses with the aid of IBM Statistical Package for Social Sciences (20.0). The study found that entrepreneurial orientation has significant positive relationship with firm innovativeness. The study concluded that entrepreneurial orientation that a measured in terms of learning orientation and achievement orientation predicts product innovation and process innovation in fast food restaurants. It was recommended that managers of fast food restaurants should utilize entrepreneurial orientation as their strategic advantage over their competitors. In addition, policymakers and other business practitioners should ensure that entrepreneurial activities in terms of achievement orientation and learning orientation are utilized to improve the innovativeness in their respective managerial levels.

**Keywords:** Entrepreneurial orientation, firm innovativeness, learning orientation, achievement orientation, process innovation, product innovation

## **1. Introduction**

Innovativeness is the important to the survival of many organizations. This is because, without innovation, firms would find it very difficult to outperform its competitors. Thus, firms that want to make drastic progress in this digital era must embrace innovation. With innovation, firms can attract new customers and retain older ones (Abdelgadir & Sara, 2020), Egwakhe, Amos & Ajayi, 2019). Customers demand has forced organisations to embark on innovativeness so that they can continually maintain relationships with their customers. Service organisations are left behind when it comes to innovativeness because service delivery goes with new ideas. This is what is referred to as service innovation. Service innovation refers to strategies, process and methodologies that organisations deploy in

rendering services to its customers (Zulkifli & Rosli, 2013). Competition has made organisations to strategize on the best way or approach through which service delivery can be effective. Rendering services to customers to their doorsteps has taken the shape of contemporary business innovations through online shopping, online marketing, online distribution and online promotion (Murad, Aleem, & Kichan, 2011).

Thus, innovativeness has been found to have predicted new product development, packaging, customer retention, repurchase intention as well as customer advocacy (Camisón & Villar-López., 2014). (Carayannis, Sindakis, & Walter, 2015) opined that innovativeness is a measure of customer retention and repeat purchase. This implies that, organization that are conscious of innovation remains steadfast in the industry as long as long they want. On the other hand, when organisations are not conscious of innovation they will be out of business. Innovativeness has been identified as a weapon of war during competition amongst rivals (Berkhout & Green, 2002). Firm innovativeness comes in two major ways; product innovation and process innovation (Seo & Chae, 2016); (Camisón & Villar-López., 2014); (Mol & Birkinshaw, 2009).

However, innovation is driven by individuals that are passionate about the progress of the organization. These individuals are entrepreneurial oriented, meaning that they are acquainted with entrepreneurial skills they learnt from entrepreneurial education. This knowledge or entrepreneurial awareness is known as entrepreneurial orientation. Having entrepreneurial orientation is the propelling force of firm innovativeness. It has been established that innovation does not just happened, it is driven by members of the organization especially managers that are saddled with the responsibility of influencing their subordinates in their various functional areas of management to achieve organizational goals. Firm innovativeness has been the major driver of organizational performance and sustainability (Seo & Chae, 2016). Innovativeness brings about diversification as a result of customer demand in several geographical locations. (Junkunc, 2007) assert that innovativeness is the button that keeps most organisations alive in the competitive industry. (Fartash & Davoudi, 2012) also maintained that innovativeness creates an atmosphere for promotion of individuals that are involved in the discovery of the new ideas, product features and service mechanisms.

Nonetheless, firm innovation is driven by members of the organization that are entrepreneurial orientated. Organization that are entrepreneurial conscious usually organize workshops and seminars for its members to avail them with the opportunity of learning entrepreneurial skills which at the end they are expected to practice it by coming up with new process, products, methods that would improve the performance of the organization. This is what entrepreneurial orientation is all about. Through the orientation of entrepreneurship studies, individual or groups are empowered to develop new products or services that can boost the profitability of the organization. Entrepreneurial orientation has been found to improve the performance of the organization (Ejdys, 2016). (Ahmed, 2017) stated that entrepreneurial orientation has improve the size and sustainability of multinational organisations. (Duru, Ehidihamhen, & Chijioke, 2018) added that organisations with entrepreneurial orientation usually outperforms their counterparts that does not have. In

addition, (Adim & Tamunomiebi, 2018) maintained that entrepreneurial orientation is an instrument for strategic competitive advantage.

Previous studies on entrepreneurial orientation showed that it predicted other dependent variables. (Yi, Amenuvor, & Boateng, 2021) examined the impact of entrepreneurial orientation on new product creativity, competitive advantage and new product performance of SMEs. Their finding revealed that entrepreneurial orientation has significant positive effect on new product novelty and new product meaningfulness. It was further revealed that new product novelty and meaningfulness have significant positive impacts on competitive advantage. (Mkalama, Ndemo, Maalu, & Pokhariyal, 2020) investigated entrepreneurial orientation and firm innovativeness of small and medium enterprises in Kenya. Their study found that entrepreneurial orientation has significant positive effect on firm innovativeness. (Abdelgadir & Sara, 2020) examined the effect of entrepreneurial orientation on firms' performance of telecommunication companies in Sudan. The findings of their study showed that entrepreneurial orientation has significant positive effect on the performance of telecommunication companies in Sudan. (Adim & Tamunomiebi, 2018) examined the relationship between entrepreneurial orientation and women entrepreneurs' contribution to household livelihood and sustenance. Finding of their study showed that entrepreneurial orientation has significant positive relationship with women entrepreneurs' contribution to household livelihood and sustenance.

Based on the above prior studies, it was discovered that most of the studies did not investigate the current phenomenon. This has created a lacuna in entrepreneurial orientation body of knowledge including firm innovativeness which this study intends to fill. This is what propel the researcher to investigate the relationship between entrepreneurial orientation and firm innovativeness in fast food restaurants in Port Harcourt, Nigeria. The broad objective of this study is to investigate the relationship between entrepreneurial orientation and firm innovativeness in selected fast food restaurants in Port Harcourt. In specific terms, this study aimed to:

- 1) Investigate the relationship between learning orientation and product innovation
- 2) Examine the relationship between achievement orientation and process innovation

From the foregoing specific objectives, the following hypotheses were formulated.

HO1: Learning orientation has no significant relationship with product innovation

HO2: Achievement orientation has no significant relationship with process innovation

## **2. Literature Review**

### **2.1 Entrepreneurial Orientation**

Entrepreneurial orientation is the processes on how to initiate, embark and start new business (Duru, Ehidihamhen, & Chijioke, 2018); (Oyeku, Oduyoye, Asikhia, Kabuoh, & Elemo, 2014). It is like socialization processes that an entrepreneur must undergo to get acquainted with entrepreneurial skills that are relevant in setting up and overseeing a formal venture. (Gupta & Gupta, 2015) stressed that entrepreneurial orientation is decisions that managers or members of an organization undertake to embark on entrepreneurial activities outside their organization (Ahmed, 2017); (N.N. & Johan, 2017). What this means is that



most managers are not usually informed on the process, strategy and methods of starting a new venture unless they are motivated with entrepreneurial knowledge. The actions and inactions of managers on the need to initiate opportunities is due to their busy schedule that occupied their time since they were recruited. For (V.K., Niranjan, & Markin, 2019), entrepreneurial orientation is concerned with how an organization behave in terms of innovation, risk taking with regards market availability. At individual level, Wu (2009) added that entrepreneurial orientation is individual behaviour towards starting up new ventures within or outside the organization. Entrepreneurial orientation is enterprise methodology, systems as well as decision-making approaches especially when it acts entrepreneurially (Vij & Bedi, 2012). Entrepreneurial orientation determinants had been validated by many scholars and revealed them as; learning orientation, achievement orientation (Keskin, 2006).

## **2.2. Learning Orientation**

Learning orientation is the ability of an entrepreneur to learn from experience, learn from other entrepreneurs that are successful in their establishments, learn from the industry of interest and other economic indices that sustains an enterprise (Zulkifli & Rosli, 2013); (Covin, Green, & Slevin, 2006). It has been shown that entrepreneurs that learn from negative and positive experiences stands the chances of making advances in innovations (Minniti & Bygrave, 2001). Again, learning orientation has been found to have significant relationship with the performance of supervisors and sales personnel (Olubiyi, Egwakhe, Amos, & Ajayi, 2019). The success of an enterprises is depended on the experience acquired overtime which enables them to focus on opportunities instead of threats.

## **2.3. Achievement Orientation**

Achievement orientation refers to entrepreneurs that are goal oriented (Gupta & Gupta, 2015). What this implies is that, focusing on goals is preferable to settling with weaknesses. This is the mindset of a good entrepreneur. Entrepreneurs with high achievement motivation thrives very well and take responsibility for both failure and success (Fellnhofer, 2019). Such entrepreneurs seek challenging tasks and aims at improving performance. These groups of entrepreneurs are goal-getters, achievers and opportunity seekers (Wittaya & Wilert, 2017).

## **2.4. Firm Innovativeness**

Firm innovativeness is defined as the willingness to bring new ideas, new methods or process that would be used to develop and launch product into the market (Abdelgadir & Sara, 2020). Keskin (2006) went further to affirm that firm innovativeness is concerned with research and development of non-existing products or services into the market. Irrespective of how the concept is perceived by scholars, innovativeness has to do with the introduction of new methods, process, design that does not exist in the firm's industry. For instance, an organization can decide to change the methods and process for producing a particular product using new machine that never existed thereby given the product new touch such as design, packaging, taste, and sizes. This is the reason why Keskin (2006) assert that an organization need to differ from other organisations that are in the same industry by distinguishing their services or products. (Salavou, 2004) affirmed that innovativeness is a combination of process and product innovations. Research on innovation has shown that process and production innovation predict organizational performance (Siguaw, Simpson, & Enz, 2006).

It is a process when it involves stages that raw materials would pass before turning out as finished product. Process innovation also involves any decisions that changes the course of operation (Hult, Robert, Hurley, & Gary, 2004). On the other hand, product innovation is concerned with addition of value to a product in terms of taste, design, size, and colour to mention but a few. Based on the affirmation that process and product innovations are the constituents of firm innovativeness, this study therefore adopt it for empirical examination.

Firm innovativeness does not take place in an isolation, it is as a result of entrepreneurial orientation that engenders it with entrepreneurial education. Workers are able to learn new methods and process of developing new products or services in the organization. However, studies have shown that entrepreneurial activities predict innovation. (Murad, Aleem, & Kichan, 2011) opined that when an organization decides to add new features to an existing product, their intention is to keep their customers and attract new ones.

### **2.5. Process Innovation**

Process innovation refers to the methodology used by organization to convert input to output (Ahuja & Katila, 2001). (Annavarjula & Mohan, 2009) opined that process innovation is the adoption of new process that never existed before to manufacture products or render service to customers. A process innovation is when organization utilizes a new or enhanced production or delivery methodology (Özer, 2012).

### **2.6. Product Innovation**

Product innovation refers to the application of new methods used in developing a product for customer satisfaction (Bergfors & Larsson, 2009). A product innovation is when organisation introduced of a good product or service that is new or improved with regards to its features or planned usages (Özer, 2012). It can also define as the addition of value or enhancement of product features, taste or sizes with the aim of satisfying and retaining customers.

## **3. Research Methodology**

Cross-sectional research survey was used as research design. Target population of ten fast food restaurants registered with Rivers State Ministry of Culture & Tourism was surveyed using simple random sampling technique. The respondents are made up of one hundred (100) fast workers drawn from the ten selected fast food restaurants operating within Port Harcourt Metropolis. Sample size of eighty (80) was determined from the population using (Krejcie & Morgan, 1970) sample size determination table. Questionnaire was used as instrument for data collection. Five point Likert scale ranging from 5=Strongly Agree (SA) – 1=Neither Agree Nor Disagree (NAD) was used to measure the variables. Thus, eighty (80) copies of questionnaire was used to collect data from respondents to ascertain the relationship between entrepreneurial orientation and firm innovativeness. Out of the number of copies administered, seventy-two (72) copies was retrieved and found valid for analysis. Cronbach  $\alpha$  values between .70 and .80 coefficients were used as benchmarks for reliability instruments. Reliability results showed that learning orientation and achievement orientation has Cronbach  $\alpha$  values of .76 and .81 respectively. On the other hand, product innovation and process innovation has Cronbach  $\alpha$  values of .73 and .78 coefficients. Frequency distribution was used to analyse the respondent's profiles while Pearson Product Moment Correlation



Coefficient (rs) was used to analyse the hypotheses with the aid of IBM Statistical Package for Social Sciences (20.0).

