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THE ROLE ASYMMETRIES IN EXCHANGE RATE REGIMES AND MACROECONOMIC PERFORMANCE: THE CASE OF NIGERIA

Samod Lawal-Arogundade*
Department of Economics, Faculty of Social Sciences, Lagos State University, Ojo, Lagos, Nigeria
samadlawal@yahoo.com, samad.lawal@lasu.edu.ng

Abstract: *The role of exchange rate in the macroeconomic fundamentals of a country cannot be underestimated but the nonlinear (asymmetric) feature of the exchange rate movements becomes of importance when analyzing its role in macroeconomic performance. Thus, this study, using historical annual time series data from 1970 and 2020, and a nonlinear ARDL model investigated the nexus between exchange rate regimes and the macroeconomic performance in Nigeria. This model allows us to capture that the partial sum of positive exchange rate movements (exchange rate depreciations) and negative exchange rate movements (exchange appreciations). We found the potential exchange rate regime to cause declining inflationary pressure sensitive to whether the exchange rate regime is responding to depreciation or appreciation in its movement. But then, irrespective of whether the exchange rate is depreciating or appreciation, the exchange rate regimes exhibit little or no significant impact on output growth in Nigeria. Specifically, we find that an intermediate exchange rate regime based on exchange rate depreciations is viable for promoting trade surpluses, whereas intermediate exchange rate regime that is due to appreciation of exchange rate tends to cause to trade deficit. More importantly, we found that the magnitude of the role of the nonlinear feature of exchange rate on trade balance is relatively higher when the exchange rate is appreciating.*

Keywords: Exchange rate regimes, IMF –LYS, Macroeconomic performance, ARDL, Nigeria.

JEL Classification: B22, B27, E31, F31.

1. Introduction

Exchange rate management anywhere in the world plays an important role in the macroeconomic fundamentals of a country. But, despite the vastness of both theoretical and empirical literature on the impact of exchange rate regimes on key macroeconomic fundamentals, namely, economic growth, inflation, and trade balance, the question that has yet to be explored is whether the nonlinearity (asymmetric) feature of the exchange rates matters in the direction and magnitude of the impacts of exchange rate regimes on macroeconomic performance. For instance, the choice to fix the exchange rate or allow it to float is usually inform by movements in exchange rates, such as exchange rate appreciations and exchange rate depreciations. To this end, the innovation in this study is to understand the extent to which the effectiveness or otherwise of a particular exchange rate regime is sensitive to the inherent nonlinearities (asymmetries) features in exchange rate movements.

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There is no gainsaying that a number of empirical studies have been conducted to explain not only the determinants of exchange rates and exchange rate regimes in Nigeria but also the link between exchange rate regimes and macroeconomic performance (see, for example, Akinbobola, 2012; Adebiyi, 2007; Adewuyi, 2003; Obaseki, 2001; Ubok-Udom, 1999; Ogun, 1998; Ayodele, 1997; Ajakaiye, 1994; Olopoenia, 1993; Olopoenia, 1986; Oyejide, 1985). However, these studies gave little or no consideration to the likelihood of the impact of exchange rate regimes being influenced by the asymmetric feature of exchange rate movements. To bridge this important gap in the literature, this study uses the nonlinear variant of the ARDL model to test asymmetries matters in the relationship between the exchange rate regime and macroeconomic performance.
The use of the ARDL model, through its nonlinear variant, enables us to capture the partial sum of positive exchange rate movements (exchange rate depreciations) and negative exchange rate movements (exchange appreciations). The importance of this is that it will enable us to either validate or refute the hypothesis that the nonlinear feature of exchange rate movements matter in the relationship between exchange rate regimes and macroeconomic performance.
In addition to this introductory section, the rest of the paper is structured as follows: Section 2 present a brief literature review. Section 3 discusses the data and presents the methodology. Section 4 contains the results and discusses the findings while section 5 concludes the paper.

2. Brief Literature Review

In their analysis of the impact of exchange rate regime on the growth of 60 developed and developing countries, Bailliu et al. (2003) uses dynamic GMM technique to show that while there is a positive link between fixed regime and growth, an intermediate regime without an anchor on the other hand impact growth negatively. In a similar development Husain et al. (2005) use the case of emerging and developing economies to show that in developing countries more flexible regimes are associated with high inflation but do not lead to gains in output growth while fixed or near fixed regimes deliver lower inflation without sacrificing growth. In attempt to replicate the LYS growth regressions, For Miles (2006) uses a panel of annual data across a developing countries' subset of the LYS original sample to show that once a measure of domestic distortions is added to the model, exchange rate regimes exert no independent impact on the output growth.
Exploring the official (IMF) and four alternative de facto exchange rate regime classifications, Bleaney and Francisco (2007) concludes that floats have very similar growth rates to 'soft' (easily adjustable) pegs while 'hard' pegs (currency unions and currency boards) have slower growth than other regimes. The study by Raji (2013) on the impact of exchange rate misalignment on economic performance revealed that the WAMZ economy is exposed to asymmetrical correlation between real exchange rate misalignment and economic performance. On the relevance of exchange rate regime in restraining current account imbalance in Sub-Saharan African nations, Gnimassoun (2015) shows that flexible exchange rate regimes are more effective in preventing disequilibria. In another development, Nathaniel et al. (2019) uses the case of ECOWAS to concludes that exchange rate regimes have the potential to deepening economic integration.
Quite a number of the extant studies have also focused on the case of the Nigerian economy (see Adeoye & Atanda, 2010; Omojimite & Akpokodje, 2010; Mahmood& Ali, 2011; Dada & Oyeranti, 2012; Adesoye, 2012), among others. However, to the best of our knowledge, none of these studies has considered accounting for the role of asymmetries in the relationship between exchange rate regimes and macroeconomic performance. Thus, it should come as no surprise that the onus of resolving the question of whether or not there

exists a link between a country's economic performance and exchange rate regimes has continued to produced mixed results. Essentially, there has been little or no concrete effort in the literature to understand the extent to which asymmetries matter in the impacts of exchange rate regimes on macroeconomic performance in Nigeria.

3. Methodology and Data

3.1 Data description and source

The variables used in the context of this study are selected based on their theoretical importance, performance measures of the economy, and their uses and findings in the previous empirical literature. More importantly, the data are annual frequency spanning between 1970 and 2020 and totaling 50 as the number of observations. The data were obtained from secondary sources including Central Bank of Nigeria (CBN) online databases, CBN annual statistical bulletin, and World Development Indicators (WDI) online database. The key variables of interest for instance macroeconomic performance are measures via three important indicators, namely, economic growth, inflation rate and a trade balance. The goal is to understand the extent to which the role of asymmetries in the relationship between exchange rate regimes and macroeconomic performance varies for alternative indicators of macroeconomic performance.

From the technical point of view, the output growth (YG)is measured as log of real GDP per capita, inflation rate (INFL) is measured as log of consumer price index, while trade balance (TB) measured as log of exports less log of imports of visible goods. In addition, the exchange rates (EXR) variable is measured as the log of the country's national currency (Naira) relative to dollar. Physical capital (PK) measured as log of gross fixed capital formation, human capital (HK) measured using secondary school enrolment as a ratio of total school enrolment and labour force (LAB) measured as log of total labor force are some of the control variables in the study. Others are government consumption (GC) measures as log of total government final consumption expenditure, trade openness (TOP) measured as the sum of export and import as a ratio of GDP, monetary policy rate (MPR), domestic income (DY) and foreign income (FY) measured as log of the Nigeria's real GDP log of world real GDP less log of Nigeria's real GDP, respectively.

Regarding the exchange rate regimes variables, the dummies for exchange rate regimes were classified into three major groups namely, pegged/fixed regime (FIX), intermediated regime (INTER) and floating/flexible regime (FLEX). Using the IMF's de jure -de facto exchange rate regime classification the dummies take the value of one if a specific exchange rate regime prevailed in a given period, and zero if otherwise. Saying it differently, irrespective of which of the alternative exchange rate regime classification method is under consideration, we create dummies for pegged/fixed, intermediate (INTER), and floating/flexible (FLEX) exchange rate regimes. However, FLEX was reflected as default benchmark so as to avoid running into the problem of dummy trap and more so to understand in relative term the extent to which economic performance respond differently to difference groups of exchange rate regimes.

3.2 Econometric Method and Estimation Procedure

To answer the question of whether the nonlinear feature of exchange rate matters in the relationship between exchange rate regimes and macroeconomic performance, the ARLD model in equation (1) is represented in a nonlinear form (NARDL).

$$\Delta \ln Z_t = \varphi + \alpha_1 \ln Z_{t-1} + \alpha_2 \ln X_{t-1} + \alpha_3^+ \ln EXR_{t-1}^+ + \alpha_4^- \ln EXR_{t-1}^- + \sum_{j=1}^{p} \beta_{1j} \Delta \ln Z_{t-j} + \sum_{i=0}^{q1} \beta_{2i} \Delta \ln X_{t-i} + \sum_{i=0}^{q2} \left(\Delta\beta_i^+ \ln EXR_{t-i}^+ + \Delta\beta_i^- \ln EXR_{t-i}^- \right) + \sum_{n=1}^{k} \lambda_n D_{nt} + \varepsilon_t \quad (1)$$

The nonlinearity in equation (1) is reflected by decomposing changes in exchange rate into positive change (depreciation) and negative change (appreciation). These decomposed prices are defined theoretically as:

$$EXR_t^+ = \sum_{j=1}^{t} \Delta EXR_j^+ = \sum_{j=1}^{t} \max\left(\Delta EXR_j, 0\right) \quad (2a)$$

$$EXR_t^- = \sum_{j=1}^{t} \Delta EXR_j^- = \sum_{j=1}^{t} \min\left(\Delta EXR_j, 0\right) \quad (2b)$$

In order to counter any notion that the decomposed exchange rate series are included in the nonlinear ARDL model merely as addition variables, we further extended the specification in equation (1) to capture the probable of the nonlinear (asymmetric) feature of exchange rates influencing the impact of exchange regimes on economic performance via an interaction term.

$$\Delta \ln Z_t = \varphi + \alpha_1 \ln Z_{t-1} + \alpha_2 \ln X_{t-1} + \alpha_3^+ \ln(EXR*D)_{t-1}^+ + \alpha_4^- \ln(EXR*D)_{t-1}^- + \sum_{j=1}^{p} \beta_{1j} \Delta \ln Z_{t-j} + \sum_{i=0}^{q1} \beta_{2i} \Delta \ln X_{t-i} + \sum_{i=0}^{q2} \left(\Delta\beta_i^+ \ln(EXR*D)_{t-i}^+ + \Delta\beta_i^- \ln(EXR*D)_{t-i}^- \right) + \sum_{n=1}^{k} \lambda_n D_{nt} + \varepsilon_t \quad (3)$$

Equation (3) is our extended nonlinear ARDL model, where the probable influence of the nonlinear feature of exchange rates on the nexus between exchange rate regime and economic performance is captured via interaction term. We can re-specify equation (3) to include an error correction term as below.

$$\Delta \ln Z_t = \varphi + \eta ECT_{t-1} + + \sum_{j=1}^{p} \beta_{1j} \Delta \ln Z_{t-j} + \sum_{i=0}^{q1} \beta_{2i} \Delta \ln X_{t-i} + \sum_{i=0}^{q2} \left(\Delta\beta_i^+ \ln(EXR*D)_{t-i}^+ + \Delta\beta_i^- \ln(EXR*D)_{t-i}^- \right) + \sum_{n=1}^{k} \lambda_n D_{nt} + \varepsilon_t \quad (4)$$

In equation (4), the error-correction term that captures the long run equilibrium in the nonlinear ARDL (NARDL) model represented as ECT_{t-1} while its associated parameter (η) [the speed of adjustment] measures how long it takes the system to adjust to its long run when there is a shock. The error correction term can be expressed as $ECT_{t-1} = Z_{t-1} - \phi_0 - \phi_1 (EXR*D)_{t-1}^+ - \phi_2 (EXR*D)_{t-1}^-$ wherein the parameters $\phi_1 \left(= -\frac{\alpha_3}{\alpha_1} \right)$ and $\phi_2 \left(= -\frac{\alpha_4}{\alpha_1} \right)$ represent the long run parameters for positive and negative changes in exchange rates respectively while the short run parameters are β_i^+ and β_i^-

Just as applicable in the conventional linear ARDL model, the long run parameters will only be estimated if there is presence of cointegration. Thus, pre-testing for cointegration is necessary also in NARDL and this involves the Bounds testing that is *F* distributed. However, the underlying hypotheses for cointegration involve the long run asymmetric parameters. In other words, the null hypothesis of no cointegration expressed as

$H_0: \alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = 0$ will be tested against the alternative hypothesis of cointegration given as $H_1: \alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq 0$.

In addition, the study would also employ the Wald test for testing restrictions to ascertain whether the nonlinear feature of exchange matters in the impact of exchange rate regime on economic performance both in the long run and short run. For the Wald test, the null hypothesis of no asymmetries - $H_0: \alpha_3 = \alpha_4$ (for long run) and $H_0: \sum_{i=0}^{q2} \beta_i^+ = \sum_{i=0}^{q2} \beta_i^-$ (for short run) is tested against the alternative of presence of asymmetries - $H_1: \alpha_3 \neq \alpha_4$ (for long run) and $H_1: \sum_{i=0}^{q2} \beta_i^+ \neq \sum_{i=0}^{q2} \beta_i^-$ (for short run).

The preference for the ARDL framework compared to other alternative econometric methods in the literature hinge on the flexibility of its application regardless of whether the variables are stationary or become stationary through the first difference. Also, and according to Pesaran et al. (2001), the selection of the optimum ARDL model involves automatic correction of the residual serial correlation and of the endogeneity problem.

4. Result Presentation and Discussion

4.1 Preliminary Results

A cursory look at table 1 shows that average output growth in Nigeria when measured is 220.8 US billion dollars for the period between 1970 and 2020. However, the average interest rates over the same period were 15% while the positive sign on the mean value of the trade balance (TB) is an indication that the country has be maintaining a trade surplus over the period between 1970 and 2020. Further presented in Table 2 is unit testing results. For robustness and consistency purposes, we considered both the basic Augmented Dickey-Fuller (ADF) test and its extended variant for instance Dickey-Fuller GLS test. Both the ADF and DF-GLS tests revealed the integration properties of series to hover between I(0) and I(1) thus further re-enforces our preference for the ARDL technique as the most appropriate in this study.

Table 1: Descriptive/Summary Statistics

	Mean	***Std. Dev.***	**N-Std. Dev.**	**Skewness**	**Kurtosis**	**J-B**
YG	220.79	127.72	0.58	0.99	2.42	9.12(0.01)
INFL	52.81	76.74	1.45	1.65	4.85	30.28(0.00)
INTR	15.32	6.10	0.40	0.12	2.48	0.69(0.71)
TB	1.04	1.20	1.16	0.27	2.01	2.71(0.26)
EXR	78.25	95.57	1.22	1.09	3.20	10.17(0.01)
PK	51.66	16.41	0.32	-0.76	3.55	5.57(0.06)
HK	26.54	12.60	0.47	-0.08	2.60	0.39(0.82)
GC	9.41	11.94	1.27	1.01	2.24	9.93(0.01)
TOP	33.32	11.91	0.36	-0.46	2.33	2.78(0.25)
FY	46481	19739	0.42	0.44	1.99	3.83(0.15)
MPR	11.72	4.54	0.39	0.53	3.36	2.67(0.26)

Note: Std. Dev. denotes standard deviation while N-Std. Dev. is the normalized variant of the standard deviation statistic standard deviation/mean. The values in parenthesis are probability values associated with Jaque-Bera (JB) statistics.

Table 2: Unit root test results

Test type: ADF Unit Root Test						
Variable	**Model with Constant**			**Model with Constant & Trend**		
	Level	**First Difference**	**I(d)**	**Level**	**First Difference**	**I(d)**
YG	0.600	-2.297***	I(1)	1.429	-2.486***	I(1)
INFL	-1.384	-4.099***	I(1)	-1.519	-4.272***	I(1)
INTR	-1.621	-6.682***	I(1)	-0.927	-6.881***	I(1)
TB	-2.612*	-	I(0)	-2.575	-7.322***	I(1)
EXR	-0.363	-5.618***	I(1)	-1.444	-5.555*	I(1)
PK	-3.302**	-	I(0)	-6.005***	-	I(0)
HK	-1.788	-2.772*	I(1)	-2.547	-5.966**	I(1)
GC	-0.231	-7.227**	I(1)	-1.778	-7.230**	I(1)
TOP	-2.866*	-	I(0)	-2.827	-7.871**	I(1)
FY	-1.761	-5.354**	I(1)	-4.494*	-	I(0)
MPR	-2.111	-8.634***	I(1)	-2.198	-8.591***	I(1)
Test type: DF-GLS Unit Root Test						
YG	1.294	-2.072***	I(1)	-1.377	-2.695	I(1)
INFL	0.420	-4.146***	I(1)	-1.701	-4.343***	I(1)
INTR	-0.906	-6.685***	I(1)	-1.086	-6.952***	I(1)
TB	-2.496**	-	I(0)	-2.579	-7.445***	I(1)
EXR	0.374	-5.427***	I(1)	-1.314	-5.616***	I(1)
PK	-0.4661	-2.769***	I(1)	-1.789	-3.321**	I(1)
HK	-0.807	-2.818***	I(1)	-2.900*	-	I(0)
GC	0.252	-7.282***	I(1)	-1.625	-7.385***	I(1)
TOP	-2.413**	-	I(0)	-2.777	-7.937***	I(1)
FY	0.868	-4.867***	I(1)	-2.711	-5.506***	I(1)
MPR	-1.493	-8.707***	I(1)	-2.180	-8.752***	I(1)

Note: The exogenous lags are selected based on Schwarz info criteria while ****, **, * imply that the series is stationary at 1%, 5% and 10% respectively. The null hypothesis is that an observable time series is not stationary (i.e., has unit root).

4.2 Regression Results

Starting with inflation (INFL) as a measure of macroeconomic performance, a look at Table 3 shows that the decision on whether to reject or do not the null hypothesis of no long run relationship was inconclusive when the estimated NARDL model is in terms of positive changes in exchange rate, but otherwise for the NARDL that include negative changes in exchange rate. However, while the coefficients on both EXR^+ and $EXR^-$are positively signed, the extent to which asymmetries matters in the impact of exchange rate regimes on inflation appears to be only statistically evident in the short run. For instance, compared to a floating exchange rate regime, a fixed regime that is due exchange rate depreciation has the potential of causing increasing price level (inflation) at least in the short run situation.
Presented in Table 4 is the empirical estimates obtained from the NARDL model when the macroeconomic performance was measured in terms of output growth. Compared to our earlier finding of significant impact of exchange rate regimes on inflation, deciphered from the empirical estimates in table 4 is evidence of no significant relationship between exchange rate regimes and output growth. Saying it differently, irrespective of whether the nonlinear exchange rate was due to exchange rate depreciations or exchange rate appreciations; the nonlinearity feature has no significant influence on the impact of

exchange rate regime on output growth. This result appears to be consistent both for fixed exchange rate regime and intermediate exchange rate regime.
With macroeconomic performance further measured as trade balance (TB), the regression results in Table 5 seems to be suggesting that the impacts of exchange rate regimes on macroeconomic performance is relatively more pronounced when the latter is measured in terms trade balance (TB). However, the consistency of this latter finding seems to statistically viable mainly when the exchange rate management was under intermediate regime.

Table 3: NARDL estimates when the macroeconomic performance is measured in terms of inflation

Long Run Equation	**Positive change in exchange rate**			**Negative change exchange rate**		
	Coefficient	**SE**	**T-stat**	**Coefficient**	**SE**	**T-stat**
YG	-1.0073	0.8222	-1.2251			
EXR^+	0.7499**	0.3064	2.4469			
EXR^+FIX	2.3819	3.9519	1.4424			
EXR^+INTER	-0.0476	0.0753	-0.6321			
EXR^-						
EXR^-FIX				Not Applicable (NA)		
EXR^+INTER						
Short Run Equation						
Constant	0.5159	0.4051	1.2738	0.9274*	0.5455	1.6999
$\Delta INFL_{t-1}$	-0.1191**	0.0528	-2.2542	-0.0573	0.0592	-0.9667
ΔYG	-0.1199	0.0991	-1.2102	-0.1860	0.1354	-1.3743
ΔEXR^+	0.0893**	0.0341	2.6195			
ΔEXR^+FIX	4.7241*	1.2817	1.9023			
ΔEXR^+INTER	-0.0057	0.0079	-0.7101			
ΔEXR^-				0.1606	0.5267	0.3051
ΔEXR^-FIX				1.8321	1.1348	1.6145
ΔEXR^+INTER				0.1100	0.1293	0.8512
ECT_{t-1}	-0.1191***	0.0271	-4.3450	Not Applicable (NA)		
Bound Test Cointegration Results						
Level of Significance	F-statistic	I(0)	I(1)	F-statistic	I(0)	I(1)
10%		3.03	4.06		3.03	4.06
5%	3.45	3.47	4.57	2.33	3.47	4.57
1%		4.40	5.72		4.40	5.72
Diagnostic and Post-Estimation Results						
Adjusted R^2		0.98		0.98		
F-statistics		4897.091(0.000)		5612.104 (0.000)		
Autocorrelation test (Q-Stat)		14.801(0.101)		15.879(0.079)		
Heteroscedasticity test (ARCH LM)		11.212(0.210)		3.649(0.800)		
Normality test (Jaque-Bera)		15.596(0.000)		11.985(0.249)		

Note: The value in parenthesis represents the probability values for the various post estimation tests performed, while ***, ** and * denote 1%, 5% and 10% level of significance.

Table 4: NARDL estimates when the macroeconomic performance is measured in terms of output growth

Long Run Equation	Positive change in exchange rate			Negative change exchange rate		
	Coefficient	**SE**	**T-stat**	**Coefficient**	**SE**	**T-stat**
PK	-0.3841	0.3494	-1.0993	-0.0831	0.1615	-0.5144
HK	0.0007	0.0112	0.0624	0.0095	0.0069	1.3677
GC	0.1129	0.1445	0.7815	0.1316*	0.0718	1.8330
INFL	-0.3817*	0.2176	-1.7542	-0.3259***	0.0949	-3.4321
TOP	0.0186**	0.0085	2.1985	0.0117***	0.0038	3.0524
EXR^{+}	0.0876	0.1547	0.5662			
$EXR^{+}FIX$	-1.8962	1.3293	-0.7376			
$EXR^{+}INTER$	0.0309	0.0444	0.6962			
EXR^{-}				3.3954***	1.0121	3.3550
$EXR^{-}FIX$				0.7745	2.2160	0.3494
$EXR^{+}INTER$				-0.1667	0.2612	-0.6384
Short Run Equation						
Constant	0.6053**	0.2664	2.2726	0.9184***	0.2251	4.0804
ΔYG_{t-1}	-0.1348**	0.0639	-2.1064	-0.2214***	0.0116	-3.5939
ΔPK	-0.0518	0.0346	-1.4966	-0.0184	0.0331	-0.5562
ΔHK	9.45E-05	0.0015	0.0627	0.0021	0.0014	1.5145
ΔGC	0.0152	0.0275	-1.8691	0.0291	0.0184	1.5864
$\Delta INFL$	-0.0515*	0.0275	-1.8691	-0.0722***	0.0256	-2.8238
ΔTOP	0.0025***	0.0009	2.8548	0.0026***	0.0007	3.7261
ΔEXR^{+}	0.0118	0.0188	0.6279			
$\Delta EXR^{+}FIX$	-1.8337	2.2544	-0.6940			
$\Delta EXR^{+}INTER$	0.0042	0.0056	0.7462			
ΔEXR^{-}				0.7518***	0.2243	3.3526
$\Delta EXR^{-}FIX$				0.1715	0.4757	0.3605
$\Delta EXR^{+}INTER$				-0.0369	0.0582	-0.6344
ECT_{t-1}	0.1348***	0.0208	-6.4683	0.2214***	0.0279	-7.9466
Bound Test Cointegration Results						
Level of Significance	F-statistic	I(0)	I(1)	F-statistic	I(0)	I(1)
10%	3.86**	2.26	3.34	5.822***	2.26	3.34
5%		2.55	3.68		2.55	3.68
1%		3.15	4.43		3.15	4.43
Diagnostic and Post-Estimation Results						
Adjusted R^2	0.98			0.98		
F-statistics	647.367(0.000)			803.589(0.000)		
Autocorrelation test (Q-Stat)	7.958(0.159)			5.890(0.317)		
Heteroscedasticity test (ARCH LM)	0.498(0.776)			0.831(0.536)		
Normality test (Jaque-Bera)	0.935(0.626)			0.414(0.813)		

Note: The value in parenthesis represents the probability values for the various post estimation tests performed, while ***, ** and * denote 1%, 5% and 10% level of significance.

Table 5: NARDL estimates when the macroeconomic performance is measured in terms of trade balance

Long Run Equation	Positive change in exchange rate			Negative change exchange rate		
	Coefficient	**SE**	**T-stat**	**Coefficient**	**SE**	**T-stat**
FY	1.6583**	0.1211	2.6669	1.1594**	0.3744	2.4372
DY	0.1287	0.9365	0.9365	-2.0040	1.1960	-1.6757
TOP	0.0041	0.0147	0.2772	0.0121	0.0199	0.6091
EXR^+	0.4126	0.3083	1.3382			
EXR^+FIX	0.2120	0.9327	-0.4556			
EXR^+INTER	0.3478***	0.0643	5.4101			
EXR^-				1.4226**	0.4469	0.6091
EXR^-FIX				-1.3858	1.6940	-0.9775
EXR^+INTER				-1.0783***	0.0266	-3.8282
Short Run Equation						
Constant	-6.9790**	2.3051	-2.5910	-1.0154**	0.0672	-2.2838
ΔTB_{t-1}	-0.8249***	0.1484	-5.5585	-0.5815***	0.1268	-4.5866
ΔFY	1.8678**	0.8182	2.6206	1.5369**	0.3990	2.3702
ΔDY	0.1062	0.7778	0.1365	-1.1653*	0.6609	-1.7633
ΔTOP	0.0034	0.0121	0.2800	0.0070	0.0114	0.6154
ΔEXR^+	0.3404	0.2676	1.2719			
ΔEXR^+FIX	1.4435	3.5729	-1.4630			
ΔEXR^+INTER	0.2869***	0.0744	3.8546			
ΔEXR^-				0.6420*	0.2916	0.6154
ΔEXR^-FIX				-0.7835	0.1235	-0.9581
ΔEXR^+INTER				-2.9529***	0.9461	-3.1213
ECT_{t-1}	-0.8250***	0.1260	-6.5486	-0.5815***	0.1054	-5.5193
Bound Test Cointegration Results						
Level of Significance	F-statistic	I(0)	I(1)	F-statistic	I(0)	I(1)
10%	5.34***	2.53	3.59	3.80*	2.53	3.59
5%		2.87	4.00		2.87	4.00
1%		3.60	4.90		3.60	4.90
Diagnostic and Post-Estimation Results						
Adjusted R^2	0.66			0.60		
F-statistics	12.922(0.000)			10.428(0.000)		
Autocorrelation test (Q-Stat)	7.068(0.216)			4.816(0.439)		
Heteroscedasticity test (ARCH LM)	0.346(0.882)			0.454(0.808)		
Normality test (Jaque-Bera)	9.730(0.077)			10.436(0.054)		

Note: The value in parenthesis represents the probability values for the various post estimation tests performed, while ***, ** and * denote 1%, 5% and 10% level of significance.

5. Concluding Remark

This study uses historical annual frequency spanning 1970 and 2020 to hypothesize that asymmetries matter in the nexus between exchange rate regimes and macroeconomic performance. Considering different indicators of macroeconomic performance, the study also hypothesized that the extent to which asymmetries matters in the nexus between macroeconomic performance and exchange rate regimes is sensitive to the indicators of macroeconomic performance that is under consideration. Exploring a nonlinear ARDL model, we find the potential exchange rate regime to cause declining inflationary pressure sensitive to whether the exchange rate regime is responding to depreciation or appreciation in exchange rate movement. Whereas a fixed exchange rate regime that is due to depreciation in exchange rate movement tends to induce inflationary pressure rather than reducing it. In another development, an intermediate exchange rate regime that is due to depreciation in exchange rate tends to induce trade surplus, but the reverse appears to be the case when the intermediate regime is due to appreciation of the exchange rate. These, among other, tend to give credence to the hypothesis that asymmetries matter in the nexus between exchange rate regimes and macroeconomic performance. Validating the study's second hypothesis is the fact that the significance and the magnitude of the role of the nonlinear feature of exchange rate on the impact of exchange rate regimes on macroeconomic performance is relatively more pronounced when the latter is measured in terms of trade balance.

5.1 Limitation to the study

This study set out to offer new evidence-based insights on the nexus between economic performance and exchange rate regimes, particularly from the perspective of whether the impact of exchange rate regimes on economic performance varies for different economic performance indicators. The study categorized the indicators of economic performance into internal and external measures. However, the study's limitation is the limited number of indicators explored as external measures of economic performance compared to the number of internal measures of economic performance indicators.

5.2 Suggestions for Further Research

The study centered on the IMF's *de jure – de facto* approach and considered the LYS approach as another alternative even though there are more than one alternative in the literature. In view of this, we suggest that further studies should consider exploring additional indicators of external measures of economic performance. Effort can also be made to consider a number of alternatives approach to exchange rate regimes classification in addition to the IMF *de – jure* to *de - facto* and LYS statistical method already considered in this study.

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Bio-note:

Dr. Samod Lawal-Aroundade is a Lecturer in the *Department of Economics, Faculty of Social Sciences, Lagos State University, Ojo Campus, Nigeria*. He received his undergraduate and postgraduate trainings from Lagos State University, Ojo, Lagos (1991-1996), University of Lagos, Akoka, Lagos (1998-1999), Lagos State University, Ojo, Lagos (2001-2002), (2016-2017) and (2019-2021). Being a passionate researcher, he has published research articles in reputable journals, chapters in books and conference proceedings both in local, national and international levels.

CORPORATE EXECUTIVES' PERCEPTIONS OF CSR IN THE LISTED MOROCCAN COMPANIES

Abdelmajid Ibenrissoul[1], Anas Yassine[2], Souhaila Kammoun[3*]
[1]Department of Management, ENCG, ISO, Hassan II University, Casablanca, Morocco
[2]Department of Management, ENCG, ISO, Hassan II University, Casablanca, Morocco
[3]Department of Economics, IHEC, CODECI, University of Sfax, Tunisia
a.ibenrissoul@encgcasa.ma
yassine.anas1@gmail.com
souhaila.kammoun@ihecs.usf.tn

Abstract: *The purpose of the paper is to analyze the perception of corporate social responsibility by corporate executives in the Moroccan context. To do so, we conducted a survey of seventy-four Moroccan corporate executives working in listed companies. Subjects were solicited by e-mail, sending them a questionnaire consisting of 37 items presented in the form of a five-point response scale (Likert scale). Our measurement scale was designed on the basis of Carroll's (1991) theoretical model of social responsibility. The study proposes a scale to measure corporate executives' perceptions of CSR in their company. The results of our study reveal two findings. The first one suggests that Moroccan corporate executives working in listed companies are more concerned about compliance with laws and ethical values than with a true CSR commitment. The second one highlights the fact that CSR commitment is a three-dimensional construct marked by a predominance of ethical-legal and philanthropic practices. The paper states the main conclusions of the study and provides some practical implications.*

Keywords: Corporate Social Responsibility, Executives' perceptions, Listed companies, Morocco, Exploratory analysis.

JEL classification : L21, M12, M14, M21.

1. Introduction

In recent years, Corporate Social Responsibility (CSR) has been gaining significant importance in scholarly research and business practice alike. As a burgeoning field of research, CSR focuses on how firms take social responsibility for their actions and try to conduct their business activities in ethical and legal manners. Even though CSR is significantly relevant and becoming a requirement for firms in both industrial and service sectors, most empirical studies on CSR have been conducted in developed countries. Empirical inquiry in developing countries where CSR is evolving remains insufficient to depict and explore this issue. Admittedly, CSR starts to occupy a prominent position in some developing countries; however, there is still a strong need to conduct more empirical research on CSR in order to determine its nature in local contexts and provide some appropriate recommendations for firms to integrate CSR practices in their business activities (Gao, 2011). One important way to do this is to evaluate the social commitment of the

[*] Corresponding author: Souhaila Kammoun
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company. According to Gond et al. (2017), ignoring CSR evaluation processes might limit insights into how people experience CSR and how CSR initiatives produce effects.
Within this context, the paper seeks to investigate corporate executives' perceptions of CSR in order to provide an overview of CSR practices in Moroccan-listed companies and to give some insights into corporate executives' evaluations of how CSR is conducted in their companies. The underlying objective is to understand how corporate executives perceive their firm's CSR efforts. Perceived CSR reflects how corporate executives view the summed CSR practices that their companies have incorporated.
This empirical study is mainly justified by the following reasons: first, there is a dearth of qualitative research on CSR in developing countries. In the Moroccan context, most recent empirical studies adopted the quantitative research approach (Ibenrissoul et al., 2016; Lahmini et al., 2016; Kammoun et al., 2020c; Ibenrissoul et al., 2021a; Ibenrissoul et al., 2021b; Kammoun et al., 2021). Nevertheless, in this context, where CSR has been recently adopted by listed companies, qualitative studies can also be deemed suitable for our research purpose. Secondly, factors influencing corporate executives' perceptions of CSR in Morocco have not been thoroughly explored in previous empirical studies. Thirdly, the focus of the survey on corporate executives is explained by their strategic positioning within the company and their crucial role in disseminating CSR practices. In fact, corporate executives play key roles and are held accountable for the achievement of the strategic goals of the company. Because of their management functions and responsibilities within the company, corporate executives are at the interface between management and employees, and in constant interaction with the internal and external work environments. Acting as mediators between management and employees, corporate executives also deal with social and societal considerations and economic concerns. Finally, on the basis of Carroll's model of CSR, the exploratory analysis of corporate executives' perceptions of CSR will help to explain their understanding of CSR and how they perceive its implementation in their business activities.
The overarching objectives of this paper are to overview the corporate executives' perceptions of CSR as well as the evolving contexts influencing their perceptions and to provide a contribution to CSR empirical literature in developing countries. The structure of the paper is organized as follows. Following the introductory section, we provide the discussion of the topic incorporating the theoretical background of CSR. After that, we present the dataset and the research methodology. Based on Carroll's model of CSR, the following section tries to depict how CSR is conducted in Moroccan-listed companies through corporate executives' and to identify categories of CSR responsibilities. Conducting CSR in industry and service companies is also discussed in this section. And lastly, the study indicates some practical implications and recommendations from the study findings, sets out some future research directions and concludes.

