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RESEARCH ARTICLE

Corporate Governance and Banks' Capital Adequacy in Gambia: The Moderating Impact of Politics

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Abstract

Bank failures and banking crises create fears and anxieties in various stakeholders; and some of remote causes of bank failures across the globe are weak/poor corporate governance structures and practices, credit risk; government recapitalization regulation; corruption and embezzlement of banks' assets; and weak legal/regulatory and political institutions. Undercapitalization is a symptom of banks' capital inadequacy to withstand financial shock. Anchored on stakeholder-institutional theory; and secondary data, and general linear model, this study investigated the moderating impact of politics on the relationship between board effectiveness, management efficiency and capital adequacy of Gambia's banking sector while controlling for financial leverage. The studied established that: the interaction of political stability and board effectiveness in risk management has significant negative effect on banks' capital adequacy in Gambia; the interaction of political stability and management efficiency in profit maximization has significant positive effect on banks' capital adequacy in Gambia; financial leverage has significant positive effect on banks' capital adequacy in Gambia; board effectiveness in risk management has significant positive effect on banks' capital adequacy in Gambia; and management efficiency in profit maximization has significant negative effect on banks' capital adequacy in Gambia. The relevance of the joint stakeholder-institutional theory was established in this study. The work recommends that all political stakeholders in Gambia should strive to stabilize the country's political system, and that the board of directors of banks in Gambia should ensure that their management teams apply prudent and best banking practices in declaring profit. This is because a positive profit should increase the capital adequacy of banks in a normal situation.

Keywords: Board effectiveness; capital adequacy; leverage; management efficiency; politics

Introduction

Background to the Study

Institutional scholars are in agreement that country institutions do matter in firm performance as well as in their ability to raise capital for their operations (Osei-Attakora, 2022; Wahua, 2017). The only divergent opinion is that the impact of national institutional variables on firms' operations and volume of capital is not generally positive across countries. This is because of the quality and level of development of the different national

institutions. Some are well developed and established while others are at the developing stage. The ability of banks to raise adequate capital has been linked to strong institutional factors like political, legal and financial systems (Oima & Ojwang, 2013). The interrelationships between and among different national and firm specific internal corporate governance variables have resulted to different similar and dissimilar findings across the globe. In specific terms, Corporate governance as measured by board effectiveness and management efficiency have different nature of effects on banks' capital adequacy: while board effectiveness mostly have negative impact on

banks' capital adequacy, board efficiency mostly have positive impact on banks' capital adequacy (Bakin, Acikalin, Aktas & Celik, 2015; Shaddady & Moore, 2015; Irawan & Anggono, 2015). Banks create money by granting credit facilities. The effectiveness of the Board of Directors curtails credit stock; and this reduces interest incomes and related income charges of banks. Management Teams of banks are charged with the primary responsibility of profit maximization; and this is achieved by granting loans and earning interest income and related charges (Shaddady & Moore, 2015; Workneh, 2014). Operationally (and as it is meant to be), boards of directors and management teams of banks seemingly work in divergent directions: one protects the assets and liabilities of the shareholders (Board) while the other aggressively aims at increasing multiple stakeholders' returns (management team).

Banking crises lead to catastrophic problems to employees, communities, depositors, borrowers, investors, governments, shareholders, and numerous other stakeholders in varying degrees. Bank failures and banking crises create "fears, anxieties, and loss of productivity" (Wahua, 2017; p. 5) to various stakeholders locally and internationally. Salient factors have been identified as the immediate and remote causes of bank failures across the globe; and they include: weak and poor corporate governance structures and practices (Afolabi, 2018; Debrah, 2018; Safo, 2018); credit risk or bad loans or non-performing loans (Afolabi, 2018; Cucinelli, 2015; Nyavor, 2017); government recapitalization regulation (Frimpong, 2018); corruption and embezzlement of banks' assets (Boadi, 2018); and weak legal/regulatory and political institutions (Wahua, 2017). Undercapitalization is a symptom of banks' capital inadequacy to withstand financial shock. This particular problem pervades the entire banking landscape (including the Gambia). The collapse and increasing financial

scandals in many businesses have raised great concern regarding the compliance of businesses with corporate governance principles and codes of best practices. Investors lack confidence in many African banks due to their perceived poor corporate governance compliance rate; as such, majority of banks across developing economies like Gambia are having undercapitalization difficulties. It is therefore critical to investigate corporate governance in an emerging country's banking sector using Gambia as a case study. Gambia makes a good case study for this study because it has history of political instability and sit-tight political leadership syndrome in West African sub-region.

This aim of this quantitative-empirical study is to establish the moderating effect of politics on the relationship between corporate governance and capital adequacy in Gambia. In specific terms, the study investigates: (1) the direct effects of politics, board effectiveness, management efficiency, and financial leverage on capital adequacy of Gambia's banking sector; (ii) the moderating impact of politics on the relationship between board effectiveness and capital adequacy of Gambia's banking sector; and (iii) the relationship between management efficiency and capital adequacy of Gambia's banking sector. The results of the study would be useful to banks across the globe, prospective investors, academics and other researchers, governments, and other stakeholders. This study would adopt a parametric-empirical approach based on secondary data analysis techniques. It is a pure quantitative research which is aimed at statistically testing the relevance of the aforementioned variables in determining capital adequacy in the Gambia from 2001 – 2020 (20 years). These data were accessed from different international agencies (World Bank Group and International Monetary Fund) in order to avoid the use of manipulated data from Gambia's national institutions.