#### 4. Results

**Table 1: Respondents' Profiles**

Demographics	Frequency	Percentage (%)
<b>Gender</b>		
Male	26	36.1
Female	46	63.9
<b>Age Bracket</b>		
46 years & above	15	20.8
36-45 years	24	33.3
18-35 years	33	45.8
<b>Educational Qualifications</b>		
Others	3	4.2
Diploma Certificate	33	45.8
Bachelor Degree	36	50.0

**Source: Research Survey (2021)**

Table 1 above shows the analysis of respondents' profiles. Gender distribution showed that 26 respondents representing 36.1% are males while 46 respondents representing 63.9% are females. This means that females are more than the males in the ten fast foods restaurants. The age bracket distribution revealed that 15 respondents representing 20.8% fall within 46 years and above; 24 respondents representing 33.3% fall within 36-45 years; and 33 respondents representing 45.8% fall within 18-36 years. On educational qualification, 3 respondents representing 4.2% hold other educational qualifications; 33 respondents representing 45.8% hold Diploma certificates; and 36 respondents representing 50.0% hold Bachelor degrees.

**Table 2: Analysis of Hypothesis One  
Correlations**

		Learning Orientation	Product Innovation
Learning Orientation	Pearson Correlation	1	.790**
	Sig. (2-tailed)		.000
	N	72	72
Product Innovation	Pearson Correlation	.790**	1
	Sig. (2-tailed)	.000	
	N	72	72

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

Result of hypothesis one above revealed that learning orientation has significant relationship with product innovation. This is because the value of correlation coefficient (.790\*\*) is high and positive. Secondly, p value (.000) is less than the level of significance (0.01). This implies that as learning orientation increases, product innovation also increases.

**Table 3: Analysis of Hypothesis Two**  
**Correlations**

		Achievement Orientation	Process Innovation
Achievement Orientation	Pearson Correlation	1	.820**
	Sig. (2-tailed)		.000
	N	72	72
Process Innovation	Pearson Correlation	.820**	1
	Sig. (2-tailed)	.000	
	N	72	72

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

The above hypothesis result revealed that achievement orientation has significant relationship with process innovation. This is because the value of correlation coefficient (.820\*\*) is high and positive. Secondly, p value (.000) is less than the level of significance (0.01). This means that as achievement orientation increases, process innovation also increases.

## 5. Discussion and Recommendations

Based on the results, it was discovered that entrepreneurial orientation has significant positive relationship with firm innovativeness. This implies that, as entrepreneurial knowledge is shared correctly in the in the fast food restaurants, managers and other members of the organization utilizes it to boost product and process innovations with the aim of satisfying customers. Secondly, as entrepreneurial orientation increases, firm innovativeness also increases in the fast food restaurants. The above findings are line with previous empirical evidence such as (Yi, Amenuvor, & Boateng, 2021); (Mkalama, Ndemo, Maalu, & Pokhariyal, 2020); (Abdelgadir & Sara, 2020); and (Adim & Tamunomiebi, 2018). (Yi, Amenuvor, & Boateng, 2021) investigated the impact of entrepreneurial orientation on new product creativity, competitive advantage and new product performance of SMEs and found that entrepreneurial orientation has significant positive effect on new product novelty and new product meaningfulness. The study of (Mkalama, Ndemo, Maalu, & Pokhariyal, 2020) on entrepreneurial orientation and firm innovativeness of small and medium enterprises in Kenya found that entrepreneurial orientation has significant positive effect on firm innovativeness. In addition, (Abdelgadir & Sara, 2020) investigated the effect of entrepreneurial orientation on firms' performance of telecommunication companies in Sudan and found that entrepreneurial orientation has significant positive effect on the performance of telecommunication companies in Sudan. Lastly, (Adim & Tamunomiebi, 2018) investigated the relationship between entrepreneurial orientation and women entrepreneurs' contribution to household livelihood and sustenance and found that entrepreneurial orientation has significant positive relationship with women entrepreneurs' contribution to household livelihood and sustenance.

In line with the above findings, this study concludes that entrepreneurial orientation that a measured in terms of learning orientation and achievement orientation predicts product innovation and process innovation in fast food restaurants. Some of the recommendations of



this study are that managers of fast food restaurants should utilize entrepreneurial orientation as their strategic advantage over their competitors. In addition, policymakers and other business practitioners should ensure that entrepreneurial activities in terms of achievement orientation and learning orientation are utilized to improve the innovativeness in their respective managerial levels.

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## **Analyzing The Influencing Factors Associated with Environmental Reporting in The Context of Green Accounting Implementation**

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### **Abstract**

The research aims to analyze the influencing factors associated with environmental reporting in the context of green accounting implementation. The research is organized to present a discussion on green/environmental accounting, a literature review related to environmental reporting, and concepts, benefits, obstacles, and influencing factors associated with environmental reporting. The study methodology was based on a field survey the researcher directed the questionnaire to the stakeholders (investors, financial analysts, creditors, and auditors) of the Egyptian listed firms. Only 427 questionnaires with responses were collected and included 11 incomplete questionnaires. Only 416 questionnaires were statistically valid and free of missing data, with a response rate of 88.89%.

The researcher concluded that external and internal factors associated with environmental reporting have a significant direct positive impact on the benefits of environmental reporting. External and internal factors associated with environmental reporting have a significant direct negative impact on the obstacles of environmental reporting.

**Keywords:** Environmental Reporting, Environmental Disclosure, Green Accounting.

## 1. Introduction

Companies are increasingly being held responsible for the effects of their decisions and actions on the environment because many have come under fire for contributing to issues like climate change, the depletion of natural resources, waste production, and a lack of corporate environmental responsibility. These changes have been linked to an increase in the trend for businesses to publish a range of environmental information in corporate environmental or sustainability reports, in which a range of environmental information is disclosed voluntarily (Braam et al., 2016). Environmental sustainability includes maintaining biodiversity, achieving atmospheric balance, and increasing the productivity of many natural environmental systems. It was suggested that environmental sustainability must be given the highest priority because it means the conservation and responsible use of natural capital (Ismail et al., 2018). The requirement for mandated economic and financial disclosures in the current era of external reporting has forced companies to broaden the scope of disclosures in annual reports to include social and environmental disclosures (Nuskiya et al., 2021).

Companies are being encouraged to voluntarily disclose social and environmental information to stakeholders and society at large as a result of the public's growing concern over environmental issues. This information demonstrates the companies' commitment to and responsibility for the ecosystem in which they operate (Kouloukoui et al., 2019). According to (Shahab et al., 2020), business and strategy scholars have been focusing more on these concerns in recent years as a result of global climate change, extreme atmospheric conditions, and deteriorating environmental settings.

Businesses that manage natural resources have the potential to put the environment in danger. Due to this, businesses must commit to treating the environment and the social sphere as the primary and integral components of their daily operations (Endiana et al., 2020).

Customers are pressuring businesses to accept responsibility for creating environmental problems as a result of increased public knowledge of the contribution of businesses to environmental concerns. Companies release corporate environmental reports to demonstrate that they are reasonably decent environmental performers in response to these pressures and as proof of their desire to take accountability and responsibility towards the environment. It has drawn interest from researchers as well as industry experts to determine whether businesses are truly acting responsibly to merit their enhanced corporate public image (Shwairef et al., 2021).

Environmental issues have expanded to be a global problem for enterprises that are sustainable. A number of laws have been created requiring corporations to comply with environmental protection standards because economic development has become a crucial factor for emerging and developing nations (Rahim 2021). The notion of environmental performance includes efficient, environmentally friendly operations that have led to a forward-looking ecological perspective for the business. It includes aspects of strengthening environmental compliance, enhancing business image, obtaining environmental certification, reducing emissions, and recycling (Susanto & Meiryani 2019).

In recent decades, society's concern for the environment has become one of the key topics of debate around the world. Environmental issues are becoming more global in scope and constitute a severe threat to the planet's health. Only companies that adhere to environmental regulations will continue to hold the top positions and acquire a competitive edge as the world's businesses become more and more competitive on a daily basis as a result of globalization and environmental change. Lack of environmental reporting and social accountability may have a negative influence on a company's financial performance by leading to the formation of actual or potential liabilities as well as lower asset values (Adeyemi et al., 2021).

A corporation is required to provide additional details about its operations, environmental policies, and environmentally friendly performance due to tighter restrictions and more outside



pressures. As a result, the manager must make sure that accurate, thorough, and timely information is being shared about the environment. The extent of information, the quality of its transmission, and its verification are therefore improved by better engagement of governance systems within organizations, and this is due to the numerous mechanisms put in place (Moalla et al., 2021).

Increasingly, investors and other stakeholders have demanded that businesses also report on their impact on the environment and society. As a result, reporting is no longer limited to a company's financial performance. The impact of an organization's environmental and social performance on its financial state has led to an increase in stakeholders' and organizations' interest in environmental accounting and reporting (Maama & Appiah 2019).

The study is organized as follows: the next section presents a discussion on green/environmental accounting; section 3 presents a literature review related to environmental reporting and includes concepts, benefits, obstacles, and influencing factors associated with environmental reporting; section 4 provides empirical study; explains the results of the questionnaire survey; and section 5 presents conclusions and future research.

## **2. Green / Environmental Accounting**

Environmental accounting is a developing field that aims to provide crucial information on environmental expenses and earnings, assist businesses and project owners in making economical choices, and motivate them to take initiatives to use natural resources wisely, minimize environmental damage, reduce waste and pollution, and alter behavior regarding the environment (Nguyen 2020). Accounting for environmental issues is a method of accounting that takes into account how a company interacts with the environment. In this sense, it can be defined as the communication of an entity's economic operations and how those actions affect the environment and community (Maama et al., 2021).

The annual financial statements that accounting provides to the community with regard to current financial facts are no longer enough for the environment and the wider community. Because of this, the accounting profession has been obliged to modify its traditional function of maximizing owners' wealth for the benefit of society as a whole. Companies must, in accordance with that, meet stakeholders' demands for more transparency regarding the way environmental, social, governance, and other aspects affect their strategy, activities, and future plans. One of the contemporary accounting ideas is green or environmental accounting, which has captured the interest of numerous academics, associations, and governmental bodies. They have put pressure on organizations to address this issue (Al-Dhaimesh 2020).

Environmental or green accounting, both terms of which can be used as oxymorons (Deegan 2013). Environmental accounting, sometimes known as green accounting, integrates assets related to the environment and their place of origin, sink, and functionalities into national and business accounts (Rounaghi 2019).

Both nationally and corporately, the idea of environmental accounting is applied. It is predicated on the idea of considering life quality rather than life standard. Prior to the development of environmental accounting, the measurement aspects of accounting and disclosure methods were limited to the evaluation of organizational revenues, expenses, resources, and commitments but did not include a means of gauging the environmental impact that enterprises were having. The goal of an environmental accounting information system depends on how it responds to the need to adopt environmentally friendly procedures and practices in order to achieve social accountability and sustainability. When environmental costs are measured or understood incorrectly, the true goal is diminished (Meiryani et al., 2019).

Identification, assessment, allocation, and integration of environmental expenses into businesses are all part of environmental accounting. It also includes ways of getting this information across to stakeholders in the company's operations. This aids in keeping track of all environmental costs paid by the company and identifying ways to cut back on them so that

profits can rise. It also makes a company's commitment to the environment more apparent to the public (Adeyemi et al., 2021).

Green accounting must be used by the company to strike a balance between its production operations and the need for ecologically friendly practices. Green accounting may assist a business in making more sustainable improvements to the effectiveness and efficiency of its resources, which will help the local society as well as the business as it develops its environmental activities. The concept of green accounting can be defined as the methods of production in a company that use their resources with greater effectiveness and efficiency in order to achieve the company's sustainability. The practice of green accounting appears to have an impact on environmental performance. A corporation is required to have a clear understanding of how to guarantee the company's own sustainable development in addition to creating a positive impact on environmental sustainability (Ulupui et al., 2020).

When businesses are held responsibility for any sort of adverse environmental effect, they always make an effort to reduce the negative consequences of their operations on the environment. This is why green accounting is crucial. Additionally, it requires businesses to anticipate any environmental harm from their operations and make plans to mitigate it. so, ensuring that businesses keep an eye on their behavior to reduce environmental dangers (Lee et al., 2020).