2. Theoretical Background

CSR as a multidimensional concept

Corporate social responsibility (CSR) is a broad concept that has gained in substance in literature. Despite a wide variety of definitions, there is no unified definition of CSR and it's hardly possible to delineate its scope (Dahlsrud, 2008: Kooskora et al., 2019; Kammoun et al., 2020b; Kammoun et al., 2021). More precisely, CSR is a multi-dimensional concept that has been defined in several ways (Karyawati et al., 2018; Kooskora et al., 2019; Kammoun et al., 2020a; Kammoun et al., 2020b).
Friedman (1970) stated that Corporate Responsibility is limited to the creation of wealth for shareholders. Indeed, neoclassical theory postulates that managers must create a kind of watertight boundary between business and non-business by avoiding any socially

responsible decision-making: "*business is the business of business*" (Allouche and Laroche, 2005). Moreover, Friedman perceived CSR as a threat. That being said, social responsibility is not the responsibility of the company, but is essentially a matter for the State (Friedman, 1970). Bowen (1953), often identified as the founder of this discipline, opened the debate on the concept of CSR by asserting that the firm has obligations towards society that go beyond legal and economic obligations. Bowen saw CSR as an opportunity for firms to improve their benefits. For his part, Carroll (1979) sees social responsibility as a response to society's economic, legal, ethical and discretionary expectations. The author views CSR as a set of obligations of the firm towards society.

From another perspective, many organisations have framed their own definitions of CSR. The European Commission's green paper on Corporate Social Responsibility defines CSR as "*the voluntary integration of social and environmental concerns into business operations and stakeholder relations*" (EU, 2001). That being said, CSR is not only limited to legal obligations but goes far beyond this by extending to other aspects such as investment in human capital, meeting the expectations of different stakeholders, and protecting the environment (Ibenrissoul et al., 2021a; 2021b).

Another prominent definition of CSR is the one provided by the ISO (International Organisation for Standardisation), the organisation responsible for defining the international standards governing business, which defines CSR as "*the responsibility of an organization with regard to the impacts of its decisions and activities on society and the environment, reflected in ethical and transparent behaviour that:-contributes to sustainable development, including the health and well-being of society;-takes into account the expectations of stakeholders;-complies with the laws in force and is in line with international standards of behaviour; and is integrated throughout the organization and implemented in its relations*" (ISO 26000).

Currently, there are more than 37 definitions of CSR (cited by Carroll and Shabana, 2010), and this number is constantly increasing due to the evolving nature of the concept. Certainly, CSR does not mean the same thing all the time, and it might mean different things to different people (Kuznetsov and Kuznetsova, 2010). For some researchers, CSR is limited to legal liability; for others, it is seen as a movement to moralize business in an ethical sense; for others, it is reduced to charity. In a nutshell, each interest group tries to see CSR differently by focusing on the aspects that concern them, which is not without generating semantic confusion. In order to better understand the underlying causes behind the divergence of definitions and controversy surrounding CSR, Dahlsrud (2008) grouped 37 definitions of CSR in the literature and concluded that the lack of a clear and universal definition of CSR is not so much related to the various definitions as to how CSR is socially constructed in a specific context. In addition, other studies identify various factors that can cause misunderstanding of social responsibilities and CSR practices, such as: the sector of activity (Colombo et al. 2017), the size of the firm (Spence et al., 2018), the firm's brand image and reputation, but also the particularity of each country (Frynas and Yamahaki, 2019; Ibenrissoul et al. 2021a). For other researchers, CSR refers to strategies put into action by firms to conduct their economic activities in a way that is societally friendly, ethical, and beneficial to their community (Kammoun et al., 2020a; Ibenrissoul et al., 2021a; Kammoun et al., 2021).

According to Lindgreen et al. (2010), what constitutes CSR in developed countries may be of limited utility in other countries. Indeed, the majority of empirical studies that have attempted to crystallize the concept of CSR have been carried out in developed countries, which still leaves room for a multitude of questions and legitimizes the interest in studying the concept in the context of a developing country such as Morocco. Especially since CSR in developing countries is less embedded in corporate strategies, less pervasive, and less politically rooted than in developed countries. Moreover, in many developing countries, the institutions, standards, and appeals systems are relatively weak compared to those in North America and Europe (Kemp, 2001). Culture will have an important influence on perceived CSR priorities (Burton et al., 2000; Pinkston and Carroll, 1996). Many other empirical studies provide insight into how CSR varies between countries (LaGore et al., 2020) and how cultural values impact perceptions of CSR (Nguyen and Truong, 2016). In a recent study, Koprowski et al. (2021) concluded that the cultural dimensions should be included among the determinants of CSR. Notwithstanding the overabundance of definitions and the diversity of conceptions of CSR, the question of establishing a development model based on CSR is crucial for any company attempting to survive in an increasingly turbulent environment marked by uncertainty and instability.

Carroll's model of CSR: principles of responsibility

As mentioned earlier, Carroll (1979) defined CSR as a set of obligations of the firm to society. Carrol distinguishes four types of obligations: economic (being profitable, committing to produce goods and services that meet quality criteria), safety and ethical (acting in a fair and equitable manner), and philanthropic (contributing to social welfare, acting with charity and benevolence). Wartick and Cochran (1985) elaborated on Carroll's approach and argued that CSR is the result of the interaction of three dimensions: the principles of CSR, the processes used to develop socially responsible skills, and the policies adopted to address social problems.

Carroll's model is a reference model in the literature on corporate social responsibility (Maignan et al. 1999; Capron and Quairel-Lanoizelée, 2007; Igalens and Gond, 2003; Peterson, 2004; Jamali, 2008). Carroll (1979) proposed a conceptual model that provides an interesting typology of CSR. In this model, Carroll defined four principles of responsibility:

Economic responsibility is the first pillar of the model. According to Carroll (1991), this responsibility is intrinsic to the existence of the company and conditions the company's commitment to other responsibilities. Thus, a company would only have to behave in a socially responsible manner if it generates profits. The second responsibility is of a *legal* nature. Compliance with the law is a sine qua non condition for a company to be socially responsible. However, it is more a question of a responsibility suffered rather than chosen (Pailot, 2005) insofar as the company is obliged to comply with the laws required by society. The third responsibility is *ethical*. It relates to all those who are upright, just and loyal. Indeed, the company is obliged to moralize its business if it wishes to be consistent with the principles and values of society. According to Carroll (1991), ethical responsibility is expected by society. *Philanthropic or discretionary* responsibility is positioned as the fourth component of the model. It reflects the company's degree of commitment to contributing to social welfare. The author believes that this responsibility is less important than the others, but it is desired by society.

Nevertheless, Carroll's (1979) model, simplistic as it may be, provides an interesting framework and analysis of the concept of social responsibility. It helps to find common ground among pure liberals (Friedman, 1962) who believe that the only responsibility of the corporation is the creation of wealth for shareholders and supporters of stakeholder theory (Freeman, 1984; Donaldson and Preston, 1995), who recognize the company's responsibilities to its stakeholders. In 1991, Carroll refined its basic model by proposing a new categorization of corporate social responsibility in a pyramidal form (see Figure 1). In this study, the author created a certain hierarchy between the four components of social responsibility. This means that a responsibility at a lower level normally has to be taken on before the responsibility at the higher level becomes important. However, economic responsibility is positioned at the base of the pyramid, followed by legal responsibility. Next comes ethical responsibility, and at the top, we find philanthropic responsibility. In his model, Carroll (1991) specifies that these categories are not exclusive but rather cumulative.

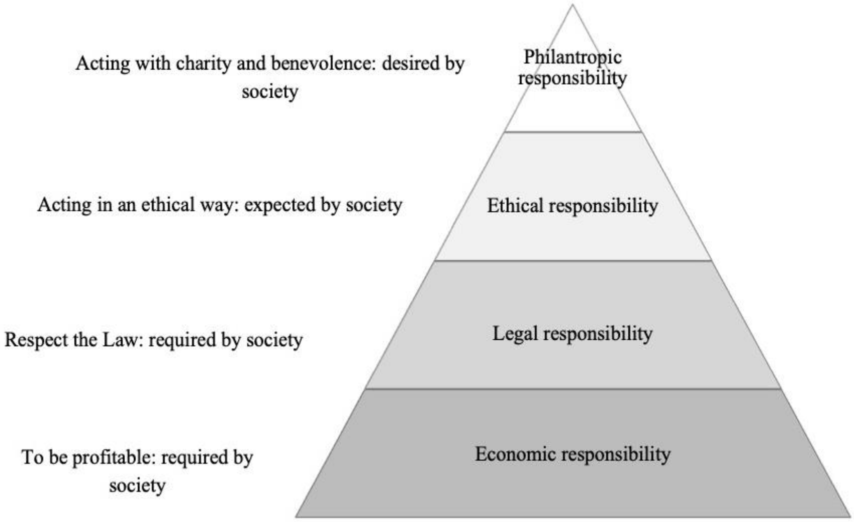

Figure 1: Carroll's pyramid model of Social Responsibility
Source : Adapted from Carroll (1991)

More recently, Carroll's four-dimensional model has been refined by Wood (1991) by stating that the meaning of social responsibility can only be understood through the interaction of three levels of corporate responsibility: firstly, the responsibility of the company as a social institution (a company that abuses the power and legitimacy granted by society will eventually lose them); secondly, responsibility in terms of the consequences (outcomes) of its activities; companies are responsible for the primary and secondary effects of their activities) and finally, the individual and moral responsibility of directors and managers (managers must use their discretionary powers in the service of corporate social responsibility).
Wood's (1991) approach aims to create some dynamism between the different responsibilities included in Carroll's (1979) theoretical model. Thus, each of the forms of responsibility proposed by Carroll (economic, legal, ethical and philanthropic) can be declined according to the three levels defined by Wood (Attarça and Jacquot, 2005). On the basis of the typologies respectively by Carroll (1979) and Wood (1991), Attarça and Jacquot (2005) present the levels and nature of CSR, as displayed in the following table:

Table 1: Levels and nature of corporate social responsibilities

	Institutional level	**Organizational level (activities)**	**Individual level**
Economic responsibilities	Produce goods and services, provide jobs, create wealth for shareholders, provide services, provide jobs, create wealth for	Prices of goods and services reflect the true costs of production and incorporate all the externalities	Produce in a way that environmentally friendly, use non-polluting technologies, reduce costs by promoting recycling, etc.
Legal responsibilities	Respect the laws and regulations. Do not lobby or expect privileged positions in public policies	Working for public policies by advocating for "enlightened" interests	Take advantage of regulatory guidance for product or technology innovation
Ethical responsibilities	Follow basic ethical principles (e.g., honesty)	Provide information precise and complete to increase the safety of use beyond the legal requirements.	Develop user information for specific users and promote it as a product advantage
Philanthropic responsibilities	Act like a citizen model in all areas: beyond regulations and ethical rules. Giving back part of the turnover to society (community)	Investing Resources of the company in charitable actions related to the first and second circle of the social environment of the company	Selecting Charitable investments that are profitable in terms of solving social problems (application of efficiency criteria)

Source: Attarça and Jacquot (2005)

Perception of CSR by Moroccan firms

During the last two decades, CSR has been a growing source of debate among researchers in Morocco (Filali Meknassi, 2007; Hattabou and Louitri, 2010; Cherkaoui, 2016; Ibenrissoul et al., 2018; Kammoun et al., 2020c; Kammoun et al., 2021; Kammoun et al., 2022). Initially, the majority of academic work attempted to shed light on the degree of commitment of Moroccan firms to CSR practices. However, the results of the studies conducted reveal realities that are sometimes heterogeneous. Even though governments and companies have made a considerable effort to take social responsibility in hand, the results of a 2007 survey by Filali Meknassi on CSR in Morocco reveal a low level of awareness of CSR practices and the principles of the Global Compact, as well as confusion between social responsibility and legal responsibility. Moreover, the perception of Moroccan companies towards the environmental emergency and their role in society remains unclear (Boutti, 2010). At this point, it is important to emphasize that CSR is neither an obligation, nor a passing fad, nor a Western export, nor even a new capitalist trick, but a voluntary commitment that leads to the renewal of the company's strategy by coordinating the expectations of the various stakeholders. This commitment could contribute in the long term to the maximization of the company's value.

The following sections lay out the objectives and scope, describe the data and research methodology used to carry out the empirical study, and indicate implications from the research findings.

3. Data description and research methodology

3.1. Scope and aim of the study

As previously stated, the underlying objective of this study is to record the corporate executives' perception of CSR within listed Moroccan companies in order to report factors forming and influencing executives' perceptions of CSR. Based on Carroll's (1991) CSR pyramid, themes are presented in four categories of responsibilities: economic, legal, ethical, and philanthropic responsibilities. The measurement scale used in this study was inspired by the work of Maignan et al. (1999), who constructed and validated a multi-item scale based on Carroll's (1979) four-dimensional model. In fact, the empirical study by Maignan et al. (1999) demonstrates that there is a significant positive relationship between the level of corporate citizenship and employee commitment (study carried out with managers). It's worth noting that the empirical study by Maignan et al. (1999) was developed in a North American context with its own specificities and particularities. In addition to the USA, other empirical studies of CSR expectations have been conducted in other European countries (Maignan and Ralston, 2002; Maignan and Ferrell, 2003).
Consequently, we thought it would be interesting to propose an adaptation of the scale to the Moroccan context by supplementing it with the contribution of stakeholder theory and Wood's approach (1991). The latter suggests the creation of a certain dynamic between the different responsibilities included in Carroll's model.
Our sample is composed of all the Moroccan companies listed on the stock exchange. The choice of this field of investigation is justified by several reasons. First, these companies are experiencing new advances in the field of CSR, following the initiative of the Moroccan Capital Market Authority (AMMC), which has introduced a requirement to improve the transparency of issuers in terms of the content, frequency and relevance of the information communicated. Second, large companies generally have resources that they could mobilize to finance their CSR projects (Lerner and Fryxell, 1988). On the other hand, SMEs are faced with a lack of resources, which prevents them from investing in this area. Finally, it is important to note that the commitment to CSR practices is based on fundamental principles, including transparency, availability and accessibility of information about the company. However, this aspect is not the strong point of SMEs, which are still reluctant to communicate and publish (activity reports, financial statements, ESG reporting, etc.). Within this context, the exploratory analysis aims to show if data collected do fit or not in Carroll's pyramid and thus to identify the main categories of responsibilities.

3.2. Sample and data collection

To carry out this study, we conducted a survey of seventy-four executives working in listed Moroccan companies. The choice of this socio-professional category is motivated by the fact that employees evaluate the societal commitment of their companies in a cognitive and objective way. Managers, on the other hand, tend to see things in an affective way and seek to give a more valorizing image to their company and strategies. The subjects were solicited by e-mail by sending them a questionnaire which consists of 37 items presented in the form of a five-point response scale (Likert scale).

4. Results and discussion

The CSR measurement scale used in this study was inspired by the previous research by Maignan et al (1999). According to the authors, people who are aware of the company's CSR activities are significantly more positive in the associations they make with organization, more positive in their attitude towards the company, and more identified with the company.

4.1. CSR measurement scale

Through interviews with seven Moroccan CSR managers and directors and on the basis of the classic criteria for adapting a measurement scale, we propose some revisions to this scale. For instance, the Maignan et al. scale (1999) used the word "we" when addressing employees (even if they are managers or company directors) to evaluate their company's CSR commitment. In order to distinguish between the company and the subject, we have revised the questions by replacing "we" with "my company" in the wording of the items. The table below provides an overview of the proposed improvements selected:

Table 2: Suggestions for improvement of the Maignan et al. scale (1999)

Items formulated by Maignan et al. (1999)	**Comments**	**Reformulation**
"We are recognized as a trustworthy company".	Some items focus either on an assessment of the result (e.g. "We are recognized as a trustworthy company") or on an objective to be reached without taking into consideration the actions carried out to reach it (e.g. "your company does not resort to corruption under any circumstances").	"My company has put in place mechanisms to control cases of corruption with well-established procedures and sanctions in the event of a proven breach".
"My company does not use bribery in any way".		
"We encourage partnerships with local businesses and schools"	This item is composed of two distinct parts. We have divided it in two.	"My company contributes to the social and economic development of the region where it is located", "My company maintains long-term partnerships with educational institutions (universities, professional training centers ...) to promote research and development".
	Some items have been added to assess the compliance of Moroccan companies' social practices with the regulations in force.	"My company gives social security coverage for all its employees, at least the mandatory social security coverage; "My company respects the legal conditions (Moroccan labor code) in case of recourse to atypical or precarious work contracts (temporary work, fixed-term contracts) ".
	The items formulated by Maignan and Ferrell (1999) do not take into account the role of union action and social dialogue in easing tensions in the workplace. This led us to formulate a new item.	"My company is committed to respecting employees' rights and responding to union demands".

Source: Authors' development

By taking into account the recommendations of CSR experts and by revising some of the wording of the items, the questionnaire is finally composed of 37 items to illustrate the four principles developed in Carroll's model (1979). These four components have been supplemented by the stakeholder theory and by Wood's approach (1991). The latter seeks to create a certain dynamic between the different responsibilities included in Carroll's four-dimensional theoretical model.

4.2. Descriptive Data Analysis

A descriptive analysis was conducted to identify the different trends reflecting the way CSR is perceived by corporate executives, based on their own statements. Figure 2 presents a trend analysis of corporate executives' perceptions of their companies' social responsibility:

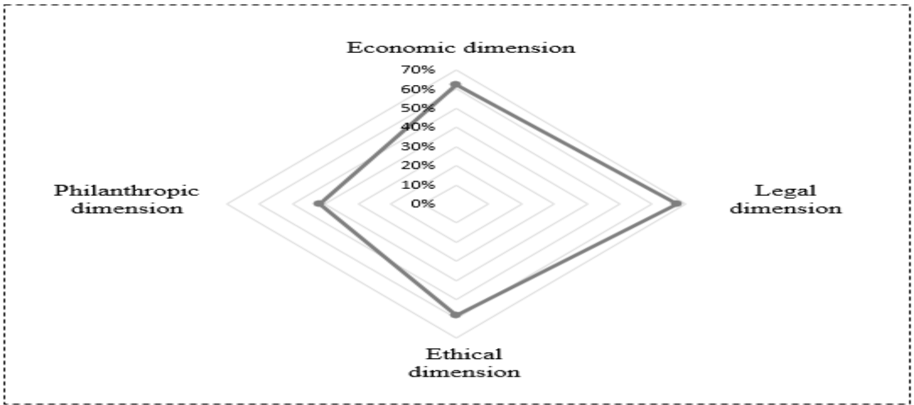

Figure 2: Trend analysis of corporate executives' perceptions of CSR
Source : Authors' computation

The preliminary statistical analysis reveals that the legal dimension dominates in terms of frequency, followed successively by the economic, ethical and philanthropic dimensions. This succession of responsibilities shows that the commitment of listed Moroccan companies to CSR practices is primarily based on compliance with the law. Nevertheless, this hierarchy suggests that CSR is "after profit", i.e. that a company should only behave responsibly when it has surplus resources; which should not be the case, and on the contrary, CSR should be considered "before profit". On the basis of the responses collected, it appears that issues related to social and environmental concerns are gradually gaining importance within large Moroccan companies. This remarkable awareness is not the result of chance, but of a long process of construction and renovation of the Kingdom's institutional framework. Thus, on the majority of actions related to CSR, Morocco has undertaken social, economic and environmental reforms that demonstrate the efforts made and the significant progress achieved in this area. In this line, we have witnessed the establishment of the legislative and regulatory framework that defines the contours of CSR (Framework Law 99-12) and sets the fundamental objectives of actions to be taken to protect the environment and ensure sustainable development. Henceforth, Moroccan-listed companies will have to work to develop good practices to include the environmental aspect in their CSR strategy.

4.3. Analysis of the factorial structure of the data

The primary purpose of the exploratory approach adopted in this study is to identify the underlying structure of our measurement scale. The technique used consists in reducing the number of variables selected as candidates for the construction of the scale to a few factors. Moreover, given the nature

and structure of our data, we opted for the use of principal component analysis (PCA), which is an extremely powerful tool for compressing and summarizing information.
The results show that the first two eigenvalues correspond to a percentage slightly higher than the average variability (54.57%). This led us to extend the factorial representation to the third axis (F1 and F2 then F1 and F3) in order to perform a quality extraction and maintain the multi-dimensionality of the construct (CSR).

Table 3: Eigenvalues

	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
Eigenvalue	13,925	2,992	1,898	1,536	1,395	1,147	1,035	1,011
Variability (%)	44,918	9,652	6,122	4,955	4,498	3,700	3,339	3,261
Cumulative%	44,92	54,57	60,69	65,648	70,146	73,845	77,185	80,446

Source : Authors' computation

In statistics, there are many types of extraction methods, but orthogonal rotation of the Varimax is indubitably the most common rotation method used. This approach is mainly used to reduce the number of variables in a data matrix to a small number of uncorrelated factors. It can also be used before a regression to avoid the use of redundant variables. However, in order to extract factors representing a theoretically meaningful construct (CSR), we use the oblique rotation with the Promax method. Indeed, it is difficult to postulate orthogonality (correlation = 0) between factors of the same construct. The following table presents the component matrix after rotation.

Table 4: Component matrix (after Promax rotation)

	D1	**D2**	**D3**
ECO1	0,004	0,158	**0,342**
ECO2	0,232	0,014	**0,424**
ECO3	0,162	0,006	**0,439**
ECO4	0,033	0,005	**0,720**
ECO5	0,000	0,005	**0,684**
ECO6	0,000	0,030	**0,451**
ECO7	0,030	**0,520**	0,006
ECO9	0,004	**0,585**	0,083
Lég1	**0,550**	0,000	0,046
Lég2	**0,376**	0,020	0,051
Lég3	**0,698**	0,003	0,001
Lég4	**0,396**	0,009	0,115
Lég5	**0,486**	0,000	0,045
Lég6	**0,497**	0,024	0,040
Lég7	**0,695**	0,000	0,022
Lég8	**0,451**	0,036	0,000
Lég9	**0,283**	0,005	0,188
Eth1	**0,296**	0,222	0,010
Eth4	**0,298**	0,165	0,147
Eth5	**0,268**	0,165	0,007
Eth6	0,060	0,097	**0,292**
Eth7	**0,406**	0,100	0,059
Eth8	**0,477**	0,100	0,002
Eth9	**0,284**	0,106	0,035
Phi2	0,013	**0,530**	0,061
Phi3	0,003	**0,716**	0,026
Phi4	0,009	**0,599**	0,000
Phi5	0,000	**0,456**	0,004
Phi6	0,014	**0,582**	0,045
Phi7	0,002	**0,548**	0,017
Phi8	0,003	**0,407**	0,004

Source : Authors' computation
Note: the values in bold correspond, for each variable, to the factor for which the cosine squared is the greatest

In order to confirm that a variable is strongly linked to a factor, we refer to its squared cosine which must be larger. Indeed, the higher the cosine (in absolute value) the more the variable is linked to the axis. On the other hand, the closer the cosine is to zero, the less the variable is linked to the axis. The results of the factor analysis show that the variables related to the legal and ethical dimensions significantly saturate the first axis (F1). Those related to the philanthropic dimension contribute to the formation of the second axis (F2). The third axis (F3) is presented by the variables related to the economic dimension. Moreover, the test of the reliability of the CSR measurement scale (see Appendix 1) shows that its three components measure the same construct. On the basis of the empirical results, it can be deduced that the CSR commitment of listed Moroccan companies is a three-dimensional construct marked by a predominance of ethical-legal and philanthropic practices (see Appendix 2). This hierarchy does not corroborate the dimensional structure proposed by Carroll's (1991) approach, which suggests that economic responsibility is the first duty to which the company must conform. This result can be explained by the fact that the context and characteristics of the study population (socio-professional category, sector of activity, size of the company, etc.) have a significant impact on the operationalization of the CSR concept.

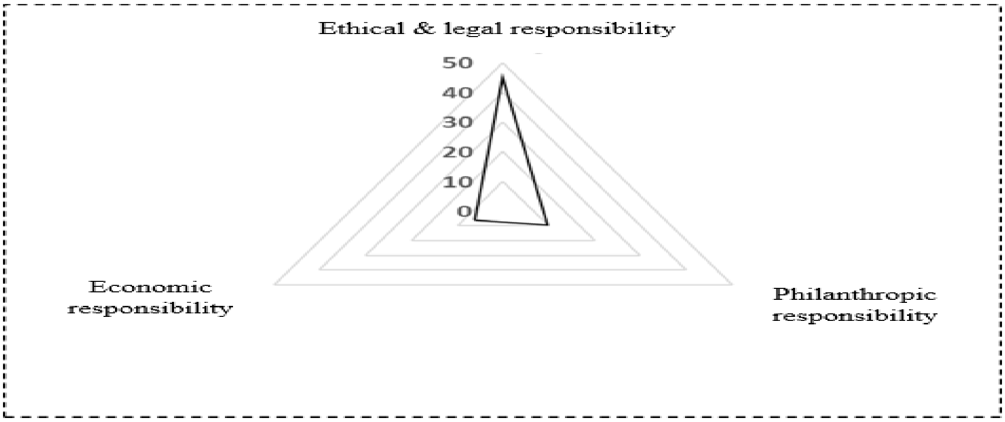

Figure 3: Hierarchy of CSR practices of listed Moroccan companies
Source: Authors' computation

Overall, the perceptual analysis of the CSR commitment of listed Moroccan companies shows a predominance of ethical and legal practices. In this context, corporate executives interviewed are aware of the importance of legal responsibilities. Their awareness is in line with the studies by Carroll (1979; 1991), Carroll and Shabana (2010), De Schutter (2008) and Wood (1991). Admittedly, corporate executives' acknowledgment of legal responsibilities and compliance with the law are of crucial importance. In fact, legal responsibility occupies an important place that stems from its binding nature. This reflects the willingness of these companies to moralize their business and to comply with legal and regulatory requirements. That being said, the possibility of strictly following rules and regulations can also be explained by the fear of heavy sanctions. This first component is followed by philanthropic responsibility, which reflects the sincere desire of listed Moroccan companies to contribute to social welfare and invest in the community. The last component corresponds to the economic responsibility of the company. The hierarchy found at the end of this analysis refers us to Wood's conceptual model (1991) suggesting that economic responsibility is a result of other responsibilities (legal, ethical and philanthropic). This model supports the idea that compliance with laws and social rules (organizational level), followed by a judicious use of managerial discretion (individual level), allows the company to increase its long-term profitability (institutional level). To put it simply, a company that respects the law, behaves ethically and acts with charity and benevolence is more likely to be profitable.

Conclusion

The scope of this study covered the analysis of the corporate executives' perceptions of CSR in Moroccan-listed companies in relation to the CSR pyramid developed by Carroll. This issue is not well discussed in the literature on CSR in developing countries. It can be argued that the dissemination of CSR practices would be strongly influenced by corporate executives' perceptions. The main purpose of the study was to propose a scale to measure corporate executives' perceptions of their company's social responsibility. Based on the foregoing developments, two main findings emerge. The first finding of the preliminary analysis suggests that the Moroccan companies surveyed are much more in line with societal compliance than with a true CSR commitment. This can be explained by the fact that items related to legal and economic responsibilities outnumber those related to ethical and philanthropic responsibilities in terms of frequency. In the same vein, the exploratory analysis shows that the final scale consists of 31 items. The second finding highlights that the underlying structure is made up of three factors that do not quite correspond to the theoretical model proposed by Carroll (1991) or to the operationalization made by Maignan et al. (1999). The scale constructed includes the notion of stakeholders. The dimensions retained in order of importance are: the ethical/legal dimension, the philanthropic dimension and the economic dimension. The hierarchy found at the end of this analysis refers to Wood's conceptual model (1991) suggesting that economic responsibility is a result of the other responsibilities (legal, ethical and philanthropic). This means that compliance with laws and ethical values (organizational level), followed by a judicious use of managerial discretion (individual level), could contribute to the improvement of the company's long-term profitability (institutional level).
A further line of inquiry should also investigate managers' perceptions of CSR in order to identify barriers or obstacles in disseminating CSR awareness to employees or in relations with stakeholders. This could be an issue for future research to explore and to provide more empirical evidence in developing countries. A better understanding of their perceptions would be useful not only for the implementation of CSR practices but also for the development of other initiatives to strengthen CSR in Moroccan companies.

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Bio-notes :
Abdelmajid Ibenrissoul is Professor in Management Sciences at the ENCG, University Hassan II of Casablanca, Morocco. He got a PhD in Economics, a PhD in Organizational Engineering and a DEA in Mathematical Economics and Econometrics. He has held several scientific responsibilities. He is Director of the Research Laboratory Scientific Engineering of Organizations of the ENCG and President of the Research & Development Commission of SAR in Morocco. He has published about twenty articles in scientific journals and 2 books and has also participated in many collective books. He has also been a member of several integrated actions, organizer of symposia, congresses and forums University.
Anas Yassine is currently Senior Financial Risk Analyst and Phd student in Management Sciences at the research laboratory : Scientific Engineering of Organisations (ISO), ENCG; Hassan II university, Casablanca, Morocco.
Souhaila Kammoun holds a Phd in Economics from the University of Social Sciences of Toulouse 1, France. Her research interests focus on Innovation, Corporate Social Responsibility and Fintechs. She has published a number of research articles in international journals and collective books. She has held the positions of Head of the Department of Economics, Director of Studies and Vice-Director. She was also Director of IHEC of Sfax, Tunisia.

Annexes

Appendix 1: Cronbach's alpha statistics [1]

Dimension	Cronbach's Alpha	Standardized Cronbach's Alpha
Ethical-Legal	0.888	0.895
Philanthropic	0.882	0.883
Economic	0.822	0.832

Appendix 2: Underlying structure of the CSR measurement scale for listed Moroccan companies

Ethical/legal dimension (15 items, α = 0.888[2])
1) My company complies with laws and regulations. 2) My company is not complicit in human rights violations. 3) My company has established procedures to monitor corruption and has sanctions in place for proven misconduct. 4) My company is committed to respecting the rights of employees and responding to union demands. 5) My company provides social security coverage to all its employees, at least the mandatory social security coverage. 6) My company respects the standards of hygiene, health and safety at work for the protection of its employees. 7) My company respects the legal conditions (Moroccan labor code) in case of recourse to atypical or precarious work contracts (temporary work, fixed-term contracts). 8) My company implements measures to prevent discrimination between women and men. 9) My company sees regulation as a lever for innovation. 10) My company has an understandable code of conduct. 11) My company informs its customers in a transparent and comprehensive way about its products and services. 12) My company has procedures in place to ensure that it does not enter into relationships with stakeholders who do not respect human rights. 13) My company promotes employee diversity (age, gender, race). 14) My company considers equal opportunity as an integral part of its employee evaluation process (promotion). 15) My company practices equity in its compensation policies.
Philanthropic dimension (9 items, α = 0.882)
1) My company is taking initiatives for more responsible environmental practices. 2) My company has a waste reduction and recycling plan in place. 3) My company is implementing programs to improve energy efficiency and reduce greenhouse gases. 4) My company develops partnerships with environmental organizations. 5) My company donates to nonprofit organizations. 6) My company sponsors sporting and/or cultural events. 7) My company develops long-term partnerships with educational institutions (universities, professional training centers, etc.) to promote scientific research. 8) My company participates in projects for the professional reintegration of people in difficulty.

[1] Cronbach's Alpha test is used to assess the reliability of the scale and to ensure that its components measure the same construct.
[2] The internal consistency of the ethical/legal dimension is excellent. Its Cronbach's alpha coefficient is well above the required minimum threshold of 0.70 (Nunnaly, 1978).

9) My company conducts awareness campaigns among its employees on addictions (tobacco, alcohol, drugs, food).
Economic dimension (7 items, α = 0.822)
1) My company is committed to producing eco-products, i.e. goods or services that respect quality, safety and environmental standards. 2) My company contributes to the creation of employment opportunities. 3) My company creates value for its shareholders. 4) My company establishes long-term financial strategies. 5) My company carefully monitors the productivity of its employees. 6) My company sells its products or services at reasonable prices. 7) My company always makes responsible purchases and considers environmental, social and economic criteria in the purchasing decision.

TRADE, FINANCIAL LIBERALISATION AND CURRENT ACCOUNT BALANCE IN NIGERIA

Bosede Victoria Kudaisi*
Department of Economics, Adekunle Ajasin University, Akungba, Ondo State, Nigeria
kudaisibosede@gmail.com

Abstract: *This paper examines the individual and interactive impacts of trade and financial liberalization on Nigeria's current account balance between 1986 and 2019. An autoregressive distributed lag technique is used to investigate the short- and long-run effects of the de facto measure of trade openness and the de jure measure of financial openness by Chinn-Ito on the current account. The finding suggests that financial liberalization, in particular, has an insignificant negative effect on the current account, whereas trade has a non-significant positive impact in the long-run. The interaction of the variables in the long-run produces significant positive influence on the account. The short-run effects show a positive impact of financial liberalization, whereas the interplay of the variables has a negative impact on the current account. The study concludes that the interaction of trade and financial liberalization is critical in improving the current account balance in Nigeria.*

Keywords: Trade openness; Financial liberalisation; Current account; Nigeria, ARDL.

JEL classification: F32, F36, F62.