Literature

Conceptual Framework

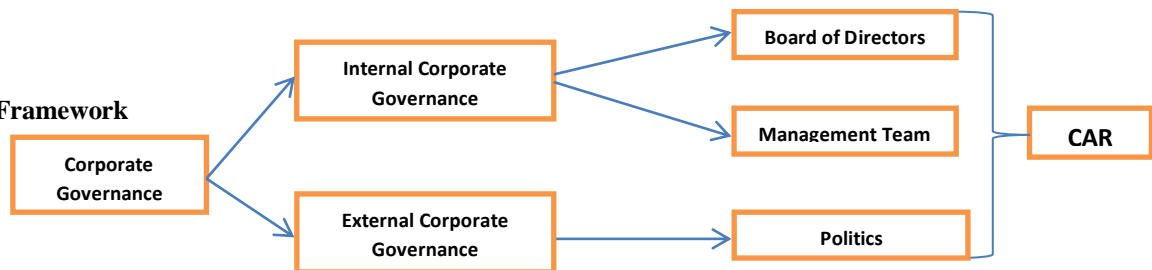


Figure 1: Diagram of the research's conceptual framework. Source: Authors (2023)

The crux of corporate governance in the corporate world is to ensure that businesses are ran in accordance with laid down soft and hard laws which are aimed at protecting the interests of shareholders as well as those of other fiduciary and non-fiduciary stakeholders (Agustina, Winarno & Dyan, 2021). The concepts guiding this study are depicted in Figure 1. Discussion around the role of firm (internal) corporate governance and country-wise (external) corporate governance structures in determining corporate performance in general and banks' capital adequacy in particular has been raging since the seminal work of Doidge, Karolyib and Stulz (2007) which stated that country-wise corporate governance account for 39 - 73% of corporate governance than firm internal corporate governance structure that account for 4 - 22% of firm performance. Hugill and Siegel (2014) believe that firm internal corporate governance dynamics are as important as country-wise factors and even more important in some cases (in determining the performance of firms). In this study, the interplay between internal and external corporate governance dimensions takes a critical and empirical approach which is aimed at testing the moderating effects of politics, in the relationship between internal corporate governance elements (board effectiveness, and management efficiency) and banks' ability to raise adequate capital in the Gambia, one of the English speaking countries in the Economic Community of West African States (ECOWAS).

Ejuvbekpokpo and Esuiké (2013), Skeel (2014), and Valsan (2014) strongly believe that both internal and external corporate governance elements serve common purpose in strengthening the governance, performance, and sustainability of firms for the common good of all stakeholders. As such, there is need for internal and external corporate actors to act in unison for the good of firms and their numerous stakeholders. Ejuvbekpokpo and Esuiké (2013) specifically asserted that effective and efficient corporate governance framework call for a robust and strong political will from politicians to make corporate laws that will promote strong legal systems that will enforce corporate governance best practices.

Political Stability

The Gambia (a unitary state) operates a presidential republican multi-party democratic framework with a unicameral parliamentary system. The President of the Gambia serves as the Head of State, Head of government,

and Commander-in-Chief of the Armed Forces of the country (Sawe, 2017). A unicameral legislature implies a one chamber parliament unlike the American presidential political system with two chambers parliament (The Senate as the Upper Chamber, and the House of Representatives as the lower Chamber). A Draft constitution of the Republic makes provision for a two terms limit of five years each.

The political economic theory holds that capital fly to safer climes from corrupt political systems. This is because corrupt politics breeds violence and destructions on investments and productivity (UNCTAD, 2018). The ability of home and foreign investors to buy the equity of banks is a function of political stability in the country; as such, Abotsi (2016) believes that at high level of political quality, corruption extends beyond paying bribes to win contracts, obtaining official permits, and avoiding unnecessary bureaucratic delays to situations where there is malfunctioning of general political framework of a country. When this (general breakdown of national political system) happens, anarchy sets in; and the economy becomes too risky for investment. This leads to capital flight to safer heavens. Therefore, banks' ability to raise adequate capital is directly affected by the quality of the country's political system (Lambsdorff, Taube & Schramm, 2018). Citing Roe (1994), Wahua (2015; p. 59) asserts that:

“Political power and country politics influence virtually everything in a country: banking, commerce, financial system, economics, ownership, control, regulation etcetera. As such, political power and political system can make or mar the fabrics of a country if they are judged good or bad”.

Osei-Attakora (2021) argued that the cardinal basis for measuring the impact of politics on business in general and banks in particular is how corrupt the political system is. A corrupt political system affects businesses negatively while a non-corrupt political system has positive impact on businesses in general. Bad politics breeds corrupt tendencies while good politics does not breed corrupt tendencies.

Board of Directors' Effectiveness

The fundamental objective of boards of directors is to protect the assets and liabilities of firms; and this is done through effective oversight function in risk management (Bakin, Acikalin, Aktas & Celik, 2015). The shareholders (the real owners of firms) appoint directors to primarily protect their interest by effectively protecting the assets and liabilities of the firm. The boards of directors are to monitor and checkmate the activities of the management in order to ensure that shareholders have value for their investments (capital appreciation, and periodic receipt of increased dividends). Many contemporary works that studied board effectiveness and capital adequacy reveal that board effectiveness does not only have a significant relationship with banks' capital adequacy; but, that it do have a significant effect on it (although this significant effect could be positive or negative depending on the board's modus operandi, vision, and mission). Such recent authors include Irawan and Anggono (2015), Shaddady and Moore (2015), and Workneh (2014).

Management Teams' Efficiency

The efficiency of management team is primarily measured with profit maximization. Managers (as operators) must show their stewardship by increasing the overall worth of the firm. Management efficiency has significant effect on capital adequacy banks has being supported; and this is supported by scholars such as Al-Tamimi and Obeidat (2013); Aspal and Nazneen (2014); Bakin, Acikalin, Aktas and Celik (2015); Irawan and Anggono (2015). One notable exception is Workneh (2014) which empirical showed a contrary view that management efficiency does not necessarily translate to any significant effect on capital adequacy of firm.

Capital Adequacy

Banks increase their capital base deliberately and via regulatory policy (as was recently witnessed in Nigeria and Ghana). In 2011, the Bank for International Settlements set a 25% minimum benchmark for shareholders' commitment to their total assets. In an empirical study carried out by Wahua in 2017, it was established that banks in Africa and Asia do not meet the 25% benchmark for shareholders' commitment to total capital. The study concluded by adding that debt accounts for circa 91% of capital of banks in Afro-Asian countries.

This is an abysmal situation as the practical implication is that African and Asian banks fall short of 25% minimum equity holding by about 16%. The consequences of poor capitalization of banks include under-performance due to high revenue payout as interest on debts, poor corporate governance mechanism (as management engages in sharp managerial practices to sustain their banks); and early liquidation of banks (as an inevitable occurrence).