Green accounting is a cost concern connected to the environment, which is more evident with firm accounting reports and methods. Environmental accounting includes identifying, measuring, and assigning environmental costs; incorporating these costs through business; determining environmental obligations, if they exist; and finally conveying this information to firm stakeholders. It is a system that strives to make the most accurate quantitative assessment (Riyadh et al., 2020).

By assessing the environmental factors that have an impact on a company's sustainability, contributing to its sustainability and its social balancing reports, complementary to and connected to its economic performance, green accounting makes environmental data accessible. Environmental policies, initiatives, accounts, sustainability reports, and social balance are all important components of green accounting (Gonzalez &Mendoza 2021).

Users of the business's financial reports will receive an overview of environmental initiatives and costs in the annual report, which may assist users in deciding on future business policies for environmental preservation. Green accounting is one of the factors that affects the financial performance of a business, It aims to boost the effectiveness of environmental management by evaluating environmental operations from the perspective of expenses, benefits, or impacts, as well as providing environmental protection impacts. In brief, the application of green accounting can determine the degree to which an organization or firm contributes favorably or negatively to the quality of people's lives and the environment (Endiana et al., 2020). The goal of green accounting is to generate expenses while gaining environmental advantages. Managers can use the information it offers to evaluate, operate, control, decide, report, and safeguard the environment. Numerous businesses are struggling with environmental problems and are searching for a suitable strategy to inform the public and use this knowledge for environmental development and protection, environmental accounting is therefore used in an attempt to safeguard the environment (Rounaghi 2019).

Solving the issues of environmental management effectiveness, restoration, and environmental protection becomes a critical necessity. An effective environmental policy must be created in order to preserve natural resources and the environment. In this context, there is an increasing need for a fundamental reorganization of environmental accounting, which produces, analyzes, and releases information on these crucial topics and acts as a knowledge base for the formulation and making of environmentally viable choices. Environmental accounting is a highly crucial tool for putting the idea of sustainable development into practice, which is development that doesn't erode the resources required for the continuation and growth of future generations (Yermolenko et al., 2020).



The necessity to account for how an enterprise's operations affect the environment and the community arises in the context of financial accounting, in addition to taking economic factors into account. However, practically all accounting methods continue to be oriented toward the business's financial perspective, and evaluations of the company's current state of social and environmental performance are still uncommon. These traditional accounting systems do not allow for the measurement of multivariate business efficiency (Valliřová et al., 2018).

(Anh et al., 2020) utilized a sample of 672 firm-year observations from firms listed on the Vietnam stock market between 2013 and 2017. The findings indicated that the effectiveness of environmental financial accounting policies is negatively and significantly correlated with each of the cost of equity and the cost of debt. As a consequence, the effectiveness of environmental financial accounting policies may assist enterprises in decreasing the cost of equity and debt capital, which not only enhances their reputation and enables them to conform with the law but additionally lowers the costs of transactions associated with obtaining external financing.

Social responsibility accounting frequently includes environmental accounting. The magnitude of a company's environmental impact is referred to as the environmental side of corporate social responsibility, which encourages businesses to participate in environmentally friendly practices. Businesses are probably going to have a conflict between revenues and expenses if dangers to the environment materialize because of the rise in pollution prevention expenses, penalties, and the cost of compensation (Nguyen et al., 2020).

Enterprise economic effectiveness today and in future periods is influenced by the extent of reporting of environmental accounting information. Consequently, the purpose of disclosing environmental accounting information is to strengthen the business's reputation and raise its financial efficacy, as well as stay in line with environmental law and prevent legal problems (Nguyen & Tran 2019).

(Giang et al., 2020) relied on the data of 80 enterprises chosen from the manufacturing, mining, and processing industries. The findings demonstrated that numerous elements, including managers' views regarding costs and benefits, changes in the environment, features of the range of production and business operations of enterprises, and pushes to release sustainable environmental information, have an important impact on the advancement of environmental accounting for sustainable development. Modern sustainable accounting still faces difficulties due to the absence of clear standards, laws, and plans, despite the great number of endeavors for sustainable development. To address sustainable development, accounting must be more pragmatic.

Accounting and environmental management are the two criteria used to evaluate environmental accounting. Environmental accounting makes available data outside the business to stakeholders, including financial services firms, environmental management institutions, societies, etc., in addition to assisting internal decision-makers in the operation of the company with the goal of enhancing financial and environmental performance. Thus, it benefits companies. increase competitive advantage through sustainable product use, Transform and raise awareness of environmental concerns among organizations and stakeholders in each business and the economic system as a whole (Nguyen & Tran 2019).

Management of the firm must have a high degree of awareness because environmental accounting is an integral component of the firm's annual financial statements. Legislation from the government requiring corporations with the possibility of harming the environment to bear environmental costs for those corporations, as a result, businesses must disclose all of their actions in their annual reports, including those that are connected to both their financial and environmental performance. This is relevant to the Sustainable Development Goals (SDGs) initiative, in which businesses are required to safeguard the environment, and provides crucial data for all stakeholders to evaluate overall performance, especially investors who wish to have an investment in the business (Taqi et al., 2021).

(Nguyen 2020) demonstrated how the pressure from stakeholders, business features, compelled compliance from government agencies, senior managers' concern for the environment, and accountant skills for environmental accounting can all have an impact on the adoption of environmental accounting in mining enterprises, but stakeholder pressure has a little impact. (Olubukola et al., 2021) cleared up that environmental accounting application improves a firm's reputation, enhances customer loyalty, lowers litigation, and assists investors in making decisions that are in the best interests of the business and the public as a whole.

The problems that prohibit businesses from properly implementing green accounting include When management offers little to no motives for controlling environmental costs, when qualified accountants are unfamiliar with the basic principles of green accounting, when there are few to no financial incentives for directing the adoption of environmental accounting policies, and when a company's accounting processes do not prioritize environmental information, there is a lack of a standard framework for handling these situations. Challenges to the adoption of green accounting include all of the aforementioned. Some approaches to overcoming these challenges include (a) the production of new studies that strengthen the green accounting strategy through the establishment of a standardized approach and (b) the influence of institutional factors that can encourage the adoption of environmental responsibility throughout businesses (Gonzalez &Mendoza 2021).

The lack of a unified framework that directs environmental accounting and reporting procedures is one of the elements preventing the adoption of environmental accounting processes. Environmental concerns' dependability and quality are not evaluated on a common scale. Environmental accounting cannot be implemented due to insufficient funding and commitment (Olubukola et al., 2021).

A number of procedures known as "environmental accounting" are designed to provide accounting systems with more ability to detect, document, and communicate the impacts of environmental pollution and deterioration. Environmental accounting's goal is to give managers information they may use to assess performance, make decisions, maintain control, and produce reports. It is crucial for users of environmental reporting to be knowledgeable about environmental performance and the release of information about environmental expenses in order to raise shareholder wealth, which in turn increases the value of the company. Environmental accounting needs to be accompanied by environmental reporting. As a result, environmental (green) disclosure will eventually result in an increase in the value of the company, increase profits for shareholders, sustainable business development, and other outcomes (Rounaghi 2019).

Most of the information is descriptive in nature, which is a crucial thing to remember because business green information reporting is not an easy phenomenon that can be properly clarified by only one conceptual framework (Maama &Appiah 2019).

### **3. Literature Review for Environmental Reporting**

#### **3.1. Conceptual Background**

Significant theoretical bases for social and environmental accounting studies include those provided by institutional theory, legitimacy theory, stakeholder theory, and resource dependence theory (Bhattacharyya 2014).

Due to social challenges brought on by expanding environmental consciousness among people and associated groups, environmental accounting and disclosure have been seen as a developing issue in recent years. Official and non-official agencies have shown a significant amount of concern in environmental reports published by businesses with industries that have an impact on the environment. Environmental accounting is an important area of accounting that makes a significant contribution to the safeguarding of the environment by determining the environmental costs caused by the company in order to do so and, as a result, releasing



financial statements determining the outcome of the company's operation and its financial state while taking into account the environmental effect of the company (Saleh et al., 2018).

Disclosure regarding the environment is the practice of sharing information on environmental topics via multiple reporting channels, such as annual statements and independent standalone environmental-related reports (such as reports relating to the environment as well as sustainability reports). It is expected that increasing the quantity and quality of environmental releases by businesses will positively impact environmental performance while enhancing economic performance, a process that in turn will result in improved environmental performance (Ismail et al., 2018). Identification, measurement, allocation, and/or integration of costs associated with greenhouse gas emissions and other environmental problems into a company's financial statements is known as environmental disclosure (Jeroh 2020).

The results of the study by (Alipour et al., 2019) showed a significant beneficial association between environmental disclosure quality and firm performance, in addition to the moderating effect of board independence in this connection.

The problem of the environmental crisis motivates businesses to create plans and initiatives that integrate social and environmental concerns into their operations. Encouragement from society will have an impact on the continuation of a business' operations and, consequently, the future viability of that business. Including effects on business performance along with social and environmental reporting can demonstrate the level to which a firm contributes to the well-being of society as a whole and to the protection of the environment (Indrasari et al., 2021).

Through the creation of policies and regulations, committees of nations, international organizations, and governments from all over the world have demonstrated their care for the environment. Examples include the Global Reporting Initiative (GRI), the International Financial Reporting Standards Board (IFRSB), and the Association of Chartered Certified Accountants (ACCA). For example, the Financial Reporting Standard (FRS) 101, Presentation of Financial Statements, which was adopted by the IFRSB, mandates that companies disclose environmental information regarding human actions that may have an impact on the environment. In contrast, GRI is an organization founded not for financial gain but to advance social, economic, environmental, and sustainable development through the creation of a reporting on sustainability framework that is used extensively worldwide for all sizes of enterprises (Aliyu 2019).

With an awareness of the idea of responsible management, investors can more accurately evaluate the risks associated with investments and possibilities by using the growing significance of information that is not financial in nature, environmental information, and social information (Alipour et al., 2019).

The purpose of environmental reports is to inform stakeholders about the most important environmental issues through the publication of documentation by businesses. Despite the fact that environmental reporting is a process that is becoming more and more important, the information that is gathered for these reports is not often of a high enough standard for stakeholders to assess a company's real environmental performance. Businesses have been compelled to create and enhance their environmental performance as a result of numerous focus groups, including environmental organizations, community groups, employees, shareholders, financial institutions, and customers. The goal of the GRI's recommendations is for businesses to provide information on their economic, environmental, and social performance as frequently as and comparable to their financial reporting, which includes reporting about the environment as a component of corporate social responsibility (CSR) reporting (Said et al., 2013). Making relationships with society at large and keeping open about organizational activities are the key goals of environmental reporting, rather than incorporating



additional types of information or increasing the reporting load. The fundamental objective is to give information on environmental efficiency that might have influenced stakeholders' decisions in some way, whether direct or indirect (Kassim 2021).

When it comes to external reporting, stakeholder groups are particularly interested in the broader context, which shows how the firm manages the environmental effects of its operations. Therefore, disclosures about present and previous activities, along with future objectives and plans, should be included in external environmental reports (Raiborn et al., 2011). Alongside conventional financial statements, reports regarding sustainability also include important information for outsiders. Such reports enable businesses to mitigate detrimental effects on the environment while increasing their environmental responsibility from the perspective of stakeholders (Rahim 2021).

(Helfaya et al., 2019), a multifaceted strategy for evaluating the extent of corporate environmental reporting, the examination of the 177 users' and 86 preparers' reactions revealed that quantity was not thought to be the most important factor in determining quality. In addition to quantity, participants considered the following factors to be important aspects of environmental reporting quality: information categories, metrics utilized, topics reported, adoption of reporting rules, inclusion of an assurance statement, and use of visualization tools.

All information shared with stakeholders concerning environmental concerns at frequent intervals and as needed is included in environmental reporting. Increasing consciousness about the company's operations, performance, and relationships with the environment among stakeholders is the goal (Iredele 2020).