1. Introduction

Liberalisation of trade and financial sectors were economic strategies to stimulate economic growth and development, particularly in developing countries in the 1970s and 80s. Many countries that liberalised their economies witnessed impressive growth in trade in goods and services and improvement in the quality of financial system in terms of fund mobilization, increased savings and investment. However, rising global imbalances, particularly in developed countries such as the United States and the United Kingdom, as well as developing and emerging economies such as Asia, recently have heightened the researchers' interest on the impact of global interconnectedness through trade and financial flows on the current account balance. This is because of the importance of the current account among the macroeconomic factors. The current account of any country indicates its net trade in goods and services, and net financial flows (income and transfer from abroad). It is a key indicator of country's health and performance, and an imbalance in the account could pose a threat to the economy, resulting in a loss of foreign investors' confidence and participation. Besides, current account reveals the country's viability and socioeconomic position (Knight & Scacciavillani, 1998), a shift in the account signifies a negative spill-overs through trade and financial channels (Adeleke, Ohemeng & Ofori-Boateng, 2017). Besides, a persistent current account deficits or huge surplus, shows that the country's imports outnumber its exports and vice versa, as well indicate a high debt profile. Therefore, current account is crucial in assessing the country's overall health because it reveals the country's productivity from the available resources. In 1986, Nigeria government liberalised its economy to enhance economic growth and stability during an economic downturn with high

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current account deficits and macroeconomic instability. Current account over the years has fluctuated around deficit and surplus, grew from a deficit of $0.07b in 1987 to +$4.99b in 1990, declined to $2.5b in 1995 and rose to +$7.43bn in 2000 until 2014, and declined to a negative of $15.44b in 2015 and $14.63b in 2019. However, it is not clear the impact of trade and financial openness on Nigeria's current account balance as the country continued to open its economy for more trade and financial flows through several trade reforms over the years. Therefore, this paper aims to examine the impact of trade and financial liberalisation on the current account balance.

Several studies have found that financial liberalisation causes and exacerbates current account imbalances (Herrmann and Winkler, 2008; Christiansen, Prati, Ricci, and Tressel, 2009; Moral-Benito and Roehn, 2016; Gursoy and Yilanci, 2013; Borio and Disyatat, 2011; Jaumotte and Sodsriboon, 2010; Ya-Qiong and Rui, 2013; Gursoy, 2013; Brissimis, Hondroyiannis, Papazoglou, Tsaveas and Vasardani, 2010; Hjortsoe, Weale and Wieladek, 2018; Zoričić, Cota and Erjavec, 2020). Financial liberalisation might relax liquidity constraints to increase saving (Mendoza, Quadrini and Jose-Victor (2009), fuel credit-driven consumption and investment growth, and producing current account imbalance (Borio and Disyatat, 2011). Others suggested that efficient financial system reduces the current account deficit through increase in domestic savings and investment (Chinn and Prasad, 2003; Herrmann and Jochem, 2005; Chinn and Ito, 2007). Conversely, current account deficit is related to country's degree of trade openness (Jiandong, Yi and Li, 2010; Romelli, Terra and Vasconcelos, 2018; Caivano and Coniglio, 2016; Moussa, 2016; Ibhagui 2018). By raising domestic savings and investments, trade openness is expected to minimise current account deficit and facilitate cross-border trade (Selçúk, Karaçor and Yardimci, 2015; Das, 2016). Furthermore, increased trade openness with a well-developed financial system and macroeconomic stability can increase capital inflows by stimulating domestic savings and investment and improving current account imbalances by depreciating the real exchange rate (World Trade Report, 2004). It is obvious from the literature that trade and financial liberalisation explain changes in the current account, however, there is no clear evidence of the interactive effects of the openness variables on current account balance. Hence, this study.

While the impact of trade and financial liberalisation on growth and macroeconomic variables has been extensively researched in Nigeria (Akpan, 2004; Kaita, 2015; Saifullahi and Tanimu, 2015; Danlami *et al.*, 2018; Aigheiyisi and Isikhuemen, 2018; Apanisile and Okunlola, 2020; Aremo and Arambada, 2021; among others), little attention has been paid to unravel the impact of trade and financial liberalisation on current account balance. Several studies looked at macroeconomic and institutional factors, monetary policy, fiscal policy shock, and adjustment policy as determinants of current account (Longe, Muhammad, Ajayi and Omitogun, 2019; Danmola and Olateju, 2013; Uneze and Ekor, 2012; Oshota, 2015; Udah, 2010; Chete, 2001; Kudaisi and Olomola, 2019; Sule and Shuaibu, 2020; among others). This is surprising because trade and financial openness might have a major influence on Nigeria's current account balance especially as the country increases its trade horizon and financial sector competition. In contrast to the previous studies that only looked at growth and selected macroeconomic factors, the objective of this paper is to investigate the individual and interactive effects of trade and financial liberalisation on current account.

The rest of the paper is organised as follows; section two reviews empirical literature, section three specifies the model, presents the estimation methods, data source and measurement. Section four discusses the empirical findings, and section five concludes and makes policy recommendation based on the findings.

2. Literature Review

This section is divided into three. The first part presents empirical literature on the relationship between financial liberalisation and current account. Follows by the impact of trade on the current account balance. Subsection three is a review on the impact of trade and financial liberalisation on the current account balance.

2.1. Financial Liberalisation-Current Account Nexus

The influence of financial liberalisation on global current account balance has long been a concern for researchers and policymakers with conflicting results. Some studies linked current account balances to domestic financial liberalisation. For instance, Zorii**c** *et al*. (2020) reported a long-run negative impact of financial openness on current account deficits in 11 European Union countries between 1999 and 2016. In a study of emerging Europe and Asia between 1994 and 2006, Herrman and Winkler (2008) linked the current account deficits in the region to financial market reforms and higher level of integration. Yang (2010) investigated the role of the macroeconomic environment and financial liberalisation (proxied by real effective exchange rate) on current account in eight emerging Asian countries during 1980–2009, the result found a deteriorating current accounts due to financial liberalisation. Gursoy (2010) found an exacerbated current account deficit from 1989–2008 in Turkey. Similarly, Gursoy and Yilanci (2013) confirmed a current account imbalance due to financial liberalisation in 11 provinces in Central, Eastern, and South-Eastern European (CESEE) countries during 2002–2010. Chinn and Ito (2007) reported a negative impact of financial openness on current account in developed countries, but positive impact in developing nations between 1971 and 2004. Ya-Qiong and Rui (2013) found a deteriorated current accounts in a study of 59 countries from 1986–2010Lanau and Wieladek (2012) found a worsened current account deficit in countries with partial financial regulation than countries that fully regularized their financial system in the case of 84 developed and developing countries study from 1973 to 2005. Saadaoui (2015) in the case of 18 developed and 21 emerging countries from 1980–2007, established that: (i) financial openness deteriorates medium-term current accounts in developed countries due to a decline in domestic investment owing to increasing overseas investment opportunities; (ii) financial openness improves current account in developing nations due to an increase in domestic investments. Smith (2010) studied the effects of financial and good markets integration on current accounts in 18 OECD countries between 1981 and 2006, the result showed a worsening current account in Canada within the short period preceding integration, and a long-run adjustment to the reform in other OECD countries.
Some studies confirmed a positive impact of financial liberalisation on current account. Christiansen *et al.* (2009) established that an improvement in current account in low-income countries is related to financial liberalisation. Ener and Arica (2012) found a positive impact of financial liberalisation (measured by real interest rate) on current account deficits for 21 OECD high-income countries between 1980 and 2009. Brissimis *et al.,* (2010) found a strong positive impact of financial liberalisation on Greece's current account imbalance from 1960–2007. Moral-Benito and Roehn (2016) in a study of 31 Asian countries during 1980–2010, observed that the impact of financial openness on current account depends on the financial liberalisation measures. According to the authors, removal of bank entry restrictions worsened the account, whereas bank privatisation and securities market deregulation improve it. Anoruo and Elike (2008) revealed that financial liberalisation boosts current account in India, Korea, and the Philippines, but deteriorates it in Thailand. Jaumotte and Sodsriwiboon (2010) found that financial liberalisation reduces current account deficits in a 49 advanced and emerging economies study. Johansson and Wang (2012) in a study of 66 East Asian and developing countries during 1981–2005, established a worsened current account deficit due to repressive financial system, thus suggesting liberalisation to improve the account. In a sample of 27 oil-exporting countries from 1980–2010, Allegret, Couharde,

Coulibaly, and Mignon (2014) found a non-linear relationship between oil price and current account, depending largely on a country's level of financial market development. On the contrary, Wang (2020) established an improved current account surplus following financial regulation for a panel of 66 developed, developing and emerging countries. Recently, Ariç, Sek and Rocha (2021) investigated the individual and combined effects of institutional quality and financial development and found that financial development improved Asia's current account, while the interactive effect is negative.

2.2. Current Account and Trade Openness

A study by Joy, Lisack, Lloyd, Reinhardt, Sajedi, and Whitaker (2018) found a significant positive impact of trade on global imbalances. Selçuk, Karaçor and Yardimci (2017) found an ambiguous impact of trade liberalisation on Turkey's current account. Moussa (2016) found a worsening current account due to trade openness in sub-Saharan African countries between 1980 and 2013. Caivano and Coniglio (2016) found that trade openness deteriorates current account in countries with strong trade restrictions and improves the account in countries that fully open to trade in a study of 15 EU countries from 1974–2011. Parikh and Stirbu (2004) discovered that trade openness exacerbates current account imbalances in a study of 42 developing countries from 1970–1999. Similarly, Parikh (2002) found a positive relationship between trade liberalisation and current account deficits in 64 developing countries. Jaffari (2006) found that trade openness had a negative impact on current account in Pakistan between 1976 and 2006. In a study of small island nations, Santos-Paulino (2010) discovered a short-lived current account deficit due to terms of trade shock and long run improvement with J-curve effects. In another study, Santos-Paulino and Thirlwall (2004) found a worsening balance of payments due to increased imports relative to exports in 22 developing countries from Africa, Latin America, East Asia, and South Asia from 1972–1997. Chin and Prasad (2003) confirmed negative relationship between current account balance, terms of terms shock and trade openness in developing during 1971–1995 in a study of 18 developed and 71 developing countries. In Nigeria, Oke and Adigun (2020) established a significant positive short- and long-term impact of trade openness and current balance from 1980–2017.

2.3. Trade, Financial Liberalization and Current Account

Lo Prete (2012) found a significant positive effect of trade openness on current account, whereas financial development deteriorates the account in a study of 19 OECD countries between 1980 and 2007. Altayligil and Cetrez (2020) revealed that trade openness and financial market development exacerbates current account deficits in a study of 97 developing and developed countries between 1986 and 2013. Hjortsoe *et al.* (2018) in a study of 19 OECD countries from 1976 to 2006, using a dynamic stochastic general equilibrium (DSGE), noted that financial liberalisation plays a significant impact between current account deficits and expansionary monetary policy. Gangal, Agarwal, and Banger (2017) found a significant positive short- and long-term effect of financial openness on current account but worsening current account following trade openness in India between 2000 and 2006. From the reviewed above, studies are silent on the complementarity or substitutability of trade and financial openness on the current account. It is also observed that there is more literature on the effects of financial liberalisation in developing countries with exception of Nigeria than trade. It is thus important to investigate the impact of financial liberalisation and trade on the account.

3. Methodology and Data

3.1. Theoretical Framework

Different approaches have been used to explain the drivers of current account balance of a nation. Elasticity approach, pioneered by Alfred Marshall (1923) and Abba Lerner (1944), extended by Joan Robinson (1937) and Fritz Machlup (1955), explains the main driver of current account balance as the sum of trade balance and net international investment income. The approach analyses what happens to current account when there is an internal and external policy. Specifically, it analyses the effect of domestic currency devaluation on the current account. Absorption approach of Alexander (1952) viewed current account imbalance as the difference between domestic output and spending (Absorption). The intertemporal approach of Obstfeld and Rogoff (1995) extends the elasticity and absorption approaches, explains that current account implicitly relies on a well-functioning financial sector (i.e. where different types of risks and liquidity issues are properly discounted in the system) and a government with sustainable fiscal policies (i.e. consume within its intertemporal budgetary possibilities), in which case, excessive borrowing by households (such as mortgages) and governments can create current account imbalances that are not sustainable. On the other hand, trade openness is expected to facilitate cross-border goods and services through the removal of trade barriers, increase exports and reduce current account deficits (ceteris paribus) (Selçúk, Karaçor and Yardimci, 2015; Das, 2016). However, theories that combine trade and financial liberalization to explain current account behavior are scarce.

3.2. Model Specification

Following Lo Prete (2012), and Gangal *et al.,* (2017), equation (1) is specified to investigate the individual and interactive impact of trade and financial liberalization on the current account.

$$CA_t = \alpha_0 + \alpha_1 fli_t + \alpha_2 trade_t + \alpha_3 reer_t + \alpha_4 \inf r_t + \alpha_5 tot + \alpha_6 rgdpg_t$$
$$+ \alpha_7 (fli_t * trade_t) + u_t \qquad (1)$$

Where α_0 = intercept, α_i (i =1,2, . . . ,7) and u_t= residual error term. CA= current account measured as % of GDP. *FL*= financial liberalisation index. *infr* = inflation rate; *trade* = economy openness measured as the difference between export and import divided by real GDP. *reer* = real effective exchange rate measured in percentage. It is included in the model to capture the country's competitiveness with the rest of the world. The interactive effect of trade and financial liberalisation is specified as *FL*trade*. *tot* = term of trade shock. Equation (1) is the linear equation of current account with other explanatory variables. Trade and financial liberalisation are expected to improve or deteriorate current account balance in Nigeria being an opened economy. Also, the interaction is expected to be positively correlated with current account surplus.

3.3. Methods of Analysis

The study employs the ARDL developed by Pesaran and Shin (1995) and Pesaran, Shin and Smith (2001) to investigate the existence of long-term relationship among the variables using F-test and the short-run elasticity of the variables using unrestricted error correction representation model (ECT_{-1}). From equation (1), the long-run equation is specified explicitly in equation (2):

$$CA_t = \beta_1 fli_{t-1} + \beta_2 trade_{t-1} + \beta_3 reer_{t-1} + \beta_4 \inf r_{t-1} + \beta_5 rgdpg_{t-1} + \beta_6 tot_{t-1} + \beta_7 (fli_{t-1} * trade_{t-1}) \quad (2)$$

The short-run dynamics relationship of the variables is written in equation (3):

$$\Delta CA_t = \beta_0 + \sum_{t=1}^{q} \beta_1 \Delta CA_{t-1} + \sum_{t=0}^{q} \beta_2 \Delta fli_{t-1} + \sum_{t=0}^{q} \beta_3 \Delta trade_{t-1} \sum_{t=0}^{q} \beta_4 \Delta reer_{t-1} + \sum_{t=0}^{q} \beta_5 \Delta \inf r_{t-1} + \sum_{t=0}^{q} \beta_6 \Delta rgdpg_{t-1} + \sum_{t=0}^{q} \beta_7 \Delta tot_{t-1} + \sum_{t=0}^{q} \beta_8 \Delta (fli_{t-1} * trade_{t-1}) + ECT_{t-1} \quad (3)$$

In equation (3), Δ is the first difference operator, q is the optimal lag length, β_1–β_8 represent the short-run relationship of the variables' coefficient. $\sum$ represents summation. The error correction term of the equation is specified in equation (4)

$$ECT_{t-1} = \Delta CA - \begin{pmatrix} \Delta\beta_1 fli - \Delta\beta_2 trade - \Delta\beta_3 reer - \Delta\beta_4 \inf - \Delta\beta_5 rgdpg - \Delta\beta_6 tot \\ - \Delta\beta_7 (fli * trade) \end{pmatrix} \quad (4)$$

The cointegration in the ARDL bounds test approach is examined under the following hypothesis as specified in equation (5). If the null hypothesis is rejected, there is cointegration. The f-statistics is compared with the critical values by Pesaran *et al*. (2001)

H_0: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$
H_1: $\beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq \beta_6 \neq \beta_7 \neq 0$ (5)

3.4. Data Sources and Measurement

Annual data from 1986 to 2019 is used, and it is in its original form. Except for financial openness which is sourced from the Chinn-Ito financial openness index, all data are drawn from World Development Indicators (2019) database. There are several measures of both trade and financial liberalisation in literature, which are grouped into *de jure* and *de facto* measurements (Gräbner, Heimberger, Kapeller and Springholz, 2021). *De facto* trade openness measures include ratio of total trade volume relative to country's GDP, exports/GDP or imports/GDP, while the *de jure* measures include tariffs and non-tariffs trade restrictions. This study employs *de facto* measures of trade openness due to data availability. D*e jure* indicators often used to measure financial liberalisation in literature include interest rate, money supply, foreign direct investment (FDI) inwards/outwards, and the savings-investment ratio, real exchange rate, among others, whereas *de facto* measures includes FDI restrictions, and capital openness/restrictions. While some authors used dummy and principal component to compute the rate of country's financial openness (Fowowe, 2008), others employed Abiad, Detragiache and Tressel (2010) measures of financial openness. This study uses 2019 update *de jure* measures of financial openness by Chinn-Ito (2008). Table 1 shows the data measurement and sources.

Table 1: Data Source and measurement

Variables	Description/ Measurement	Source
CA	Transactions Balance in trade of goods and services, factor income and current transfers in one year. It is expressed as % of GDP	World Development Indicators (WDI, 2019)
FLI	Financial liberalisation index. It measures the degree of country's capital account openness	Chinn-Ito index (2021)
REER	Real effective exchange rate. It is the weighted average of the currencies of the trading partners adjusted by the weights of trading partners.	WDI, 2019
TOT	It is the ratio of exports to imports prices of goods/services of a nation.	WDI, 2019
TRADE	Export plus import divided by GDP.	WDI, 2019
RGDPG	Measures the stage of economic development before and after the reform. Expressed in percent.	WDI, 2019
INFR	Measures the overall rising price level. The consumer price index is used as a proxy for macroeconomic environment and stability.	WDI, 2019

Source: Author's compilation (2021)

4. Results and Discussion

4.1. Descriptive Statistics

The result in Table 2 summaries the descriptive statistics of the variables. The Table shows that all the variables are positively skewed, except financial liberalisation and trade. The assumption of normality of the variables is also confirmed by the closeness of the mean and median values. The kurtosis shows that the *GDP growth rate*, *financial liberalisation index*, *trade*, and *terms of trade* are all normally distributed with the values ranging between 1 and 3, while other data sets appear to be leptokurtic.

Table 2: Summary of Descriptive Statistics

	CA	FLI	Trade	REER	INFR	RGDPG	TOT
Mean	3.2515	-1.2647	35.233	110.03	17.445	4.3795	120.372
Median	2.4621	-1.0000	35.258	96.106	10.751	4.430	100.841
Maximum	20.739	-1.0000	53.277	272.92	75.401	15.329	224.643
Minimum	-6.2895	-2.0000	9.1358	49.732	0.686	-2.035	43.877
Std. Dev.	5.6712	0.4478	10.314	55.468	15.391	3.879	57.634
Skewness	1.1459	-1.0666	-0.4312	1.806	1.946	0.493	0.494
Kurtosis	4.4073	2.1377	2.9248	5.450	7.305	3.381	1.896
Jarque-Bera	10.247	7.5005	1.0620	27.007	47.725	1.585	3.109
Observations	34	34	34	34	34	34	34

Note: Std.Dev means standard deviation.
Source: Author's analysis (2021)

4.2. Stationarity Test

The stationarity test of the variables was conducted using Augmented Dickey-Fuller (ADF) and Philip Perron (PP) unit root tests. The non-stationarity of the variables implies that the mean and variance of the variables are not constant over the period, thus giving a spurious result. To control for this, the stationarity test was carried out using two alternative specifications—at level and first difference both at intercept to achieve consistency in the test results. The unit root test results are mixed as shown in Table 3. Current account balance, financial liberalisation index, and terms of trade shocks are stationary after first differencing, which implies they are integrated of I(1), whereas, real effective exchange rate (reer), trade openness, inflation rate and real GDP growth rate are stationary at level i.e. I(0).

Table 3: Unit Root Test Results (Intercept only)

Variables	ADF Test			PP Test		
	@ Level	@ 1st Diff.	Order	@ Level	@ 1st Diff.	Order
CA	-2.0176 (0.2781)	-5.0941 (0.0002)	I(1)	-2.3082 (0.1754)	-6.5240 (0.0000)	I(1)
FLI	-1.4213 (0.5599)	-4.9925 (0.0003)	I(1)	-1.4913 (0.5254)	-4.9940 (0.0003)	I(1)
TRADE	-3.6000 (0.0112)	-7.0814 (0.0000)	1(0)	-3.5847 (0.0116)	-7.9148 (0.0000)	I(1)
REER	-4.0401 (0.0037)	-6.8489 (0.0000)	I(0)	-4.1537 (0.0027)	-7.1897 (0.0000)	I(0)
INFR	-4.3544 (0.0022)	-3.5000 (0.0170)	I(0)	-2.8080 (0.0680)	-6.8693 (0.0000)	I(0)
TOT	-1.3682 (0.5856)	-5.4699 (0.0001)	I(1)	-1.3115 (0.6124)	-5.5261 (0.0001)	I(1)
RGDPG	-3.8764 (0.0056)	-3.7538 (0.0069)	I(0)	-3.7945 (0.0069)	-13.9661 (0.0001)	I(0)

Note: ADF Test 5% @ level test (= -2.954) and 1st differences (= -2.957) respectively. PP Test, 5% @ level (-2.954) and 1st difference (= -2.957). Lag length selection criterion: Akaike Info Criterion, Maxlag = 8. Parenthesis () indicates probability
Source: Author's analysis (2021)

4.3. ARDL Bounds Test

The Bounds test result reported in Table 4 shows the F-statistic value of 9.57. This provides a strong support for the rejection of the null hypothesis of no co-integration, since the value is greater than the upper bound I(1) values of all levels of significance. According to Pesaran *et al*., (2001), if the value of the F-statistic is greater than the upper bound, I(1) of the critical values of Table CI(i) case I (no intercept and no trend) in Pesaran *et al*., (2001) given the K-value of 7, there is an existence of long-run relationship among the variables. Thus, there is a long-run cointegration relationship among current account and the explanatory variables. Once this is ascertained, short-run and long-run relationship of the variables can be investigated.

Table 4: Bounds Test Result

F-Bounds Test	**H_0: No long-run relationship**			
		Critical Value Bounds		
Test Statistic		**Significance**	**I(0)**	**I(1)**
F-statistic	9.572921	10%	1.7	2.83
K	7	5%	1.97	3.18
		2.5%	2.22	3.49
		1%	2.54	3.91

Source: Author's analysis (2021)

4. 4. Diagnostic Test

The diagnostic test of the model is presented in Table 7. The serial correlation test indicates there is no problem of autocorrelation since the *p-value* is greater than 0.05 significance level, likewise the result of the BPG heteroscedasticity test shows there is no problem of heteroscedasticity. Ramsey test shows that the estimated model is correct. Also, the Jargue-Bera normality test indicates normal estimated model.

Table 5: Result of Diagnostic Test

	Obs*R-squa	Prob. Chi-Squared(2)
Breusch-Godfrey serial correlation LM test	5.969845	0.1131
Heteroscedasticity(BPG) test	25.99446	0.2067
Wald Test(F-stat)	19.49645	0.0001
Ramsey Test(F-statistic)	0.007332	0.9335
Normality Test (Jargue-Bera)	1.317557	0.517483

Source: Author's analysis (2021)

4.5. Long-run Relationship of the Variables

The result of the long-run relationship of the variables presented in Table 6 shows a negative coefficient of *de jure* measure of financial liberalisation. This suggests that the more a country's financial system is opened to the rest of the world, the more the capital inflows it receives, savings and investments, and hence the improvement in the current account balance. It can be concluded that financial liberalisation has had little impact on Nigeria's current account deficits. This finding corroborates those of Christiansen *et al.* (2009), Gangal *et al.* (2017) and Zoričić *et al.,* (2020) who argued that financial liberalisation worsens current account imbalance through an increase in domestic savings and investment. Also, the trade is positive but non-significant; implying that trade openness alone may not be sufficient to determine the balance in current account. The result contradicts Oke and Adigun (2020) who found significant positive impact of trade openness on current account. The estimated coefficient of the interactive term of trade and financial liberalisation on current account is positive and significant, suggesting that trade and financial openness are complementary rather than substitute to either improve or deteriorate the account. This finding supports Altayligil and Çetrez (2020) who found that an increase in trade and financial market development could increase current account deficits. Besides, the result suggests that an increase in the interaction term of trade openness and financial liberalisation could boost current account balance or reduce the imbalance in the account in the long run. The coefficient of terms of trade has a negative sign and statistically significant. In other words, terms of trade can also influence current account balance negatively whenever there is a shock in trade. This result corroborates the findings of Chin and Prasad (2003) and contradicts Santos-Paulino (2010). The real exchange rate and the growth rate of real GDP are both positive and significant, indicating that a rise in real effective exchange rate and the state of the economy (measured as RGDPG) could lead to a deteriorating current account in the long-run. Thus corroborates Marshall-Lerner condition which states that currency devaluation improves current account deficits, and the findings of Altayligil and Çetrez (2020). Inflation rate is negative, suggesting that higher inflation rate could decrease deficit in current account. This corroborates the findings of Altayligil and Çetrez (2020).

Table 6: Long-run Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FLI	-20.748713	14.289435	-1.452032	0.1744
FLI*TRADE	0.788129	0.378397	2.082811	0.0614
TRADE	0.520419	0.318439	1.634283	0.1305
REER	0.143825	0.047311	3.039986	0.0112
TOT	-0.185363	0.062791	-2.952077	0.0132
RGDPG	1.588699	0.507567	3.130025	0.0096
INFL	-0.379640	0.282590	-1.343434	0.2062

Source: Author's analysis (2021)

4.6. Short-run Dynamic Relationship of the Variables

The short-run relationship of the variables is presented in Table 7. The error correction term (ECT_{-1}) is correctly signed as its coefficient is negative (-0.37) and statistically significant, implying approximately 37% speed of adjustment from disequilibrium in the current account. This indicates existence of long-run relationship among the variables. The estimated coefficient of trade is negative and non-significant, suggesting that trade alone cannot drive deficits in the account. This result buttresses the findings of Chin and Prasad (2003). Financial liberalisation index shows significant positive role in determining the behaviour of the account in the short-run. This result supports Moral-Benito and Roehn (2016) submission. The interaction effects of trade and financial openness is negative but significant. Terms of trade and exchange rate are positive and significant, confirming that terms of trade shock and exchange rate instability could deteriorate current account. The state of the economy proxied by RGDPG has a negative impact on current account balance.

Table 7: Short-run Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FLI)	16.603763	4.378574	3.792048	0.0030
D(FLI*TRADE)	-0.441222	0.093834	-4.702141	0.0006
D(TRADE)	-0.509417	0.113193	-4.500436	0.0009
D(REER)	0.036385	0.018784	1.937077	0.0788
D(TOT)	0.060239	0.019294	3.122184	0.0097
D(RGDPG)	-0.190242	0.132423	-1.436625	0.1787
D(INFL)	-0.107281	0.060929	-1.760755	0.1060
CointEq(-1)	-0.370673	0.086991	-4.261029	0.0013

Source: Author’s analysis (2021)

4.7. Stability Test

In addition to the diagnostic test, the stability test of the model was also confirmed using cumulative sum of recursive residual (CUSUM) and cumulative sum of squares recursive residual (CUSUM of Squares). The figures are reported in Figures 2 and 3 respectively, which show that the plots are within the critical bounds at 5% level of significance, thus accepting the null hypothesis of no long-run relationship.

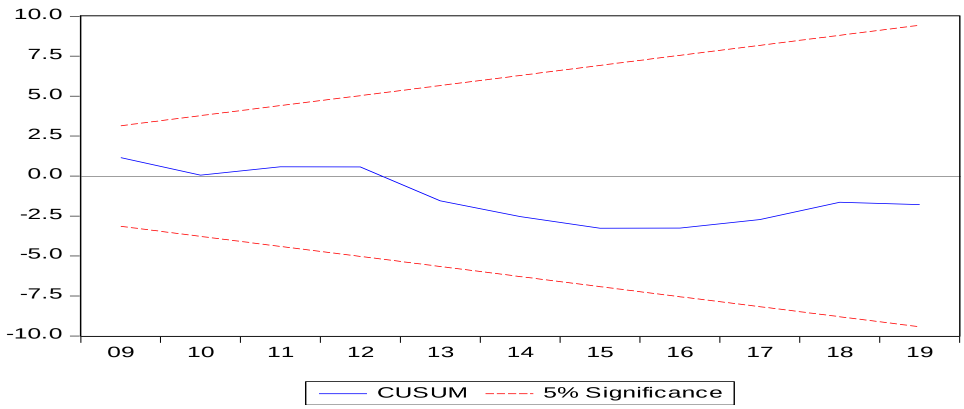

Figure 1: CUSUM
Source: Author’s processing (2021)

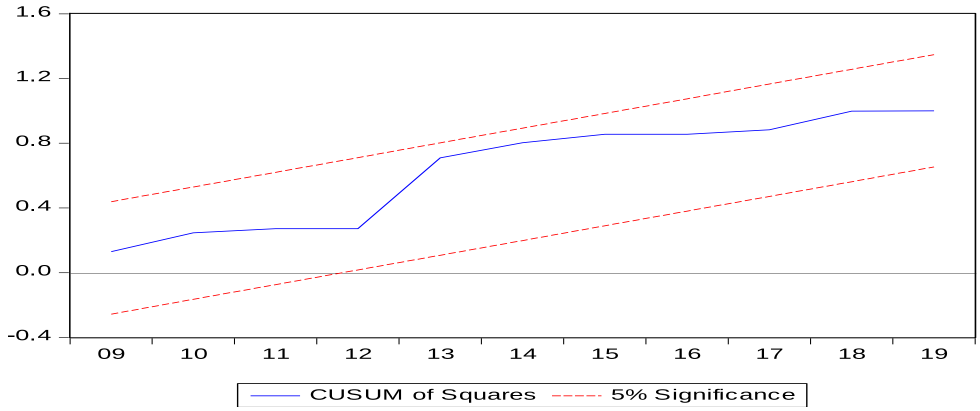

Figure 2: CUSUM of Square
Source: Author's processing (2021)

5. Conclusion and Recommendations

This study investigates the influence of trade and financial liberalisation on current account balance using the Chinn-Ito financial openness index as a measure of financial liberalisation and *de facto* measure of trade openness. The study employs autoregressive distributed lag (ARDL) technique to examine the short- and the long-run impact of trade and financial liberalisation on current account balance between 1986 and 2019. The findings suggest that financial liberalisation has a significant positive impact on the current account in the short-run and negative impact in the long-run. In the short-run, a significant negative relation exists between trade and current account but non-significant positive relationship in the long-run. In terms of the interaction of trade and financial openness, there is no evidence it worsens current account balance in the short-run, whereas, there exists a positive relation in the long-run. Also, the result shows a negative impact of real exchange rate and GDP growth rate on current account balance in the long run.
The empirical results have important policy implications on how to harness financial liberalisation policy and trade to improve current account. Financial openness and trade need to be strengthened and pursued simultaneously to significantly reducing the country's current account deficits through increased in exports, reduction in imports by localizing most of the importable goods in the country. Strong financial and trade sectors reforms are required which will significantly enhance savings and investments, capital inflows as well as induce strong competition internationally and domestically. Besides, a successful financial liberalisation will be a crucial component of the country's strategy to mobilise domestic funds, promote trade, and therefore improve the current account. Based on this, flexible interest rates are required to encourage and promote both domestic and foreign investors, as high interest rates discourage investors. A high demand for collateral security sends a negative signal to prospective investors, have negative effects on investment and hence, current account balance. The government need to create an enabling environment for investors by maintaining stable exchange rates, as instability in the rate could stymie investment, saving and the current account balance. Finally, to improve the country's current account the country's macroeconomic framework must be strengthened to accommodate domestic investments, strengthen exports, and achieve favourable term of trade.

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Bio-note

Kudaisi Bosede Victoria is a lecturer in the *Department of Economics, Adekunle Ajasin University Akungba*, Ondo State, Nigeria. She has researched in the fields of economics with special interest on International Economics, Macroeconomics, Development and Behavioural Economics.

A COMPARATIVE ANALYSIS OF JOB SATISFACTION LEVEL IN PUBLIC AND PRIVATE TERTIARY INSTITUTIONS

Ehireme Boaz Agbonifoh[1], Christopher Ihionkhan Agbonifoh[2*]
[1] *Air Wisconsin*
[2] *Department of Marketing, Faculty of Management Sciences, University of Benin, Benin City, Nigeria*
captainboaz7@gmail.com
christopher.agbonifoh@uniben.edu

Abstract: *This study is about job satisfaction with special reference to staff of Benson Idahosa University and University of Benin. Demographic variables such as gender, age, educational qualification, family size, working experience, income and job status were examined to find out their relationship or otherwise with the dependent variable. Another objective was to find out the difference in the level of job satisfaction in the public and private tertiary institutions. The study sample consists of three hundred respondents drawn from across the two universities. A questionnaire instrument was used to gather the needed information and the analytical techniques employed include simple percentage, t-test and regression analysis. All tests were performed at the 0.05 level of statistical significance. The finding of the study suggests that job satisfaction was well above average in areas such as the type of leadership and sort of work, and was below average in terms of salary, community value, pressure they got from the job and participation in supervision. The results also show that the majority of Benson Idahosa University staff were generally dissatisfied with their work especially in terms of feeling of accomplishment, level of participation, the value the community places on their job, the prestige of the job, recognition from supervisors, current state of the department and their chances of getting promoted. Most members of staff of the University of Benin were satisfied with all aspects of their job except feeling of accomplishment; pressure from the job and the value the society places on their job. The study indicates clearly that a higher percentage of staff of University of Benin (62%) enjoy a higher level of job satisfaction compared to Benson Idahosa University (43%). The result of the study shows that job satisfaction is negatively related to family size and job experience but positively related to job status. Based on these findings, it is recommended that private school proprietors as well as the government should make adequate resources available to enable their employees attain maximum satisfaction.*

Key words: Job satisfaction, private universities, public universities, staff members' tertiary institutions.

JEL classification: M31, M37.

1. Introduction

The world of business has become very competitive especially since the advent of modern form of globalization. This has led to keen competition among businesses both locally and internationally. Each organization, profit or non-profit, public or private should be concerned

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with how to survive in the market place by satisfying their customers and thereby making profit and achieving growth. According to a common maxim, employees cannot deliver satisfaction to customers if they themselves are not satisfied. That is why human resources managers are concerned with how to build and maintain a satisfactory and satisfied workforce in organization.
In Nigeria, many public enterprises seem to underperform when compared to private enterprises. It may therefore be expected that there would be different levels of job satisfaction among employees in public and private enterprises. This therefore is the focus of this study.
Job satisfaction refers to employee's well-being. There have been several researches on job satisfaction all over the world such as the popular "two factor hygiene and motivation theory" by Frederick Herzberg (1959), "job satisfaction and characteristics" by Olorunsola (2012) but none of them compares job satisfaction in public and private sectors. This is the focus of this study which is to examine the satisfaction level.