Theoretical Framework: Stakeholder-Institution Theory

This study rests on stakeholder-institutional theory, which is a blend of two corporate governance theories: stakeholder theory, and institutional theory. Wahua (2017), Essen, Strike, Carney and Sapp (2015), Hugill and Siegel (2014), and Hennisz, Dorobantu, and Nartey (2014) agree with the unification of stakeholder and institutional theories in one study. The Organisation of Economic Cooperation and Development (2014) strongly opined that: (i) Companies should respect the rights of stakeholders established by law or through mutual agreements; (ii) Stakeholders whose interests are protected by law should have adequate opportunities to obtain effective remedies where their rights have been violated; (iii) Performance-enhancing mechanisms for employee should be put in place their participation and development; (iv) Stakeholders who participate in the corporate governance process should have access to relevant, sufficient and reliable information on a timely basis; (v) Stakeholders should be able to freely communicate their concerns about illegal or unethical practices to the board of directors without risk that their rights will be compromised for doing so; and (vi) Corporate governance framework should be complemented by effective enforcement of creditor rights as well as an effective insolvency framework.

Citing Riley (2012), Wahua (2017) stated that business stakeholders have interests in businesses as well as powers and influence on the operations of businesses; and this could be illustrated thus: (i) Shareholders' main interests in businesses are Profit growth, Share price growth, dividends; their main power and influence lie in the election of board of directors; (ii) The main interests of Banks and other Lenders are the interest and principal to be repaid by firms as well as the maintaining of credit rating while their primary power and influence are the enforcement of loan covenants and the withdraw banking facilities granted to businesses; (iii) Business directors

and managers are keenly interested in gaining salary, share options, job satisfaction, and status while their main powers and influences lie on making decisions and having detailed information in order to avoid the problems which are related to information asymmetry; (iv) The employees of businesses are mainly interested in earning salaries and wages, job security, and job satisfaction and motivation while their primary powers and influences are staff turnover (resigning from jobs as at when needed), industrial action (to register their displeasure to perceived bad working condition), and the provision of quality service quality; (v) The main interests of business Suppliers are the securing of long term contracts, prompt payment for goods and serviced provided, growth of purchasing power in the operations of the business. Conversely, their main powers and influences rational pricing of goods and services provided, rendering of quality services and provision of quality products, and ensuring product availability; (vi) The Customers of businesses are mostly interested in receiving reliable quality for goods and services, value for money, product availability, and prompt and responsible customer service. The main powers and influence of the customer to businesses are the boosting of the sales revenue of businesses by way of repeat purchases, and promotion of the products and services of the business via word of mouth recommendations to third parties; (vii) The host community as a business stakeholder is mainly interested in the protection of the environment, provision of local jobs for unemployed members of the host community, local impact on the host community by way of corporate social responsibility. Host communities' powers and influences on business operations is indirect via local planning and opinion leaders' molding of public opinion for or against the company; and (viii) Governments' are mainly interested in ensuring that businesses operate legally, pay corporate taxes promptly, and create jobs for unemployed and underemployed persons. Wahua, Kwode and Chukwuma (2022) observed that stakeholders are at the heart of businesses, and that stakeholder synergy is critical for businesses' success stories.

Empirical Review

Kakar, Ali, Bilal, Tahira, Tahir, Bahadar, Bukhari, Ullah and Aziz (2021) examined the impacts of corporate governance (CG) and risk management on the performance and capital adequacy of banks that operated in Pakistan between the years 2010 - 2015. This

quantitative study anchored on agency theory; made use of secondary data extracted from annual reports of sampled banks; and analysed data using the ordinary least square (OLS) multiple regression analysis. Risk management was measured with value at risk (VAR) and bank performance was measured with dummy variables. The study established that: (i) corporate governance has significant negative effect on risk management (measured with value at risk); and (2) corporate governance has significant positive effect on capital adequacy of banks. This implies that improved corporate governance effectiveness significantly increases capital adequacy of commercial banks while laxity in corporate governance decreases banks' capital adequacy. This study goes to call for improved corporate governance architecture in order to reduce non-performing loans of banks (a measure of board effectiveness) as well as increase their capital adequacy. Technically, when banks' loans are performing, they earn higher interest incomes which go to increase their capital base via increased retained earnings. The work of Agustina, Winarno and Dyan (2021) studied the impact of good corporate governance (CG) on capital adequacy ratio (CAR) of banks in Indonesia using agency theory. The study made use of secondary data from Federal Reserve Bank of Indonesia from 2015 to 2019; and the OLS multiple regressions was used. Only listed banks were studied. The major variables used in the study are non-performing loans (a measure of board effectiveness), return on assets (a measure of management efficiency, and capital adequacy ratio (CAR). The work established that board effectiveness (NPL) and management efficiency (ROA) have no significant impact on bank CAR. Agustina, Winarno and Dyan (2021) agree with Jamil and Qureshi (2020), and disagree with Okoye, Evbuomwan, Achugamonu and Araghan (2016). The impacts of board effectiveness and management efficiency would be tested in this study at country level. The authors recommend that there is need to include the impact of institutional variables on future studies. Wijaya, Sulisty and Roziq (2021) evaluated the impacts of corporate governance (CG) and capital adequacy ratio (CAR) on profitability and financing risk of sharia banks based on multiple theoretical models. This is a quantitative research with secondary data from Federal Reserve Bank of Indonesia from 2015- 2019. Partial least square (PLS) model of data analysis was used. The study established that corporate governance (CG) and capital adequacy ratio (CAR) affect financing risk as well as profitability. This is a new dimension in the study of

corporate governance and capital adequacy of banks as corporate governance and capital adequacy (independent variables) are linked to financing risk and profitability (dependent variables). This is somewhat connected to the research carried out by Okoye, Evbuomwan, Achugamonu and Araghan (2016). Finally, the study suggest that further research on the theme should consider the following observations: need for larger sample size and the incorporation of return on assets (ROA) and non-performing loan (NPL) as the proxies of corporate governance performance. This study measured board effectiveness and management efficiency with non-performing loans and returns on assets respectively. The reason for this is that the overall function of board of director in the operation of deposit taking banks across the globe is to protect banks' assets and liabilities while that of the management team is profit maximization (Wahua, 2017).