A positive attitude toward environmental disclosures is linked to a higher chance of being good environmental participants in the future, and the strength of this association depends on the board of directors. A CSR-related release can be a tool to show stakeholders that businesses are committed to reducing the environmental effects of their operations. The entire organization must be committed to CSR, beginning at the top of the structure, or the board level, where all major decisions are made, including those pertaining to CSR and sustainability. In attempting to win over stakeholders' trust, establish the groundwork for improved reputation, and ultimately change the public's view of the industry, businesses in some contentious industries, like oil firms, should place a special emphasis on this kind of dedication (Arena et al., 2015).

An effective way to raise the degree of involvement that these reports are meant to achieve is to acknowledge that there is a gap that exists between a business's environmental reporting and its stakeholders' awareness of environmental concerns. This discrepancy is distinct from the conventional expectation gaps, which have pointed out discrepancies between the data presented in business reports and the data that stakeholders want. Instead, this difference is a mismatch between how management conveys environmental challenges to stakeholders via business environmental reporting. Stakeholders must be able to interact with environmental reports in a manner consistent with their awareness of environmental problems. If this is not accomplished, the idea will not be understood, and the stakeholders' view of the company may be unfavorable and even inaccurate (Morrison et al., 2018). Businesses provide information about their environmental actions because stakeholders expect them to. Company environmental reporting and what is expected of stakeholders are closely related (Borgstedt et al., 2019).

Financial reporting has an essential function in informing those with financial interests regarding the financial performance of an organization, and it could be very effective at performing so, but there are a lot of central presumptions and rules, making it a highly insufficient vehicle for informing them about the business's social and environmental performance (Deegan 2013). Financial reporting is no

longer regarded as the exclusive source of data on the efficiency and responsibility of corporations. In order to explain the full story of a company, how it generates value, the strategy, dangers, challenges, and opportunities of its operations, as well as to assess performance towards strategic goals, it is crucial for firms to publish environmental information in the same way (Maama & Appiah 2019).

We live in a world which decisions about how to allocate resources are decided based on their commercial value, which adds to social and environmental problems. The measure of a valuation's contribution to allocating resources to projects with favorable social and environmental results. Society needs choices regarding resource allocation to take into account social and environmental impacts more and more. While some reporting-related law now exists, the majority of actions are voluntary. As a result, the business case for monitoring and providing information on social and environmental consequences has received more attention (Nicholls 2020).

Both financial reporting and accounting, along with the concepts of convergence and uniformity in accounting, are impacted by the rules of sustainable development. The current accounting procedure and financial reports need to be expanded with respect to reporting specific sustainability-related issues in order to guarantee that the needs of every social and environmental stakeholder are properly met. This comprises revenue and expenditures associated with social, environmental, and economic factors included in the period's profit and loss report, along with additional comprehensive income and corresponding liabilities and assets on the balance sheet at the close of the time period (Valliřová et al., 2018).

### **3.2. Benefits and Obstacles**

Environmental reporting can be used as a method of interaction to shift public opinions, achieve competitive benefits including a better business reputation and lower cost of capital, and serve as a tool for management to establish business legitimacy (Braam et al., 2016). Despite taking into account financing disparities as well as expansion potential, voluntary environmental disclosure enables business value optimization at levels that are closer to optimum debt levels. A company's capacity to obtain external finance more easily and at a lower cost increase with voluntary disclosure of environmental reports (Hussain et al., 2020).

According to the underlying premises of the legitimacy theory, management is inspired to engage in behavior that fully discloses environmental information in order to establish or preserve the legitimacy of the company in society. Greater societal support may come from increased information about environmental disclosure. The firm might see equity gains as a result of this support. Therefore, the firm's profitability and returns on equity will increase in direct proportion to the extent of environmental information sharing. Contrarily, the theory of proprietary costs makes the assumption that the firm will incur expenses as a result of disclosing information, which may suggest a likelihood of a negative correlation between disclosure and the financial benefits realized by the company (Pedron et al., 2021).

Based on a sample of 46 big companies for the years 2011 to 2018. The findings indicated that environmental transparency greatly improves business efficiency (Rahim 2021).

Implementation of environmentally friendly practices and environmental reporting are very essential and should have a particular place in the company's decision-making of management. The more managers enhance environmental reporting, the greater will be the quality of the company's earnings. Companies have the opportunity to enhance their earnings quality among competitors through attempts to improve their release and disclosure of additional non-financial information (Alipour et al., 2019).

Environmental reporting is thought to have many advantages, including avoiding government interference, fostering trust between businesses and the community, avoiding government penalties, enhancing businesses' reputations by gaining environmental awards, lowering the amount of risk, and reducing operational failures (Agyei & Yankey 2019).

(Mathuva et al., 2019) investigated if Kenyan listed firms' environmental reporting increases stock liquidity. The findings showed that environmental reporting has a positive relationship with stock liquidity via a panel dataset of 244 firm-year evaluations from 50 listed firms in Kenya from 2011 to 2015. The results also suggested that publicly traded firms in Kenya that involve higher

environmental reporting appear to be more appealing to investors. The informational environment appears to be improved by the greater environmental reporting, which reduces information asymmetry and draws in investors. The findings showed some evidence of the beneficial economic effects of participating in further disclosure over and beyond the customary company financial reporting; environmental reporting offers additional benefits and pertinent data that investors can use to guide their investment choices. Investors might be more inclined to invest in a business that is known for championing environmental preservation because of the priority that is put upon environmental conservation.

(Pedron et al., 2021) discovered that there is no correlation between changes in the accounting profits of enterprises and environmental disclosure using a sample of 69 Brazilian companies that were surveyed during 2006 and 2012. However, it plays a role in establishing the value that Brazilian publicly traded enterprises are given. The idea that environmental disclosure lowers information asymmetry, enabling the investor to view lower risks in a firm and thus assigning a greater value to it, means that the financial market determines value in businesses that disclose details regarding their environmental difficulties.

Being aware of environmental costs and the performance of the item's production process can lead to better reliable and thorough costing, which can assist businesses in designing their process of producing goods with an increased focus on environmental concerns (Rounaghi 2019).

Different techniques are used by shareholders and customers to understand and analyze environmental information presented by businesses. The degree of environmental reporting has a significant and positive relationship with market-based performance but is adversely and significantly connected with performance that is tied to customers (for instance, sales growth and profit share). This suggests that the primary goal of the environmental reporting approach is to maximize the value of shareholders. Customers are more likely to be focused on the performance of the environment, which improves sales growth and operational efficiency. A greater degree of environmental performance, however, causes shareholders to respond unfavorably. This could be justified by the shareholders' consideration of the costs and benefits of making such environmental measures (Radhouane et al., 2018).

As environmental accounting becomes more prevalent, a growing number of publicly traded corporations are paying attention to the reporting of environmental accounting information. Environmental governance charges, disclosure expenses, and penalties from appropriate departments are only a few of the challenges that come up throughout the disclosure process of environmental information. Numerous parties participate in the disclosure process, primarily investors, the media, publicly traded firms, and governments. Many publicly traded corporations understand how crucial it is to maintain the environment, but they will decide to avoid disclosing environmental accounting information throughout the whole disclosure procedure in order to maximize their own corporate profits (Qi et al., 2021).

(Omar et al., 2021) highlighted that the community's right to know about social and environmental reporting practices will be hampered by the lack of a robust legislative framework.

Due to measurement problems, environmental costs from processes are frequently added to other costs, buried deep in accounts, or completely ignored. If environmental issues are not reported, users may not be able to determine factors that pose substantial long-term risks or benefits to an organization, and their decision-making may be shifted toward immediate financial performance metrics rather than a holistic perspective on the future (Raiborn et al., 2011).

Although the fact that environmental reporting is strategically significant to external stakeholders, increased levels of environmental disclosure are seen unfavorably by shareholders of companies that operate in ecologically sensitive industries. In accordance with the cost-benefit evaluation, it has been discovered that shareholders evaluate the value of environmental reporting for companies in environmentally sensitive industries mainly in



terms of profitability-based efficiency rather than revenue-based efficiency (Radhouane et al., 2018).

The lack of obligatory standards is often identified as the main cause of insufficient availability of social and environmental information; however, the voluntary character of environmental information leads to an ununiform specific of information, and the lack of the necessary expertise in assessing, pricing, and incorporating operational effects on the environment onto financial statements are also internal issues that contribute to the low quality of disclosed environmental data (Kassim et al., 2019).

A sample of the biggest publicly listed French companies included in the SBF120 index revealed that shareholders gave voluntarily environmental disclosure by ecologically vulnerable industries a negative rating. In spite of the advantages of such releases by firms, shareholders continue to be worried about the greater expenses associated with these firms releasing such information. Unless there are considered advantages that exceed the cost of environmental reports, shareholders view companies' voluntary disclosure of environmental information adversely (Radhouane et al., 2020).

The improper allocation of resources caused by social and environmental disclosure activities can cause the underlying economy to fail in cases where localized reporting requirements for non-monetary disclosures do not meet those of international markets (Bhattacharyya & Agbola 2018).

The lack of an environment general legitimacy, a clear lawful demand, a lack of consciousness and understanding, an absence of government incentives, a distrust of change, and a lack of civil society groups are thought to be the main obstacles preventing the growth of social and environmental reporting. Companies hardly appear to participate extensively in voluntary disclosure of social and environmental data in a developing country setting (Alshbili et al., 2021).

### **3.3. Influencing Factors**

Varying legal structures, cultural diversity, and disparate industries are just a few of the variables that can lead to discrepancies in the release of environmental information, especially when businesses are involved in high-risk environmental industries (Alvarez & Martínez 2020).

Push caused by government or legal demand, pressure from social media, shareholder impact, the presence of a sustainability group or department within the firm, and the type of the company's operation are some of the major factors that affected firms' extent of environmental accounting reporting (Agyei & Yankey 2019).

The study by (Braam et al., 2016) examined the connection among external assurance, several company environmental performance indicators, and the extent and kind of voluntary environmental reporting procedures. For a sample of Dutch corporations between 2009 and 2011, measurements of emissions of greenhouse gases, waste generation, and water utilization were analyzed, and a differentiation was created among corporate environmental disclosures that included or did not include external assurance. Results revealed that water use, emissions of greenhouse gases, and external assurance all significantly and incrementally contribute to the heterogeneity in environmental reporting's degree and type. The findings are consistent with the idea that corporations' decisions regarding environmental disclosure are heavily influenced by legitimacy. According to the study, in order to push businesses to take greater responsibility for their environmental performance, reporting requirements for sustainability should be made obligatory in addition to voluntary ones.

The amount and nature of the information on climate hazards disclosed in the sustainability reports of companies listed on the Brazilian Stock Exchange were examined by (Kouloukoui et al., 2019), and it was determined whether there were any correlations between this information and certain corporate traits between 2009 and 2014. The study's final sample of 67 businesses had 402 observations. The findings showed that although Brazilian businesses have a propensity to publish information on climate hazards, the volume of this kind of disclosure is still quite low. Findings revealed that firm size, financial success, and country of origin are significantly and favorably correlated with corporate hazards related to climate disclosures. Findings also showed a negative correlation between corporate climate hazards disclosures and degree of debt.

(Bhattacharyya 2014) studied Australia's social and environmental reporting landscape and chose the Global Reporting Initiative. Using a sample of 47 small and large Australian companies taken from five industries, social and environmental reporting requirements were used to assess the relationship between corporate features and degrees of social and environmental reporting and to investigate the magnitude of the correlation. The results showed that the scope of social and environmental reporting by Australian corporations was relatively low and that large enterprises in the industrial transportation sector had much greater levels of total disclosure. Age, profitability, and the size of the outside auditor had no connect to the level of overall disclosure.

The study by (Indrasari et al., 2021) utilized the terms proactive and reactive methods to describe the reasons why businesses adopt social and environmental reporting. The incentive for the corporation may come from its knowledge of the need to contribute to bettering people's lives or from outside forces or encouragement. This study revealed that social and environmental disclosure had an impact on corporate performance, both financially and non-financially, using a sample of firms listed on the Indonesia Stock Exchange. Influences on non-financial outcomes can be evident in support from the community, which is crucial for enhancing the reputation of the company and its products and boosting operational effectiveness. The company's immediate and prospective advantages can be used to quantify the effects on financial performance.