Objectives of the Study
The objectives of this study are to:
1. find out if the job status of the employee affects job satisfaction
2. investigate the relationship between job satisfaction and gender
3. determine the relationship between job satisfaction and age
4. find out the relationship between job satisfaction and educational qualification
5. verify the relationship between job satisfaction and family size
6. find out if work experience affects job satisfaction
7. ascertain if income affects job satisfaction
8. find out if there is a difference in job satisfaction among employees in both the public and private sectors of the Nigerian economy and compare them to know which staff is more satisfied.

Research Hypotheses
The hypotheses tested in this study are as follows:
1. There is a positive relationship between job status and job satisfaction
2. There is a significant difference between men and women in terms of job satisfaction
3. There is a positive relationship between age and job satisfaction
4. Educational qualification has a significant effect on job satisfaction
5. Family size is positively related to job satisfaction
6. Working experience is positively related to job satisfaction
7. There is a significant relationship between income and job satisfaction
8. There is a significant difference in the job satisfaction level of the public and private sectors of the Nigerian economy.

2. Literature Review

2.1 Chronological Background of University of Benin and Benson Idahosa University

The bed rock of growth and development in every society is education. This is because it serves as a training ground and also a means of developing human capital needed to sustain the economy. Hence, it can be said that the success and growth of other critical sectors depend on education (Okoro, PrisciEdwin, 2014). In Nigeria, university has three forms of ownership; federal, state and private. The federal and state are classified as the public universities while those owned by private individuals are referred to as private universities. According to Mathew (2013), private universities were established due to high demand for admission into public universities, continuous fall in the standard of public

universities due to poor funding by government, negative attitudes of lecturers to work, incessant strikes by the Academic Staff Union of Universities (ASUU) as a result of poor staff welfare, and so on.
The University of Benin was established in 1970. It commenced operation as Mid-west institute of Technology, and was accorded the status of a full-fledged University by National Universities Commission (NUC) on 1st July, 1971. In his Budget Speech in April, 1972, the then Military Governor of Mid-Western State, Col. S. O. Ogbemudia, the then visitor to the University formally announced the change of the name Mid-West Institute of Technology to the University of Benin (Student hand book of information, 2018).
On 1st April, 1975, the University at the request of the State Government, was taken over by the Federal Government and became a Federal University. Today the University has a number of faculties, departments, institute, centre and units (Student hand book of information, 2017/2018).
Benson Idahosa University was founded by the renowned Late Arch Bishop Benson Idahosa, the founder of Church of God Mission, worldwide. Benson Idahosa University is a private Christian university that seeks to contribute to the production of high-level leadership, as well as quality manpower for the nation and world at large. The university started operating as a fully licensed institution in March 2002 with an initial student enrolment of 400, registered into two faculties, Faculty of Arts, Social Sciences, Education and Faculty of Basic and Applied Sciences.
Salary Structure of Nigerian Lecturers
There are seven categories of academic ranks/posts in Nigerian universities (Senior Staff Regulations, 2017). They include: Graduate Assistant, Assistant Lecturer, Lecturer II, Lecturer I, Senior Lecturer, Reader/Associate Professor and Professor. Graduate Assistant and Assistant Lecturers are regarded as the lowest ranks in academia. They earn ₦99, 768.11($ 200) and ₦114, 464.48 ($229) respectively per month and ₦1, 197, 217 ($2,394.43) and ₦1, 373, 573.76 ($2,747.15) in that order annually. Lecturer II earns ₦130, 002.17 ($260.00) monthly and ₦1, 560, 026.04 ($3,120.05) yearly while Lecturer I earns ₦163, 709.24 ($327.45) monthly and ₦1, 964, 510.88 ($3,929.02) yearly. Senior Lecturer earns ₦231, 393.17 ($462.79) monthly and ₦ 2, 776,718.04 ($5553.44) yearly. Professorial position is the highest rank in university. This category consists of Reader/Associate Professor and Professor. Reader/Associate Professor earns ₦281, 867.72 ($563.74) monthly and ₦3, 383, 412.64 ($6,766.83) yearly while Professor earns ₦342, 442.35 ($684.88) monthly and ₦4, 109, 308.02 ($8218.62) annually (Kaoje et al., 2020; Igwenagu, 2016)

2.2 Job Satisfaction
Satisfaction is a state of fulfillment. It is achieved when one’s desire meets up with what is available (Bello et al., 2017). Job satisfaction is defined as an individual’s feeling regarding his or her work. It can be influenced by a multitude of factors. The term relates to the total relationship between an individual and the employer for which he is paid. Job satisfaction, according to Green (2000), is a state of mind in which workers feel comfortable at their workplace without any internal or external disturbance. It is generally known that job satisfaction is a major determinant of employee and organizational performance and effectiveness in industrial and organizational settings (Laschinger, 2001; Riketta, 2002; Bhatti et al. 2014; Asrar-ul-Haq et al., 2017).
People seek for employment in an organization because of what they intend to achieve such as security of income, better prospect in the future and satisfaction of psychological and social needs. People have diverse kind of needs at separate times in the organization that they belong (Sweta, 2015). One primary responsibility of management is to provide enabling environment or atmosphere for people at work to satisfy their needs (Prasad, 2006). Job satisfaction has various features. Conspicuous among them are satisfaction with the work

itself, salary, recognition, rapport with superiors and fellow workers, and opportunity for development. Every feature contributes to an individual's general feeling of satisfaction with the job. Jafar et al., (2010) identified five key characteristics of job satisfaction as: satisfaction from job, satisfaction from supervisor, satisfaction from colleagues, satisfaction from salary and satisfaction from promotion. Similarly, various researches have shown that lecturers derive satisfaction from factors such as developing sincere and individual relationship with students, the academic challenge of teaching and autonomy (Amazt & Idris, 2011) while dissatisfaction is traceable to excess workload, meager salary and lack of recognition.

2.3 Influence of Demographic Variables on Job Satisfaction

Demographic is the study of universal and specific population factors such as race, gender, income, religion, marital status, occupation, as well as population density, size and location (Blythe, 2005). Demographics are the quantification of statistics for a given population and are used to classify the study of measurable sub-sets within a given population (Amangala, 2013). DeVaney and Chen (2003), in their study discovered that demographic variables such as gender, education, age and race have an influence on employees' job satisfaction. Similarly, Malik (2011) found that age, job rank, educational qualification and years of experience were to some extent related to the overall job satisfaction of university employees. In the same vein, Noordin and Jusoff (2009) found that the demographic factors such as current job status, marital status, age and salary appear to have significant impact on the respondents' level of job satisfaction.

Sanusi and Mohammed (2021) in a study on demographic factors and its influence on job satisfaction in Adamawa State University, Mubi, Nigeria found that marital status, educational qualification, age and gender have a significant effect on employee job satisfaction. In terms of education, employees with higher qualification tend to receive better salaries and allowances and thus are more satisfied than employees with lower educational qualification. With respect to gender, the study further revealed that employees within the age bracket of 25-34 are more satisfied with their work compared to those of younger and older category of age. Furthermore, the study shows that male employees are satisfied more with their jobs than their female counterparts.

However, in a study conducted by Amarasena et al. (2015) in Sri Lanka on the effects of demographic factors on job satisfaction of university faculty members, the study found that demographic factors such as teaching experience, gender, age, highest level of education, marital status and number of children of staff members, had no statistically significant differences on employees' job satisfaction.

2.4 Theory Underpinning the Study

This study is based on hygiene-motivation theory developed by Frederick Herzberg. This theory is very crucial and it states that satisfaction and dissatisfaction are driven by different factors. Frederick Herzberg (1923-2000) was a US clinical psychologist who became an influential management thinker through his work on the nature of motivation and the most effective ways of motivating people. His 'hygiene-motivation' theory was first set out in the motivation to work, published in 1959. According to him "hygiene factors have to do with the context or environment in which a person works". They include supervision, working relationships, status, security and pay. The most important thing about these factors is that they do not in themselves promote job satisfaction but rather serve primarily to prevent job dissatisfaction in the same way that a clean environment does not itself give good health but a lack of it would usually cause disease. That is to say that their absence at work leads to dissatisfaction.

Motivators are also called growth factors. According to Herzberg, they relate to what a person does at work rather than the context in which it is done and they include achievement, recognition, the work itself, responsibility, advancement and growth.
Herzberg in summary explains that the two sets of factors are separate and distinct because they are concerned with two different sets of needs. It should be noted that this model is still used in organizations all over the world.

3. Methodology

The descriptive research design was adopted for this study because it gives a picture of the population. The researcher collected data from a cross section of workers to enable them assess the level of job satisfaction and be able to compare job satisfaction in the two organizations. It also enables us to examine the socio-demographic factors that were related to job satisfaction. The population used for this study comprises of all staff of the universities who have had a minimum of one year working experience with the universities. As a result of the impossibility of studying the entire population due to time, financial and other constraints, a representative sample was therefore selected from the population and used for the study. A sample of three hundred (300) staff members were used for the study. The sample size was gotten from 150 staff each from the universities. The 150 comprises of 50 senior non-academic staff, 50 junior non-academic staff and 50 academic staff of each of the universities. Among the 50-academic staff, the researcher tried to get staff from all the departments in each of the universities. This same method was applied in getting the total of 100 non-academic staff (made up of senior and junior). All the respondents were contacted in their offices because of its convenience and reliability. The sources of data for this research were made up of primary source, that is, the responses gathered from respondents through the use of questionnaires.
The research instrument used in this study was the questionnaire because the type of information sought could not be gathered otherwise. This instrument according to Agbonifoh and Yomere (1999) can be used to measure behaviour, past, present or even intended; other characteristics such as age, sex, marital status, income, level of formal education, attitudes and opinions. It is a difficult task to understand a person's satisfaction by mere observation of actions and behaviour, hence the questionnaire is an appropriate instrument. The questionnaire used in this study contains structured questions. The structured type of questions limits respondents to a set of replies. In these questionnaires, the investigation used the check list and the Likert-type scale because they require less skill, are easier to use and the data they yield are more easily analyzed and compared. The questionnaire consists of two parts: the classification section requesting profile information about the respondent and the last section with questions relating to the other subject matters of the investigation.
The fifteen (15) variables used to measure job satisfaction in this study were collected from different sources based on our review of the literature. Pay/salary, promotion, supervision and sort of work done/nature of work were adapted from job satisfaction scale developed by Spector (1997) while recognition was adapted from Bello et al. (2017). Freedom of making decisions/autonomy and pressure from the work/stress were gotten from Hackman & Oldham (1980); Smith et al. (1969). The other variables were constructed by the researchers taking into cognizance the prevailing situations in the University of Benin and Benson Idahosa University (see Table 1 for details).
A number of hypotheses were posed in this study. Other questions were equally asked for which hypotheses were not formulated. The questions were meant to find out about the level of satisfaction in a private and public firm and compare them. Responses were gathered and analyzed by means of frequency distribution, percentage analysis, t-test and regression.

Table 1: Questionnaire

Sort of Work
At times I have the feeling that my work is meaningless
I experience a sense of satisfaction in performing my job
My job is enjoyable
How satisfied are you with the sort of work you are doing
Type of Leadership
How satisfied are you with the type of leadership you have been getting from your supervisor
Department as it Stands
How satisfied are you with the department as it now stands
Prestige within the City
How satisfied are you with your prestige within the city
Chances of Getting Promoted
There is really too little chance for promotion on my job
Those that do well on the job stand a fair chance of being promoted
I am satisfied with my chances for promotion
Salary
How satisfied are you with your present salary
I feel I am being paid a fair amount for the work I do
Raises are too few and far between
I feel appreciated by the organization when I think about what they pay me
I feel satisfied with my chances for salary increases
Status in the Community
How satisfied are you with your status in the community
Community Value
What value do you think your community put on your service
Recognition from Supervisors
How much recognition does your supervisor show for a job well done
Appreciation from management increases level of job satisfaction of employees
The organization views its academic staff as assets
Management recognizes me as an individual
Participation Level
To what extent do you get to participate in the supervisory decisions that affect your job?
Freedom of Making Decision
In your daily work, how free are you to make decisions and to act on them
Close Supervision
How closely do you feel you are observed by your supervisor?
My supervisor is quite competent in doing his/her job
My supervisor is unfair to me
My supervisor shows too little interest in the feelings of subordinates
I like my supervisor
Advice Friends
Would you advise a friend to join the department?
Feeling of Accomplishment
Do you receive a feeling of accomplishment from the work you are doing
Pressure from the Work
Rate the amount of pressure you feel in meeting the work demands of your job

4. Result and Discussion

Profile of the Respondents

A total of 255 respondents returned their questionnaire out of which 45.1% were from the University of Benin and the remaining 54.9% were from Benson Idahosa University (see Table 2). 60.4% of the total respondents who returned their questionnaires were males while 39.6% were females. Single respondents made a total of 39.6%, 52.5% were married, 5.9%

were divorced and 1.6 % were widowed. Table 1 showed that the respondents had a variety of family size despite the fact that 28.6% did not answer the question. With respect to education, majority of the respondents (28.2%) had at least a first degree. The monthly incomes of the majority of the respondents (48.2%) were between $101- $200. The experience level of the respondents shows that the majority of the respondents had worked in their organization for less than ten (10) years.

Table 2: Profile of the Respondents

Demographic Attributes	Classifications	Frequency	Percentage
School	Uniben	115	45.1
	BIU	140	54.9
Gender	Male	154	60.4
	Female	101	39.6
Marital Status	Single	101	39.6
	Married	134	52.5
	Divorce	15	5.9
	Widowed	5	2.0
Educational Qualification	FSLC	13	5.1
	SSCE/WASSCE/GCE	35	13.7
	OND/NCE	63	24.7
	First Degree	72	28.2
	Higher Degree	64	25.1
	No Response	8	3.1
Family Size	1-3	54	21.2
	4-6	114	44.7
	7-9	9	3.5
	10-12	4	1.6
	13-15	1	0.4
	No Response	73	28.6
Category of Staff	Junior Non-academic	110	43.1
	Senior Non-academic	80	31.4
	Academic	64	25.1
	No Response	1	0.4
Income Per Month	Below $100	54	21.3
	$101- $200	123	48.2
	$201- $400	57	22.4
	$401- $600	12	4.7
	$601 $800	6	2.4
	Above $800	1	0.4
	No Response	2	0.8
Years of Experience	0-5 years	145	56.7
	6-10 years	43	16.8
	11-15 years	8	3.1
	16-20 years	14	5.3
	21-25 years	3	1.7
	26-30 years	4	1.5
	31-35 years	8	3.1
	36-40 years	1	0.4
	No Response	29	11.4

Source: Authors' fieldwork

Job Satisfaction among Respondents

Job satisfaction was measured using a 15-item basis with a 5-point Likert-type scale ranging from 1-5. Table 3 shows the areas the respondents were satisfied the most and not satisfied. The respondents were satisfied the most with the type of leadership, sort of work, the supervision they received and their status in the community. Most respondents said they would advise their friends to take up a job with their respective universities.

Table 3: Job Satisfaction of the 255 Respondents

S/N	Aspect of Job	Mean Score
1	Sort of work	3.90
2	Type of leadership	4.07
3	Department as it stands	3.30
4	Prestige within the city	3.06
5	Chances of getting promoted	3.22
6	Salary	2.96
7	Status in the community	3.33
8	Community value	2.98
9	Recognition from supervisors	3.15
10	Participation level	3.04
11	Freedom of making decisions/autonomy	3.24
12	Close supervision	3.45
13	Advice friends	3.73
14	Feeling accomplishment	2.55
15	Pressure from the work/stress	2.7
	Overall Mean	**3.25**

Source: Authors' fieldwork

Job Satisfaction in Benson Idahosa University

Table 4 shows percentage of respondents from Benson Idahosa University who were satisfied with the different aspects of their job. It shows that 120 or 87.5% were satisfied with the sort of work they do while 112 (80%) were satisfied with the type of leadership under which they work. For the remaining 13 aspects of the job, less than 50% of the respondents were satisfied. In fact, for the eleven (11) of the job factors, the percentage of the respondents that were satisfied was less than 40%. On the average, for the 15 job factors, 43.15% of the respondents were satisfied. Thus, the overall finding here shows that most of the respondents from Benson Idahosa University are not satisfied with their jobs.

Table 4: Satisfaction Level of the 140 respondents from Benson Idahosa University

S/N	Aspect of Job	Satisfied/ Very Satisfied	
		Number	**%**
1	Sort of work	120	85.7
2	Type of leadership	112	80
3	Department as it stands	49	35.3
4	Prestige within the city	46	32.8
5	Chances of getting promoted	90	36.7
6	Salary	45	32.2
7	Status in the community	51	36.4
8	Community value	43	30.9
9	Recognition from supervisors	49	35.3
10	Participation level	42	30.2
11	Freedom of making decisions/autonomy	69	49.3
12	Close supervision	58	44.7
13	Advice friends	63	45.3
14	Feeling accomplishment	35	25.2
15	Pressure from the work/stress	57	47.3
	Mean		**43.15**

Source: Authors' fieldwork

Job Satisfaction in University of Benin

Table 5 shows the data on job satisfaction among staff of the University of Benin who were included in the study. For the job factors, more than 50% of the respondents were satisfied with 12 factors. They are most satisfied with the sort of work (88.7%), type of leadership (86.9%), advice friends to work for University of Benin if need be (86%), chances of promotion (83.4%), and the current state of the department (77.4%). The only three factors they are dissatisfied with include community value (47.8%), feeling of accomplishment (19.1 %) and pressure from work (19.1%).

Table 5: Satisfaction Level of the 115 Respondents of University of Benin

S/N	Aspect of Job	Satisfied/ Very Satisfied	
		Number	**%**
1	Sort of work	102	88.7
2	Type of leadership	100	86.9
3	Department as it stands	89	77.4
4	Prestige within the city	86	74.7
5	Chances of getting promoted	90	83.4
6	Salary	58	50.5
7	Status in the community	80	69.6
8	Community value	55	47.8
9	Recognition from supervisors	74	64.4
10	Participation level	59	53.6
11	Freedom of making decisions/autonomy	62	53.9
12	Close supervision	66	53.3
13	Advice friends	98	86
14	Feeling accomplishment	22	19.1
15	Pressure from the work/stress	22	19.1
	Mean		**61.89**

Source: Authors' fieldwork

Comparison between Respondents of Benson Idahosa University and University of Benin

Figure 1 shows the percentage of respondents from the two universities who were satisfied with each of the fifteen (15) job factors investigated in this study. It shows that University of Benin were more satisfied with respect to nine (9) of the job factors namely: the department, prestige, chances of promotion, salary, status in the community, community value, participation, recognition from supervisors and advice friends. For two (2) of the fifteen (15) factors, Benson Idahosa University staff were more satisfied and they are feeling of accomplishment and pressure from the work/stress. For the fifteen (15) factors, on the average, percentage of University of Benin staff members who were satisfied is approximately 62% as against 43% for Benson Idahosa University. The obvious conclusion therefore is that on the average, University of Benin staff members were more satisfied with their job than Benson Idahosa University staff.

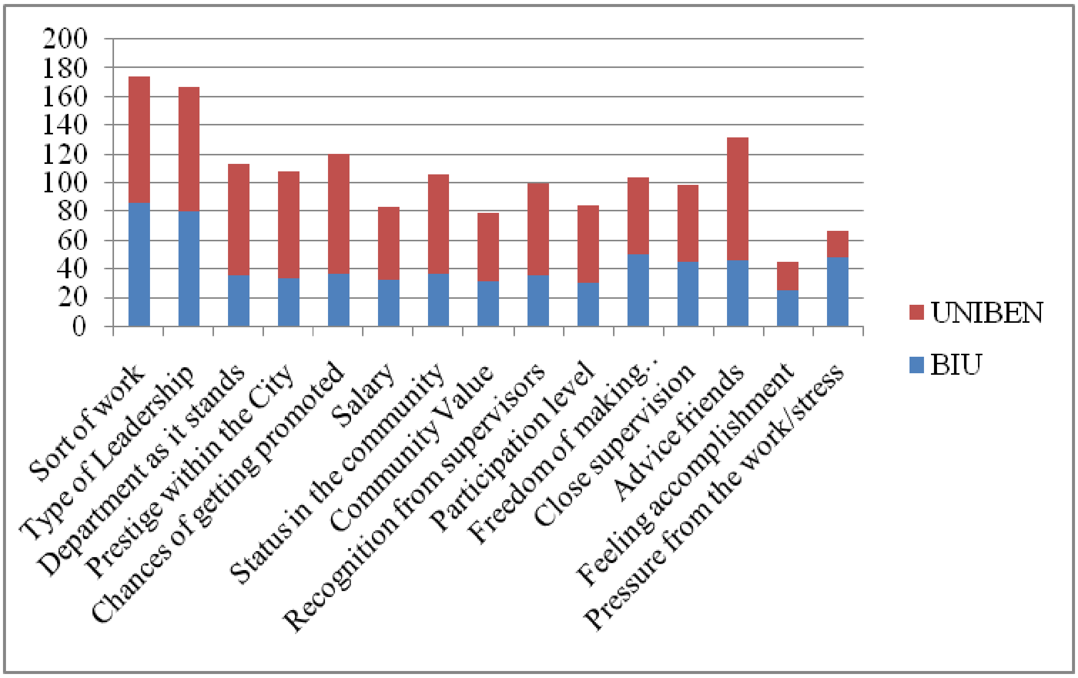

Figure 1: Comparison between Benson Idahosa University and University of Benin Respondents in Terms of Percentage Satisfied

Table 6 shows that there are significant differences in certain aspects of the job. Benson Idahosa University staff are not satisfied with aspects like the department as it stands, prestige, their chances of promotion, their salary, their participation, their freedom to act, the supervision, and they would not advice their friends to work for Benson Idahosa University.

Table 6: Comparison between Respondents of Benson Idahosa University and University of Benin

Aspect of work	University	Number	Mean	Sig.
Sort of work	UNIBEN	115	3.9	.757
	BIU	140	3.89	
Type of Leadership	UNIBEN	115	3.89	.093
	BIU	140	4.21	
Department	UNIBEN	115	3.77	.001
	BIU	139	2.91	
Prestige	UNIBEN	115	3.73	.000
	BIU	140	2.51	
Chances of promoted	UNIBEN	108	4.02	.000
	BIU	139	2.6	
Salary	UNIBEN	115	3.03	.011
	BIU	140	2.89	
Status in the community	UNIBEN	115	3.56	.123
	BIU	140	3.14	
Community Value	UNIBEN	115	3.16	.456
	BIU	139	2.83	
Recognition	UNIBEN	115	3.44	.214
	BIU	139	2.91	
Participation	UNIBEN	110	3.15	.000
	BIU	139	2.96	
Freedom	UNIBEN	115	3.28	.008
	BIU	140	3.2	
Close supervision	UNIBEN	115	3.63	.000
	BIU	139	3.31	
Advice friends	UNIBEN	114	4.27	.000
	BIU	139	3.29	
Accomplishment	UNIBEN	115	2.47	.260
	BIU	139	2.62	
Pressure of the work	UNIBEN	114	2.42	.790
	BIU	139	2.92	

Source: Authors' fieldwork

Comparison of Job Satisfaction with Respect to Gender

An analysis was made with respect to finding out the relationship between gender and job satisfaction. Table 7 shows the relationship between gender and job satisfaction. It shows that there is no significant difference in the level of job satisfaction between males and females in nine (9) of the job factors while the remaining six (6) factors showed a significant difference. Males were more satisfied with five (5) aspects of their job namely: sort of work, salary, status in the community, participation and freedom to act.

Table 7: Comparison of Job Satisfaction with Respect to Gender

	Gender	N	Mean	t-test for equality of means T	Df	Sig. (2-tailed)
Sort of work	Male	154	4.02	2.117	252	.035
	Female	101	3.71			
Type of Leadership	Male	154	4.18	0.64	253	.523
	Female	101	3.89			
Department	Male	154	3.27	-0.672	252	.502
	Female	100	3.36			
Prestige	Male	154	2.93	-1.953	253	.052
	Female	101	3.26			
Chances of promotion	Male	153	3.18	-0.64	245	.052
	Female	94	3.3			
Salary	Male	154	3.11	2.738	253	.007
	Female	101	2.72			
Status in the community	Male	154	3.45	2.189	253	.029
	Female	101	3.15			
Community Value	Male	153	2.93	-0.997	251	0.32
	Female	100	3.06			
Recognition	Male	153	3.16	.057	252	.955
	Female	101	3.15			
Participation	Male	153	3.2	2.777	247	.006
	Female	96	2.8			
Freedom	Male	154	3.46	3.773	253	.000
	Female	101	2.89			
Close supervision	Male	154	3.54	1.392	252	.165
	Female	100	3.32			
Advice friends	Male	154	3.64	-1.500	251	.135
	Female	99	3.87			
Accomplishment	Male	154	2.38	-3.293	252	.001
	Female	100	2.82			
Pressure from the work	Male	153	2.78	1.458	251	.123
	Female	100	2.56			
Overall Job Satisfaction	Male	150	3.2653	.654	240	.514
	Female	92	3.2181			

Source: Authors' fieldwork

On the average, that is, on the overall level of job satisfaction, there is no significant relationship between gender and job satisfaction at the 5% level of statistical significance. We therefore accept the null hypothesis which states that there is no difference between gender and job satisfaction (H2).

Age, Educational Qualification, Family Size, Job Status, Monthly Income and Experience with the Organization

In trying to determine if there was a relationship between job satisfaction and the variables such as experience, educational qualification, family size, monthly income, job status and age, the researcher used a multiple regression analysis. Table 8 shows that there is no significant level of satisfaction with respect to age, educational qualification and monthly income. We therefore reject the hypotheses with respect to age (H3), educational qualification (H4) and monthly income (H7). There is a significant level of satisfaction in family size. It even has a negative effect of satisfaction which implies that the larger the family size, the less satisfied the person is. There is also a significant level of satisfaction with respect to the relationship between job status and satisfaction. It shows a positive relationship, implying that the higher the job status, the higher the satisfaction. Finally, the relationship between experience with the present organization and job satisfaction is significant and is positive which implies that the longer the individuals stay in the organization, the more satisfied they become. We therefore accept the hypotheses with respect to family size (H5), job status (H1) and experience with the organization (H6)

Table 8: Regression Analysis of Relationship between Job Satisfaction and Socio-demographic Variables

Variables	**Coefficients**	**T-test**	**P-value**	**Decision**
Constant	3.429	16.774	.000	
Age	-.048	-.642	.522	Not Significant
Family Size	-.067	-2.446	.016	Significant
Edu. Quality	-.112	-1.643	.102	Not Significant
Job Status	.245	3.653	.000	Significant
Monthly Income	-.028	-.379	.705	Not Significant
Exp-Present Org	.019	2.502	.013	Significant
R- Square = .192		**Adjusted R-Square = 0.158**		
F-Stat = 5.792		**Prob (F-Stat)= 0.000**		

Source: Authors' fieldwork

5. Discussion of findings

The possible reasons for the dissatisfaction of respondents are poor working environment and poor salary when compared to other sectors like the banking industry, oil and gas industry political sector and so on. Offices are not furnished and, in most cases, crowded because of the lack of space for new offices which in turn leads to little or no comfort for the staff of the university.

The study showed that members of staff of the University of Benin are more satisfied than Benson Idahosa University staff. The possible reason for this difference in satisfaction level could be the fact that University of Benin staff members are freer to act on their own will when compared to the staff of Benson Idahosa University. The laws in Benson Idahosa University were very strict compared to that of University of Benin. Another possible reason is that the University of Benin is better funded and has more facilities than Benson Idahosa University. Also, the University of Benin has even been able to build a solid reputation over the years when compared to Benson Idahosa University. There is more of job security in the University of Benin compared to Benson Idahosa University. University of Benin has been able to provide accommodation for most of its staff unlike Benson Idahosa University. Finally, we can say that University of Benin runs a democratic style of leadership while Benson Idahosa University runs an authoritarian style of leadership. This finding is supported by the study conducted in Kwara State, Nigeria, by Bello et al. (2017), who reported that University of Ilorin lecturers are more satisfied compared to Land Mark University lecturers in terms of salary and promotions. After testing the hypothesis, a pay disparity was found to exist between private and public universities in Nigeria. Lecturers in public university were more satisfied with their salary and promotions than the lecturers of private university. Similarly, our findings are in line with results from a study conducted by Hameed et al. (2018) on job satisfaction of lecturers from public and private sector universities in Lahore, Pakistan. The results discovered statistically noteworthy differences in extent of agreement for some of the statements between the public and private university teachers on the Job satisfaction scale (salary, promotion, benefits, coworkers, type of work done, and communication within the organization) with public lecturers satisfied with the

majority of the items. Also, our finding supports the study by Abiodun-Oyebanji (2012), who found that university staff in public universities felt more satisfied than their counterparts in the private universities with regards to financial rewards in some selected tertiary institutions in south western Nigeria.
It was surprising to find out that there was no significant difference with respect to gender and job satisfaction. The reason might be that females generally were regarded as weaker vessels but as this research has showed, there is no priority given to any particular sex. There is equality in the working environment. This finding contradicts an earlier report by Sanusi and Mohammed (2021) in a study on demographic factors and its influence on job satisfaction in Adamawa State University, Mubi, Nigeria. They found that gender has a significant effect on employee job satisfaction among academic staff in Adamawa State University.
Family size, job status and experience on the job were the only factors with respect to job satisfaction that had an effect. The issue of family size is not strange and it makes sense because as we can see from the research, larger families tend to be dissatisfied compared to smaller families. Job status satisfaction is a fact and this is because the higher the position of the employee, the more satisfied he would be. The same law goes for experience as an aspect of the job. The reason for the more experience staff to be more satisfied could be because of the fact that they have been with the organization long enough to get use to changes in the immediate environment. The other factors like age, educational qualification and monthly income showed no significant interference with job satisfaction.

6. Conclusion

Job satisfaction is very important in organization because if workers are not satisfied, they will not work well. Therefore, it is safe to say that if they do not have satisfaction, they will not be able to give their best. The study of Benson Idahosa University and the University of Benin shows that many staff members are not satisfied, especially those of Benson Idahosa University. Since they are not satisfied, they may not be able to do their work well. This is why people say the standard of education has fallen.
The study has shown that the private is guilty of job dissatisfaction. It would be good if the regular body: National Universities Commission (NUC) investigates and ensures satisfaction else the standard of graduates from the universities will be below standard.
Another surprising discovering is that public universities staff are more satisfied than the private university whereas in business, private firms perform well when compared to public firms. It is safe to say that university is an exception. Private university owners should ensure maximum satisfaction of their staff.

7. Recommendations

Following from the findings of the research, the study makes the following policy recommendations.
Government should ensure that members of staff of the universities are paid like their counterparts in other countries. They should seek professional advice on how to improve the standard of living for the lecturers of the universities because these lecturers are the ones that train the future leaders. Government should also provide the basic infrastructure such as electricity, classrooms, water and so on to the universities. Competent vice chancellors and member of council should be appointed for the proper management of the funds of the universities.
To solve the problems of job dissatisfaction in Benson Idahosa University, the possible factors that should be improved or changed include offices; the offices of most lecturers are crowded and there is no room for privacy and concentration.

Another possible problem is the job security status; Benson Idahosa University should stop the clocking in and clocking out of staff as it leads to the staff having a sense of bondage in the university. Finally, there should be freedom of worship and the staff should not be forced to go to their own churches.
The leadership style should be changed so that it would enable participation of everyone. The staff should be allowed to actively act on their will because this will later bring about efficiency. The universities should ensure that promotion is not delayed especially to the rank of Associate Professor and the Professor respectively. They should also ensure that members of staff are promoted as at when due.

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Bio-note

Agbonifoh, Ehireme Boaz is a graduate of Business Administration, Benson Idahosa University, Benin City, Edo State, Nigeria. He is a First Officer, Air Wisconsin, United State of America.

Dr. Agbonifoh, Christopher Ihionkhan, is a Lecturer I in the Department of Marketing, Faculty of Management Sciences, University of Benin, Benin City.. His research area includes branding, consumer behaviour, brand loyalty and Internet marketing. He has many publications in local and international journals. Dr. Agbonifoh is a member of the Academy of Management Nigeria (TAMN).

THE INFLUENCE OF SERVICE QUALITY DIMENSIONS ON CUSTOMER SATISFACTION IN THE NIGERIAN BANKING INDUSTRY

Gabriel Tuoyo Kubeyinje[1*], Samuel Obehi Omigie[2]
[1]*Department of Marketing, Faculty of Management Sciences, University of Benin, Benin City, Nigeria*
[2]*Department of Business Administration, Faculty of Management Sciences, University of Benin, Benin City, Nigeria*
tuoyo.kubeyinje@uniben.edu
samuel.omigie@uniben.edu

Abstract: *The study explored the influence of service quality dimensions on customer satisfaction in the Nigerian banking industry. A collection of four hundred (400) customers of sixteen Deposit Money Banks (DMBs) quoted in the Nigerian Stock Exchange (NSE) that operates in Benin City, Edo State, Nigeria were given questionnaires for the study, out of which three hundred and sixty seven (367) were found fit in testing the formulated hypotheses. Data collected through questionnaires administration were analyzed using descriptive and inferential statistical instruments. Findings from the study show that service quality tangibility and reliability are statistically insignificant with customer satisfaction within the quoted DMBs in Nigeria. The study recommends that management of DMBs should enhance the appearance of staff, communication materials, physical facilities and equipment among others. Also, banks management and staff should provide adequate procedures to perform their promise service dependably and accurately.*

Keywords: Customer satisfaction, Equipment, Reliability, Service, Tangibility, Quality.

JEL classification: E44, J11, M16, M31, M38.

1. Introduction

Service quality has regularly being recognized among all customer demands as a central issue in the accomplishment of any organizational objectives (Jasmine and Hrishika, 2016). Parasuraman, Zeithmal and Berry (1988) specified that SERVQUAL (an abbreviation of 'Service Quality') is a well-known standard instrument use in measuring service quality across five dimensions; tangibility, reliability, responsiveness, assurance and empathy. The SERVQUAL classic is a basic mechanism in the product/service marketing compendium. Service quality is usually determined on the subjective observation in which customers comprehend from their expectation and perception with the manner the service was provided.