Jamil and Qureshi (2020) investigated the association between the corporate governance (CG), profitability and capitalization of banks in Pakistan using agency theoretical underpin. This quantitative research made use of secondary data from annual reports of listed banks in Pakistan for the period 2006- 2018. The ordinary least square (OLS) multiple regression was used. The three dimensions of the study are corporate governance (measured by shareholder interest, board size, CEO compensation), management efficiency (measured by profitability), and bank capitalisation (measured by capital adequacy ratio). The study established that board effectiveness (measured by NPL) and management efficiency (measured by ROA) have no significant impact on banks' capital adequacy ratio (CAR). The proposed study would also run the interaction effects of internal corporate governance and politics on capital adequacy of Gambia's banking sector.

Wahua (2017) carried out an empirical cross-country comparative study on the role of corporate governance and institutional structures on banks' capital adequacy ratio (CAR) with the moderating effects of legal systems. The study covered the period 1998 – 2014 with aggregate secondary data from banking sectors of five countries out of the eight developing countries of D-8. These five countries are: Egypt, Malaysia, Nigeria, Pakistan, and Turkey. This stakeholder theory based work used both ordinary least square and hierarchical regression models to test the hypotheses developed in the research. Corporate governance (CG) has two proxies (board effectiveness and management efficiency); the institutions

covered are politics, law, finance; leverage was the control variable; and capital adequacy ratio (CAR) was the dependent variable. Corporate governance and institutional variables were the independent variables. The critical findings of the work are: (i) corrupt political systems have negative effects on banks' CAR; (ii) legal and financial systems have different effects on banks' CAR; (iii) board effectiveness and management efficiency have different effects on banks' CAR; (iv) strong legal systems significantly moderated the effects of corporate governance on banks' CAR; and (v) the interaction of legal systems and board effectiveness has positive effects on banks' CAR. The study recommends that there is need to replicate the study in other economic and non-economic groups in order to validate its findings. The recommendation of this study forms the corner stone of this study.

Okoye, Evbuomwan, Achugamonu and Araghan (2016) investigated the impact of CG on the profitability of Nigerian banking sector. This quantitative research made use of secondary data. The ordinary least square regression (OLS) analytical technique was used. The prime findings of the study are: (i) capital adequacy ratio (CAR) has significant negative impact on profitability; and (ii) non-performing loan (NPL) has significant positive effect on profitability while inflation (a control variable) has no significant effect on profitability. This study by Okoye, Evbuomwan, Achugamonu and Araghan (2016) is a reverse of the direction of this particular study. It measures the impact of capital adequacy ratio on profitability and the impact of non-performing loan in profitability. While capital adequacy ratio served as an independent variable in Okoye et al (2016), it serves as a dependent variable in the proposed research. Second, while profitability served as a dependent variable in Okoye et al (2016), it serves as an independent variable in this study by serving as a proxy of management overall efficiency. The authors desire that there is need to include the impact of institutional variables on future studies. Institutional variables are integral parts of institutional theory. The salient institutional variables for this proposed study is the political system in the Gambia.

Pindado, Queiroz and Torre (2015) investigated the moderating impacts of country-level corporate governance indicators (such as legal systems, financial systems,) on market valuation using data from 12 countries: Austria, Belgium, France, Germany, Greece, Ireland, Italy, Spain, the Netherlands, the United States, the United Kingdom, and Japan (these are American and

European countries). The study established that Legal protection and financial support have significant positive effects in moderating the relationship between corporate governance (as measured by ownership structure and independence of the board of directors) and market valuation. This study did not factor-in the effectiveness of the board as well as the efficiency of the management team (despite the fact that the board and the management are at the nucleus of firm corporate governance). Again, all the studied countries are developed economies; it did not consider emerging or undeveloped economies. There is need to carry out a similar study using the Gambia's banking sector as case study.

Majocchi, Dalla Valle and D'Angelo (2015) investigated the influence of firm and country corporate governance factors on the performance of 403 Italian manufacturing firms. This parametric research established that countries' corporate governance factors (political stability, economic performance and financial stability) have significant effect on Italian manufacturing firms' financial performance (they are particularly affected by

institutional features in general and political risk in particular). It is the suggestion of the work that there is need for further researches to incorporate other countries for comparability purpose since it was based on a single economy. This study is an attempt to hearken to that call; and the Gambia is a good fit as its banking sector is understudied.

Methods

Research Design and Model

This is a parametric-empirical study based on descriptive research design approach. Osei-Attakora (2022) states that parametric quantitative studies ensure that normality assumption is met; investigations like cause and effects, associations, and relationships are carried out; and positivism researches are executed for the prime purpose of developing new knowledge. This work is anchored on the following statistical model:

$$CAR = \alpha + \beta Pol + \beta Bod + \beta Mgt + \beta(Pol * Bod) + \beta(Pol * Mgt) + \beta Lev + ei$$

Where:

CAR	=	Capital adequacy of banks in the Gambia
Pol	=	Gambia' political system
Bod	=	Board effectiveness of banks in the Gambia
Mgt	=	Management efficiency of banks in the Gambia
Pol * Bod	=	Interaction of politics and board effectiveness
Pol * Mgt	=	Interaction of politics and management efficiency
Lev	=	Financial leverage of Gambia's banking system
α	=	Constant factor or intercept
β	=	Coefficients of each variable
e	=	Error terms

Population and Sampling Procedures

The population of this study includes all the commercial banks that operated in The Gambia, within 2001 – 2020 (20 years). According to the Central Bank of the Gambia (banking supervision; n.d.), there are 12 commercial banks in the country. These banks are: Access Bank (Gambia) Ltd, Arab Gambia Islamic Bank, Banque Sahelo-Saherienne Pour L'Investissement et Commerce, Bloom Bank (Gambia) Ltd, Ecobank (Gambia) Ltd, First Bank Nigeria (Gambia) Ltd, Guaranty Trust Bank

(Gambia) Ltd, Mega Bank (Gambia) Ltd, Standard Chartered Bank (Gambia) Ltd, Trust Bank Ltd, Vista Bank (Gambia) Ltd, and Zenith Bank Gambia. The census sampling technique (the study of the whole population) was adopted because the country-wise aggregate data of all the variables under study would were collected via secondary method from relevant international organizations like the World Bank, and International Monetary Fund (IMF). Wahua and Ahlijah (2020) adopted this approach.