In the instance of the Libyan oil and gas business, research was done by (Omar et al., 2021) on the management attitudes towards reporting social and environmental initiatives as well as variables that affect their choice. The results showed that managers are aware of their own motivations for doing so, along with the potential detrimental effects that a company's operations may have on society and the environment. On the other hand, because of the growing knowledge of the potential detrimental effects of the oil and gas business, oil and gas firms feel compelled to publish their social and environmental activities. However, because Libyan enterprises don't have access to a complete framework, the disclosure of these activities is still restricted.

(He & Loftus 2014) analyzed environmental disclosures provided by Chinese businesses operating in environmentally delicate sectors from 2010 annual reports and independent environmental or sustainability reports revealed that firms with enhanced environmental performance provide more environmental information compared to firms with poorer environmental performance, and these firms additionally present a higher percentage of hard disclosure objects. That is, companies that do well in terms of the environment are more inclined to disclose their environmental impacts in a more unbiased and reliable manner.

In the study by (Otchere et al., 2020) which examined the environmental disclosures made by 25 companies in Ghana, including manufacturing and mining firms, in their annual reports from 2009 to 2012, it was discovered that mining firms made higher levels of environmental disclosures than manufacturing firms. The level of environmental disclosures made by mining and industrial enterprises appears to be statistically significantly influenced by environmental performance. The extent of environmental disclosures made by Ghana's mining and manufacturing enterprises is negatively impacted by their environmental performance. There is evidence that companies with bad environmental practices reveal more environmental data. Additionally, discovered to be statistically significant predictors of the extent of environmental disclosures were business size, business age, and capital concentration. However, Business age and capital concentration have a negative impact on environmental disclosures, but business size has beneficial effects.

(Bhattacharyya & Agbola 2018) used 312 annual reports of publicly traded Indian companies for the fiscal years 2006, 2012, and 2014. The results showed that the choice to present voluntary other than financial disclosure has a positive relationship to a company's age, profits, industrial type, and leverage. The choice to present social and environmental disclosures, however, was found to be negatively associated with consumer accessibility, leverage, and participation in the industrial transport industry.

(Gerged et al., 2021) studied the relationship with company value and company environmental disclosure in Gulf Cooperation Council GCC countries. Company environmental disclosure was discovered to be significantly and favorably correlated with



company value as determined by Tobin's Q in a sample of 500 firm-year observations using a 55-item. Additionally, there is some proof that company environmental disclosure is favorably associated with return on assets.

(Ifada et al., 2021) examined 117 manufacturing and coal mining enterprises in Indonesia between 2017 and 2019. The findings demonstrated a favorable relationship between environmental performance, firm size, and financial performance. The independent board of directors has little impact on the financial performance, however. Additionally, environmental disclosure is positively impacted by corporate size, financial performance, and environmental performance. Nevertheless, environmental disclosure is unaffected by the independent board of directors. According to the study's results, financial success and environmental performance are significantly positively correlated. As a result, businesses that are aware of environmental issues and employ eco-efficient practices will be more profitable.

According to the strategic legitimacy hypothesis, businesses operating in environmentally sensitive industries are anticipated to disclose more environmental information compared to businesses in less environmentally sensitive industries (Chelli et al., 2018).

(Wahyuningrum et al., 2020) collected data from 36 firms from 2014 to 2016 at the Indonesia Stock Exchange. The level of environmental disclosures was shown to be influenced by both firm size and environmental performance variables. The number of board members and the financial performance variable, which is evaluated by a company's profitability and leverage, have little impact on the level of environmental disclosures.

(Nguyen 2020) gathered information from 87 businesses listed on the Vietnamese stock exchange between 2009 and 2019. The findings demonstrated that company size, availability, and external auditing are all important factors that affect the amount of information related to environmental accounting disclosure. These variables have a positive impact on the extent of environmental accounting information disclosure. Managers must concentrate on allocating enough funds for environmental accounting and information disclosure with the goal of acquiring and sustaining their competitive advantage and state.

The study by (Agyemang et al., 2021) used data from mining companies listed in China from 2000 to 2018 and found that there is a significant and positive connection between the environmental performance of a company and environmental information disclosure, while return on equity and leverage showed an unfavorable and insignificant relationship with environmental disclosure and environmental performance. This means that as the mining business's profitability and financing via debt ratio rise, it becomes more important for environmental disclosure and environmental performance.

Using information from Ghana's publicly traded companies. Environmental disclosure ratings were created by conducting content studies on 422 annual reports of the listed companies. The analyses revealed that environmental disclosures are significantly influenced by profitability, leverage, and market share pricing, among other factors (Maama et al., 2021).

Corporate governance and corporate reporting on the environment have long been important topics that are debated on a global scale. An effective corporate governance system inspires trust among investors and guarantees a transparent procedure that makes it possible for additional disclosures and high-quality reporting. (Aliyu 2019) analyzed how corporate governance factors such as board size, board independence, board meetings, the structure of the risk management committee, and environmental disclosure relate to each other in Nigeria. The data used in this study was taken from the annual reports of 24 publicly listed businesses on the Nigerian Stock Exchange, which were in the industrial products, natural resources, and oil and gas industries and covered the years 2011 through 2015. The findings showed that board independence, board meetings, and environmental reporting have a positive, statistically significant association. The other possibility variables and environmental reporting, however, do not significantly relate to one another. To ensure that there are more environmental reporting disclosures, there must be convergence between environmental reporting and corporate governance.

(Jeroh 2020) examined in comparison the internal factors that influence how companies in Sub-Saharan Africa (SSA) disclose environmental issues. Results showed that while the size, gender diversity, and independence of the audit committee, as well as the characteristics of the board, were found to be significant factors influencing environmental disclosure for companies in Kenya and Nigeria, this is not the case for companies in South Africa.

The study by (Ismail et al., 2018) looked into the factors that influence how well oil and gas businesses in DCs disclose environmental information. A total of 116 oil and gas businesses from 19 DCs were incorporated into the sample in order to attain this goal. Just five variables were positively and substantially correlated with the level of environmental disclosure, business size, foreign ownership, profits, leverage, and participation in industry or trading groups. However, company type, proximity to the market, ownership concentration, institutional ownership, state ownership, multi-nationality, and environmental accreditation are not.

In a sample of Sri Lankan publicly traded firms from 2015 to 2019, the research of (Nuskiya et al., 2021) explored the factors that influence environmental disclosures in a developing country context. The results showed that the sampled corporations' use of environmental disclosures was on the rise. This study also revealed that the level of environmental disclosures is positively correlated with board independence, board size, industry type, board meetings, profitability, and firm size. Contrarily, the quantity of environmental information that has been disclosed has a detrimental impact on CEO duality.

A survey was implemented to examine the corporate drivers behind voluntary reporting of social and environmental data in New Zealand. The survey's findings showed that the majority of firms in New Zealand do not depend on reporting guidelines to establish their sustainability reporting, and they do not assure these reports. In these businesses, top management, particularly the CEO, CFO, or sustainability manager, is typically the one driving the sustainability agenda. The most significant variables influencing a company's decision to report are social concerns and the rights of shareholders (Dobbs & Staden 2016).

(Moalla et al., 2021) demonstrated that the presence of an environmental audit committee, the environmental auditor's BIG 4, the company size, the amount of debt, earnings management, and the industry type are effectively significant factors in the voluntary disclosure of environmental information. They did this using a sample of French publicly traded companies in SBF120 for the years 2012 to 2017. The involvement of an environmental audit committee, the availability of a CSR committee, the participation of the environmental auditor in the BIG 4, the rating of corporate governance, the size of the company, earnings management, and the sector are also systematic major factors for timely disclosure of environmental information.

To determine the level of social and environmental reporting, (Nurhayati et al., 2016) assessed the 2010 annual reports of a sample of the top 100 Indian TA companies registered on the Bombay Stock Exchange. According to the survey, there was fewer social data in annual reports than was reported by corporations for environmental data. Significant determinants of the difference in social and environmental reporting include firm size, brand growth, and audit committee size; however, board independence, extent of ownership, and social and environmental reporting were not shown to be significantly correlated.

(Baalouch et al., 2019) investigated how different variables affected the levels of environmental disclosure, focusing on variables associated with the vision and strategy of the company, such as environmental audit, existence of an environmental committee, variety among and within boards, such as independence of the board, gender diversity, and variables associated with the environment, such as environmental performance and level of business pollution. Showing a sample of SBF120 French publicly traded companies for the years 2009 through 2014. The study discovered that disclosure quality is still comparatively poor. The results also showed that a company's strategy and vision act important roles in determining variances in the quality of environmental reporting.

In order to figure out the extent of environmental reporting, (Rao et al., 2012) examined the 2008



annual reports of the top 100 Australian companies listed on the Australian Stock Exchange. This information was compared with different corporate governance indicators, and analysis revealed a significant positive correlation among the level of environmental reporting, the percentage of independent and female directors on a board, institutional financiers, and board size. Therefore, it is crucial to take into account the organization's level of environmental reporting in relation to how the company is controlled, as well as the connection between non-financial disclosure and governance procedures. The wider view of corporate governance contends that shareholders and stakeholders should be at the center of corporate governance, expanding the scope of corporate duty and accountable.

The study by (Kilincarslan et al., 2020) used a sample of 121 publicly traded companies from 11 countries in the Middle East and Africa (MEA) between the years 2010 and 2017 to examine the effects of corporate governance systems on environmental disclosure procedures across these countries. The findings from the experiments substantially suggested that MEA enterprises that have significant governance disclosures have improved procedures for environmental disclosure. In contrast to board independence, which has an adverse effect, board characteristics such as diversity in gender, size, CEO duality, and audit committee size have had a positive effect on MEA enterprises' voluntary environmental disclosures.

(Usman & Aliyu, 2021) investigated the impact of ownership structure determinants on Nigeria's practice of social and environmental reporting. In order to collect social and environmental disclosure data from the corporate reports of 80 businesses listed on the Nigerian Stock Exchange between 2012 and 2017, the article used the Global Reporting Initiative (GRI) disclosure methodology. Indicators of social and environmental disclosure include management ownership, foreign ownership, block ownership, and dispersed ownership. The outcome of the qualitative investigation revealed proof of modest social and environmental information disclosure in business reports. It has been discovered that block ownership, foreign ownership, and dispersed ownership all improve how social and environmental data is disclosed in corporate reports. On the other hand, it was discovered that management ownership had little impact on social and environmental disclosure.

The impact of the board of directors' qualities on the amount of environmental disclosure by Brazilian corporations was confirmed by (Fernandes et al., 2019). A sample of 152 firms that are listed on the S&P stock market was employed in the study. According to the results, the total number of independent board members was statistically significant, indicating that board independence can enhance administrative control and promote better environmental disclosure. With an average age reaching 60, environmental disclosure increased on boards before decreasing after that age.

In order to determine whether corporate governance (CG) policies affect the connection between environmental disclosure quality (EDQ) and company risk, (Rezaee et al., 2021) assessed this relationship. The study analyzed information for a sample of 762 listed Iranian companies with firm years from 2011 to 2016. The findings showed a connection between company risk and EDQ that was detrimental. Other CG policies, such as CEO duality and board size, do not appear to have any impact on the association between EDQ and risk; however, board independence mitigates this connection and decreases the adverse relationship between EDQ and risk.

(Said et al., 2013) evaluated the extent of environmental disclosure in annual reports submitted by Malaysian publicly traded companies for the year ended 2009 and explored any connections between board, company, and human capital characteristics and environmental disclosure. The study's findings showed a correlation between the level of environmental disclosure and the presence of an independent non-executive chairman, the age of the chief executive, the presence of a CEO with a profession in law, and the industry category. The most important factor that affects the extent of environmental disclosure is determined to be the category of industry.

One of the biggest problems confronting the company in promoting its sustainability is establishing strong corporate governance and sustaining effective environmental performance. The study by (Buniamin et al., 2011) examined the annual reports of 243 businesses listed on Bursa Malaysia in an effort to analyze the relationship among these two crucial elements. Management ownership, board size, board independence, financial expert, CEO duality, and meeting frequency were the six corporate governance characteristics that were chosen. In general, it was discovered that



there is limited environmental reporting. Board size and management ownership are the two most important corporate governance characteristics that have a substantial impact on the level of environmental reporting.