Relationship between Service quality and customer satisfaction is meaningful when evaluating customer loyalty (Pitt, Watson and Kavan, 1995). It may well be proposed that customers are not only concerned in the tangible features of the services provided to them but also the intangible features in the delivery process. Antreas (1997) opined that perceived quality function is the performance of service providers about customer satisfaction. Moreover, advance making value for customers is conceivable through upgrading customer

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[*] Corresponding author: Gabriel Tuoyo Kubeyinje

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contentment. In essence, organizations must be prepared to deliver quality products/services to make customers fulfilled (Day, 1998) and improved techniques than others (Brannback, 1997).
The activities of banking system in Nigeria commenced in 1892, established majorly by foreign professionals. By late 1950s, the banking sector later experienced great expansions with indigenous ownership. Financial deregulation later became a regular character in the banking industry after the transition of free banking era, (1892-1952). This consequently gave rise to the first banking ordinance regulation in 1952, while the Central Bank of Nigeria (CBN) was established in 1958, to regulate and supervise the undertakings of banks in Nigeria. The Nigeria banking industry has a generous effect in the economy due to its extensive contribution to the ease of financial transaction within and outside the country in terms of the period of economic deterioration (poor and insecure monetary systems) in the recent years (Ajao, 2009).

1.1. Research Questions

The study raised the following research questions:
i. To what degree does service quality tangibility impact customer satisfaction within the quoted DMBs in Nigeria?
ii. What is the relationship between service quality reliability and customer satisfaction within the quoted DMBs in Nigeria?

1.2. Objectives of the Study

The core thrust of this study is to empirically examine the influence of service quality dimensions on customer satisfaction in the Nigerian banking industry. Precisely, to:
i. ascertain the degree to which service quality tangibility impact customer satisfaction within the quoted DMBs in Nigeria;
ii. evaluate the relationship between service quality reliability and customer satisfaction within the quoted DMBs in Nigeria.

2. Literature Review

2.1. Customer Satisfaction

Researchers have basically stated that satisfaction can be referred to as post-choice attitudinal or evaluative judgment relating to consumers buying making action (Oliver, 1980; Churchill and Suprenant 1992). Boonlertvanich (2011) described customer satisfaction as a form of display which give the impression whether repurchase decision will be made by customers or together not along their loyalty. It is also refers to as the emotion of fulfillment which is accomplished by comprehending his or her wants. Fulfillment of customers is predisposed by perceptions of quality of services (Zeithaml and Bitner, 2000). It has also been described as the totality of customer’s assessment of their experience with an organization or its product/service (Cronin and Taylor, 1992). Sokefun (2011) opined that customer satisfaction offers suggestion signifying how a firm is effective at providing product/service to the market location. Hence, management will also need to establish customer requirement by reviewing the market need, particularly in terms of uncertain expectation or preconceived ideas held by customers (Unugbro, 2006).

2.2. Service Quality

Kotler and Armstrong (2018) specified that services are made up of events, values or gratification tendered for sale which are basically intangible in nature and do not lead to possession of any physical item. Examples are banking, education, insurance, health care, fashion designing, hair styling and automobile repair services among others. Parasuraman et al. (1988) indicated that service quality is the discrepancy among customer perception and customer expectation relating to the current service being delivered by a particular organization in comparison to outstanding service within that given industry. They disclosed that service quality is the contrast among customer's expectation of service supplier performance (perceived quality). For example, when service provider's performance meet or exceed customers' expectation the customers will be pleased. Similarly, if the service provider's performance (perceived quality) is lower than expected, the customer is more likely to be displeased. Oliver (1997) emphasized that quality judgments are more particular and that of satisfaction are all encompassing. Quality judgments have a connection with cognitive judgments, while that of satisfaction relates to effective judgments. Saha, Hassan and Uddin (2014) asserted the significance of service attributes as a veritable asset through researches that have associations of customer fulfillment with exceptional quality of service, critical to the continued survival of industries as no organization can live long without customers' patronage and loyalty.

2.3. Service Quality Dimensions

The Parasuraman et al. (1988) dimensional constructs of SERVQUAL model related to this study will be review. They are:

2.3.1. Tangibles

These include the appearance of physical facilities, equipment's in the banking halls, communication materials, appearance of staff and other physical features which provide products/services in banks. Organizations utilize tangibles attributes to communicate quality of signals and perception of image and notions (Zeithaml, Bitner and Gremler, 2006). Equipment's that is explicitly visible, contemporary and elegant which are perceived to have substantial influence on customer fulfillment are characteristics of tangibles (Ananth, Ramesh and Prabaharan, 2011). The first hypothesis states that:

H_{o1}: *There is no statistically significant relationship between service quality tangibility and customer satisfaction within the quoted DMBs in Nigeria.*

***2.3.2. Reliability**:* Ability of banks' management and staff to implement the agreed services dependably and accurately. Reliability is the capabilities of bank's staff to convey deals to customers continually and trustfully (Saraei and Amini, 2012). When providing banking services to customers, there should be precision in completing orders, keeping up exact documents, records and figures, precision in billing, sustaining pledge agreements and so forth are fundamental issues of reliability that are germane to maintain and attract present or potential customers (Yang and Fang, 2004). Do organizations fulfill their pledges at the initial period? Do organizations respect agreements? Service providers need to answer some of these questions if they intend to attain reliability. The study hypothesizes, secondly that:

H_{o2}: *There is no statistically significant relationship between service quality reliability and customer satisfaction within the quoted DMBs in Nigeria.*

2. 4. Empirical Literature Review

Ravichandran, Bhargavik and Arun Kumar (2010) examined the effect of service quality on customer's banking behavioural goals, in Tirchirappalli, City of Tamilnadu, India. Two major public banks were used to select respondents, employing the purposive sampling technique. The variables (demographic and rational) were analyzed using the univariate analysis. Findings from the study show that dimensions of tangibility, responsiveness and empathy are essential determinate in forecasting customer behavioural goals.

Lau, Cheung, Lam and Chu (2013) investigated the influence of measuring service quality in the banking industry in Hong Kong. SERQUAL classic was used to develop the questionnaire of the study that identifies the influence of five dimensions, from 119 customers. Findings revealed that all five dimensions positively fulfilled customer needs.

The study recommended that SERVQUAL model is a viable tool in assessing service quality in the retail banking sector in Hong Kong.

Salami and Olannye (2013) examined customer perception in Asaba from selected banks utilizing SERVQUAL model. A total of 240 respondents from five banks using a 25 item close-ended questionnaire were survey. Findings from an ANOVA show that tangibles, reliability, responsiveness, empathy and assurance at a significant level of 0.1 influence customer perception of service quality. It recommended that for retail banks to accomplish or surpass customer anticipations they should offer services that enhances qualities.

Furthemore, Berushie (2014) determined customer satisfaction and service quality in Commercial Bank of Ethiopia (CBE), Addis Ababa area office. The evaluation was made in view of SERVQUAL model by examining tangibles, reliability, responsiveness, assurance, empathy and one additional dimension called convenience. Data was generated from questionnaire administered to 100 customers at Addis Ababa branch and analyzed using descriptive analysis and correlation from the SPSS data platform. Results revealed among others that the bank is not as reliable as expected by customers, because it has failed to provide service to its customers on a promised time frame. This stood out to be a serious concern as it may wear away customers' confidence.

Cudjoe, Anim and Nyanyofio (2015) examined the relationship between service quality and customer satisfaction in Ghana Commercial Bank (GCB). Purposive sampling technique was adopted with the aid of SPSS for data analysis. The findings indicated that all five dimensions assisted in providing quality service delivery. Recommendation was suggested that GCB could strive hard on boosting quality on all dimensions at all times.

Another empirical study was conducted by Ogunde (2015) to ascertain the effects of service quality perception on customers of commercial banks. The five dimensions of SERVQUAL were adopted in evaluating the excellence of service provided via commercial banks in Bauchi metropolis. Findings indicated that reliability has the highest mean score compare to that of other dimensions. It recommended that commercial banks within the metropolis should perform better to achieve average outcome on the other dimensions.

Also, Okeke, Ezeh and Ugochukwu (2015) investigated service quality dimensions and customer satisfaction relationship Nigerian banking sector with online/e-banking services. Assurance, responsiveness, perceived risk, tangibility, security and price were the seven dimensions used. 400 questionnaires were given out to respondents, out of which 258 were retrieved and found usable. The data analysis employed was the Multiple Linear Regression (MLR). The findings specified that five dimensions; price, security, perceived risk, responsiveness and assurance are related significantly, while reliability and tangibility are insignificantly related. It recommended that further studies should be conducted and explored.

Haruna, Kabiru, Faiza and Badiya (2016) investigated service quality and rural bank customer satisfaction in Adamawa State, Nigerian. The five dimensions of SERQUAL were employed. Correlation and regression analysis was piloted on 417 customers as the sample size. Findings from the research indicated that customers were fulfilled with tangibles, responsiveness, reliability, assurance with the exclusion of empathy. It recommended that banks should employ an all-inclusive view of empathy dimension.

Ndikubwimana and Berndt (2016) examined the influence of service quality and customer satisfaction in Rwanda among bank customers. SERVPERF questionnaire was modified with a quantitative approach. 156 questionnaires were collected from respondents in Rwanda. The findings revealed that banks' serene environments, amenities and so forth are advantageous in offering superiority services which makes customers fulfilled with the tangibles dimension. It recommended that the findings can be used to segment products/services.

Finally, Aremu, Onifade, Aremu and Mustapha (2018) in their study focused on service quality enhancement as sustainable means of customer satisfaction in the banking sector of

Nigeria. The five dimensions in Parasurama et al. (1988) were adopted. Two hundred and fifty (250) questionnaires were given out to customers. Multiple correlations, descriptive analysis and multiple regression techniques were utilized for data analysis. The study findings revealed that tangibles, reliability and responsiveness are significant; contrary empathy and assurance are insignificant in sustaining customer gratification. Recommendations are suggested to management to enrich quality of services to fulfill customer's desires which on the long run leads to continuous patronage and loyalty.

3. Methodology

The cross-sectional survey exploration was applied. The desire on this method is knowledgeable via way of means of its capacity to permit the researchers to beseech the opinions of respondents concerning their satisfaction within side the Nigeria banking industry. Sixteen (16) Nigerian DMBs quoted in the NSE that operates in Benin City, capital of Edo State, located in south-south geo political region of Nigeria. Benin City comprises of diverse populace of banks customers with different categories of details, thus accepted and considered as an illustrative sample of the populace of Nigerian DMBs customers. The DMBs include; Access Bank Public Limited Company (PLC), Ecobank Nigeria PLC, Fidelity Bank PLC, First City Monument Bank PLC, First Bank of Nigeria Limited, Guaranty Trust Bank PLC, Heritage Banking Company Limited, Keystone Bank Limited, Polaris Bank Limited, Stanbic IBTC Bank PLC, Sterling Bank PLC, Union Bank of Nigeria PLC, Unity Bank PLC, United Bank for Africa PLC, Wema Bank PLC and Zenith Bank PLC. The population of the study covers all customers of the 16 DMBs in Benin City. A sample of twenty five (25) was chosen from each of the DMBs. Therefore, the sample size of the study is four hundred (400). Convenience, a non-probability sampling technique was employed to select customers from each of the DMBs examined based on the personal judgment of the researchers. Convenient sampling was also, utilized because accessibility, interaction and moderation with respondents that were administered the questionnaire, comprising bio-data and research objectives to fill was stress-free. Primary data were sourced through questionnaire administration while the secondary data were sourced from articles in journals publications, textbooks, financial institution facts and the Internet. Data were analyzed using the Statistical Package for Social Sciences (SPSS version 24.0) and Econometric (E-views 8.0).

4. Data Analysis and Presentation

Four hundred (400) copies of questionnaire were administered, out of which three hundred and sixty seven (367) copies, showing that 91.75% response rate were found fit and imputed for the final statistical analysis.

4.1. Descriptive Statistics

Table 1: Respondents' Demographics

Variable	Category	Frequency	Percentage
Gender of respondents	Male	197	53.7
	Female	170	46.3
Marital status of respondents	Single	179	48.8
	Married	188	51.2
Age of Respondents	20 and below	37	10.1
	21 – 30	76	20.7
	31 – 40	116	31.6
	41 – 50	93	25.3
	51 and above	45	12.3

Educational qualification of respondents	SSCE/GCE	49	13.4
	ND/NCE	65	17.7
	HND/First Degree	140	38.1
	Master's Degree	94	25.6
	Ph.D.	19	5.2
Occupation of respondents	Government sector	59	16.1
	Private sector	97	26.4
	Self-employed	114	31.1
	Student	60	16.3
	Retired	37	10.1

Note: GCE- General Certificate of Education, HND- Higher National Diploma, NCE- National Certificate of Education, Ph.D. - Doctor of Philosophy & SSCE- Senior Secondary Certificate of Education
Source: Researchers' Fieldwork, 2022 using SPSS v 24.0

Table 1 profiles data of respondents used in the study. It shows that 197 (53.7%) respondents are males, while 170 (46.3%) respondents are female, implying that male constituted more of the respondents. In assessing respondents marital status, it revealed that a total of 179 (48.8%) respondents are singles, while 188 (51.2%) respondents are married, suggesting that majority of the respondents are married. 37 (10.1%) respondents were less than 20 years; 76 (20.7%) respondents were within 21-30 years, 116 (31.6%) were between 31- 40 years; also respondents between 41-50 years were 93 (25.3%) and while the remaining 45 (12.3%) respondents were 51 years and above. Likewise, the educational qualification of the respondents indicated that 49 (13.4%) respondents had SSCE/GCE, 65 (17.7%) respondents accounts for ND/NCE, also 140 (38.1%) possessed HND/First degrees, while 94 (25.6%) respondents earned Master's degrees, lastly 19 (5.2%) obtained Ph.D. This appears that the respondents that filled the questionnaires are educated. In ascertaining occupation of respondents, 59 (16.1%) respondents work in Government sector, 147 (47.3%) respondents are in the private sector; respondents that constitute 114 (31.1%) are self-employed. Similarly respondents that are students are 60 (16.3%), lastly 37 (10.1%) of the respondents are retired.

4.2. Inferential Statistics

Table 2 illustrates the correlation matrix of variables employed in the study. Statistically, multicollinearity between exogenous latent constructs are present when the correlation coefficient is 0.90 and above (Hair Jr., Black, Babin and Anderson, 2014). The correlation coefficient between the dependent variable of customer satisfaction and the independent variables of tangibility and reliability are all positively and moderately correlated with values of 0.082765 and 0.156275, which is below the cut-off of 0.90. These confirm the non-availability of multicollinearity.

Table 2: Correlation Matrix

Correlation t-Statistic Probability	CS	TAN	REL
CS	1.000000		
TAN	0.082765	1.000000	
REL	0.156275	0.242477	1.000000

Note: Correlations are significant at the 5% level**,** CS- Customer Satisfaction, TAN- Tangibles & REL-Reliability
Source: Researchers' computation, 2022 using E-views 8.0

Table 3: Ordinary Least Square (OLS) Multiple Regression

Variable	Coefficient	Standard Error	t-Statistic	Probability Value	Hypotheses
(Constant)	1.178157	0.275795	4.271861	0.0000	Significant
TAN	-0.088791	0.056901	1.560447	0.1195	Insignificant
REL	0.091867	0.054042	1.699897	0.0900	Insignificant
(SUMMARY STATISTICS) R-squared=0.317993; Adjusted R-squared=0.308547; Standard Error of the Regression=0.455674; F-statistic=33.66401; Prob(F-statistic)=0.000000; Durbin-Watson Stat =1.749338					

Note: Correlations are significant at the 5% level**,** TAN- Tangibles, REL- Reliability
Source: Researchers' computation, 2022 using E-views 8.0

Table 3 shows the OLS multiple regression estimation of variables utilized in the study. The summary statistics indicates a coefficient of determination (R-squared) stood with a value of 0.317993 with customer satisfaction in DMBs indicating that about 32% of the systematic differences in the dependent variable were imputed by the independent variables, while the remaining 68% were not imputed by the error term. Similarly, after adjusting the degree of freedom, adjusted coefficient of determination (Adjusted R-squared) stood at 0.308547 with customer satisfaction in DMBs, it means that more than 31% of the systematic differences of the dependent variable have been explained by the independent variables whereas 69% were captured by stochastic disturbances because it is unexplained. The overall F-statistic (goodness-of-fit test) of 33.66401 at prob(F-statistic) value of 0.000000 is statistically significant at 1%. This indicates that all gradient coefficients (except constants or intercepts) within the regression are zero and statistically significant at 5% significance level, compared to the standard error of the regression, the minimum value of which was 0.455674. Durbin-Watson (DW) statistic of 1.749338 reveals the non-availability of autocorrelation, because the DW statistic is approximately 2.00 (Studenmund, 2000).

4.3. Test of Research Hypotheses

4.3.1 Hypotheses one

Tangibles (TAN) result t-statistic value stood at -1.560447 and p = 0.1195 is insignificant at 5%. The result indicated that tangibility is statistically insignificant and the coefficient was a negative value of -0.088791. The null hypothesis formulated is accepted.

4.3.2. Hypotheses two

Reliability (REL) calculated t-statistics value stood at 1.699897 and p = 0.0900 is insignificant at 5%. The outcome indicated that Reliability is statistically insignificant and its coefficient of 0.091867 was positive. The null hypothesis formulated is accepted.

4.4. Discussion of Findings

The first hypothesis shows that tangibility (TAN) is statistically insignificant, buttressed the findings of Okeke et al. (2015) which shows that tangibility does not significantly enhance customer satisfaction. But the result was argued against by Zeithmal et al. (2006) who indicated that organizations utilize tangibles attributes to communicate quality of signals and perception of image and notions. Ndikubwimana and Berndt (2016) also specified that banks' serene environments, amenities and so forth are advantageous in offering superiority services which makes customers fulfilled with the tangibles dimension. The findings did not concurred with the empirical exploration of Ravichandran et al. (2010) who stated that service quality variables such as tangibles, are essential determinants in forecasting behavioural ambition. Similarly, Cudjoe et al. (2015) found out that, all the five dimensions including tangibility assisted in providing quality service delivery.

The second hypothesis demonstrates that reliability (REL) was statistically insignificant corroborate with the findings of Berushie (2014) who revealed among others that the bank is not as reliable as expected by customers, because it has failed to provide service to its customers on a promised time frame. But Lau *et al.* (2013); Salami and Olannye (2013); Aremu et al. (2018) indicated that reliability are significant in sustaining customer gratification. Another empirical study conducted by Ogunde (2015) reveals that reliability has the highest mean score compare to that of assurance, tangibles, empathy and responsiveness.

5. Conclusion

The questionnaires were fairly distributed to respondents and the outcomes from the demographic data reveals substantial suggestions to banks to continuously have current profiles of customers details such as gender, marital status, age, occupation, educational qualification, occupation and so forth. This will assist banks to segment their services in line with their customers' requirements. Two dimensions of SERVQUAL classic were employed, which are tangibles and reliability. Tangibles has a negative relationship along with statistically insignificant influence on customer satisfaction within quoted DMBs in Nigeria, while reliability has a positive relationship though statistically insignificant influence on customer satisfaction within quoted DMBs in Nigeria. As the banking industry continues to grow, there is need for continuous studies on different emerging subjects linking to quality service and customer fulfillment practices in the banking industry so as to promote sustainability.

5.1. Recommendations

The recommendations suggested are as follows:

i. Management could enhance the appearance of staff, communication materials, physical facilities and equipment among others, within and around their banks premises. Special attention should be given to their physical environment, that is, the need to overhaul their framework to have speed with the challenging environment and mechanical framework which contains a coordinate relationship with customer fulfillment. These include the provision of Automated Teller Machines (ATMs), money transfer, Point of Sales (POS) and on-line banking among others.

ii). Management and staff should provide adequate procedures to perform their promise service dependably and accurately in order to provide excellent service to their customers. Appropriate feedback machinery could be put in place that will address the methods of tackling customers' complaints and issues straightforwardly which can boost customer fulfillment.

5.2. Further Studies

This study suggests the following for further studies:

i. Studies should be conducted using more representative sample size of respondents, increase in the number of selected banks, adding more objectives and broaden geographical locations in urban and rural territories among others. These would lead to opportunities for generalization, technological advancement and improved capital utilization rate.

ii. Also, studies should be carried out to investigate similar or more objectives in Other Financial Institutions (OFIs) such as, Insurance, Microfinance Banks (MfBs), Finance Companies (FCs), Development Finance Institutions (DFIs), Pension Fund Administrators (PFAs), Bureau-De-Change (BDC), Discount Houses (DHs), Primary Mortgage Institutions (PMIs) and so forth, as well as in order related service sectors in Nigeria.

iii. Furthermore, other studies should comprehensively examine Nigerian DMBs parameters objectively/subjectively in relation to service quality dimensions and customer satisfaction with that of other countries and the results can be used as benchmark to formulate and implement policies decisions.

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Bio-Data

Dr. Gabriel Tuoyo KUBEYINJE is a Lecturer in the *Department of Marketing, University of Benin, Benin City, Edo State, Nigeria*. He has degrees in B.Sc. Business Administration, M.Sc. Marketing Management and Ph.D. Business Administration from the University of Benin. Dr. Kubeyinje research interest and areas of specialization are Strategic Marketing, Entrepreneurship, Marketing Research and General Management. He has numerous publications in reputable and learned journals.
Dr. Samuel Obehi OMIGIE is a Lecturer in the *Department of Business Administration, University of Benin, Benin City, Edo State, Nigeria*. He is certified both in Marketing and Management. He has several publications published in scholarly and reputable Journals. Dr. Omigie research interest and areas of specialization are Operations Management, Production Management, Marketing, Entrepreneurship, and general Management.

COVID-19 PANDEMIC AND ITS IMPACT ON HOUSEHOLD FINANCIAL BEHAVIOR IN INDONESIA

Ascaryan Rafinda[1*], Timea Gal[2]
[1] *Accounting Department, Faculty of Economics and Business, Jenderal Soedirman University, Indonesia; and Károly Ihrig Doctoral School of Management and Business, University of Debrecen, Hungary.*
[2] *Institute of Marketing and Commerce, Faculty of Economics and Business, University of Debrecen, Hungary.*
ascaryan.rafinda@unsoed.ac.id, ascaryan.rafinda@econ.unideb.hu
gal.timea@econ.unideb.hu

Abstract: *The global pandemic, previously only a health crisis, has been slowly causing the economic crisis. The government policy to lockdown and apply social distancing affected the social and economic lives of the countries. The policy affected businesses and led companies to lay off their employees. Many households were suffering economically because of this pandemic. This research aims to identify the changes in household financial behaviour during the covid-19 pandemic. This research is vital as it is the first to explore household financial behaviour during a pandemic which uses a quantitative method of an online survey with 635 participants in Indonesia. Participants' perceptions on their behaviour during the most challenging time of covid-19 (mid-2020) were compared to their current behaviour and the differences were analysed thoroughly. The results show that spending and insurance behaviour did not change during the pandemic, but the saving and investment behaviour increased significantly during the pandemic. Pandemic warns people that they need investment and savings to survive in an emergency. As the pandemic is still ongoing and there were different government policies between the first and fourth waves, the impact on the economy and households needs to be examined in a more extended period.*

Keywords: household finance, covid-19, pandemic, financial behaviour, Indonesia.

JEL classification: D14, D91, G41.

1. Introduction

The first outbreak of covid-19 started in December 2019 in Wuhan, China. The flu-like symptom diseases from the virus made it challenging to identify the virus carrier. In March 2020, the epidemic spread massively worldwide, and WHO declared it as a pandemic. The number of cases in mid-January 2021 shows that more than 95 million people were infected globally, including more than two million deaths.

As the government cannot control the spread of the virus, each country is slowly applying a lockdown and social distancing. The government policy slows down the spread of the virus and prevents the health care from running out of its capacity. The health crisis slowly turns into an economic crisis because of the government policy that directly impacts the business sector. This pandemic affected the banking and insurance sector, the governmental and public spheres, the financial market, the financing, and cost of capital as well (Goodell,

* Corresponding author: Ascaryan Rafinda
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2020). The lockdown and social distance policy lead to businesses' inability to run as usual. This policy has directly impacted many people who work in some industries. Slowly companies cannot pay the employees' salaries, and they must lay them off. That happens all around the world. So, the issue in household finance is essential to find in this pandemic era. This research contributes to identify the changes of financial decisions during the covid-19 pandemic.

Several previous researchers examined the impact of the covid-19 pandemic on macroeconomics, such as the stock market at the aggregate level (Corbet, Larkin and Lucey, 2020; Prabheesh, KP, 2020; Sharma, 2020; Zhang, Hu and Ji, 2020). The covid-19 pandemic affects income and poverty, also found in the US (Han, Meyer, and Sullivan, 2020). The income and wealth loss reports were also studied in the US during the pandemic by many researchers (Coibion, Gorodnichenko, and Weber, 2020). The US consumer spending behaviour has substantially changed due to the pandemic (Baker et al., 2020).

In microeconomics, several researchers assessed the impact of covid-19 on financial behaviour: investment behaviour on the stock market decisions (Budiarso *et al.*, 2020; Priem, 2020; Wu, Yang, and Zhao, 2020; Talwar *et al.*, 2021) and the impact on people's financial vulnerability (Midões and Seré, 2020).

Indonesia is the fourth most populated country. Right now, it has 275 million residents. This country is interesting to be examined as they represent how financial behavior is changing in developing countries, especially in Asia. The present research identifies changes in people's financial decisions during the covid-19 pandemic. As the health crisis turns into an economic crisis, it is essential to determine how household finance is changing. This research contributes to household finance in several ways. First, this research is among the first to identify the impact of covid-19 pandemic on the households' financial decisions. Second, this research is doing the smallest scale of measurement: the household as the key player in the economic system. Third, this research comprehensively identifies several financial decisions: budgeting, investment, saving, and insurance.

2. Literature review

The health crisis caused by the covid-19 virus has not directly impacted economics. A government policy led to the reduction of economic flow in the countries. As people had to stay at home, traveling was restricted, and the cancellation of mass gatherings directly impacted the economy (Horowit, 2020). The policy directly affected several sectors, such as the travel industry, hospitality, sport, bank, financial market, events, entertainment, health, and education (Ozili and Arun, 2020). The different timing of local lockdowns during the pandemic has been related to household spending and at a macroeconomic level (Coibion, Gorodnichenko, and Weber, 2020). Like so many sectors which were impacted due to covid-19, examining the effects on the smallest unit of economics (i.e. household economics) is critically essential. Without spending from the households, the country's economy may never run as usual.

Several researchers have researched the impact of the covid-19 pandemic on the financial market. The effect on the volatility of the Chinese stock market and cryptocurrency was found during this financial stress period, and also the reason beyond that happening was also documented (Corbet, Larkin and Lucey, 2020). In the pandemic period, the financial contagion also happens in the Chinese and G7 financial and nonfinancial stock returns (Aktaruzzaman, Boubaker, and Sensoy, 2020). It was also found that the current epicentre of the virus has a significant relation to stock market volatility and the decline of the global stock market (Ali, Alam, and Rizvi, 2020).

There is some literature on financial behaviour during the covid-19 pandemic. Investor behaviour in the capital market is the most prevalent issue which was assessed in this pandemic (Budiarso et al., 2020; Linardi, 2020; Priem, 2020; Putri, Xu and Akwetteh, 2020;

Wu, Yang and Zhao, 2020; Zhang, Hu and Ji, 2020; Talwar et al., 2021). The other topic is the examination of household spending response during the pandemic (Baker et al., 2020), the household liquidity constraint (Li et al., 2020), the impact on income and poverty (Han, Meyer and Sullivan, 2020), the impact on household financial vulnerability (Midões and Seré, 2020), and financial planning (Fox and Bartholomae, 2020). The first contribution of the present research is to comprehensively examine several household financial decisions, such as budgeting, saving, investment, and insurance decisions.

Previous research examining the pandemic's impact on household economics has been found in American households, using consumer belief to determine society's expectations of the economic fallout during the pandemic (Dietrich et al., 2020). They measure society's expectations in the national GDP, inflation, duration of the pandemic, financial decisions, fear of losing jobs, food supplies, and Chinese products (Knotek et al., 2020). This research contributes to identify the shift of financial behaviour during the covid-19 pandemic, especially in Indonesia as a developing country.

During a difficult time in the global pandemic, people lost their jobs, and the worldwide economic slowdown made people financially vulnerable. This forces people to be more careful in spending their resources. So, based on that argument, the **first hypotheses are: People have become more careful in their spending during the covid-19 pandemic compared to the era before the pandemic.**

In the covid-19 pandemic, more people realize that relying on only one source of income puts them at risk of bankruptcy. Whenever their company or their only source of income stops working, it will hit them hard financially. The pandemic teaches many people that they need to have another income source and emergency funds to secure their lives. So, more people start learning about investment and begin to put their money into emergency funds. Based on that argument, **the second hypothesis is that people have become more attracted to saving and investment during the covid-19 pandemic than before the pandemic.**

The health crisis during the covid-19 pandemic increases people's anxiety to get infected with the virus. The psychology behind the covid-19 pandemic is similar to people who face a natural disaster. In a disaster response, individual risk perception of hazard has been identified as a predictor of people's decisions, such as during flooding (Grothmann and Reusswig., 2006), hurricane (Peacock, Brody and Highfield., 2005), tsunami (Johnston, D. et al., 2005), and earthquake (Whitney, D.J., Lindell, and Nguyen, 2004). People perceived they were in a high-risk condition because they could be infected by the virus. The potential harm raised because of the pandemic influences people's decision to protect themselves and their family with insurance. Based on that argument, **the last hypothesis of this research is that people have become more interested in insurance during the covid-19 than before the pandemic.**

3. Research Method

This research collected data through a self-administered online questionnaire from Indonesian participants to determine changes in financial behaviour. 824 people initially filled in the questionnaire, but only 635 participants answered all the questions. This research becomes part of an online seminar that discusses the economic impact of the covid-19 pandemic to collect the data. The conference discusses the macroeconomic level of the effect of the global pandemic. The seminar material is not closely related to any individual financial behaviour that could influence people's answers in the questionnaire. The online seminar has been done ten times between December 2020 and February 2021 in Indonesia. Participants were asked to fill in the questionnaire before and after the seminar. Their perception on financial decisions before the covid-19 pandemic was collected before the seminar, and their perception on their financial behaviour during the covid was collected after the seminar. Respondents were between 25-65 years old.

Participants had to score their perception on financial behaviour before and during the pandemic as well. The questionnaire consisted of 29 questions: demographic (5), questions about the pre-pandemic financial behaviour (12), and questions on financial behaviour during pandemic (12). The financial behaviour questions in this research involved four domains: consumption, insurance, saving, and investment (Dew and Xiao, 2011). Table 1 shows each question that used in this research.

Table 1: Financial Behaviour Questionnaire

No	Question of the research
1	Spending Behaviour (Strongly Disagree – Strongly Agree) a. I compare prices in different shops when purchasing a product or service. b. I pay all my bills (electricity, water, telephone, etc.) on time. c. I keep a written or electronic record of my monthly expenses. d. I stay within my budget or spending plan.
2	Saving and Investment Behaviour (Strongly Disagree – Strongly Agree) a. I have begun or maintained an emergency savings fund. b. I save money from every income received. c. I save for a long-term goal, such as purchasing a car, education, home, etc. d. I contribute money to a retirement account. e. I buy bonds, stocks, mutual funds, or long-term investments.
3	Insurance Behaviour (Strongly Disagree – Strongly Agree) a. I maintain or purchase an adequate health insurance policy. b. I maintain or purchase adequate property insurance such as comprehensive auto or homeowners' insurance. c. I maintain or purchase adequate life insurance.

Source: Author's own work (2022)

During data analysis t-test paired sample was used to assess the effect of the covid-19 pandemic on the participants' financial behaviour.

The pilot test was executed to avoid multi-perception in the survey. Then exploratory factor analysis (EFA) was applied to determine the suitability of questions into several variables. The test EFA value using Kaiser-Meyer-Olkin (KMO) recommended a threshold of 0.7 (Kaiser, 1974). The next stage was to do a reliability and validity test. Paired sample t-test was used to answer the hypotheses.

4. Results and Discussion

A pilot test was conducted with 78 participants through an online conference during this research. The pilot test was voluntary and set as a bundle with the personal finance seminar. The pilot test's result was the revision of the research instrument as in case of some questions, multi-perception arose at some participants. Then minor wording revision was done to make the questionnaire more easily understandable by the participants. Besides minor wording, exploratory factor analyses were also executed to group a set of questions into several variables in the pilot stage. The summary of the results of exploratory factor analysis can be seen in Table 2.

Table 2: Result of the Exploratory Factor Analysis

No	Indicators	Factors		
		Saving and investment	Insurance	Budget
1	I compare prices in different shops when purchasing a product or service.			0.813
2	I pay all my bills (electricity, water, telephone, etc.) on time.			0.850
3	I keep a written or electronic record of my monthly expenses.			0.784
4	I stay within my budget or spending plan			0.802
5	I have begun or maintained an emergency savings fund.	0.784		
6	I save money from every income received	0.892		
7	I save for a long-term goal, such as purchasing a car, education, home, etc.	0.771		
8	I contribute money to a retirement account.	0.795		
9	I buy bonds, stocks, mutual funds, or long-term investments.	0.761		
10	I maintain or purchase an adequate health insurance policy.		0.895	
11	I maintain or purchase adequate property insurance such as comprehensive auto or homeowners' insurance.		0.806	
12	I maintain or purchase adequate life insurance.		0.867	

Source: authors' calculation based on primary data

Table 2. summarizes the results of exploratory factor analysis, and all 15 questions are classified into three variables. The variables are budget behaviour, saving and investment behaviour, and insurance behaviour. As the recommended threshold is 0.7, all questions are formed into each variable. A total of 824 people filled in the questionnaire, but only 635 participants fulfilled the requirements. This research requires the respondent's age to be between 25-65 years old and answer all the questions. The demographics of the respondents can be seen in Table 3.

Table 3: Demographics of the Respondents

Demographics			Financial Background		
Gender	Male	285	Annual Revenue	< 3.000 US $	246
	Female	350		3.001 – 5.000 US$	106
Age	25 – 35	142		5.001 – 7.000 US$	75
	36 – 45	185		7.001 – 9.000 US$	68
	46 - 55	217		9.001 – 10.000 US $	72
	56 - 65	91		> 10.000 US $	68
Number of people living in the same house	1	108	Financial Condition	Consumptive Debt	149
	2	158		Have no saving account	168
	3	168		Makes end meet	78
	4	125		Have a small saving account	104
	5	54		Have a small passive income	86
	> 5	22		Have an active asset that regularly generates passive income	50

Source: authors' calculation based on primary data

Cronbach alpha was used for the reliability test. The recommended score of Cronbach's alpha is 0.70 (Nunnally and Bernstein, 1978). The construct validity of this research was examined by using convergent validity. The average variance extracted (AVE) has been used, and the recommended score is the threshold of 0.5 (Hair, Ringle, and Sarstedt, 2013). Table 4 shows a summary of the reliability and validity test.