Data Collection Process and Analysis Technique

Data on all the variables were collected from the database of International Monetary Fund and the World Bank Group. The data were analysed descriptively and inferentially with general linear model (Univariate Analysis of Variance). The inferential statistics produced

two outputs: the test of between-subjects effects (to test the fitness of the model for the analysis), and the parameter estimates (to test the hypotheses developed in the study). All the statistical analyses were set at 95% confidence level. This is supported by Wahua and Ezeilo (2021).

Operationalization of Research Variables

Table 1: Operationalisation of Research Variables

Variable	Code	Measurement	Reference
Independent Variables:			
Political stability	Pol	Political stability index	World Bank (2021)
Board effectiveness	Board	(NPL/Gross Loan) * 100	Wahua (2020)
Management efficiency	Mgt.	(Net income after tax/total assets) * 100	Wahua (2020)
Control Variable:			
Financial Leverage	Lev	(Total Assets/Capital) * 100	Wahua (2020)
Dependent Variable:			
Capital Adequacy	CAR	$\frac{SWRC_i * 100}{SWRW_{Ai}}$	Wahua (2020)

Source: Authors (2023)

Political stability is a great factor to be considered in banks’ capitalization exercise. The economic theory holds that capital flight sets in in unstable/unsafe economies (Wahua, 2017). The main function of the Boards of banks is to secure the assets and liabilities; and non-performing loan is a good measure of assessing board’s effectiveness. Management efficiency is quantified with profitability; and leverage is measure with the ratio of total assets to capital. See Table 1 for the details of the measurements of the variables.

Results and Discussion

Test of Basic Normality

It is a basic requirement for all parametric research to pass the basic assumption of the dependent variable(s) being drawn from a normal distribution (Wahua, Tsekpo & Anyamele, 2018). The Shapiro-Wilk test of normality was carried out with the aid of statistical package for social sciences (SPSS); and the results as shown in Table 2 indicate that all the variables passed this basic assumption for parametric research.

Table 2: Tests of Normality (Shapiro-Wilk)

Variable	Statistic	df	Sig.
Politics	0.923	20	0.113
Board effectiveness	0.937	20	0.209
Management efficiency	0.903	20	0.147
Financial leverage	0.959	20	0.529
Capital adequacy	0.970	20	0.760

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source: Authors (2023)

The results of the normality test on all the variables show that their significance values are greater than 0.05; hence, this show that they are drawn from normal distribution (Wahua & Ezeilo, 2021; Wahua, Mkombo, Okai & Acquah-Yalley, 2022).

Test of Model Fitness

Table 3: Tests of Between-Subjects Effects

Source	Type III Sum of Squares	Mean Square	F	Sig.
Corrected Model	493.475 ^a	82.246	25.355	0.001

a. R Squared = .921 (Adjusted R Squared = .885)

Dependent Variable: Capital Adequacy

Source: Authors (2023)

Table 3 shows that the Model used in this study is a good fit for the analyses carried out (F = 25.36; Sig = 0.001); and that it accounted for 92% and 88% of the variations that occurred in capital adequacy when error terms is not accounted for, and when error was accounted for respectively.

Test of Hypotheses

Two hypotheses guide this research; and they are stated below:

H01: Politics does not moderate the relationship between board effectiveness and capital adequacy of banks in Gambia

H02: Politics does not moderate the relationship between management efficiency and capital adequacy of banks in Gambia

Hypotheses 1 and 2 were tested simultaneously using Univariate general linear model (UGLM). Tsekpo (2020) supports the use of interaction effect to test moderation while Wahua, Okolobi and Dioha (2022) used UGLM.

Table 4: Parameter Estimates

Variable	B	t	Sig.	Partial Eta Squared
Intercept	10.259	0.857	0.407	0.053
Politics	-0.078	-0.385	0.707	0.011
Board Effectiveness	7.937	5.060	0.001	0.663
Management Efficiency	-20.163	-6.123	0.001	0.743
Politics * Board	-0.183	-5.468	0.001	0.697
Politics * Mgt	0.418	6.250	0.001	0.750
Financial Leverage	2.105	6.689	0.001	0.775

Dependent Variable: Regulatory Capital

Source: Authors (2023)

The results of Hypotheses 1 and 2 are captured in Table 4 (Parameter Estimates). The salient findings contained in Table 4 are:

1. Politics had non-significant negative effect on capital adequacy of banks that operated in Gambia from 2001 to 2020;
2. Board effectiveness in risk management had 66% significant positive effect on capital adequacy of banks that operated in Gambia from 2001 to 2020;
3. Management efficiency in profit maximization had 74% significant negative effect on capital adequacy of banks that operated in Gambia from 2001 to 2020;
4. Politics had 70% significant negative moderation on the relation between board effectiveness and capital adequacy of banks that operated in Gambia from 2001 to 2020;
5. Politics had 75% significant positive moderation on the relationship between management

- efficiency and capital adequacy of banks that operated in Gambia from 2001 to 2020;
6. Financial leverage had 76% significant positive effect on capital adequacy of banks that operated in Gambia from 2001 to 2020; and finally,
 7. When all the variables are held constant (that is equal to zero), capital adequacy of banks in Gambia would increase by 5% (but this is not significant).

Discussion of the Major Findings

The weak political system in Gambia has significant negative effect on banks' ability to raise adequate capital in the country. This is not farfetched from the political economy theory canvassed by Wahua (2017; 2020); that capital flies away from political unstable or unpredictable zones (or countries) to a more politically stable one. The long years of rule by a single political leader did have negative impact on the economy in terms of raising adequate capital by banks that operated in the country.