Using an extensive dataset of 2,854 Chinese publicly traded companies from 2010 to 2017, the study by (Shahab et al., 2020) investigated the effect of chief executive officer (CEO) qualities on sustainable performance, environmental performance, and environmental reporting. The results of the research are divided into four categories. CEOs with research experience are more likely to participate in initiatives that enhance sustainable performance, environmental performance, and environmental reporting. CEOs with financial knowledge are associated favorably with improved environmental reporting and sustainable performance. CEOs with international experience are more interested in participating in actions that improve sustainable and environmental performance. Younger CEOs often make decisions that have a negative impact on the environment and sustainability.

(Gerged 2021) examined how company environmental disclosure in developing countries is impacted by inner corporate governance procedures. utilizing a sample of 500 company-year observations made in Jordan between 2010 and 2014. According to the study, there are beneficial correlations between company environmental disclosure and board size, board independence, CEO duality, and foreign ownership. On the contrary, there is a negative correlation between the level of environmental information given and management ownership, institutional ownership, and ownership concentration.

(Shwairef et al., 2021) provided an explanation of how the intermediary influence of strategic positioning on corporate governance influences environmental reporting. The chief executive officers and chief financial officers of 197 major Malaysian corporations provided the information. The findings demonstrated that the effect of four corporate governance factors board size, board independence, the inclusion of a CSR committee, and institutional ownership on environmental reporting is moderated by managers' strategic posture. The number of CSR committee members and the size of the board also directly affect how much information businesses provide about the environment. The effects of ownership concentration on environmental disclosure, direct as well as indirect, were disregarded.

(Osemene et al., 2021) conducted a comparative analysis of corporate governance practices and environmental accounting reporting in Egypt, Nigeria, Kenya, and South Africa. The results of the content review conducted to determine the environmental disclosure and reporting rating showed that the board committee has an important influence on environmental accounting disclosure in African nations, board independence in Egypt and Kenya, board size in South Africa and Nigeria, board diversity in Kenya and Nigeria, and institutional ownership in Nigeria, Egypt, and South Africa. This conclusion suggests that current corporate governance regulations and codes deserve to be complied with.

Corporate governance systems for businesses incorporate social and environmental reporting. Both of these structures were primarily concerned with business ethics, stakeholder response, and the environment in which businesses operate. Therefore, a business's social and environmental reporting practices must be incorporated into its governance frameworks in order for it to behave ethically. To be able to guarantee that stakeholders' interests are taken into account and their obligations are met, a strong framework for corporate governance is necessary (Usman & Aliyu 2021).

## **4. Empirical Study:**

### **4.1. Population and Sampling**

All stakeholders make up the study's population, and the sampling unit is everyone who has any involvement with a publicly traded company. The stakeholders were the target audience for the questionnaire since it was deemed likely that they would be familiar with the research constructs and the nature of the study in the firms. The stakeholders must get the questionnaire because of the nature of the study constructs. The Influencing Factors, which reflect the research variables, allow stakeholders to assess their satisfaction with them. The population of this study, which is connected to

environmental reporting and the Green Accounting Implementation, is geographically spread, surpasses 100,000 items, and the appropriate sample shouldn't be less than 384 observations.

The researcher directed the questionnaire to the stakeholders (Investor, Financial analyzer, creditor, Auditor) of the Egyptian listed firms. In order to increase the questionnaire response rate, the researcher connected with the stakeholders and discussed the objective of the study and the questionnaire's contents with them. Basically, the questionnaire was directed to 468 stakeholders, only 435 of them accepted the questionnaire. Finally, the researcher collected only 427 questionnaires with a response and including them 11 incomplete questionnaires, then became only 416 questionnaires were statistically valid and free of missing data with a response rate 88.89% (416/468).

#### 4.2. Reliability:

The Cronbach alpha is the most commonly used indicator of reliability, and a questionnaire is considered reliable if its Cronbach's alpha value is greater than or equal to 0.7 (Hair et al., 2010). The tables below demonstrate that all items have corrected item-total correlation values above 0.3, which is considered to be an acceptable level of internal consistency. All stakeholders in the study were given the questionnaire, which they were asked to complete online using a Google form. The results were used to evaluate the questionnaire's reliability and validity. The following table provides a summary of each construct's Cronbach's alpha and corrected item-total correlation results:

**Table (1): Corrected Item-Total Correlation and Cronbach's Alpha for all variables**

Variables	Measurement Item	corrected item-total correlation	Cronbach's Alpha if item deleted	Reliability	
				No. of Questions	Total Cronbach's Alpha
Benefits of environmental reporting	Q1	0.425	0.742	16	0.821
	Q2	0.381	0.676		
	Q3	0.449	0.841		
	Q4	0.372	0.711		
	Q5	0.440	0.843		
	Q6	0.423	0.857		
	Q7	0.447	0.723		
	Q8	0.457	0.839		
	Q9	0.443	0.673		
	Q10	0.450	0.797		
	Q11	0.391	0.737		
	Q12	0.431	0.748		
	Q13	0.391	0.653		
	Q14	0.461	0.745		
	Q15	0.362	0.839		
	Obstacles of environmental reporting	Q16	0.411		
Q17		0.449	0.670		
Q18		0.408	0.717		
Q19		0.450	0.725		
Q20		0.458	0.814		
Q21		0.369	0.739		
Q22		0.424	0.686		
Q23	0.450	0.765			

Variables	Measurement Item	corrected item-total correlation	Cronbach's Alpha if item deleted	Reliability	
				No. of Questions	Total Cronbach's Alpha
	Q24	0.416	0.761		
	Q25	0.453	0.705		
	Q26	0.401	0.763		
	Q27	0.395	0.751		
External Factors Associated with Environmental Reporting	Q28	0.410	0.763	5	0.782
	Q29	0.439	0.690		
	Q30	0.454	0.792		
	Q31	0.370	0.696		
	Q32	0.459	0.681		
Internal Factors Associated with Environmental Reporting	Q33	0.450	0.708	17	0.887
	Q34	0.401	0.702		
	Q35	0.358	0.668		
	Q36	0.404	0.740		
	Q37	0.387	0.685		
	Q38	0.427	0.835		
	Q39	0.458	0.843		
	Q40	0.370	0.808		
	Q41	0.446	0.760		
	Q42	0.381	0.829		
	Q43	0.393	0.716		
	Q44	0.381	0.672		
	Q45	0.408	0.674		
	Q46	0.354	0.704		
Q47	0.437	0.662			
Q48	0.394	0.833			
Q49	0.433	0.708			

Table (1) shows some results for all variables as follow:

- For the Dependent Variables Benefits & Obstacles of environmental reporting the Cronbach's alpha is 0.821 & 0.795 respectively which represents a good indicator of the reliability of this construct.
- For the Independent Variables the influencing factors Associated with Environmental Reporting (external & Internal) the Cronbach's alpha is 0.782 & 0.887 respectively which represents a good indicator of the reliability of this construct.
- In addition, the value of the corrected item's overall correlation is greater than 0.3, which is considered to be a sign of strong internal consistency.

#### 4.3. Sample Description:

This section outlines the characteristics of the sample concerning the stakeholders' gender, experience and job titles. These characteristics are presented in table (2):

**Table (2): Description of the sample of stakeholders (N=416)**

	Demographic Characteristics	Frequency	Percentage	Cumulative Percentage
Gender	Male	156	37.50%	37.50%
	Female	260	62.50%	100.00%



Experience	Less than 5 years	45	10.82%	10.82%
	Greater than 5 and less than 10 years	161	38.70%	49.52%
	Greater than 10 and less than 15 years	175	42.07%	91.59%
	Greater than 15 years	35	8.41%	100.00%
Position	Investor	115	27.64%	27.64%
	Financial analysts	98	23.56%	51.20%
	creditor	106	25.48%	76.68%
	Auditor	97	23.32%	100.00%

According to Table (2), 62.50% (260) female, followed by 37.5% (156) males. Additionally, there is 42.07% (175) who have an experience Greater than 10 and less than 15 years, followed by 37.70% (161) who have an experience Greater than 5 and less than 10, followed by 10.82% (45) who have an experience less than 5 years and finally 8.41% (35) who have an experience greater than 15 years.

In terms of Position, the highest distribution was related to Investors by 27.64% (115), followed by 25.48% (106) creditors, 23.56% (98) financial analysts, finally 23.32% (97) auditors.

#### 4.4. Descriptive analysis:

Table (3) shows the descriptive statistics for the study variables. This table contains the mean, standard deviation, skewness, and kurtosis for the items used to measure each variable as follows:

**Table (3): Descriptive statistics (N=416)**

Variables	Measurement Item	Mean	Std. deviation	Skewness	Kurtosis
Benefits of environmental reporting	Q1	3.841	1.221	-1.068	0.394
	Q2	4.018	1.144	-1.289	1.129
	Q3	3.857	1.210	-1.108	0.533
	Q4	4.060	1.091	-1.333	1.484
	Q5	3.836	1.206	-0.940	0.222
	Q6	3.914	1.258	-1.198	0.540
	Q7	4.109	1.039	-1.386	1.810
	Q8	3.906	1.358	-1.187	0.199
	Q9	4.146	1.057	-1.628	2.521
	Q10	4.036	1.039	-1.280	1.533
	Q11	4.164	0.898	-1.286	2.259
	Q12	4.258	0.890	-1.869	4.598
	Q13	3.974	1.330	-1.303	0.494
	Q14	3.398	1.493	-0.571	-1.066
	Q15	4.211	1.009	-1.598	2.539
	Q16	3.948	1.177	-1.191	0.764
Benefits of environmental reporting		3.981	0.839	-1.112	1.030
Obstacles of environmental reporting	Q17	4.003	1.083	-1.295	1.468
	Q18	3.984	1.181	-1.347	1.170
	Q19	3.948	1.177	-1.191	0.764
	Q20	3.914	1.258	-1.198	0.540
	Q21	3.826	1.228	-1.161	0.543

	Q22	4.018	1.261	-1.323	0.764
	Q23	3.935	1.238	-1.302	0.838
	Q24	4.003	1.083	-1.295	1.468
	Q25	3.836	1.206	-0.940	0.222
	Q26	3.521	1.348	-0.700	-0.580
	Q27	3.878	1.219	-1.137	0.457
Obstacles of environmental reporting		3.906	0.948	-1.144	0.856
External Factors Associated with Environmental Reporting	Q28	3.724	1.307	-0.986	-0.033
	Q29	4.031	1.131	-1.369	1.386
	Q30	3.737	1.225	-0.961	0.217
	Q31	4.055	1.014	-1.122	1.113
	Q32	3.841	1.221	-1.068	0.394
External Factors Associated with Environmental Reporting		3.821	0.975	-1.125	0.951
Internal Factors Associated with Environmental Reporting	Q33	3.857	1.210	-1.108	0.533
	Q34	3.927	1.220	-1.213	0.709
	Q35	3.865	1.123	-1.021	0.690
	Q36	4.146	1.044	-1.511	2.136
	Q37	3.729	1.354	-0.997	-0.163
	Q38	4.164	0.898	-1.286	2.259
	Q39	4.018	1.144	-1.289	1.129
	Q40	4.146	1.057	-1.628	2.521
	Q41	4.211	1.009	-1.598	2.539
	Q42	4.258	0.869	-1.580	3.465
	Q43	4.214	0.932	-1.372	2.112
	Q44	4.188	1.012	-1.476	2.169
	Q45	4.289	0.844	-1.531	3.220
	Q46	4.221	0.920	-1.505	2.729
	Q47	4.188	1.025	-1.669	2.808
	Q48	4.036	1.039	-1.280	1.533
	Q49	4.109	1.039	-1.386	1.810
Internal Factors Associated with Environmental Reporting		4.165	0.749	-1.267	2.261

According to (Blanca et al., 2013), the absolute values of skewness and kurtosis must fall within the ranges of -2.49 and 2.33 and -1.92 and 7.41, respectively, in order for the data to have a normal distribution. Table (3) shows that these two requirements are met and that the data are normally distributed. Additionally, all items mean are higher than 3, which tends respondents to agree, leading to their responses of "agree, strongly agree." As a result, no responder has provided a negative reaction to any item.

#### 4.5. Structural Equation Modeling & testing hypotheses:

##### 4.5.1. Assessing the Measurement Model:

Testing the validity and reliability of the measurement model is necessary to determine the importance of the relationships in the structural model. The degree of model goodness of fit and the construct validity are the two variables that determine if the measurement model is valid in this situation (Blunch 2012).