Table 4: Result of reliability and validity test

No	Construct	Cronbach Alpha	AVE
1	Spending Behaviour	0.756	0.560
2	Saving and Investment	0.812	0.645
3	Insurance behaviour	0.795	0.593

Source: authors' calculation based on primary data

In this research paired sample t-test was used to answer the hypothesis. Three hypotheses were proposed, and two out of three were justified in this research. The first hypothesis that states people's behavior during covid-19 becomes more careful in spending is confirmed. The mean of the pre-test was 9.83, and the post-test was 12.02. The paired sample t-test was found statistically significant. The second hypotheses state people are more attracted to saving and investment during covid-19, supported by the data. The mean differs significantly from pre-test (8,43) and post-test (22,46). The third hypothesis supports that people are more attracted to insurance during the covid. This result can be summarized in Table 5 below.

Table 5: Summarize paired t-test result

No	Hypothesis	Pre-test	Post-test	Paired t-test
1	People have become more careful in their spending during covid-19 than before the pandemic	Mean: 9,83 SD: 1,767	Mean:12,02 SD: 1,671	0,000 (signifincant)
2	People have become more attracted to saving and investment during covid-19 than before the pandemic	Mean: 8,43 SD: 1,432	Mean:22,46 SD: 1,461	0,000 (signifincant)
3	People have become more interested in insurance during the covid-19 than before the pandemic	Mean: 5,03 SD: 1,133	Mean:4,93 SD: 1,104	0,105 (Not signifincant)

Source: authors' calculation based on primary data

More detailed discussion is needed as the results show some interesting findings. Several questions were found to be significantly increased during the pandemic, while the rest were found not increasing. During the pandemic, it was found that people tend to compare the prices during shopping. The trend is growing during the pandemic as they need to save more money for an unpredictable moment in the future. People's behavior on staying within the budget was also changing, during the pandemic for most people it was not easy to stay within their budget. Besides that, people's behavior in recording their transactions has also changed during covid-19. Other behaviour in saving and investment were found to increase significantly during the pandemic. People start to collect their emergency fund, save more, make long-term financial goals, and invest more in bonds, stocks, and long-term investments.

On the other hand, several questions were found to be statistically not significant. Behaviour such as paying the bills on time and the insurance behaviour such as starting their health, property, and life insurance have not changed.

5. Conclusion

As the results show, two out of three hypotheses were justified by the research data. Saving and investment behaviour, and spending behaviour have changed during the pandemic. However, some of the questions found a significant difference before and during the pandemic covid-19. As the pandemic directly impacts people's income, people have become careful in their spending. They compare the prices between one store and another. Today, people have more options to spend their money. They can easily compare the prices between local stores and online marketplaces. Having emergency funds is critically important when a pandemic happens because many people cannot maintain their source of income. They realized that it was easy for them to lose their job. They need emergency funds to preserve their wealth. The saving behaviour is also influenced by the fear of losing their source of income in the pandemic. This fear induces people to tighten their spending and save more money for their future. Financial planning for retirement is another critical issue in this pandemic. People are more sensitive in their future financial planning; it is especially true for the retirement. The pandemic also hit people's minds that they cannot live securely when relying only on one source of income, so investment behaviour has changed a lot during the pandemic. People are aware that they need to invest their money to generate another source of income to secure their wealth. The investment behaviour finding contradicts some previous research in China. They found that the household investment portfolio decreased by 16.03% during the pandemic (Yue, Gizem Korkmaz, and Zhou, 2020), but it corresponds with another researcher with significantly higher stock activity in the covid-19 pandemic (Budiarso et al., 2020).

Even though some financial decisions have changed significantly during the pandemic, other behaviours have not changed. People's behaviour in paying their routine bills has not changed; people keep paying them on time. People cannot track and record their monthly expenses daily related to their spending behaviour. Sticking to the monthly budget is difficult for most of the participants. The bank overdraft balance is not typical in Indonesian banks. The banks simply make it a dormant account or just close the account when their customer has no money in their bank account. Pandemic does not influence people to change their behaviour in withdrawing cash from the ATMs. They rarely exceed the limit of the transactions each month. The decision to be involved in health, property, and life insurance was also not significantly changed. This finding is quite attractive; a pandemic as a health crisis normatively increases people's awareness of their health risk and protects it using insurance, but this research found that insurance was not attractive during the pandemic.

As the pandemic has not finished yet, the households' financial behaviour might change initially, in the middle and at the end of the pandemic. Another issue that could be examined is the persistence of behavioural change, which might be the only temporary change. This research found that many people have changed their spending, saving, and investment behaviour. This pandemic triggers people to learn more about the importance of financial knowledge. They have started to understand the importance of preparation before a financial shock happens in the future.

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Bio-note

Ascaryan Rafinda, is a Ph.D. student at Károly Ihrig Doctoral School of Management and Business, the University of Debrecen in Hungary. He is also a lecturer at the Faculty of Economics and Business, Universitas Jenderal Soedirman. His research is interested in financial behaviour and education.
Tímea Gál, is an associate professor of the Marketing and Trade Department at the University of Debrecen in Hungary. Her research field includes business and management.

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IMPROVING INTERNATIONAL STUDENTS' COMMUNICATION SKILLS AND INTEGRATION AT THE UNIVERSITY OF MISKOLC BY THE COMBINATION OF LEADERSHIP AND TECHNOLOGY ACCEPTANCE MODEL

Somayeh Kariman*, István Kunos
Institute of Management Science, University of Miskolc, Institute of Management Science, Miskolc, Hungary
somy2012kariman@yahoo.com
szvkunos@uni-miskolc.hu

Abstract: *Recent studies in multicultural societies have begun to integrate sociological ideas into the modeling of personal behavior. In particular, this new approach emphasizes how social interdependence influences the way a person behaves and communicates. By developing communication skills, international students can reduce individual stress, improve their academic achievements, and also become successful in the job market by integrating and cooperating better with people who have different cultural backgrounds. In addition, digitalization has become a widespread global phenomenon and the main driving force in this era of mankind. Introducing new technologies to any organization doesn't mean it's easy and involves many challenges, like the acceptance and adoption of new technologies by employees and customers. In this field, Davis (1985) introduced the technology acceptance model to determine the individual usage of technology. Therefore, the objective of our research is to analyze the factors that affect international students' communication skills via the usage of email at the University of Miskolc, Hungary, based on applying the technology acceptance model and transformational leadership. Unfortunately, we could not access all the international students because of COVID-19 and restrictions. Therefore, our sample size is not big enough.*

Keyword: Technology Acceptance Model, Transformational Leadership, Behavioral intention.

JEL classification: D83, M14.

1. Introduction
Communication skills are critical for developing one's personality in a global environment, such as a university. While academic performance is the most important element for developing individuals, "the balance between academic performance and these competencies is an aspect emphasized by employers (Iksan et al., 2011)". For example, students could graduate and be excellent in their academic skills but poor in their self-awareness and communication skills. Therefore, some activities and workshops such as developing personality, intercultural communication skills, and cultural awareness are needed to improve emigrate people. Such activities are sometimes run by universities and student organizations because of the importance of these skills in relation to preparation for entering the job market. In particular, international students especially need to know why it is

* Corresponding author: Somayeh Kariman
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so important to have high-level skills in these areas. International students may face some problems in adjusting to the new culture, and climate, or how to manage their stress and anxiety at the University of Miskolc. Developing emotional support such as social support, familiarity and similarity of culture, language ability could manage their acculturative stress (Thomas and Choi, 2006). Consequently, the university should provide some programs such as engagement in various activities or social support for coping with acculturative stress for freshmen.

2. Literature Review

A university's role is not just to provide degrees for students in various fields needed for the global market and businesses, but also to develop students' generic skills, or soft skills, which are required to compete in the global market (Iksan et al., 2011). In this area, international students could provide extremely useful opportunities and also challenges for the university as well. International students are from different countries, with diverse knowledge, experience, and cultural background perspectives. International students, by providing different types of knowledge and attitudes, can develop and spread a wide range of knowledge and experiences at the university. In contrast, freshmen could face different barriers, difficulties, and stress, which is called acculturative stress. For instance, difficulties with the language and adjusting to the academic culture, misunderstandings in their communication with others, culture shock, and difficulties managing their financial needs (Wu et al., 2015). Vergara et al. (2010) argued that there is a relationship between acculturative stress and emotional intelligence with coping responses and length of stay in foreign countries. Acculturative stress, such as language, academic, emotional, cultural, financial, social, and political, could have significant effects on acculturation (Pan et al., 2008). They may have dramatic effects on the emotional (Paukert et al., 2006), psychological, social, and physiological dimensions of adjustment (Scherer and Berry, 1991). According to our knowledge, reducing acculturative stress for freshmen could boost their confidence, which, eventually, could improve their relationships with other international students and staff at the University of Miskolc.

2.1 Leadership

Nowadays, with the phenomena of globalization and developments in organizational culture, a significant role of leadership is to recognize and analyze issues concerning the diversity of cultures. While the main roles of the managers in the organization are controlled, planned, and analyzed, promoting trust, cohesion, and vision among the members of the organization can also be related to the role of the leader. Effective organizations need both tactical and strategic thinking as well as a cultural characteristic that is built upon and improved by their leaders. One of the most effective definitions of leadership was presented by Kim and Maubourgne (1992), who stated that leadership is a special skill and ability to encourage confidence in the individual that is intended to achieve organizational goals. A leader's leadership style is determined by the leader's actions, attitudes, and behavior to lead their followers to a specific goal (Dubrin, 2001). Several types of leadership styles have already been introduced, such as transformational, or bureaucratic leadership. Each leadership style can be used for a specific situation, which can be related to organizational culture as well. Also, Robbins (1993) suggests that national culture has an important role in determining the types of leadership in an organization. So, to better interpret this type of leadership in the next part, we will discuss it.

2.1.1 Transformational Leadership

Transformational leaders can provide a clear vision and mission for the members' activities in the organization. Transformational leaders try to show a high degree of trust and emotional interest in the use of new technology in the organization. For transformational leadership to reach the organizational goal and succeed, try to use specific communication. Besides, a transformational leader with charismatic skills could foster more commitment from the members to the progress of the organizational performance while using new technology. Transformational leadership may meet the emotional needs of each member in the multicultural organization, and finally, this leader may intellectually stimulate the members through the use of new technology in the organization. Kirkan (2011) noted that transformational leadership tries to change the current situation of the organization by identifying and determining the main problems facing it and then developing the inspiration to achieve those goals (Alqatawenh, 2018). There are five behaviors that are characteristic of transformational leaders (Bass and Avolio 1990).

- **Idealized Influence by attitude:** Provides a vision and a clear mission for their employees.
- **Idealized Influence by behavior:** They provide the role model for their followers.
- **Inspiration of Motivation: Concentrate on the followers' efforts and use simple methods to achieve their goal.**
- **Intellectual Stimulation:** Better problem solving, developing the followers to take the risk and make decision independently.
- **Individualized Consideration:** Gives the personnel a high level of attention, treats each employee individually, and coaches him or her.

2.2 Technology Acceptance Model

The Technology Acceptance Model was developed by Fred Davis (Davis et al., 1985). In addition, the theory of reasoned action (TRA) was established by Ajzen and Fishbein (1975). Both the theory of reasoned action (TRA) and the technology acceptance model (TAM) have strong behavioral elements concerning the usage of the technology when a person can act without any limitation. However, in the real world, there are many limitations to using technology, such as personal ability to use, factors of time, the environment, and social and organizational limits and conditions, (Davis et al., 1992). Davis et al. argue that although technology is developing very fast, people still have some ambiguity concerning the usage of technology because they believe that this technology is very complex for usage. People, based on their attitudes and intentions, try to learn and use new technology for their performance before knowing the exact meaning and way of its use. Attitudes toward using new technology can cause low confidence, or after trying to learn how to use the new technology can be stable. Therefore, the actual usage of technology cannot be an immediate outcome of such attitudes and intentions (Davis et al., 1992). Predicting system use became a focus for many researchers in the mid-1970s, when new technology was threatening to cause increasing failures in system adoption in organizations. Based on the work of Fishben and Ajzen (1975), who formulated the theory of reasoned action, Davis shaped the technology acceptance model (TAM) in his PhD dissertation in 1985. He finally presented his conceptual model of the Technology Acceptance Model (Davis, 1986), as shown in Figure 1.

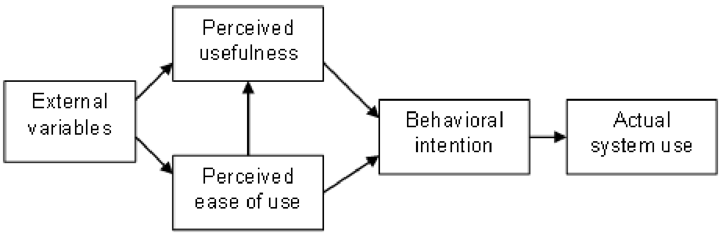

Figure 1: The Technology Acceptance Model
Source: Davis, F.D. (1986).

Perceived Usefulness: Indicates that the individual believes using a particular system can enhance his or her job performance.
Perceived Ease of Use: Indicates that the individual believes using a particular system is free of physical and mental effort.

For better analysis in this study, we would like to add two more external factors to the technology acceptance model. These two factors are:
Perceived Security: The significance of security and privacy in accepting and employing technology (DuFour rt al., 2017)**.**
Perceived Social Norm: Social norm or normative pressure is defined as the person's perception that most people who are important to her or him should or should not perform the behavior in question (Fishbein and Ajzen, 1975 as cited in Nysveen et al., 2005).

3. Methodology

The problem being addressed in this research is the impact of transformational leadership on perceived usefulness, perceived ease of use, perceived sense of security, and social norms of the technology acceptance model variables, which can result in the behavioral intention of the international students towards the usage of email for communication at the University of Miskolc. After providing the questionnaire and holding a few classes and workshops with the international students, we decided to create an online survey to gather information from the international students' community. Also, the technologies, such as Gmail and Whatsapp, have provided better and easier conditions for collecting information in a short time. The choice of the students was constrained by the outbreak of COVID-19, which has minimalized our chances of contact with the surveyed group, and we had to select the subjects of the survey at random. Stratified sampling is used in this study, which means the population is divided into heterogeneous groups and these, in turn, are subdivided into homogeneous groups with common characteristics to be studied according to the requirements of the researcher. In this research, we used primary data for our data collection as well. Finally, in this research, the structural equation model with Smart PLS software was used to analyze the data and examine the research hypothesis. This research includes two hypotheses:

- H1: Transformational Leadership has a direct effect on Technology Acceptance Model.
- H2: Transformational Leadership has an indirect effect on behavioral intention.

The impact of five characteristic of transformational leadership on four factors of the technology acceptance model is:
L: Transformational Leadership - L_1: Idealized Influence Behavior; L_2: Idealized Influence Attribute; L_3: Inspirational Motivation; L_4: Individualized Consideration and L_5: Intellectual Stimulation
T: Technology Acceptance Model - T_1: Perceived Usefulness; T_2: Perceived Ease of Use
T_3: Perceived Sense of Security; T_4: Perceived Social Norms

3.1 Descriptive Statistics

Some demographic characteristics of international students who participated in this research, such as gender, marital status, age, and education, are shown in table 1. Based on the International Relations Office report, the total number of international students at the University of Miskolc is 272 units. We attached a questionnaire to be filled in and sent it back to them in digital form. Among 272 international students, only 105 of them filled out the questionnaire (39% of the total sample size). So, in this research, the total sample size of students at the University of Miskolc is 105. Table 1 shows the demographical factors among international students at the University of Miskolc.

Table 1: Descriptive Statistics of Demographic Characteristics of Participants in the Study

		N	N %
Gender	Male	66	62.9%
	Female	37	35.2%
	I prefer not to say	2	1.9%
Age	<=30	70	66.7%
	>30	35	33.3%
Degree	Bachelor	27	25.7%
	Master	52	49.5%
	PhD	26	24.8%
Marital Status	Married	23	21.9%
	Single	71	67.6%
	In a long-term relationship	8	7.6%
	Divorced	1	1.0%
	I prefer not to say	2	1.9%
Higher Education Years Categories	1-2	9	8.6%
	2-3	0	0.0%
	3-4	20	19.0%
	4-5	0	0.0%
	5-6	41	39.0%
	More than 6 years	35	33.3%

Source: Own Edition

The result shows that male students (62.9%) under the age of 30 (66.7%) and studying for a Master’s degree gave the most answers.

3.2 Inferential Statistics

To investigate the research questions and Hypothesis about the impact of Transformational Leadership and its dimensions on the Technology Acceptance Model and its dimensions, a structural equation model with Smart PLS software using partial least squares (PLS) has been used (Wetzels et al., 2009). Analysis of variance (ANOVA) and SPSS software are also used to influence the demographic variables on the dimensions of the Transformational Leadership and TAM. The structural equation model can be used as a tool for showing which variables could cause changes in the other variables. If the model being drawn is confirmed and the data fits with the parameters of the model, that model can be used to test questions and hypotheses about the existence of a causal relationship between variables in the path diagram. Therefore, first, we are going to study the characteristics of the drawn model based on the conceptual models of the research (Figures 6), then we will examine the objectives of Hypothesis our research.

3.2.1 Evaluation of Measurement Model (Validity and Reliability

To evaluate the model’s measurement, Cronbach's alpha, Composite reliability, factor load coefficients, convergent validity, and discriminant validity are used. Cronbach's alpha is a classic measure of reliability and internal consistency. Values of this criterion above 0.7 indicate a high amount of variance between one dimension and related questions (Cronbach, 1951). Thus, the results in Table 3 indicate the acceptance of the model’s variables. Composite reliability is a more modern criterion than Cronbach's alpha. In this model, the reliability of the dimensions is calculated according to the factor load of the questions, and values above 0.7 are desirable for this index (Nunnally, 1978). According to the results in Table 2, the composite reliability of the latent variables introduced in the model indicates the strong reliability of the extracted factors. When instead, convergent validity is evaluated by the Average Variance Extracted (AVE), results show the degree to which one-dimension has correlated with its questions; the higher the correlation, the better the fit. The value of the AVE above 0.5 is indicated as an acceptable convergence (Fornell and Larcker, 1981). According to the results, the latent variables introduced in the model are above 0.6 (Table 2), so, it is desirable.

Table 2: Cronbach's Alpha Coefficient, Combined Reliability and Convergent Validity of each Dimension in the Impact of Leadership in Technology Acceptance Model

Convergent	Combined	Cronbach's	Dimensions
0.79	0.9	0.950	L: Transformational
0.661	0.907	0.871	L_1: Idealized
0.691	0.899	0.849	L_2: Idealized
0.821	0.932	0.891	L_3: Inspirational
0.712	0.908	0.866	L_4: Individualized
0.763	0.928	0.896	L_5: Intellectual
0.62	0.86	0.940	T: Technology
0.672	0.935	0.918	T_1: Perceived
0.694	0.919	0.889	T_2: Perceived Ease
0.794	0.951	0.935	T_3: Perceived Sense
0.763	0.906	0.844	T_4: Perceived Social

Source: Own Edition

Table 3: Assessing Discernment Validity Using the Fornell-Larker Matrix Method in the Impact of Transformational Leadership on the Technology Acceptance Model

T4	T3	T2	T1	L5	L4	L3	L2	L1	
								0.813	L1
							0.831	0.686	L2
						0.906	0.762	0.679	L3
					0.844	0.760	0.637	0.629	L4
				0.874	0.652	0.712	0.558	0.535	L5
			0.820	0.460	0.630	0.542	0.461	0.433	T1
		0.833	0.799	0.509	0.585	0.492	0.455	0.450	T2
	0.891	0.455	0.483	0.291	0.435	0.350	0.444	0.388	T3
0.873	0.392	0.377	0.455	0.207	0.256	0.261	0.200	0.129	T4

Source: Own Edition

Based on Table 3, the correlation of the questions with their dimensions is greater than the correlation of the questions with other dimensions, and this means the validity of the Leadership measurement on Technology Acceptance Model.

Another indicator for evaluating the discriminant validity of the measurement model is the cross-loading matrix. In this method, the degree of one-dimensional correlation with that dimension and the degree of correlation between one-dimensional questions and other dimensions are compared. In this case, if the correlation of the questions with their dimensions is less than the correlation of the questions with other dimensions, the discriminant validity of the model is called into question (Hensler et al., 2009). These results are shown in Table 4, where the yellow cells indicate the correlation of the questions with their dimension.

Table 4: Discriminant Validity by Cross-Loading Matrix (Transformational Leadership's Impact on the Technology Acceptance Model

T4	T3	T2	T1	L5	L4	L3	L2	L1	
0.146	0.285	0.353	0.417	0.349	0.430	0.417	0.480	0.722	Ld1q1
0.166	0.378	0.363	0.360	0.437	0.558	0.592	0.648	0.847	Ld1q2
0.001	0.328	0.327	0.301	0.458	0.515	0.588	0.534	0.820	Ld1q3
0.152	0.297	0.450	0.450	0.483	0.553	0.540	0.530	0.822	Ld1q4
0.065	0.289	0.339	0.249	0.440	0.491	0.605	0.587	0.850	Ld1q5
0.236	0.355	0.262	0.326	0.291	0.363	0.483	0.709	0.404	Ld2q1
0.109	0.324	0.421	0.419	0.529	0.547	0.717	0.886	0.617	Ld2q2
0.148	0.366	0.417	0.390	0.477	0.572	0.656	0.875	0.587	Ld2q3
0.200	0.439	0.388	0.389	0.516	0.600	0.648	0.842	0.638	Ld2q4
0.283	0.319	0.394	0.453	0.592	0.570	0.889	0.688	0.617	Ld3q1
0.311	0.333	0.499	0.553	0.702	0.762	0.930	0.700	0.595	Ld3q2
0.118	0.300	0.440	0.464	0.637	0.725	0.899	0.683	0.635	Ld3q3
0.214	0.415	0.480	0.594	0.542	0.851	0.669	0.563	0.543	Ld4q1
T4	T3	T2	T1	L5	L4	L3	L2	L1	
0.266	0.347	0.466	0.514	0.447	0.837	0.560	0.461	0.448	Ld4q2
0.198	0.405	0.571	0.559	0.693	0.887	0.789	0.648	0.652	Ld4q3
0.198	0.287	0.439	0.448	0.480	0.799	0.499	0.443	0.442	Ld4q4
0.276	0.184	0.380	0.415	0.837	0.624	0.648	0.505	0.479	Ld5q1
0.141	0.212	0.477	0.409	0.889	0.565	0.553	0.435	0.441	Ld5q2
0.134	0.248	0.427	0.344	0.882	0.542	0.634	0.438	0.440	Ld5q3
0.168	0.366	0.492	0.436	0.885	0.545	0.646	0.562	0.506	Ld5q4
0.379	0.328	0.565	0.802	0.315	0.524	0.417	0.398	0.334	Td1q1
0.387	0.508	0.673	0.843	0.400	0.570	0.493	0.445	0.428	Td1q2
0.522	0.414	0.618	0.821	0.365	0.565	0.505	0.409	0.393	Td1q3
0.442	0.362	0.602	0.794	0.341	0.436	0.398	0.322	0.309	Td1q4
0.283	0.349	0.719	0.798	0.326	0.459	0.400	0.316	0.331	Td1q5
0.326	0.431	0.671	0.826	0.393	0.500	0.424	0.329	0.328	Td1q6
0.271	0.363	0.730	0.852	0.490	0.553	0.464	0.417	0.352	Td1q7
0.338	0.369	0.730	0.549	0.513	0.615	0.584	0.506	0.534	d2q1
0.309	0.438	0.857	0.647	0.541	0.566	0.499	0.468	0.416	Td2q2
0.307	0.327	0.857	0.717	0.313	0.384	0.305	0.270	0.226	Td2q3
0.289	0.348	0.836	0.719	0.398	0.422	0.327	0.326	0.368	Td2q4
0.331	0.413	0.877	0.687	0.368	0.467	0.361	0.344	0.353	Td2q5
0.378	0.902	0.407	0.441	0.305	0.457	0.413	0.500	0.414	Td3q1
0.408	0.903	0.410	0.454	0.318	0.450	0.419	0.485	0.405	Td3q2
0.300	0.888	0.439	0.440	0.308	0.419	0.365	0.425	0.373	Td3q3
0.297	0.831	0.356	0.378	0.121	0.210	0.079	0.201	0.198	Td3q4
0.356	0.929	0.410	0.434	0.229	0.383	0.255	0.345	0.323	Td3q5

0.798	0.337	0.179	0.329	0.090	0.062	0.076	0.028	-0.007	Td4q1
0.909	0.327	0.397	0.416	0.217	0.285	0.297	0.213	0.189	Td4q2
0.909	0.365	0.380	0.437	0.217	0.290	0.279	0.251	0.130	Td4q3

Source: Own Edition

Based on Table 4, the correlation between the questions and their dimensions is greater than the correlation between the questions with other dimensions, which means the validity of the Leadership measurement on Technology Acceptance Model is acceptable.

3.2.2 Evaluation of Structural Model

To evaluate the structural model, which includes the ability to predict the predictor variables of the model from the criteria of the model, the coefficient of determination (R^2) and (Q^2) have been used. R^2 is a criterion used to connect the measurement part and the structural part of the structural equation model and shows the effect an exogenous variable has on the endogenous variable. In the coefficient of determination, 0.19, 0.33, and 0.67 indicate weak, medium, and strong values, respectively (Chin, 1998). Henseler et al., (2009) argued that if in one model, one endogenous dimension is affected by only one or two exogenous dimensions, and the value of R^2 is 0.33 or above, this indicates the strength of the relationship between those dimensions and the endogenous dimension in the model. According to Table 5, the coefficient of determination for the endogenous variables defines the impact of Leadership on the Technology Acceptance Model as above average. Therefore, the model has a favourable situation from both the structural point of view and the point of view of this index. For example, in interpreting this value, we can say that the L1 dimension (Idealized Influence Behavior) has a coefficient of determination of 0.696, which means that the Leadership variance can explain 69.6% of the L1 changes. In other words, 69.6% of the changes in idealized influence behavior is related to Leadership. The Q^2 indicator was introduced by Stone and Geisser and determines the predictive power of the model. Hensler et al. (2009) determined the predictive power of the model as 0.02, 0.15, and 0.35, where 0.02 indicates poor predictive power. Referring to Table 5, we can see that a value is obtained above 0.15 for all the endogenous variables, which indicates good predictive power for this model.

Table 5: R^2 and Q2 Values of the Leadership Model's Impact on Technology Acceptance Model

Q^2	R^2(Adjust)	Dimensions
0.447	0.696	L1
0.468	0.720	L2
0.660	0.829	L3
0.501	0.740	L4
0.477	0.650	L5
0.171	0.390	T
0.549	0.843	T1
0.512	0.761	T2
0.397	0.519	T3
0.249	0.345	T4

Source: Own Edition

3.2.3 General Evaluation of the Model:

For evaluating the fitting of the general research model, the criterion SRMR (Standard Root Mean Square Residual) has been used in this research. A lower index shows a stronger fit of the model, and values- less than 0.08 are considered optimal values(Hu and Bentler, 1999). The results show that the value of the index obtained for the model is close to the desired value. Another measure model is the Goodness of Fit (GOF) index. Wetzel et al. (2009) introduced three values- as 0.01, 0.25, and 0.36, which mean the weak, medium, and strong values for the GOF index. According to Table 6, in the assumed model, this value is within the allowable range, and the developed model is within the acceptable range and shows the optimal fit of the model.

Table 6: Overall Fit Index of Transformational Leadership's Impact on Technology Acceptance Model

Estimated Model	
SRMR	0.105
GOF	0.56

Source: Own Edition

4. Investigating the Structural Model Indicators of the Impact of Leadership on Technology Acceptance Model

The structural equation model for the impact of Transformational Leadership on the Technology Acceptance Model is presented in Figure 2. According to the drawn model, the impact of the Leadership and Technology Acceptance Model from each of their dimensions and their significance is one of the main factors for indicating the confirmation of the overall structure of the conceptual model of the research. The results of this effect and their significance are presented in Figure 2 and Table 7, respectively.

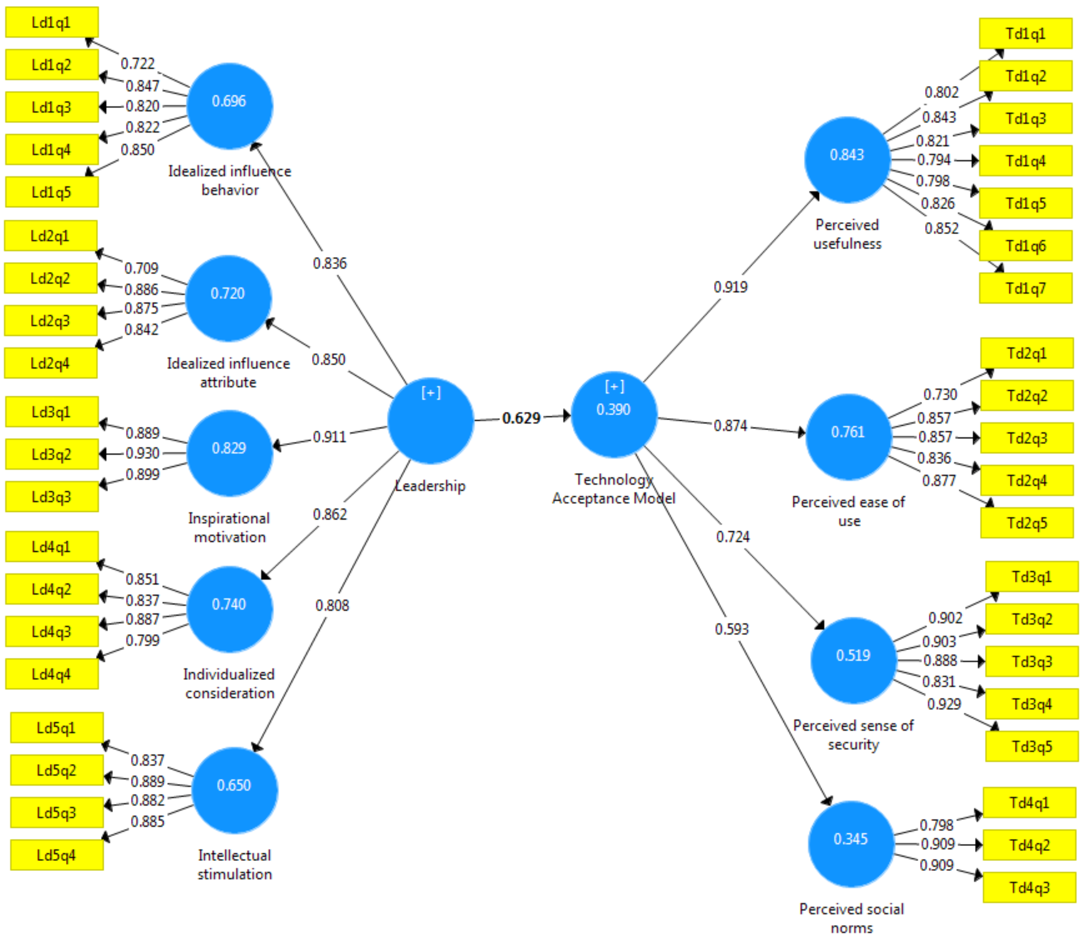

Figure 2: Structural Equation Model of the Transformational Leadership’s Impact on Technology Acceptance Model
Source: Own Edition

Table 7: Estimation of Coefficients in the Transformational Leadership’s Impact on Technology Acceptance Model

Confidence Interval		P-Values	T Statistics	Direct Effects	Inner Model
97.5%	2.5%				
0.924	0.675	0.000*	13.181	0.836	L -> L1
0.907	0.755	0.000*	21.890	0.850	L -> L2
0.944	**0.858**	**0.000***	**39.817**	**0.911**	**L -> L3**
0.913	0.766	0.000*	22.375	0.862	L -> L4
0.901	0.682	0.000*	13.625	0.808	L -> L5
0.772	0.427	0.000*	7.041	0.629	L -> T
0.946	**0.887**	**0.000***	**58.002**	**0.919**	**T -> T1**
0.930	0.782	0.000*	23.622	0.874	T -> T2
0.847	0.552	0.000*	9.035	0.724	T -> T3

0.716	**0.448**	**0.000***	**8.426**	**0.593**	**T -> T4**
97.5%	2.5%	P Values	T Statistics	Indirect Effects	
0.720	0.385	0.000*	6.582	0.578	L -> T1
0.705	0.346	0.000*	6.019	0.549	L -> T2
0.626	0.251	0.000*	4.883	0.455	L -> T3
0.504	0.231	0.000*	5.338	0.373	L -> T4

*P Value<0.05
Source: Own Edition

L: Transformational Leadership
L_1: Idealized Influence Behavior
L_2: Idealized Influence Attribute
L_3: Inspirational Motivation
L_4: Individualized Consideration
L5: Intellectual Stimulation
T: Technology Acceptance Model
T_1: Perceived Usefulness
T_2: Perceived Ease of Use
T_3: Perceived Sense of Security
T_4: Perceived Social Norms

Based on the results of Figure 4 and Table 7, we can say that Transformational Leadership is affected by all its dimensions (T > 1.96, P <0.05), so the variance explained by this variable is significant for each dimension. According to the result, Leadership is most affected by L3 (Inspirational Motivation) with a coefficient of 0.911, and the leadership variance can explain 82.9% (R^2 = 0.829) of L3 changes. Since the obtained confidence interval for this dimension overlaps with other confidence intervals (0.944, 0.858), we can say that there is no significant difference between the L3 dimension and other dimensions. On the other hand, the outcomes show that the highest and lowest effects of the Technology Acceptance Model are related to perceived usefulness and perceived social norms, with coefficients of 0.919 and 0.593, respectively. Consequently, the variance of the Technology Acceptance Model can explain 84.3% and 34.5% for the variance of T1 and T4. On the other hand, since the confidence intervals obtained by these two dimensions [other (0.946, 0.887) and (0.716, 0.448)] do not overlap with each other, we can say that the variance of the Technology Acceptance Model for these two dimensions is significantly different from each other. Finally, according to the result, we can conclude that Transformational Leadership has a significant indirect effect on the dimensions of the Technology Acceptance Model.