Again, the unpredictable political atmosphere that hovered in the country within the period under review weakened the capacity of boards of directors to raise adequate capital for their banks. This is not farfetched also from the fact that politics controls everything in an economy (Faten, 2013; Aguilera & Jackson, 2010). An unstable political atmosphere is corruption prone; and a corrupt political system affects business adversely in no small measure (Osei-Attakora, 2021). This is because corrupt politics breeds violence and destructions on investments and productivity (UNCTAD, 2018). The ability of home and foreign investors to buy the equity (share capital) of banks is a function of political stability in the country (Abotsi, 2016).

Even when unstable political atmosphere did not significantly alter the balance of capital adequacy of banks that operated in the Gambia within the period under review, it is statistically evident that it weakened the capacity of the key corporate governance internal stakeholder (Boards) from functioning effectively in turning around the fortunes of their various banks in terms of raising adequate capital from within and outside the country. Political instability leads to general breakdown of national political system; results to anarchy; and the economy becomes too risky for investment. This leads to capital flight to safer heavens. Therefore, banks' ability to

raise adequate capital is directly affected by the quality of the country's political system (Lambsdorff, Taube & Schramm, 2018).

One salient finding as revealed in the Parameter Estimate is that the interaction of political stability and management efficiency in profit maximization resulted to significant increase in capital adequacy of banks in the country to the tune of 75%. This is despite the fact that both politics and management efficiency individually had negative (decreased) effects on capital adequacy. So, it is an innovation in literature that a weak political system can be strengthened by a somewhat efficient management when they interact. Banks managers in the Gambia therefore understand the political terrain of the country, and know how best to maneuver around its weaknesses in order to remain in business. One possible explanation for this is what Abotsi (2016) termed the grease the wheels hypothesis. It suggests that an inefficient politics or bureaucracy creates a major impediment to economic activity and so some grease money may be needed to circumvent this impediment. Bad politics serves as greasing the wheels when it promotes business efficiency by greasing the palms of people in authority and with influence (Osei-Attakora, 2021). Another possible explanation is that the profits been declared by banks in the Gambia are not actually earned; but, what may qualify as paper profits.

Conclusion

Implications of the Major Findings

The findings of this study are relevant to the stakeholder-institution theoretical framework guiding this study. The interaction of political institution with internal stakeholders (boards of directors and management teams) witnessed significant effect on capital adequacy of banks that operated in Gambia within the period studied. While the interaction of politics and boards of directors decreased capital adequacy the interaction of politics and management teams increased capital adequacy of banks that operated in the Gambia within the period being studied.

Practically, the need for governments and citizens to ensure stable and healthy political environment cannot be ignored. This is very crucial as undercapitalized banking sectors could undermine banking intermediation and resultant economic growth/development. Bank Managers

equally have a role to play in order to survive in an unstable political environment without breaking soft and hard laws of the country. This is in relation to the concept of grease the wheels hypothesis.

The need for governments, the Central Bank of Gambia, and corporate bodies to formulate policies, regulations, and laws for healthy political environment cannot be neglected. This is because politics virtually controls everything that happens in a country (Osei-Attakora, 2021).

Summary

Bank failures and banking crises create fears, anxieties, and loss of productivity to various stakeholders; and some of remote causes of bank failures across the globe are weak/poor corporate governance structures and practices, credit risk; government recapitalization regulation; corruption and embezzlement of banks' assets; and weak legal/regulatory and political institutions. Undercapitalization is a symptom of banks' capital inadequacy to withstand financial shock. Anchored on stakeholder-institutional theory; and secondary data, and general linear model, this study investigated the moderating impact of politics on the relationship between board effectiveness, management efficiency and capital adequacy of Gambia's banking sector while controlling for financial leverage.

The studied established that: (i) the interaction between political stability and board effectiveness in risk management has 69.7% significant negative effect on banks' capital adequacy in Gambia; (ii) the interaction between political stability and management efficiency in profit maximization has 75% significant positive effect on banks' capital adequacy in Gambia; (iii) financial leverage has 77.5% significant positive effect on banks' capital adequacy in Gambia; (iv) board effectiveness in risk management has 66.3% positive effect on banks' capital adequacy in Gambia; and (v) management efficiency in profit maximization has 74.3% significant negative effect on banks' capital adequacy in Gambia. The relevance of the stakeholder-institutional theory was established in this study.

The work recommends that all political stakeholders in Gambia should strive to stabilize the country's political system, and that the board of directors of banks in Gambia should ensure that the management of the banks applies prudent and best banking practices in declaring

profit. This is because a positive profit should increase the capital adequacy of banks positively in a normal situation.

Research Ethics and Conflict of Interest

This is an original article; and no known ethical breach was engaged in. Also, there is no conflict of interest in this research.

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RESEARCH ARTICLE

Fama and French (2015) five-factor model using SEM with a Mediating Role of Liquidity: Evidence from Pakistan

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Abstract

Liquidity is one of the intricate phenomena that cannot be assessed in a single dimension due to its multidimensional structure, which is still contentious among researchers and must be explored from several perspectives. This study thus analyses the multidimensional liquidity as mediating variable to empirically investigate whether liquidity influence the nexus between risk-premiums and portfolio stock returns using Structural Equation Modeling. Using liquidity as factor is employed using time-series OLS regression technique. The sample used in this study comprised of monthly returns of 286 non-financial firms enlisted on PSX for time span from January 2006 through June 2022. The findings of the study reveal that liquidity as mediating variable performs statistically highly significant while as independent risk-factor also performs statistically highly significant using Fama and French (2015) five-factor model. The market risk-premium exhibits statistically insignificant results for PSX while size, profitability and investment also show significant findings in the market. The potential investors and portfolio managers need to consider liquidity as benchmark criteria prior to make decision regarding investing in PSX.