##### 4.5.1.1. Exploratory Factor Analysis:

Because there is no one fixed approach for conducting EFA, the researcher must make a number of crucial considerations. As indicated in table (4), the study used EFA to perform the Kaiser-Meyer-Olkin (KMO) scale as follows:

**Table (4): KMO & Bartlett's Test for all variables**

Variables	Kaiser-Meyer-Olkin	Bartlett's Test of Sphericity	
		Chi Square	Sig.
Benefits of environmental reporting	0.779	1152.744	0.000
Obstacles of environmental reporting	0.682	666.040	0.000
External Factors Associated with Environmental Reporting	0.730	558.657	0.000
Internal Factors Associated with Environmental Reporting	0.631	300.665	0.000

All variables' KMO scales are more than 0.5, as shown in table (4). Additionally, all variables passed the Bartlett's Test, indicating that the data are reliable and of excellent quality for the structural equation model.

#### 4.5.1.2. The Model Fit of the Measurement Model

According to (Byrne 2010), goodness of fit indicates how well the measurement model fits the data gathered from the sample. As indicated in table (5), the study utilized the most used indices to assess the model's fit.

**Table (5): The indices of model fit for the measurement model**

Measure	Estimate	Threshold	Interpretation
GFI	0.981	Closer to 1	Accepted
RMR	0.027	Closer to 0	Accepted
CFI	0.977	Closer to 1	Accepted
TLI	0.980	Closer to 1	Accepted
RMSEA	0.035	Less Than 0.08	Accepted

The CFI value of 0.977 is approved because it is higher than 0.95. Additionally, the RMR index value is satisfied because it is less than 0.05. In a similar vein, the RMSEA value of 0.035 is less than the 0.08 suggested by (Byrne 2010). Given that it is more than 0.08, the GFI value of 0.981 is approved (Byrne 2010). As a result, the measurement model corresponds to the information gathered from the stakeholders.

#### 4.5.1.3. The Construct Validity of the Measurement Model:

Additionally, (AVE), which can only be used to measure convergent validity, accepts values that

are higher than 0.5. Moreover, Composite Reliability (CR) and Cronbach's alpha were used to assess the measurement model's reliability. The following list of criteria was used to evaluate the model's validity:

**Table (6): The validity and reliability of the measurement model**

Variables	Factor Loading and Reliability			Convergent Validity	
	Questions	Factor Loading	Cronbach's Alpha	AVE	CR
Benefits of environmental reporting	Q1	0.726	0.821	0.702	0.751
	Q2	0.619			
	Q3	0.812			
	Q4	0.635			
	Q5	0.661			
	Q6	0.727			
	Q7	0.673			
	Q8	0.805			
	Q9	0.780			
	Q10	0.703			
	Q11	0.760			
	Q12	0.645			
	Q13	0.755			
	Q14	0.647			
	Q15	0.616			
	Q16	0.665			
Obstacles of environmental reporting	Q17	0.653	0.795	0.699	0.782
	Q18	0.747			
	Q19	0.638			
	Q20	0.749			
	Q21	0.725			
	Q22	0.719			
	Q23	0.629			
	Q24	0.639			
	Q25	0.803			
	Q26	0.734			
	Q27	0.655			
External Factors Associated with Environmental Reporting	Q28	0.780	0.782	0.747	0.727
	Q29	0.720			
	Q30	0.764			
	Q31	0.684			
	Q32	0.789			
Internal Factors Associated with Environmental Reporting	Q33	0.710	0.887	0.709	0.786
	Q34	0.774			
	Q35	0.660			
	Q36	0.652			
	Q37	0.694			
	Q38	0.733			
	Q39	0.640			
	Q40	0.804			
	Q41	0.698			
	Q42	0.731			
	Q43	0.626			
	Q44	0.690			



	Q45	0.766			
	Q46	0.769			
	Q47	0.717			
	Q48	0.717			
	Q49	0.669			

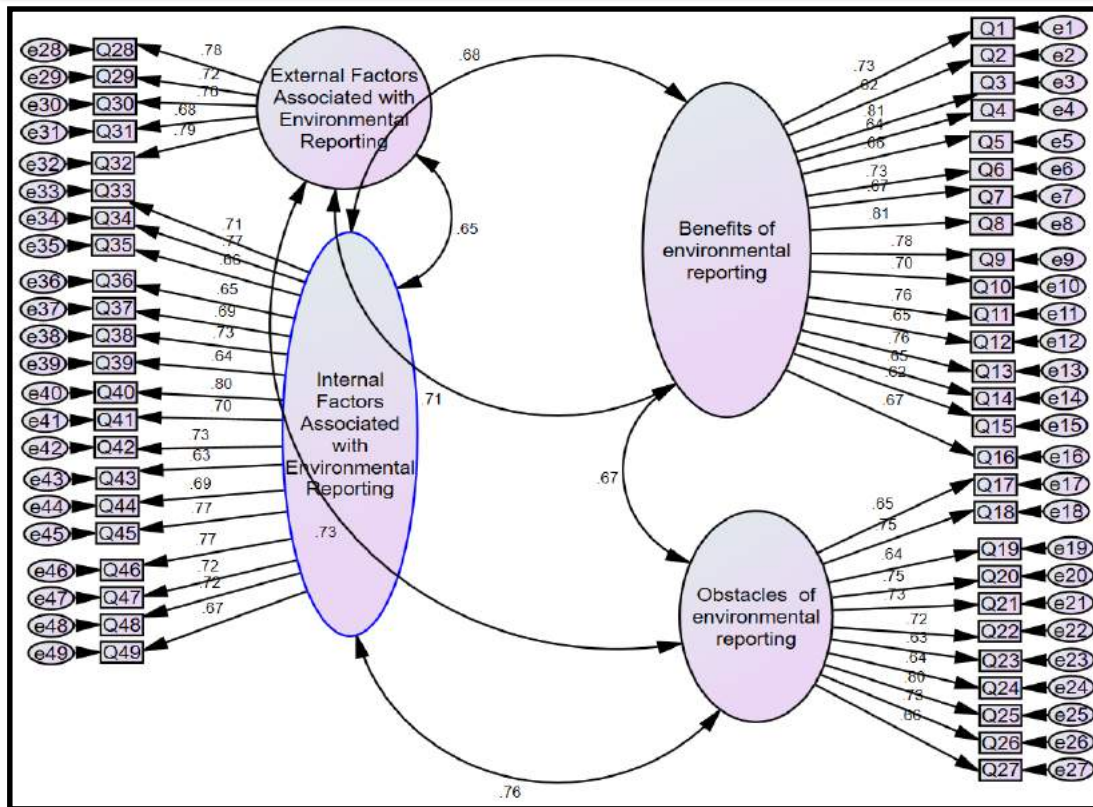
Table (6) shows that acceptable Cronbach's alpha values are those that are higher than 0.6. Additionally, the composite values for reliability are better than 0.6 and the AVE values are greater than 0.5, which allows for acceptance. In table (7), discriminant validity is also evaluated. This table demonstrates the correlations between the factors and the AVE square roots as well as the fact that the square root of AVE values is larger than the correlations between constructs. The discriminant validity is thus attained. Finally, the measurement model satisfies every requirement set forth to evaluate its reliability and validity.

**Table (7): Construct Correlations and Square Root of Average Variance Extracted**

	Benefits of environmental reporting	Obstacles of environmental reporting	External Factors Associated with Environmental Reporting	Internal Factors Associated with Environmental Reporting
Benefits of environmental reporting	0.838			
Obstacles of environmental reporting	0.753	0.836		
External Factors Associated with Environmental Reporting	0.817	0.776	0.864	
Internal Factors Associated with Environmental Reporting	0.793	0.822	0.779	0.842

Finally, the measurement model was established as shown in figure (1) after analyzing its validity and reliability as well as model fit. The measurement model contains four main constructs namely, Benefits of environmental reporting, Obstacles of environmental reporting, External Factors Associated with Environmental Reporting and Internal Factors Associated with Environmental Reporting.





**Figure (1): The measurement model**

**4.5.2. Assessing the correlation coefficients among variables' dimensions:**

In this study, Pearson's r correlation among variables' dimensions can be shown in table (8), The results included in this table ensure a significant relationship among all dimensions for each variable. Additionally, the results ensure a positive significant relationship between both external and internal factors associated with environmental reporting and the Benefits of environmental reporting (where R = 0.658, 0.721 respectively). Moreover, there is negative significant relationship between both external and internal factors associated with environmental reporting and the obstacles of environmental reporting (where R = -0.521, -0.635 respectively). These results indicate that both external and internal factors associated with environmental reporting improve the environmental reporting by increasing the benefits and decreasing the obstacles.

**Table (8): Pearson Correlation among variables**

	Benefits of environmental reporting	Obstacles of environmental reporting	External Factors Associated with Environmental Reporting	Internal Factors Associated with Environmental Reporting
Benefits of environmental reporting	1			
Obstacles of environmental reporting	-0.457	1		
External Factors Associated with Environmental Reporting	0.658	-0.521	1	
Internal Factors Associated with	0.721	-0.635	0.318	1

Environmental Reporting				
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#### **4.5.3. Assessing the structural model and hypotheses testing**

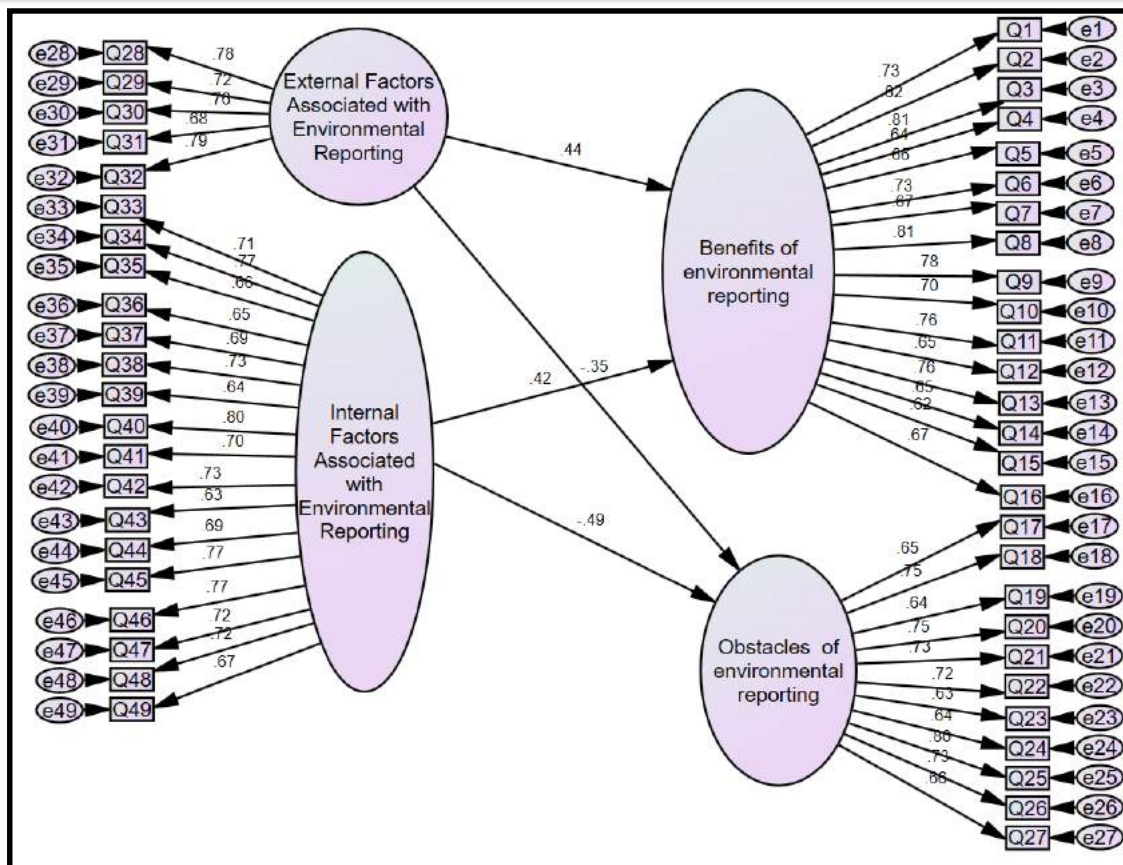
Table (9) involves the indices used to test the fit structural model as follows:

**Table (9): The indices of model fit for the structural model**

Measure	Estimate	Threshold	Interpretation
GFI	0.977	Closer to 1	Accepted
RMR	0.023	Closer to 0	Accepted
CFI	0.979	Closer to 1	Accepted
TLI	0.983	Closer to 1	Accepted
RMSEA	0.037	Less Than 0.8	Accepted

The value of CFI is 0.979 which is accepted as it is greater than 0.95. Furthermore, the value of RMR index is also satisfied because it is lower than 0.05. Similarly, RMSEA equals 0.037 which lies under 0.08 as proposed by (Byrne, 2010). The value of GFI which equals 0.977 is accepted as it is higher than 0.8 (Byrne, 2010). Therefore, the measurement model fits the data collected from the stakeholders.