5. Investigating the Hypothesis of the Impact of Transformational Leadership on Technology Acceptance Model:

A structural equation model is used to investigate the hypothesis of the effect of Transformational Leadership on Technology Acceptance Model. The structural model was fully investigated and analyzed, and all factor loads and model fit indices were confirmed. Therefore, according to the approval of the studied model, in this section, the hypothesis can be examined.

> ***Hypothesis 1:*** *Transformational Leadership has a direct effect on Technology Acceptance Model.*
> ***Hypothesis 2:*** *Transformational Leadership has an indirect effect on behavioral intention.*

As shown in Figure 4, one of the relationships discussed in the research model is the effect of Transformational Leadership on the Technology Acceptance Model. According to the outcomes, the significance level of this path (L -> T) is less than 0.05 ($P < 0.05$), so this path is significant and Leadership affects the Technology Acceptance Model. Also, the magnitude of this effect was 0.629, which shows that Leadership has a significant direct effect of 62.9% on the Technology Acceptance Model. In other words, Leadership is 39% effective in explaining the variance ($R^2 = 0.39$) in the Technology Acceptance Model. Therefore, based on the results, the hypothesis that transformational leadership could also influence behavior intention by affecting the Technology Acceptance Model is accepted.

6. Discussion and Conclusion

The objective of this research is to analyse the factors that affect international students's virtual communication's skills by applying the technology acceptance model at Miskolc University. To investigate the research Hypothesis about the impact of transformational leadership on TAM, the structural equation model with Smart PLS software by the partial least squares (PLS) method has been used. We considered various stages in our research: In the first stage, based on helping transformational leadership, we decided to develop the international students' personalities and self-awareness to better manage and cope with their acculturative stress and improve the students' communication skills at the University of Miskolc. In our opinion, without applying transformational leadership, we could not have been a success in these regards. We have already reached an interesting result concerning the role of leadership in improving personalities among the international students at the University of Miskolc. According to our results, individualized consideration and intellectual stimulation of the transformational leadership dimension have the highest impact on the PhD students than the other groups, while the idealized influence attribute and inspirational motivation have the highest impact in the Master's group. Furthermore, the results show that all of the transformational dimensions, rather than the idealized influence behavior, are more prevalent in women than in men. However, the significance level of the ANOVA test for all dimensions of transformational leadership is more than 5%, so it is assumed that gender and education do not affect leadership. In the second stage: after improving the communication skills, we were very interested in how transformational leadership could be effective in the technology acceptance model (TAM) and its dimension for improving virtual communication. The outcome was very interesting. For instance, transformational leadership has a significant direct effect of 62.9% on the technology acceptance model. In contrast, transformational leadership also has an indirect effect on behavioural intention. Overall, we can conclude that transformational leadership can play a role in influencing people's inclination to use technology.

7. Limitation

The findings of the present study carry significant limitations and suggestions that are relevant for future research. For example, we didn't consider the impact of Emotional Intelligence for improving and developing communication skills. Emotional intelligence, according to our understanding, is the ability and skill for recognizing, motivating, and managing our feelings with others in our relationships. Therefore, emotional intelligence is highly beneficial in the areas of education, work, and mental health. According to Preeti (2013, p.9), ''emotionally intelligent people are more likely to succeed in everything they undertake''. Teaching and encouraging emotional intelligence and social skills are very important in educational fields, which could affect academic achievement positively. Improving these skills and abilities has also had a long-term positive effect on achievement in our successful lives. In short, emotionally intelligent students would have better academic achievement and have better communication skills. Emotional intelligence became well known when Daniel Goleman (1995) argued that EI (also called EQ) has more value than IQ. While IQ reflects an ability in verbal, mathematical, or mechanical skills, memory is also improved, which could improve performance in an educational field very well. Goleman (1995) argued that an IQ score could not foresee a person's success and happiness in his/her life. A person's ability to use his/her emotions and identify others' emotions could better predict his/her mental and physical health in both personal and social life' success. Therefore, we recommend future researchers consider the impact of emotional intelligence on their studies. In our opinion, developing emotional intelligence could act as the main factor for successful relations, especially within cross-cultural organizations**.** On the other hand, the condition of COVID-19 didn't allow us to access more information and data at the University of Miskolc. Consequently, it could be better for future researchers to consider the time of their researchers as well.

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Bio-note

Somayeh Kariman is a *Ph.D. candidate* at the *University of Miskolc, Hungary*. Her doctoral research is focused on improving international students' communication skills and integration at the University of Miskolc, Hungary through the combination of leadership, the Hofstede model, and the technology acceptance model.

István Kunos is a member of the *Public Body of the Psychological Committee* of the *Hungarian Academy of Sciences, Head of the Department of Management Science* at the *University of Miskolc, Hungary*. The main streams of his research work are coaching, leadership psychology, and fields of applied psychology that can be connected to leadership science.

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IS THE FINANCIAL PERFORMANCE AFFECTED BY BOARD CHARACTERISTICS DURING COVID-19? EVIDENCE FROM THE ENERGY INDUSTRY

Pompei Mititean[*]
Accounting Doctoral School, Bucharest University of Economic Studies, Romania
mititeanpompei19@stud.ase.ro

Abstract: *This paper aims to examine the impact of board's characteristics on the financial performance of firms operating in the energy industry, during a certain and uncertain time. For this purpose, we chose four board's characteristics: duality of the CEO, size of the board, the board meetings and board's independence, which represent our independent variables. For measuring financial performance, we chose the Return of Assets (ROA) and Return of Equity (ROE) ratios. The data used was collected from Refinitiv Eikon database and includes a sample of 359 companies, for the period 2018-2021. The SPSS statistical program was used to run the regression model on the selected sample. This study provides mixed results on the impact on board's characteristics on the financial performance of companies operating in the energy industry. During certain time, CEO duality and board's meetings are negatively correlated with ROE, but positively correlated with ROA. The size and board's independence negatively affect the financial performance of companies for both ROA and ROE before and during COVID-19. This article contributes to previous studies conducted on the link between corporate governance and firm financial performance, showing mixed results. The results obtained may help management companies to carry out their corporate governance.*

Keywords: board characteristics, corporate governance, COVID-19, energy industry, financial performance

JEL classification: M41, G34.

1. Introduction

Over the last few years, there have been numerous debates on corporate governance matters and its relationship with company-related metrics, such as equity prices (Hamza and Mselmi, 2017), human resources management (Ibrahim and Zulkafli, 2016), earnings management (El Diri, 2020, Jessica, 2020), company value (Mendra et al., 2021; Jannah and Sartika, 2022), corporate social responsibility (Yahaya and Apochi, 2021) and financial performance (Shahwan et al. 2015; Paniagua et al., 2018; Yilmaz, 2018; Karem et al., 2021; Farhan et al., 2022). The link between corporate governance and corporate financial performance has been widely debated by scholars. This topic used different metrics for corporate governance such as board independence, board size, board gender diversity, CEO-chair duality, and for company financial performance Return on Assets (ROA) or Return on Equity (ROE), as Lungu et al. (2020) and Mititean and Constantinescu (2020) highlighted in their studies. Results obtained by the authors are mixed. Borlea et al. (2017) did not show any correlation between corporate governance characteristics and corporate performance. Conversely, Bhatt and Bhatt (2017) and Arora and Bodhanwala (2018)

[*] Corresponding author: Pompei MITITEAN
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identified that corporate performance is positively correlated to corporate governance mechanisms, while Detthamrong et al. (2017) found a negative correlation.
This study aims to investigate the possible correlations between board's characteristics, defined as CEO duality, board size, board meetings, and board independence, and financial performance, measured by return of assets and return of equity ratios.
Our sample consists of 359 companies operating in the energy sector, from 10 energy sub-sectors, during 2018 - 2021 period. The research method includes descriptive statistics, correlation matrix and linear regressions.
Furthermore, relying upon Khatib and Nour (2021) study, this study analysed the possible impact of board's characteristics on corporate financial performance before and during COVID-19 pandemic. The analysis period was divided into two-time frames: 2018 – 2019 and 2020 – 2021, the first representing the period before the coronavirus outbreak, while the latter the period under the pandemic.
This paper is organized as follows: first, a review of the recent literature on the research topic was conducted and then defined the research design and methods, variables, and data sample. The last part of the paper includes the results obtained and final conclusions reached.

2. Literature review and hypotheses development

Over time, the relationship between corporate governance and corporate performance has been examined by researchers both nationally and internationally. Caraiman (2020) studied the relationship between risk management and corporate governance, while Stanila (2019) analysed the impact of corporate governance on foreign direct investments in Romania. Shen and Chih (2007) studied the impact of corporate governance on earnings management. Bhagat and Bolton (2008), Borlea et al. (2017) and Arora and Bodhanwala (2018) studied the relationship between corporate governance and corporate performance. Many studies highlighted the idea that the board's chairman is a factor influencing corporate performance. Hsu et al. (2019) investigated the effects of CEO duality on corporate performance of Taiwanese companies, for the 2000-2012 period. Using the quantitative research method, the authors found that CEO duality has a negative impact on corporate performance when information costs are high. Guillet et al. (2013) examined the impact of CEO duality on corporate performance for companies in the US hospitality sector, for the 1992–2008 period. The results revealed that CEO duality helps restaurants improve their performance. Other authors such as Duru et al. (2016), Tang (2017), and Wijethilake and Ekanayake (2019) concluded that CEO duality has a negative impact on corporate performance. Following the review of the specialized literature, the first hypothesis is developed:

H1. Duality of the CEO has a positive impact on corporate financial performance.

The influence of the size of the board of directors on corporate performance was debated in the specialized literature. Boussenna (2020) studied the relationship between board size and financial performance for a sample of non-financial French companies, which were listed on the stock exchange, during 2005-2017. The author used ROA and ROE ratios as metrics for corporate performance, while the total number of board members was used for corporate governance. The results suggest that the size of the board has a positive effect on financial performance. Handriani and Robiyanto (2018), Badu and Appiah (2017), Alqatan et al. (2019) and Yilmaz (2018) identified that board's size influences significantly the financial performance of companies. The size of the board plays an important role in public companies in Northern Iraq and is crucial in increasing financial performance (Karem et al., 2021). In order with the previous literature presented, the second hypothesis is developed:

H2. The size of the board has a positive impact on corporate financial performance.

Vafeas (2019) explored the impact of board meetings frequency on corporate performance for a sample of 307 firms. The period under analysis was 1990-1994. The results indicated that the frequency of the board's meetings are inversely correlated with the companies' value. Hanh et al. (2018) study showed that the frequency of the board's meetings has a negative impact on corporate performance. At the opposite pole, the studies of Eluyela et al. (2018) and Idris and Ousama (2021) identified that board meetings have a positive impact on firm performance. Thus, the third hypothesis is developed:

H3. Board meetings have a positive impact on the corporate financial performance

Merendino and Melville (2019) studied the impact of the board of directors' structure on financial performance. The sample included 731 observations from Italian listed companies, during the period 2003-2015. The results showed that the percentage of independent directors out of the total number of directors has a positive effect on financial performance. The research of Kyere and Ausloos (2020) indicated that a statistically significant effect was found for ROA ratio while, in terms of Tobin's Q ratio, the independent board of directors has no effect on financial performance as it is statistically insignificant. Rashid (2018) and Shan (2019) argued that the board's structure has no positive impact on companies' financial performance, while the study of Uribe-Bohorquez et al. (2020) argued the contrary. Based on prior literature, our fourth hypothesis is developed in the following.

H4. Board independence has a positive impact on company financial performance.

3. Research method

This paper aims to examine the impact of corporate governance mechanisms on the performance of companies operating in the energy sector. Data for both corporate governance and corporate performance mechanisms were collected from Refinitiv Eikon database. Data collected cover the 2018-2021 period. The search initially generated data for 23.648 observations. Those companies were eliminated which present no data for the 2021 reporting period. The final sample consists of 359 companies operating globally and 11.488 observations, distributed in ten categories, as presented in Table 1 and Table 2. Moreover, 63% of the companies included in the sample operate in North America (227 companies per year), followed by companies from Europe (14,8% of total, 53 companies) and Asia (13,6% of total, 49 companies). Furthermore, 101 companies operate in the oil and gas exploration sector (28% of our sample).

Table 1: Sample structure based on headquarter and observation period

Year / Headquarter	2021	2020	2019	2018	Total	%
Africa	1	1	1	1	4	0,3%
Asia	49	49	49	49	196	13,6%
Central America	7	7	7	7	28	1,9%
Europe	53	53	53	53	212	14,8%
North America	227	227	227	227	908	63,2%
Oceania	7	7	7	7	28	1,9%
South America	15	15	15	15	60	4,2%
Total	359	359	359	359	1.436	100,0%

Source: Authors' own analysis

Table 2: Sample structure based on activity sector

Year / Energy Sector	2021	2020	2019	2018	Total	%
Coal	18	18	18	18	72	5,0%
Integrated Oil & Gas	17	17	17	17	68	4,7%
Oil & Gas Drilling	14	14	14	14	56	3,9%
Oil & Gas Exploration	101	101	101	101	404	28,1%
Oil & Gas Refining	71	71	71	71	284	19,8%
Oil & Gas Transportation	42	42	42	42	168	11,7%
Oil Related Services	59	59	59	59	236	16,4%
Renewable energy equipment	21	21	21	21	84	5,8%
Renewable fuels	7	7	7	7	28	1,9%
Uranium	9	9	9	9	36	2,5%
Total	359	359	359	359	1.436	100,0%

Source: Authors' own analysis

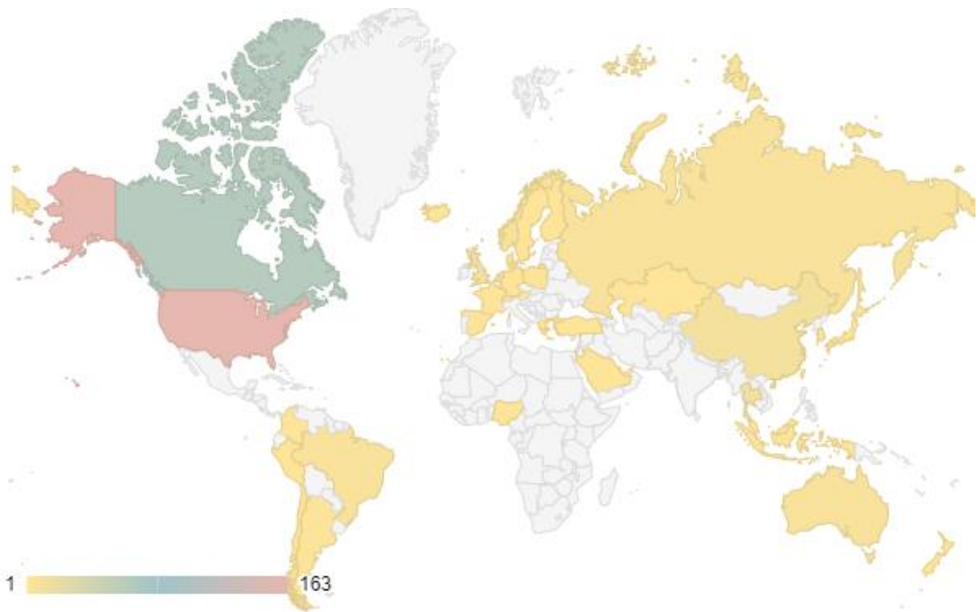

Figure 1: Geographic distribution of the sample based on headquarter
Source: Authors' own analysis

Financial Performance is defined as a dependent variable which will take subsequently the value of Return of Assets (ROA) and the value of Return of Equity (ROE) for which data was downloaded from Refinitiv Eikon. ROA is computed as the ratio between earnings before interest and taxes and total assets, while ROE is the ratio between profit after tax and total equity. These ratios were widely used by authors to measure financial performance: Bachmann et al. (2019); Ciftci et al. (2019); Wang et al. (2017); Detthamrong et al. (2017); Gaur et al. (2015); Koji et al. (2020) or Kyere and Ausloos (2020).
The independent variables are represented by the corporate governance mechanisms. As many other authors, Arora and Sharma (2016); Bachmann et al. (2019); Christensen et al. (2010); Wijethilake and Ekanayake (2019) and Kyere and Ausloos (2020), in this study four variables for corporate governance measurement were defined: CEO Duality (CEO), board size (BZ), board meetings (BM), and board independence (BI). CEO Duality expressed as a dummy variable equals 1 when CEO doubles as board chair and 0 otherwise. The size of the board is measured as the total number of board members. The board meetings variable is

expressed as the number of board meetings taken place every year. The board independence is calculated as the number of independent directors on the board divided by the total number of directors on the board. Furthermore, two control variables were defined: the firm size (FZ) and leverage (LV). These measures were also used by Kyere and Ausloos (2020); Mishra et al. (2021); Din et al. (2021) and Khatib and Nour (2021) in their studies. The firm size is calculated as a natural logarithm of the total assets, while the leverage is computed as a ratio between total debt and total assets.
To run the regression model, which was used by various scholars such as Ciftci et al. (2019), Wang et al. (2017), Detthamrong et al. (2017), Klç and Kuzey (2016) or Papangkorn et al. (2019), the SPSS statistical program was used. The equation model used to analyse the influence of corporate governance mechanisms on corporate financial performance is expressed as follows:

$$FP = \beta_0 + \beta_1 CEO_i + \beta_2 BZ_i + \beta_3 BM_i + \beta 4 BI_i + \beta_5 FZ_i + \beta_5 FZ_i + \xi_i$$

where:
FP = Firm performance is the dependent variable, which will subsequently take the value of ROA and ROE
CEOi = CEO duality (independent variable)
BZi = Board size (independent variable)
BMi = Board meetings (independent variable)
BIi = Board independence (independent variable)
FZi = Firm size (control variable)
LVi = Leverage (control variable)

4. Results and Discussion

In Table 3 a descriptive analysis was performed for the dependent and independent variables included in the study, as well as for the control variables. The mean value of the sample for ROA and ROE is 2,29% and 5,75%. The minimum size of the board for the companies from the Energy Sector is 1 while the maximum is 21 with a mean of 8.88. Furthermore, the maximum number of meetings per year is 66 with a minimum of 0 meetings and a mean of 9.60. The mean percentage of independent members of the board is 59.83, which means that almost 60% of the board members are independent with a minimum of 0 and a maximum of 100.00.

Table 3: Descriptive statistics of variables

Variables	N	Min	Max	Mean	SE	Skewness		Kurtosis	
						S	SE	S	SE
CEO	1.258	0	1	0.349	0.477	0.634	0.069	-1.600	0.138
BZ	1.257	1	21	8.881	2.691	0.789	0.069	1.586	0.138
BM	1.043	0	66	9.596	6.112	3.452	0.076	20.008	0.151
BI	1.436	0.00%	100.00%	0.598	0.311	-0.846	0.065	-0.598	0.129
ROA	896	-62.4%	68.4%	0.023	0.095	-0.671	0.082	10.834	0.163
ROE	1.032	-251.8%	264.1%	0.058	0.319	-0.079	0.076	20.278	0.152
FZ	1.434	16.28	27.08	21.949	1.807	0.149	0.065	0.026	0.129
LV	1.434	0.0%	219.9%	0.302	0.223	1.933	0.065	11.025	0.129

Notes: S – Statistic; SE - strd. Error
Source: Author`s computed

The Pearson (below) and Spearman (above) correlation matrix for all variables included in this study is presented in Table 4. CEO duality is negatively correlated with ROA and ROE at the level of 0.05 and 0.01. The size of the board is positively correlated with ROE and ROA at level 0.05. Furthermore, a strong positive correlation was found for board meetings with

ROA at the level of 0.01 and negatively correlated with ROE at the level 0.01. Board independence is negatively corelated with ROA and ROE at levels 0.05 and 0.01. As Shan (2015) and Wang et al. (2019) noticed in their articles, the multicollinearity potential issues were checked by performing the variance inflation factor (VIF) for both ROA and ROE, presented in Table 4. The authors noticed that if the de VIFs results are below 10, and the tolerance is greater than 0.1 then the multicollinearity does not exist. As presented below, in this study there are no multicollinearity issues.

Table 4: Pearson and Spearman correlation matrix

Variables	CEO	BZ	BM	BI	FZ	LV	ROA	ROE
CEO	1	0.077**	-0.192**	0.041	-0.007	-0.034	-0.008	-0.050
BZ	0.051	1	0.088**	-0.001	0.509**	0.051	0.041	0.068*
BM	-0.170**	0.074*	1	0.001	0.120**	0.027	0.081*	0.052
BI	0.104**	-.109**	-.116**	1	.079**	0.032	-0.073*	-.082**
ROA	-0.023	0.485**	0.082**	0.072**	1	0.265**	0.199**	0.228**
ROE	-0.005	0.016	-0.010	-0.025	0.148**	1	-0.122**	-0.030
FZ	0.007	0.036	0.030	-0.115**	0.180**	-.132**	1	0.880**
LV	-0.037	0.011	0.005	-0.098**	0.131**	-0.064*	0.657**	1
Tolerance	0.969	0.732	0.954	0.952	0.731	0.969	-	
VIF	1.032	1.366	1.048	1.050	1.368	1.032	-	
Tolerance	0.959	0.704	0.927	0.943	0.706	0.958		-
VIF	1.043	1.420	1.078	1.060	1.417	1.043		-

Notes. *. The correlation is significant at the 0.05 level (2-tailed). **. The correlation is significant at the 0.01 level (2-tailed).
Source: Authors computed

In Table 5 the results of the regression model for the period 2018-2021 is presented. The impact of corporate governance mechanisms on the financial performance of the firm was presented in Table 5. The duality of the CEO has a positive impact on ROA's ratio and a negative impact on ROE ratio, both being insignificant. These results are mixed, similarly with the results of the studies conducted by Wijethilake and Ekanayake (2019) or Merendino and Melville (2019).

Table 5: The Impact of Board Characteristics on ROA and ROE ratios

Variables	ROA		ROE	
	B	Sig.	B	Sig.
(Constant)	-29.210	0.000	-66.909	0.000
CEO	0.236	0.743	-2.035	0.361
BZ	-0.399	0.009	-0.654	0.170
BM	0.029	0.662	-0.157	0.398
BI	-0.036	0.035	-0.112	0.034
FZ	1.742	0.000	4.172	0.000
LV	-0.081	0.000	-0.243	0.000
F statistic	12.126		8.871	
Durbin-Waston	1.817		1.978	
Adjusted R-square	0.096		0.066	
ANOVA Sig	<.001[b]		<.001[b]	

Source: Author`s computed

Second, the size of the board has an insignificant negative impact on ROE ratio and a negative significant impact at level of 0.01 on ROA ratio. These results are contrary with the previous results of Khatib and Nour (2021) and Merendino and Melville (2019), who identified a positive impact of the board size on financial performance of the companies.

Third, mixed results for the number of board meetings were found. Board meetings have an insignificant negative impact on ROE ratio and an insignificant positive impact on ROA ratio. These results are contrary with the results of Idris and Ousama (2021) and in concordance with the study conducted by Hanh et al. (2018). Finally, a negative and significant impact of board independence on both ROA and ROE ratios was identifed. These results being similar to the results of Merendino and Melville (2019) and Kyere and Ausloos (2020).

Table 6: The Impact of Board Characteristics on ROA and ROE ratios-Year Subsample

Variables	ROA-NON-COVID		ROA – COVID		ROE-NON-COVID		ROE - COVID	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.
(Constant)	-19.145	0.001	-91.594	0.000	-40.973	0.031	-39.082	0.000
CEO	0.524	0.513	-3.273	0.340	-0.011	0.997	0.162	0.890
BZ	-0.482	0.005	-0.753	0.301	-0.594	0.320	-0.341	0.168
BM	0.110	0.294	-0.055	0.840	-0.077	0.760	0.054	0.546
BI	-0.032	0.110	-0.135	0.091	-0.077	0.253	-0.041	0.135
FZ	1.318	0.000	5.071	0.000	3.089	0.001	2.104	0.000
LV	-0.067	0.002	-0.113	0.204	-0.370	0.000	-0.078	0.008
F statistic	5.714		7.123		6.090		4.597	
Durbin-Waston	1.908		1.823		1.839		2.057	
Adjusted R-square	0.079		0.093		0.077		0.052	
ANOVA Sig	<.001[b]		<.001[b]		<.001[b]		<.001[b]	

Source: Authors computed

Table 6 presents an additional analysis of thesample, which refers to the impact of board characteristics on firm financial performance before and during COVID-19. The duality of CEOs and board meetings during uncertain times has a negative impact on ROA ratio and a positive impact on ROE ratio, both insignificant. During a certain time, the effect is inverse. This study found no differences on the impact of board size and board independence on financial performance of the companies from the Energy Industry, before and after COVID-19.

5. Conclusions

The purpose of this study is to analyse the impact of CEO duality, board size, board meetings, and board independence on the company's financial performance measured by ROA and ROE ratios using SPSS software and performing a linear regression analysis. Furthermore, an additional analysis was conducted to find if any differences exist on the impact of board characteristics on financial performance of companies before and during the COVID-19 period.

The results obtained in this study are mixed. The results for the first hypothesis are supported in proportion of 50%, CEO's duality is negatively associated with ROE ratio while with ROA ratio is positively associated. The same results were established for the third hypothesis of the study, referring to the impact of board meetings on the financial performance of companies. The second and fourth hypotheses, which reffer to the impact of board size and board independence on company financial performance, are rejected. The results show a negative impact for both board size and board independence on ROA and ROE ratios.

Analyzing the impact of CEOs duality, board size, board meetings, and board independence on ROA and ROE ratios before and during COVID-19 outbreak, mixed results were founded. An inverse relationship was identified for CEO duality and board meetings with ROE and ROA ratios. Before Covid-19 outbreak, CEO duality and board meetings were positively

associated with ROA ratio and negatively associated with ROE ratio while during COVID-19 outback the effects are inversely. The size and independence of the board have a negative impact on the financial performance of companies prior to and after COVID-19 outbreak.
This study may play an important role for the shareholders of the companies or other related parties by helping them to see whether they will invest in the companies from energy industry or not. This study contributes to the literature by offering new insights on the link between corporate governance and firm performance.
This study has some limitations. First, few data were founded for the energy industry, and secondly, the numbers of characteristics included in this study are restricted to the board characteristics and one industry. Future research may be extended to more corporate governance mechanisms such as: the percentage of women on the board or the independence of the audit committee and more firm financial performance measurements such as sales return or Tobin's Q ratio. The future studies may include more control variables such as firm size measured as the total number of employees or others.

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Bio-note

Pompei Mititean, is a *PhD student* at Accounting Doctoral School, Bucharest University of Economic Studies, Romania. As a PhD student, *Pompei Mititean,* focused on corporate governance and its relationship with performance of the companies. He published several papers in prestigious international journals and participated in numerous international conferences presenting the results of these studies.

THE EFFECT OF CAPITAL STRUCTURE ON EARNINGS PER SHARE OF PUBLICLY TRADED COMPANIES: A REVIEW OF RELATED LITERATURE

Stephanie M Chondough*
Faculty of Economics and Business, Károly Ihrig Doctoral School of Management and Business, The University of Debrecen, Debrecen, Hungary.
cherrysteph78@yahoo.com

Abstract: *The purpose of this article is to conduct a review of related works on the relationship between capital structure and earnings per share of publicly traded companies to determine the nature of the relationship that exists between the two variables. A desk survey was employed to review related works. A summary of the methodology, findings and conclusions are presented to determine the extent to which the main question of the review is answered. The result revealed that there is a dearth of research on the effects of earnings per share on the capital structure of listed companies and vice versa, especially in Europe and America. The review also identified a unidirectional approach to the methodology of the reviewed works. There are divergent findings on the relationship that exists between earnings per share and capital structure which calls for more studies to be conducted to determine the behavior of these variables more clearly.*

Keywords: earnings per share (EPS), capital structure, performance.

JEL classification: M41, N20.

1. Background

Over the years, the discussion around earnings per share (EPS) and the capital structure of quoted firms have been an interesting discussion that has been widely debated by scholars and managers saddled with the responsibility of making corporate financial decisions. Capital structure is the way a company balances the financing of its assets by combining equity, debt or hybrid securities. It was defined first by “Modigliani and Miller as the mix between debt and equity” a company utilizes in its operations (Modigliani and Miller, 1958). “A company's capital structure refers to the combination of debt and equity” that it has to fund its assets to increase its overall value (Mand and Singh, 2015). In practice, this combination ranges from simple to very complex and may include various sources.
Traditionally, debt has been preferred over equity since the cost of debt is usually considered lower than the cost of equity. However, it is believed also that debt is useful up to a certain limit after which it becomes too costly to use the debt mix to finance assets. There exists an optimum level of capital structure to a point where an increase in debt will improve profitability. Beyond that, it will reduce the profitability of a firm. As interest is paid out of the profits before tax, it provides a shield against tax burden, thereby improving profits available to equity shareholders. Although leverage does not change the total earnings of the firm, it does maximize the returns available to equity shareholders. On the other hand, excessively electing to use the debt option to finance the assets of a firm increases the financial risk of the firm and makes the cost of debt increasingly more expensive. The optimal capital

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structure is a mix of debt and equity in which the benefit of debt outweighs the cost of debt (Gupta, 2015).

One of the measures of values is Earnings Per Share which is succinctly captured under IAS 33- Earnings Per Share. “According to the International Accounting Standard (IAS) 33: Earnings per share, an entity that trades equity instruments on public markets is required to disclose EPS as part of its financial statements” (IFRS, 2014). EPS is a measure that allocates the earnings of a corporation with each of its ordinary shares (Vaidya, 2014). It measures a corporation's performance in relation to the share capital utilized to create such returns, and hence serves as an indicator of profitability (Koppeschaar, et al., 2013). It is stated that EPS is key in making investment decisions because it can be used to assess risk and corporate performance. As a result, EPS is a measure of shareholder wealth, and as EPS grows, so does the value of the share (Mkhonza, 2012).

One of the earliest works that attempted to examine the nexus between capital structure and a firm’s performance was in 1945 by Chudson who explored the possible connection between the capital structure of a firm with its performance. However, since then, the debate as to whether a firm's capital structure influences its performance, especially earnings per share (EPS) has been debated and so far, there seem to be divergent conclusions on this topic. Fatoki and Olweny, (2017) attributed the divergent and inclusive opinions on methodology, choice of variables used, period of study and the data utilized.

Earlier researchers like Durand (1959) and Solomon (1963) concluded that capital structure influences earnings per share. Whereas, Miller and Modigliani (MM theory) (1958) proposed the net operating income approach, concluding that a firm's capital structure is immaterial in a perfect market. It posits the irrelevance of capital structure in a perfect market to its worth. Thus, the way a company is financed does not have any consequence on its earnings per share. Merton and Modigliani's assertions serve as the foundation for modern capital structure thought, as it is often regarded as a purely theoretical finding because it is founded on the assumptions of perfect market scenario that do not exist in the business world. In order words, the theory is based on impractical assumptions. So, the theory is seen by many as a mere academic exercise that does not have application in the real world of business. The Miller and Modigliani proposition was based on very restrictive assumptions that were subsequently modified in 1963 (Nassar, 2016).

Irrespective of the above argument, the discussion around capital structure gained prominence, interest and controversy, since the MM theory asserts that a firm’s value does not depend on its capital structure. The hypothesis proposed by MM resonated in corporate finance academia. Subsequently, different theories such as Jensen and Meckling’s (1976) agency cost theory was proposed. The agency cost theory discussed the conflict between managers and shareholders on one hand and debtors and shareholders on another hand. Since then, numerous scholars have examined diverse components of capital structure to assess their impact on a firm's performance using various performance proxies such as net profit, return on assets, earnings per share, and return on equity, among others.

The question of whether capital structure affects the earnings per share of a firm, or it is affected by a firm’s earnings per share is a crucial one. And more importantly, the question of whether the relationship between capital structure and earnings per share is a two-way relationship is more crucial. On one hand, whether a firm’s earnings per share is a key determinant of the capital structure, or the changes in capital structure affect underlying earnings per share remains a very valid question that needs answers.

Another major defect in the available literature is that most studies were conducted using a unidirectional approach in which decisions regarding capital structure influence a firm's EPS without taking into consideration the likelihood of a reverse causal relationship between the variables (Yinusa, et al., 2016). Due to these gaps, it is considered imperative to review the literature on this topic to determine whether researchers have adequately attempted to use

earnings per share as a proxy of financial performance on capital structure from the postulation of a reverse causality hypothesis.
This study adopts a desk survey using related materials from Google Scholar and Scopus. 30 papers were selected for the review based on their relevance. Most previous studies employed ROA and ROE as proxies for firm performance. However, this study seeks to review related literature on the effect of capital structure on EPS, therefore, only studies that captured EPS were selected. The methodology used and a summary of the findings would be presented. Any noted limitations would be presented. Finally, the researcher would decide as to whether the research has answered the identified gap or not.

2. Empirical Review of related literature

Much research has been conducted on the relationship between capital structure and earnings per share. However, it remains to be seen if this relationship is a two-way relationship or not.

2.1. Findings from Europe

In Romania, (Moscu, 2014) analyzed the correlation between capital structure and profitability of 53 companies listed in Romania. He measured profitability by using EPS among other profitability measures. Using multiple regression, the variables demonstrated a strong positive relationship with capital structure.
In another part of Europe, (Vuong, Vu and Mitra, 2017) investigated the impact of capital structure on the financial performance of listed UK firms for the period 2006-2015. The investigation measured data from 739 UK listed companies on London Stock Exchange using four performance variables, namely, “return on equity - ROE, return on assets - ROA, Tobin's Q and earnings per share - EPS as dependent variables”. The result showed a negative relationship between capital structure and earnings per share. In another effort, Norvaišienė and Stankevičienė, (2012) investigated the relationship between capital structure and performance of Lithuania's food and beverage companies from 2005-2010. They employed “return on capital (ROC), return on equity (ROE), return on assets (ROA), earnings per share (EPS), operating margin and net profit margin” as indicators of performance. Using correlation coefficients, the result returned a negative relationship between EPS and the other indicators on capital structure. While these results are in agreement with Miller and Modigliani theorem, the authors did not test the reverse causality relationship between the two variables.