Keywords: Liu (2006) multidimensional liquidity; Fama and French (2015) five-factor model; Structural Equation Modeling; OLS regression; Pakistan Stock Exchange

Introduction

Stock markets play a dynamic role and directly contribute to higher economic growth of a country (Afonso, & Reimers, 2022) where stocks are traded on a regular basis by mobilising domestic resources (Husain & Mahmood, 2001) and shifting money from savers to investors (Marques, Fuinhas & Marques, 2013; Oskooe, 2010; Deb & Mukherjee, 2008). The individual investors and portfolio managers are extremely sensitive of their rational investment decision-making about valuation and allocation of financial securities in building their internationally diversified portfolios in such a dynamic, volatile, and illiquid stock market. However, idiosyncratic risk, which is linked to uncertain future expected returns, influences their investment decisions (Ullah, et al., 2019). The stock investors are rationally hypercautious about prospective returns and stock liquidity from a psychosocial perspective, which drives them to be rational before making investments in the stock markets.

Moreover, previous literature documents an inverse nexus between liquidity and average portfolio/stock returns in stock markets such as Hartian, and Sitorus, (2015) observed negative nexus between liquidity and stock returns in developed countries using trading volume, turnover ratio, and turnover volatility as proxy for liquidity. Due to multidimensional nature of liquidity, several proxies are employed to quantify the liquidity and examine its nexus with portfolio/stock returns; nevertheless, it is still vague which proxy is best suited for which emerging equity market. There is a plethora of studies employed numerous proxies of liquidity to demonstrate direct nexus with equity returns, but to the best of my knowledge, no study has used it as a mediating variable using asset pricing models (APMs). Irom, Ibiame, and Nyor (2022) empirically examined the relationship between capital structure and stock returns while augmenting liquidity as a mediating variable in their study; thus, the study differs by two perspectives, including the use of Liu (2006) multidimensional liquidity as a mediating variable in

addition to the study of Fama and French (2015) five-factor model as suggested by Azam (2022a). Due to the ability of measuring the multifaceted dimension of liquidity, Liu (2006) model can estimate better coefficients, hence this study choose as mediating variable between portfolio returns and risk-premiums to analyze the PSX market.

Previous research has examined the validity of APMs on explaining portfolio/stock returns on the Pakistan Stock Exchange and also examined liquidity augmented various APMs and also used GDP-Growth as mediating variable using CAPM but has not been used multidimensional liquidity as mediating variable using Fama and French (2015) five-factor model specifically for Pakistan Stock Exchange. A sample of 286 enlisted firms was used in this study to construct 25 value-weighted 25 portfolios based Size-B|M ratios in accordance with Fama and French (1993; 2015) in order to determine the shortcomings and gaps of the FF5FM and Azam (2021) six-factor model (A6FM) in this market. We examined FF5FM using Structural Equation Modeling (SEM) using Liu (2006) multidirectional liquidity as a mediating variable to investigate whether liquidity mediates the impact of five-factors on portfolio returns of non-financial firms' portfolios. In most previous researches, time-series multivariate regression analyses are employed while this study uses both SEM with mediation of liquidity and OLS regression technique with liquidity as augmented factor to evaluate the efficiency and impact of each factor on the portfolio returns to assess direct and indirect influence of each factor. These situations, however, were raised in the current investigation for PSX.

Moreover, liquidity is one of the intricate phenomena that cannot be measured in a single dimension due to its multidimensional structure, which is still contentious among researchers and must be explored from several perspectives. This study thus analyses the multidimensional liquidity as mediating variable to empirically investigate whether liquidity influence the nexus between risk-premiums and portfolio stock returns using Structural Equation Modeling. The following research questions are addressed in this study: Does liquidity explain portfolio returns as a mediating or independent variable? Do market, size, value, profitability, and investment factor account for PSX portfolio returns? In explaining portfolio returns in PSX, does Azam (2021) six-factor model outperform Fama and French (2015) five-factor model?

To better understand the effects of liquidity on stock returns and the numerous factors affecting portfolio returns

in PSX, the study aims to provide answers to the following questions. First, considering several measurements, is there a substantial relationship between liquidity and stock returns? The direct relationship between multidimensional liquidity and stock returns are empirically tested in PSX such as Azam (2021) but are there any mediating effect of liquidity on stock returns using Fama and French (2015) five-factor model? Second, to what extent do portfolio stock returns depend on the market, size, value, profitability, and investment factors?

Literature Review

The empirically tested discipline of APMs spanning developed, emerging, and frontier markets throughout the world is one of the most actively researched fields in the field of investing and portfolio management that is yet inconclusive and progressing among scholars. Among various APMs, the most thoroughly investigated model is Fama and French (1993) three-factor model, which is augmented with two additional factors such as profitability and investment and is known as Fama and French (2015) five-factor model (henceforth FF5FM) and assumed to be the dominant models of asset pricing (Singh, Singh, & Prakash, 2022). It is also scrutinized around the globe using various stock markets. The findings of FF-5FM showed diversified results in terms of validity and performance in explaining potential average portfolio stock returns.

According to recent studies, relying solely on a single factor model (CAPM) exclusively might lead to substantial losses. As a consequence, studies like those by Zaremba, et al. (2019) looked at 160 anomalies in order to thoroughly analyse which factor substantially influences the average expected returns of stocks using dataset of 23 Frontier Markets. More recently, Azam (2022c) has investigated Tobin-q as a risk-premium augmented with CAPM, FF3FM, C-4FM, and FF5FM utilising the PSX dataset for time-span from 1994 to 2020. The study calculated excess portfolio and market returns using the 3-month T-bill rate as the risk-free rate. They employed monthly data from 521 financial and nonfinancial firms to perform a comprehensive analysis on PSX utilising the time-series OLS regression approach. The findings demonstrate statistically significant determinants such as size, value, profitability, and Tobin-q risk-factor, whereas market and investment show negligible findings. The GRS test found the Tobin-q augmented FF-5FM to be the market's most efficient model. Literature also shows that liquidity, as a mediating variable, may not provide superior results such

as Irom, Ibiame, and Nyor (2022) investigated the capital structure and stock returns nexus using Nigerian stock market data in order to gain insight into the mediating function of liquidity proxy and provide a fresh viewpoint to the current research. The liquidity ratio as the proxy of liquidity has been assumed but it is observed that liquidity has no significant impact on stock returns. The study further revealed that liquidity has moderate nexus with capital structure and stock returns.