Therefore, based on the above indices, the structural model utilized in the current study shows an acceptable degree of fitness. The structural model is presented in figure (2).



**Figure (2): The structural model**

In this section, the results of testing research hypotheses among study constructs are presented. Such hypotheses were tested using SEM with AMOS 23. Hypothesis H1 proposed that External Factors Associated with Environmental Reporting has a direct impact on Benefits of environmental reporting; while H2 posited that Internal Factors Associated with Environmental Reporting has a direct impact on Benefits of environmental reporting; besides H3 proposed that External Factors Associated with Environmental Reporting has a direct impact on Obstacles of environmental reporting; Finally, H4 suggested that Internal Factors Associated with Environmental Reporting has a direct impact on Obstacles of environmental reporting.

**Table (10): The results of testing direct relationships**

Hypothesis	Hypothesis direction		Estimate	Sig.	Hypotheses result	
H1	External Factors Associated with Environmental Reporting	➔	Benefits of environmental reporting	0.438	0.000	accepted
H2	Internal Factors Associated with Environmental Reporting	➔	Benefits of environmental reporting	0.421	0.000	accepted



H3	External Factors Associated with Environmental Reporting		Obstacles of environmental reporting	-0.351	0.001	accepted
H4	Internal Factors Associated with Environmental Reporting		Obstacles of environmental reporting	-0.487	0.004	accepted

**4.5.3.1. The direct effect of External Factors Associated with Environmental Reporting on Benefits of Environmental Reporting:**

According to table (10), it is clear that external factors associated with environmental reporting has a significant direct positive impact on benefits of environmental reporting where ( $\beta = 0.438$ ;  $P < 0.05$ ). Therefore, H1 which represents the effect of external factors associated with environmental reporting on benefits of environmental reporting can be accepted in the alternative form in a positive effect, which indicates that increasing the level of external factors associated with environmental reporting lead to increasing the benefits of environmental reporting.

**4.5.3.2. The direct effect of Internal Factors Associated with Environmental Reporting on Benefits of Environmental Reporting:**

According to table (10), it is clear that internal factors associated with environmental reporting has a significant direct positive impact on benefits of environmental reporting where ( $\beta = 0.421$ ;  $P < 0.05$ ). Therefore, H2 which represents the effect of internal factors associated with environmental reporting on benefits of environmental reporting can be accepted in the alternative form in a positive effect, which indicates that increasing the level of internal factors associated with environmental reporting lead to increasing the benefits of environmental reporting.

**4.5.3.3. The direct effect of External Factors Associated with Environmental Reporting on Obstacles of Environmental Reporting:**

According to table (10), it is obvious that external factors associated with environmental reporting has a significant direct negative impact on obstacles of environmental reporting where ( $\beta = -0.351$ ;  $P < 0.05$ ). Therefore, H3 which represents the effect of external factors associated with environmental reporting on obstacles of environmental reporting can be accepted in the alternative form in a negative effect, which indicates that increasing the level of external factors associated with environmental reporting lead to decreasing the obstacles of environmental reporting.

**4.5.3.4. The direct effect of Internal Factors Associated with Environmental Reporting on Obstacles of Environmental Reporting:**

According to table (10), it is obvious that internal factors associated with environmental reporting has a significant direct negative impact on obstacles of environmental reporting where ( $\beta = -0.487$ ;  $P < 0.05$ ). Therefore, H4 which represents the effect of internal factors associated with environmental reporting on obstacles of environmental reporting can be accepted in the alternative form in a negative effect, which indicates that increasing the level of internal factors associated with environmental reporting lead to decreasing the obstacles of environmental reporting.

reporting lead to decreasing the obstacles of environmental reporting.

## **5. Conclusions and Future Research**

**Based on the theoretical and statistical study, the researcher arrived at a set of results as follows:**

1. Environmental data can be accessed thanks to green accounting. Important elements of green accounting include environmental policies, efforts, accounts, sustainability reporting, and social balance.
2. The use of green accounting can establish the extent to which a company or organization contributes positively or negatively to the environment and the quality of people's lives.
3. The objective of green accounting is to incur costs while reaping environmental benefits. Managers can assess, operate, control, determine, report, and protect the environment using the information it provides.
4. Environmental reporting can be used as a means of communication to influence public opinion and to gain competitive advantages, such as a better reputation for the company.
5. Companies have the chance to improve the release and disclosure of extra non-financial information in order to distinguish themselves from rivals in terms of the quality of their results .
6. One of the most important external factors influencing environmental reporting is disparate industries, especially high-risk environmental industries.
7. The most important internal factors influencing environmental reporting is a business's profitability and the efficiency of governance mechanisms.
8. External factors associated with environmental reporting has a significant direct positive impact on benefits of environmental reporting where ( $\beta = 0.438$ ;  $P < 0.05$ ).
9. Internal factors associated with environmental reporting has a significant direct positive impact on benefits of environmental reporting where ( $\beta = 0.421$ ;  $P < 0.05$ ).
10. External factors associated with environmental reporting has a significant direct negative impact on obstacles of environmental reporting where ( $\beta = -0.351$ ;  $P < 0.05$ ).
11. Internal factors associated with environmental reporting has a significant direct negative impact on obstacles of environmental reporting where ( $\beta = -0.487$ ;  $P < 0.05$ ).

**Based on the results, the researcher recommends:**

1. It is necessary to pay attention to the internal and external factors affecting environmental reports and focus on the most influential of these factors.
2. Creating a legislative framework for preparing environmental reports, with the need for mandatory standards that regulate the preparation of these reports.
3. Conducting further studies on addressing the problems of measuring environmental costs, especially in industrial organizations.
4. Conducting studies on evaluating and pricing operational environmental impacts in financial statements.

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## Appendix (1)

### Benefits of environmental reporting:

Benefits	References
1. A tool for management to establish business legitimacy.	(Braam et al., 2016, Pedron et al., 2021)
2. A method of interaction to shift public opinions.	(Braam et al., 2016)
3. Achieve competitive benefits.	(Braam et al., 2016)
4. Improve business reputation.	(Braam et al., 2016, Agyei & Yankey 2019)
5. Enable business value optimization.	(Hussain et al., 2020)
6. Increase company's capacity to obtain external finance more easily and at a lower cost.	(Hussain et al., 2020)
7. Raise firm's profitability and returns on equity.	(Pedron et al., 2021)
8. Improve business efficiency.	(Rahim 2021)
9. Enhance the quality of company's earnings.	(Alipour et al., 2019)
10. Avoid government interference and penalties.	(Agyei & Yankey 2019)
11. Lowering the amount of risk and operational failures.	(Agyei & Yankey 2019)
12. Enhance the information environment and beneficial economic effects.	(Mathuva et al., 2019, Alipour et al., 2019)
13. Reduce information asymmetry and draw in investors.	(Mathuva et al., 2019, Pedron et al., 2021)
14. Offer pertinent information that investors can use to guide their investment choices.	(Mathuva et al., 2019)
15. Recognise environmental costs and performance can lead to better reliable and thorough costing.	(Rounaghi 2019)
16. Maximize the value of shareholders.	(Radhouane et al., 2018)

### Obstacles of environmental reporting:

Obstacles	References
17. Environmental governance charges, disclosure expenses, and penalties.	(Qi et al., 2021, Raiborn et al., 2011, Radhouane et al., 2018)
18. The lack of a robust environmental reporting legislative framework.	(Omar et al., 2021)
19. Environmental disclosure are seen unfavorably by shareholders for companies that operate in ecologically sensitive industries.	(Radhouane et al., 2018)
20. The lack of obligatory standards.	(Kassim et al., 2019)
21. Restricted available resources to the company.	(Kassim et al., 2019)
22. The lack of the necessary expertise in assessing, pricing, and incorporating	(Kassim et al., 2019)



operational environmental effects onto financial statements.	
23. The absence of consciousness and understanding about the importance of environmental issues.	(Alshbili et al., 2021)
24. Distrust of change.	(Alshbili et al., 2021)
25. A lack of civil society groups role.	(Alshbili et al., 2021)
26. Measurement problems of environmental costs leads to inappropriate accounting treatment and disclosure.	(Raiborn et al., 2011)
27. An absence of government incentives.	(Alshbili et al., 2021)

### **Influencing Factors Associated with Environmental Reporting:**

<b>Influencing Factors</b>	<b>References</b>
<b>External Factors:</b>	
28. Push caused by government or legal demand, pressure from social media, shareholder impact.	(Agyei & Yankey 2019, Indrasari et al., 2021)
29. Strict obligatory requirements for environmental reporting.	(Braam et al., 2016)
30. Cultural diversity.	(Alvarez & Martínez 2020)
31. Varying legal structures.	(Alvarez & Martínez 2020)
32. disparate industries, especially high-risk environmental industries.	(Alvarez & Martínez 2020, Bhattacharyya & Agbola 2018, Nuskiya et al., 2021, Chelli et al., 2018, Moalla et al., 2021, Said et al., 2013).
<b>Internal Factors:</b>	
33. The presence of a sustainability department within the firm.	(Agyei & Yankey 2019, Baalouch et al., 2019, Shwairef et al., 2021)
34. Using external assurance for environmental reports.	(Braam et al., 2016)
35. Size of the company.	(Kouloukoui et al., 2019, Bhattacharyya 2014, Otchere et al., 2020, Ifada et al., 2021, Wahyuningrum et al., 2020, Nguyen 2020, Ismail et al., 2018, Nuskiya et al., 2021, Moalla et al., 2021)
36. Company financial performance.	(Kouloukoui et al., 2019, Ifada et al., 2021)
37. Knowledge of the need to contribute in making people's lives better.	(Indrasari et al., 2021, Omar et al., 2021)
38. Company environmental performance.	(He & Loftus 2014, Otchere et al., 2020, Ifada et al., 2021, Wahyuningrum et al., 2020, Agyemang et al., 2021, Baalouch et al., 2019)
39. Age of the company.	(Otchere et al., 2020, Bhattacharyya & Agbola 2018)
40. Capital concentration.	(Otchere et al., 2020)
41. Business's profitability.	(Agyemang et al., 2021, Maama et al., 2021,

	Ismail et al., 2018, Nuskiya et al., 2021)
42. Leverage.	(Bhattacharyya & Agbola 2018, Agyemang et al., 2021, Maama et al., 2021, Ismail et al., 2018)
43. Market share pricing.	(Maama et al., 2021)
44. Board characteristics (independence, meeting, size, gender diversity, CEO duality, age).	(Nuskiya et al., 2021, Aliyu 2019, Jeroh 2020, Nurhayati et al., 2016, Baalouch et al., 2019, Rao et al., 2012, Kilincarslan et al., 2020, Fernandes et al., 2019, Rezaee et al., 2021, Said et al., 2013, Buniamin et al., 2011, Shahab et al., 2020, Gerged 2021, Shwairef et al., 2021, Osemene et al., 2021)
45. Determinants of ownership structure (foreign, management, block, dispersed, institutional).	(Ismail et al., 2018, Usman & Aliyu 2021, Buniamin et al., 2011, Gerged 2021, Shwairef et al., 2021, Osemene et al., 2021)
46. Participation in industry or trading groups.	(Ismail et al., 2018)
47. Audit committee indicators (size, variety and independence).	(Jeroh 2020, Moalla et al., 2021, Nurhayati et al., 2016, Kilincarslan et al., 2020)
48. The amount of debt.	(Moalla et al., 2021)
49. Earnings management.	(Moalla et al., 2021)