2.2. Findings from Asia

Mand and Singh (2015) measured the impact of capital structure on the earnings per share of Indian companies using 15 control variables. Panel data regression was used to establish the connection between the dependent and the independent variables. They found that capital structure has a statistically insignificant relationship with EPS in all sectors except telecommunications. Saleem and Naseem (2013), Utami and Hidayah (2017) also concluded in their research that no relationship exists between the two variables. Similarly, Siddik et al., (2017) measured the relationship between capital structure and performance of banks in Bangladesh using panel data of 22 banks for the period 2005-2014. Using ROE and EPS as proxies for bank performance, the result of the pooled OLS revealed that capital structure inversely affects bank performance. Also, Nassar (2016), investigated the effect of capital structure on the financial performance of 136 companies listed on the Istanbul Stock Exchange (ISE) using return on assets (ROA), return on equity (ROE) and earnings per share (EPS) as proxies for firm performance and debt ratio (DR) as a proxy for capital structure. Using multivariate regression analysis, the result showed that there is a negative significant relationship between capital structure and firm performance. These three findings are consistent with Miller and Modigliani's proposition of 1958. It is unclear from both findings whether the firms were of similar sizes or not. Therefore, it is not clear if smaller-sized or bigger-sized firms would have different results. Again, the two studies only measured the effect of capital structure on EPS. The reverse effect was not considered. This again brings to mind the research gap.

In similar findings from above, Das (2017) investigated the relationship between capital structure and earnings per share of automobile companies in India. He investigated six companies using OLS regression analysis and Time Dummies and OLS regression analysis without using Time Dummies. The result showed capital structure has little or no effect on earnings per share. One major limitation of the research is the sample size which is just six. Whether a valid conclusion can be derived from this small sample remains to be seen. The question of authenticity also arose given the short period covered by the investigation – 2012 to 2016. Also**,** Gupta (2015), conducted an empirical study of the relationship between capital structure and profitability of foreign promoters in India. He applied correlation and multiple regression in SPSS and the findings indicated a positive relationship between EPS and profitability. However, further analysis indicated a negative relationship between capital structure and ROA, ROE and EPS. The research measured a one-way relationship between the variables. The reverse causality relationship was not measured. Similarly, in Bangladesh**,** Hossain, (2019) studied the relationship between capital structure and a firm's financial performance in a developing country. While the result showed a positive relationship between capital structure and equity, that of EPS returned a negative relationship. This finding is in consistent with other researchers, who also found a negative relationship Tifow and Sayilir 2015; Salim and Yadev 2012; Sivathaasan and Rathika 2013; Kalpana 2014; Rahman et al. 2019; San and Heng 2011).

Basit and Hassan (2017) used a survey of 250 enterprises registered on the Karachi Stock Exchange to investigate the impact of capital structure on a firm's performance (KSE). The findings revealed a positive association between EPS, ROE, and ROA using descriptive statistics, person correlation coefficient, and multiple linear regression. Similarly, Mujahid and Akhtar (2014), Chowdhury et al, 2010, Goyal (2013), Chandrakumarmangalam and Govindasamy (2010), Saeedi and Mahmoodi (2011), all found a positive relationship between the two variables.

2.3. Findings from Africa

In contrast to Miller and Modigliani's debt irrelevance theorem of 1958 and modified in 1963, Efuntade et al., (2019) examined how capital structure has affected the earnings per share of listed companies in Nigeria. Using multiple regression analysis (OLS), they tested the relationship between the dependent and independent variables using debt as a proxy for capital structure and EPS as a proxy for performance. They concluded that a well-configured capital structure management plays a key role in a firm's performance. Another research conducted in Ghana by Anafo, Amponteng and Yin, (2015) returned a similar result. Solomon et al. measured the impact of capital structure on the profitability of banks listed on the Ghana Stock Exchange from 2007 to 2013. They used EPS, ROA and ROE as indicators of performance. The statistical tool of analysis was descriptive statistics and multiple regression models. The result revealed a significant relationship between capital structure and earnings per share and other performance ratios such as ROA and ROE. However, not mentioning the causality test is a clear indication that a cause-effect relationship was not tested. Therefore, we cannot establish if capital structure influences EPS or not. Similarly, Akintoye et al. 2019 also found a significant effect between the variables studied.

In a contrasting finding in East Africa, Marobhe and es Salaam-Tanzania (2014) investigated the influence of capital structure on manufacturing firms in East Africa. He applied panel secondary data of 12 manufacturing companies for the period 2005-2012 using multiple regression. The result showed an insignificant relationship between capital structure and earnings per share.

2.4. Reverse Causality Findings

In a reverse causality analysis, Fatoki and Olweny (2017) researched the effect of earnings per share on the capital structure of 87 companies in Nigeria using a causal research design. The result showed a significant relationship between share price and the capital structure of a firm at all levels. While this research is a significant shift from the norm, it does not test the relationships two-way. Similarly, Chen and Chou (2015), investigated the effects of EPS on capital structure in a rare reverse causality analysis in China. The result showed that EPS fluctuations affect the capital structure in a rather negative way. And that these fluctuations persist for at least a decade.

Table 1: Review Summary

Author/ Publication year	**Region/ Country**	**Sample Size**	**Period**	**Method**	**Findings**
	Europe				
(Moscu, 2014)	Romania	53	Nil	multiple regression	positive Relationship
Vuong, et al. (2017)	United Kingdom	739	2006-2015	Panel Data	No Relationship
Norvaišienė, R. and Stankevičienė, (2012)	Lithuania	Nil	2005-2010	multi-correlation	Negative Relationship
	Asia				
Mand and Singh (2015)	India	Nil	2001-2010	Panel data regression	No Relationship
Saleem & Naseem (2013)	Pakistan	8	2004-2009	ANOVA; t-test. Correlation analysis	No Relationship
Salim, M., & Yadav, R. (2012)	Malaysia	237	1995-2011	Panel data regression	negative relationship
Saeedi and Mahmoodi (2011)	Iran	320	2002-2009	Panel data regression	Significant positive Relationship
Utami, & Hidayah (2017)	Indonesia	Nil	2011-2016	Multiple correlation regression	No relationship negative impact
Siddik et al. (2017)	Bangladesh	22	2005-2014	panel data; pooled OLS	Negative Impact
Nassar (2016)	Turkey	136	2005-2012	multivariate regression analysis	Negative relationship
Sivathaasan and Rathika, (2013)	Sri Lanka	10	2006-2010	Correlation and regression	Negative relationship
Kalpana (2014)	India	3	2003-2012	Correlation	Negative correlation
Rahman et al. 2019	Bangladesh	50	2013-2017	Regression analysis	Significant negative
Das (2017)	India	6	2012-2016	OLS regression analysis Time Dummies	No effect

Gupta (2015)	India	45	2008-2012	Correlation descriptive statistics multiple regression	Negative relationship
Hossain et al. (2019)	Bangladesh	Nil	2013-2017	panel data descriptive statistics pooled OLS	negative relationship
Tifow and Sayilir (2015)	Turkey	130	2008-2013	panel data	negative relationship
Basit, A., & Hassan (2017)	Pakistan	250	2010-2014	person correlation descriptive statistics linear regression	positive relationship
Chowdhury and Chowdhury (2010).	Bangladesh	77	1994-2003	fixed effect model; descriptive statistics; time series	Positive relationship
Mujahid and Akhtar (2014)	Pakistan	155	2006-2011	regression analysis	Positive relationship
Goyal (2013)	India	Nil	2008-2012	regression analysis	Positive relationship
San and Heng (2011).	Malaysia	49	2005-2008	Regression Model	Significant relationship
Chen and Chou (2015)	China	Nil	1965-2012	Regression	Negative Effect
Chandrakumarmangalam & Govindasamy (2010)	India	7	1997-2007	Regression	significant impact
	Africa				
Efuntade et al. (2019)	Nigeria	6	2010-2017	multiple regression analysis	Positive Relationship
Anafo et al. (2015)	Ghana	17	2007-2013	multiple regression descriptive statistics	significant relationship
Marobhe and es Salaam-Tanzania (2014)	East Africa	12	2005-2012	multiple regression	insignificant relationship
Fatoki and Olweny (2017)	Nigeria	87	1999-2015	OLS model GMM model	significant relationship
Rufus I. Akintoye et al. (2019)	Nigeria	20	2008-2014	Descriptive statistics, linear regressions	Negative effect

Source: Own systematization

3. Conclusions

Capital structure and firm performance has been debated over the years. However, the focus has always been on other performance indicators such as, return on assets, return on

equity and other measures of performance. Thus, empirical evidence on EPS is limited which pose a gap that needs to be covered.
Another finding of the research is the unidirectional approach authors typically adopted in their efforts to investigate the relationship between capital structure and earnings per share. Investigations centered almost one hundred percent on the effect of capital structure on earnings per share. A few slim deviations measured the relationship between the two variables. Most of those relationships returned a negative correlation between the variable. Others found a positive relationship between capital structure and earnings per share while a few others found no relationship. However, they did not conduct any causality test. As a result, there were no conclusions on cause-effect relationships between the variables. Also, a few researchers investigated the effect of earnings per share on capital structure. However, no author conducted two-way research to ascertain the effect of the variables on each other. This gap calls for more research to be conducted to enable us to determine the behavior of these variables more clearly.

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Bio-Note

Chondough Stephanie M. is a PhD student at the *University of Debrecen, Faculty of Economics and Business, Károly Ihrig Doctoral School of Management and Business, Debrecen, Hungary*. Chondough's research focuses on social responsibility, sustainability and corporate financial performance in both large corporations and as well as small and medium sized enterprises. I published a couple of papers and participated in conferences presenting the results of these studies.

THE IMPACT OF COVID-19 PANDEMIC ON THE MARKETING OF THE PERFORMING ARTS

Ulziibadrakh Zoljargal *
Institute of Marketing and Commerce, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary
ulziibadrakh.zoljargal@econ.unideb.hu

Abstract: *The spread of the Covid-19 pandemic has impacted all firms and organizations around the world, and this issue has not escaped the attention of arts, particularly performing arts organizations. Last few decades, performing arts audiences were shrinking due to economic, social, and technological changes, moreover, Covid-19 has been influenced strongly over the last two years. Therefore, it is crucial to understand and provide an extensive view of the market situation, the role of marketing, and the consequences of Covid-19 in the arts specifically in the field of performing arts. This paper aims to explore the impact of the Covid-19 pandemic on performing arts organizations, more focusing on marketing circumstances during the pandemic period, and identifying research gaps. This paper systematically reviews a total of 88 publications from Scopus and Web of Science databases and analyzed them using a descriptive analysis method and VOSviewer. The findings of this study highlight five main themes from the data analysis to demonstrate the substantial and influential results including the number of publications by year, country, and journals in order to understand the market situation. Moreover, the study disclosed keyword co-occurrences and found a new challenging and influential impact of digital transformation on performing arts due to the Covid-19 crisis. Finally, the paper provides a conclusion and a future research agenda.*

Keywords: Arts, Performing arts, Marketing, Covid-19, Pandemic.

JEL classification: I18, L82, M31, Z11.

1. Introduction

On 30 January 2020, The World Health Organization (WHO) declared COVID-19 as an outbreak of Public Health Emergency of International Concern, and then on 11 March 2020, WHO declared it as a pandemic globally. Since the declaration of a pandemic, local governments started to make closures for non-crucial businesses, industries, and suspensions for social and other activities. As a result, cultural and arts institutions had to cancel, postpone, or re-design their events, moreover closed their doors and faced new and additional challenges as other business and industrial sectors.
In general, art provides aesthetic and psychological needs for people, which is a necessity of human life. Attending cultural events is a crucial predictor, which determines a human’s quality of life and supports human wellbeing (Baranowski, Korczak and Zając, 2020). One of the main achievements of cultural events is to allow audiences to be more active and socialized (Kochoska and Petrovski, 2015). Also, Kużelewska and Tomaszuk (2020) stated that cultural activities are inseparable from human life and rights, it requires a security mechanism within the framework of international (including local) legal systems. However,

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the lockdown period changed the way of art consumption, and additionally cultural and arts organizations faced difficulties to run their activities. During the shutdown period, online attendance of arts and cultural activities is seen as an escapist therapy to isolation (Tajtáková, Žák and Filo, 2019). Arts, especially performing arts is a unique type of arts sector due to their special characteristics. In the performing arts, production and consumption processes happen at the same time, where artists and audiences are together with feelings like a religious ceremony (Duffett, 2012). These live performances can be recorded and delivered both online or offline, although the benefits of live performances such as socializing and being away from the atmosphere do not occur. The Covid-19 epidemic has transformed the ways of seeing and experiencing the performing arts (O’Grady, 2020), and most importantly the role of arts and culture has been extensively acknowledged in terms of education and entertainment sectors during economic downturns. Performing arts organizations have been restricted in their in-door activities since the beginning of the pandemic, and as a result, numerous operational modifications have occurred.

At present, performing arts organizations are still in a fluctuating situation, the role of marketing is changing, and the functions are still uncertain in the long run. Therefore, this paper aims to systematically review the literature on the impact of the Covid-19 crisis on the performing arts, examine how the role of marketing of performing arts organizations changed during the pandemic period, and identify research gaps. This paper is structured as an introduction, theoretical background, research methodology, findings, and results from the research analysis. The result section highlighted the current marketing transformation in the field of performing arts followed by a conclusion and future agenda.

2. Theoretical background

This section provides a theoretical framework of performing arts marketing as well as the marketing of performing arts during the period of the Covid-19 pandemic, in order to support the systematic literature review background that demonstrates the difference in the role of marketing of performing arts before and after the pandemic.

2.1. Marketing of performing arts

In a general sense, the concept of marketing was introduced to the non-profit art sectors in the 1970s (Lee, 2005). Arts marketing is defined as an integrated management concept and a satisfying interchanging relationship between audiences and the organizations. The role of arts marketing is not only the task of attracting spectators to the performances, concerts, and shows but also the necessity to identify and promote the value and objectives of the organizations to wider audiences (Hill, O’Sullivan and O’Sullivan, 2003). As stated by researchers, a key distinction between commercial and art marketing is that the commercial marketing controls the character of a product or service by adapting it to the needs of the customers, whereas the role of arts marketing is interfacing the artist’s inventions with acceptable audiences due to the specific nature of the cultural goods (Mokwa, Dawson and Prieve, 1980). Arts marketing developed in the 1990s, during this time the role of marketing became more associated and new marketing methods were analyzed (Lee, 2005). Then, during the 2000s, there was significant growth in the number of papers, articles, books, educational programs, scientific conferences, and research works on this subject (Evrard and Colbert, 2000).

The art covers many types of categories such as visual arts, graphic arts, literature, and architecture, and also one of the crucial branches of the art is performing arts including music, dance, opera, and theatre. The number of performing arts organizations, their audiences, and their contributions have increased significantly from the middle of the 1960s until the middle of the 1980s. However, in the last few decades, the market for performing

arts is declining and shrinking due to the economic, technological, social, and plenty amount of leisure activities. Therefore, performing arts organizations faced an issue to understand the social, economic, and most importantly the marketing affairs to resolve the problems (Scheff and Kotler, 1996). The reason for introducing marketing concepts into the performing arts organizations was to understand the nature of the services and products, to communicate with their audiences, to increase the number of audiences, to create a value for their consumers, and support the organization's goals. The application of performing arts marketing differs from standard commercial marketing because it focuses on selling artistic products and performances instead of creating a product based on consumers' needs and wants (Kerrigan, Fraser and Ozbilgin, 2016). The marketing tactics of performing arts aim to foster more relationships between the audiences and main services namely performances and shows (Bouder-Pailler, 1999). A researcher Ruth Rentschler (2002) divided performing arts marketing into three stages based on her research including a foundation period focused on audience studies, (1975-1984), a professionalization period focused on marketing implications and marketing mix (1985-1994), and a discovery period focused on a comprehensive approach to marketing strategy (1995-2000). Even the marketing has been applied recently to performing arts organizations, marketers are still working hard to improve and develop the most profitable marketing approaches for the performing arts.
As mentioned previously, the audiences of performing arts organizations were shrinking due to the economic and social changes, and plenty amount of leisure time activities even before the Covid-19 crisis. Furthermore, due to the decreased private support and public spending, performing arts organizations have been going through serious challenging times (Tubillejas-Andrés, Cervera-Taulet and García, 2020) and falling over hundreds of years (Wilson and Goldfarb, 2015). Since the last century, a small number of people have participated in the performances, the quality of art forms has been threatened, and the younger generation has not been able to perform the arts at the cultural and economic levels (Askegaard, 1999).

2.2. Marketing of performing arts during the Covid-19 crisis

In addition to the traditional challenges of performing arts organizations, the Covid-19 pandemic made pressure on performing arts organizations to rethink their production methods, directions, and approaches to survive in business (Terracini, 2020). Therefore, the traditional challenges and the Covid-19 both impacted seriously on the art and cultural sectors especially in the performing arts in a wide-angle view, and the sector was hit hard by the pandemic (Julia and Brady, 2020). All organizations were forced to ban physical access to the buildings and the processes during the pandemic, one of them was arts organizations, which resulted in more challenges and difficulties for the art market such as full lockdowns, income losses, and job insecurity for artists and employees, travel restrictions (Banks and O'Connor, 2020), event postpones and cancellations, and government or private support delays (Daley, 2021). Furthermore, the government put immediate limitations on travel and event gatherings amid the Covid-19 crisis.
Cultural participation is a significant factor in a human's quality of time (Baranowski, Korczak and Zając, 2020). However, during the pandemic period, people spent their time with their families, and most of the outdoor leisure activities were consumed tremendously like running, hiking, and biking. In this moment of global crisis, art consumption is frequently put aside from utilization. To ensure artistic consumption, cultural organizations shifted their activities to hybrid adapting to the pandemic regulations. One possible option to run their activities was online access, which could help people to boost their mental health, ease isolation, and meet their cultural and educational needs (Samaroudi, Echavarria and Perry, 2020).
An essential consequence of the pandemic for performing arts is the gigantic growth in the use of technologies and learning (Baicu, et al., 2020). Digital and technological media are

important tools of marketing communication for arts organizations to attract new audiences and build a loyal relationship with their existing audiences. Performing arts organizations also were adjusting their marketing strategies with digital and social media to connect with their audiences, provide an intensive experience, and advertise their activities. During the long-term pandemic period, those performing arts organizations faced changing their activities totally to a digital turn. According to a research, technological services used less by older and low-income people (Cruz-Cárdenas, et al., 2019). Whereas, most of the consumers of performing arts organizations segmented as the highest part of the society such as middle-aged, educated, and well-paid, therefore it was an advantage to reach out to their audiences effortlessly, and to plan sufficient digital marketing strategies. On the one hand, it was an advantage for performing arts organizations to organize online events because it made huge possibilities to watch their performances from all around the world, and also helped to boost the reputation and favorable image of the art world in the network sufficiently (Pashkus, Pashkus and Koltsova, 2021).

3. Methodology

The Covid-19 pandemic has impacted strongly the arts industry, as a result, the art market has changed tremendously worldwide. It is critical to understand and provide a comprehensive view of the market condition, the role of marketing, and the effects of Covid-19 in the arts, particularly in the sphere of the performing arts. To assure reliable and valid results for the research, this research adopts a systematic literature review approach. Differing from a traditional literature review, a systematic literature review adopts a scientific, transparent, and replicable process. This leads to an evolving collaborative insight based on a theoretical synthesis of existing works (Cook, et al., 1997).

To discover sufficient literature, the search is conducted within the academic literature including Scopus and Web of Science databases, as they are considered the largest, most popular, and multidisciplinary scientific online databases. For this systematic search, the following keyword search terms are used: “Arts” AND “Marketing” AND “Covid*”. All search results are included until the 12th of January in 2022. These statistics can be utilized to demonstrate the huge changes in the performing arts during the pandemic period from a marketing point of view.

The selection criteria of this research are based on the PRISMA statement (Moher, et al., 2009). The research principally focused on existing literature mapping the impact of the Covid-19 pandemic on marketing in the field of arts and then narrowed it down to the specific field of performing arts. The results from the initial search are cultivated into three stages as follows: initial identification, screening criteria, and final clarification. In the first stage, 7 research resulted in Scopus, and 165 research resulted in Web of Science, including articles, review articles, early accesses, proceedings papers, editorial materials, conference papers, and a book chapter. For filtering, a total of 44 results are excluded in this stage due to their research areas. Overall, 128 results are exported with full records to the Excel file for further analysis. In the second stage, to preserve the quality of the review, all duplications are checked carefully. First, research abstracts were screened thoroughly, and then a careful evaluation of the full papers was examined to determine the relevance for further analysis. 40 results were excluded due to their research areas, document types, and languages and a total of 88 results have transferred to RIS, CSV, and Tab-delimited formats for further analysis. In the final stage, 6 results were from Scopus and 82 results from Web of Science, then overall 88 results were analyzed using a descriptive analysis method, and the VOSviewer program. All the literature inclusion and exclusion criteria at every stage are shown in Figure 1.

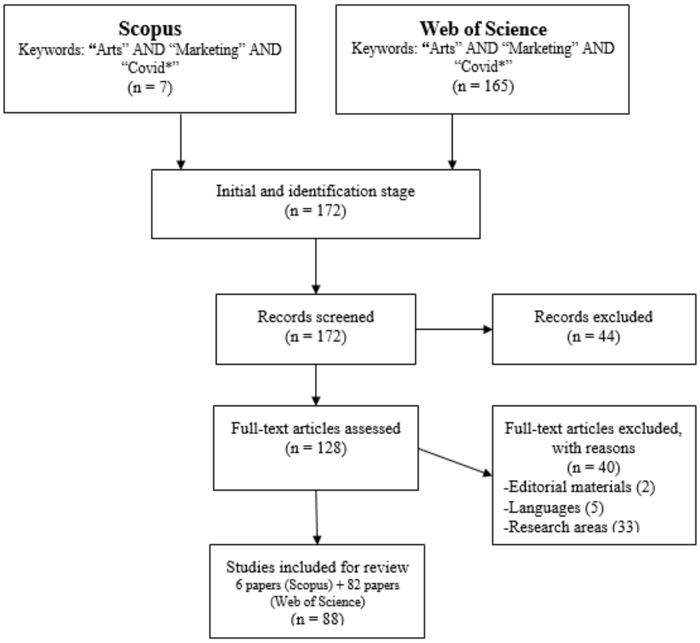

Figure 1: A flow diagram based on PRISMA statement: summary of systematic search and review process
Source: Author's processing based on own data (2022)

4. Results

The results of this systematic literature review disclose the important findings of the research. The author chose the following results from the VOSviewer analysis to demonstrate the significant changes in the field including categorization of the years, countries, journals, co-occurrence of the keywords, and the most crucial finding is the digital transformation of marketing in the field of performing arts during the Covid-19 pandemic period.

4.1. The outline of the year

During the Covid-19 pandemic period, a total of 88 publications have found on Scopus and Web of Science databases in this area. 11 of all publications have published in 2020. Whereas, the number of publications increased rapidly in 2021 accounting for 77 of 88 publications, which is a dominant resource of the publications in this systematic review overall. Each company, organization, and industry are challenged to reassess their strategies due to the impact of Covid-19 throughout the world, one of them is performing arts organizations. The pandemic period is still going on, and we are not going back to normal life easily. Therefore, the number of publications seems to increase in the upcoming years more focusing on how to make sufficient strategies and to adapt them in this transformation period, likewise how to pass this challenging period without any loss.

4.2. The outline of the country

Figure 2 reports the outline of the countries analyzed in this paper. The majority of the papers are published in Australia (purple), followed by England (blue), India (yellow), the USA (green), Canada (purple), some of the European countries, and China (purple). Most of the works connected each other in one way or another in terms of countries, and the high number of works published in developed countries as is customary. It suggested that there are more research works needed for the market of performing arts from other developed and developing countries.

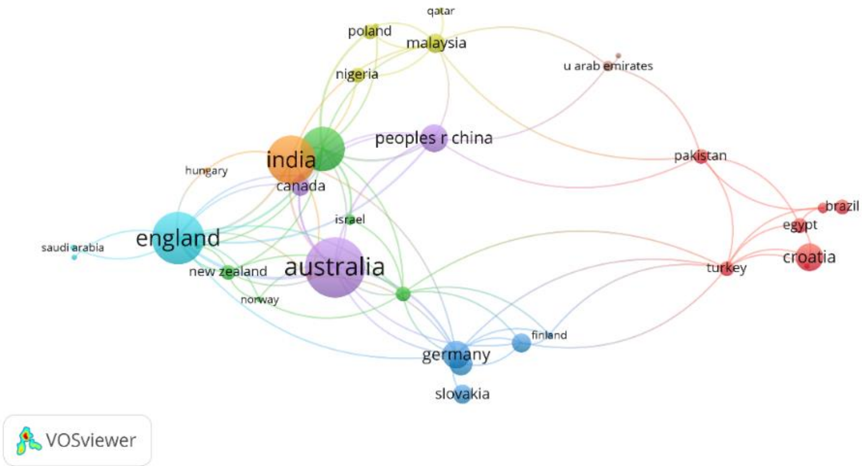

Figure 2. The number of publications by country (network visualization)
Source: Author's analysis based on own data (2022)

4.3. The outline of the journal

This research study included a wide range of journals, which applies to many different research fields. A total number of publications were published in 65 scientific journals, and the most published journals are shown in Figure 3. Colors of the figure range from blue, green, and yellow. A high number of items and weights is indicated by a yellow color, and reversely, the low number of items and weights is indicated by blue color. The below figure demonstrates that the highest 5 journals are Arts, Interdisciplinary management, Contemporary economics, Cogent Arts & Humanities, and Marketing identity: COVID-2.0. A top journal is Arts, with a total number of 9 papers altogether. The publications in those journals mainly referred to the impact of Covid-19 on the role of marketing in performing arts organizations from different perspectives.

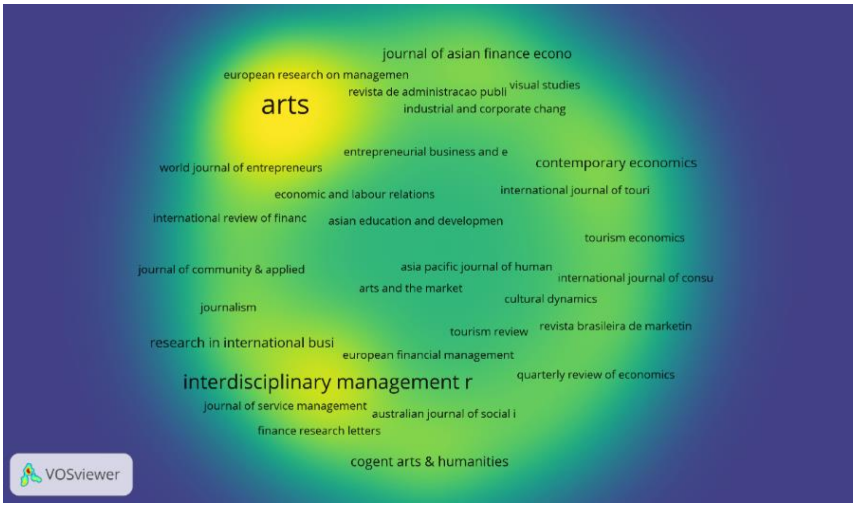

Figure 3. The number of publications by journals (density visualization)
Source: Author's analysis based on own data (2022)

4.4. The outline of the co-occurrence

A co-occurrence map reveals the total number of occurrences of a keyword in all documents, and deliberate the publication hotspots in the discipline zones. Figure 4 revealed the relation between keywords of the publications studied in this paper. Every keyword is clustered into colors, the highest number of keyword occurrences represented by a bigger circle frame, and generally, all clusters are strongly connected to each other. A shorter distance between clusters reveals a strong relation, and inversely a longer distance between clusters shows a weak relation between them. From the 88 publications, the VOSviewer revealed 560 keywords totally, and the most relevant clusters were Covid-19*, digital transformation, art* market, impacts, arts marketing, marketing, and determinants.

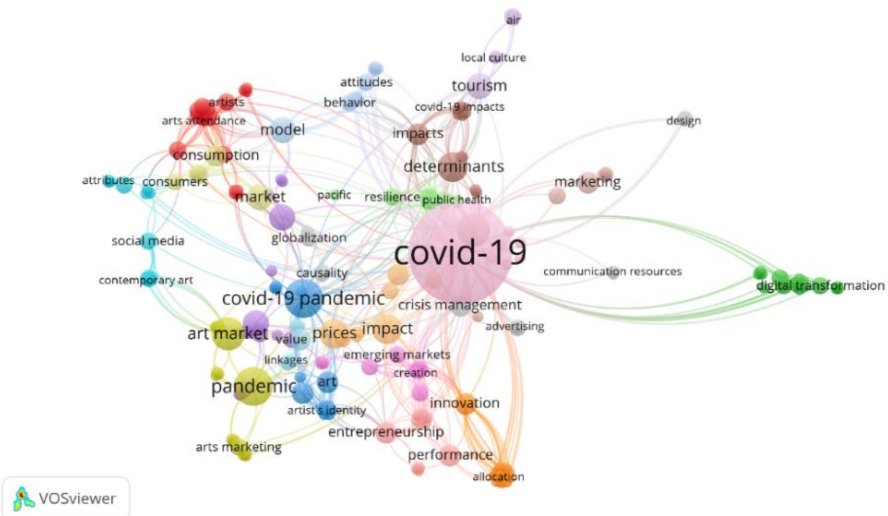

Figure 4. Co-occurrence map of keywords (network visualization)
Source: Author's analysis based on own data (2022)

The first big cluster was Covid-19 (pink), which indicated a powerful keyword factor of all publications. Other clusters connected with a short distance beside a digital transformation (green). As mentioned above, a long-distance connection indicates a weak relation with other indicators or clusters. Figure 4 reports that a digital transformation cluster is a new concept and only associated with the Covid-19* cluster firmly, therefore which assume that a digital transformation item has aroused due to the impact of the Covid-19*.

4.5. Digital transformation
Digital platforms, social media, and online payments are supporting arts organizations to be creative and innovative (Holliman and Rowley, 2014). Mostly, arts organizations create digital content such as videos, podcasts, and ad-funded content, and upload them to a website, web pages, and other platforms. Digital contents also include e-books, whitepapers, podcasts, blog or vlog posts, videos, and everything that audiences expect from digital platforms (Halvorson, Rach and Cancilla, 2012). Due to the consequence of the Covid-19 pandemic, cultural and arts organizations shifted their activities to digital platforms more strongly ever than before. Generally, digital channels provide new business opportunities, transactions, and purchases at a distance, communication, and networking all through the world for the art market (Samdanis, 2016). Since the beginning of the epidemic, consumption patterns have vanished such as public, indoor, and physical, and while on the contrary other consumption patterns have risen fiercely, they are slighter influenced by social distancing such as virtual or digital, open-access, and home (Radermecker, 2020). Cultural and arts organizations were trying to adjust digital innovations and transformations in their activities responding to this demand including online live events, virtual exhibitions or sales, free open access to materials, videos, 3D concerts, and so on. Even before the pandemic, these digital innovations made a huge profit for some platforms such as Spotify, Netflix, Amazon, and contrarily theatres and museums had to change their business models and strategies promptly to this challenge by increasing their digital and online access, availability, visibility, and creating new contents (Borowiecki and Navarrete, 2017).
Due to the Covid-19 crisis, arts attendance and funding have decreased significantly in the long-term, however, on the other side, it impelled the arts organizations to do online transformation totally (Bell, 2021). During this lockdown period, cultural and arts organizations created new online content and modified their existing materials (Szedmák, 2021). Also, audiences had only one option to choose online cultural content all over the world during the lockdown period, and these kinds of online activities helped audiences to decrease the feeling of isolation, upgrade their mental health, and reinforce the educational and creative needs of various audiences. During a pandemic period especially at the beginning of 2020, the number of online audiences has increased significantly, and millions of people changed their everyday lifestyles such as work, education, and social activities to digital and online platforms to meet the requirement for social distancing (Samaroudi, Echavarria and Perry, 2020). Moreover, artists started to explore ways to reach their audiences online and distributed their ongoing projects and existing artworks on social platforms (Banks and Connor, 2020). However, it was sorrowful for musicians to play in an empty theatre to connect with their audiences online (Keen, 2020), and on the other hand, it was a new challenge for artists to transform their experiences into a digital universe.

5. Conclusion
The Covid-19 pandemic has impacted hugely on everyone’s life, moreover strongly on business, industrial companies, and non-profit organizations. One of them was cultural and arts organizations and these organizations needed to change their strategies and operations during this period. In the field of performing arts, the Covid-19 has brought many changes, challenges, and consequences. Therefore, it was necessary to study how to surmount this pandemic period, identify further directions, and how to adapt those challenges to their future organizational goals and strategies. Based on these reasons, this study attempted to

understand the impact of the Covid-19 on the marketing of the field of performing arts and revealed significant findings which can be a valuable contribution to arts and performing arts organizations. In this paper, a total of 88 publications were analyzed systematically. The number of publications has increased rapidly in 2021 compared with 2020. Those works have been published mostly in Australia, the USA, Canada, and England, and in the future, there are more research works necessary for the market of performing arts from other developed and developing countries. A substantial finding during the Covid-19 period in the performing arts sector was a digital turn and transformation. Performing arts is a service organization, where audiences get physical experiences of attending their performances. Therefore, it was challenging to transform their strategies and activities into digital platforms. In the upcoming years, it is obvious that firms and organizations will continue their activities and functions more actively on digital platforms. Therefore, this paper provides future recommendations for firms and organizations on using and incorporating digital and social media mainly in their processes. Moreover, digital marketing is expected to expand its dimensions wider in the field of arts organizations. Future research is suggested to fill the gap of how performing arts organizations changed their business and marketing strategies, and how to implement those strategies and their functions into the big transformations and changes aroused by the impact of Covid-19.
Due to the pandemic, the art market is changing tremendously and this topic has still remained understudied. The main limitations of this systematic literature review are research methods, disciplines, and territories; thus, it is suggested for future studies focus on collecting primary and secondary data to examine the market and marketing changes and difficulties during the pandemic period in other arts disciplines at a global level extensively.

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Bio-note

Zoljargal Ulziibadrakh is a *Ph.D. student* of *Károly Ihrig Doctoral School of Management and Business, Faculty of Economics and Business, the University of Debrecen in Hungary*, and doing *her* research in the field of arts marketing specifically in the field of classical music. The main aim of the research is to define the role of marketing in those fields and combine marketing and art for better results and contribute to the art development of Mongolia, specifically to the development of classical music. *She* has published valuable articles and attended scientific conferences to make a significant contribution to her research field.