Recent asset pricing literature provides new empirical evidence that stock returns are valued for related risk characteristics such as market beta, size, value, profitability, and investment, whereas Azam (2021) enhanced liquidity as the most important risk factor in PSX. The size, investment, and liquidity anomalies in the Azam (2021) liquidity augmented six-factor model are discovered to be the highly statistically significant anomalies using OLS regression technique, similarly the value and investment factors in the Fama and French (2015) five-factor model. Haddad and Hellara (2019) used Hu, Pan and Wang (2013) liquidity proxy and observed significant and negative nexus with stock returns in emerging markets.

Liquidity is a major aspect of the financial market and is critical for investment strategies and financial securities (Irom, Ibiame, & Nyor, 2022). Ma, Anderson, and Marshall (2016) described that liquidity has a dynamic impact on the financial market, impacting equity returns and fostering stability and growth in the capital markets (Nguyen & Puri, 2009). It is the primary variable determining the efficiency of the capital markets (Ye, et al., 2021). The liquidity of a financial asset, on the other hand, is one of the desired qualities that investors want (Minovi, Stevanovi, & Belopavlovi, 2011). It is a vital component of today's financial markets (Scharnowski, 2021). A lack of liquidity can have a detrimental influence on stock prices (Irom, Ibiame, & Nyor, 2022). Additionally, they look for asymmetric information that may have an impact on stock prices directly or indirectly in order to protect their initial investments and expected returns. The Efficient Market Hypothesis (EMH) theory, in contrast, asserts that stock prices accurately represent all information that is accessible in efficient markets. Since the last 50 years, a plethora of variables, titled the "zoo of factors" (Cochrane, 2011; 2017), have been proposed and empirically investigated throughout the world to challenge the EMH paradigm and to support the idea that there are many determinants that investors and portfolio managers can use to diversify idiosyncratic risk and outperform the market.

Besides, anticipating estimated future returns is not transcendental, which cannot be found in the contemporary period when economists and statisticians created computer-assisted instruments and methodologies. Many academics and researchers have worked hard to build ideas and useful models to forecast predicted stock returns in this area. These advancements have as their justification the best assessment and selection of financial assets or optimal portfolio with a view to maximise the associated expected returns and reduce the idiosyncratic risk correlating with their prudent investment (Garvey, Murphy, & Wu, 2007). Furthermore, Amihud and Mendelson (1986a) included the liquidity factor, a vital indicator of financial security, as a new variant in the zoo of factors. One cluster, however, treated liquidity as a factor loading and treated it as illiquid minus liquid (IML) firms (Liu 2006), whereas another estimated it as a reliable indicator of stock returns in their studies and discovered statistically significant (Acharya & Pederson, 2005; Paster & Stambaugh, 2003; Liu, 2006) and robust contributions utilising multivariate analysis (Belkhir, Saad, & Samet, 2020; Grillini et al., 2019; Wu, 2019; Abdi & Ranaldo, 2017). Similar findings were observed by (Chan & Faff, 2005; Javid & Ahmed, 2008) who found a statistically significant and established linkage between the illiquidity premium and predicted returns. As a result, this study is the first to examine liquidity's unexpected impact on stock returns using liquidity as a mediating variable with Fama and French's (2015) five-factor model in PSX due to the multidimensional nature of liquidity, which makes it impossible to assess in a one-dimensional manner.

The literature suggests that multifactor APMs were expected to outperform single-factor APMs in explaining the variation in portfolio returns (Chen, 1983; Ross, 1976; Brown & Weinstein, 1983; Burmeister & Wall, 1986). As claimed by Fama and French (2015), the FF-5FM outperforms previous single-factor and multiple factor APMs in explaining between 71-94 percent of volatility in equity returns in the US, although it still lacks complete capturing ability (Lin, 2017). Despite decades of study, it is still ambiguous what causes cross-sectional price fluctuations in anticipated stock returns (Annaert, De Ceuster, & Versteegen, 2013). In a similar vein, Huang (2019) doubts the model's reliability and explanatory ability in emerging equities markets. Therefore, more investigation of increased FF-5FM in Pakistan's expanding market is necessary to determine the authenticity of the findings. Azam (2022d) empirically examined the FF5FM with additional determinant of Consumer Confidence

Index (CCI) using non-financial sectors of PSX. The findings revealed statistically insignificant outcomes for CCI while FF5FM produces significant explanatory power in the market.

There is a plethora of studies conducted on the valuation of APMs during Covid-19 and its influence on stock volatility using ARCH and GARCH such as Azam, & Azeem (2021) using PSX dataset and observed significant impact. On the other hand, Azam and Ilyas (2011) examined Price to earnings (P/E) premium and leverage premium and observed significant estimates using PSX dataset. Similarly, Qadeer et al. (2022) used PSX data and analyzed FF-5FM in augmenting turnover as liquidity proxy and observed significant results but it is single dimensional. Younus and Butt (2022) examined 54 anomalies using sample of 290 firms' dataset. The time-series tests are conducted using various APMs on PSX but vague results were observed to explain the portfolio returns. On the other hand, using FF-5FM in PSX, Zada, Rehman, and Khwaja (2018) observed size, value, profitability and investment are priced by the market using Fama and MacBeth (1973) two-steps regression technique by assuming a sample of 120 firms. On the other hand, Thafani & Ediriwickrama (2022) empirically examined the FF-5FM in Sri Lankan equity market using time span from June 2009 to December 2018. The model employed is Newey and West (1987) weighted average least square regression model Sri Lankan stock exchange. The size, profitability and investment are redundant in the market. The results showed similarity with Fama and French (2017) for Japan and Asia Pacific portfolios.

After going through the literature review, the study extracts the following hypotheses to be investigated:

H₁: Liquidity as mediator has indirectly significant nexus between the risk-factors and portfolio returns.

H₂: Liquidity as risk-factor has directly significant nexus with the portfolio returns.

Data and Methodology

To analyse the Pakistan stock market, estimates are generated using the FF5FM through Structural Equation Modeling (SEM) with multidimensional liquidity as a mediating variable, as well as OLS multivariate regression with liquidity as the independent variable. The monthly returns of the PSX-100 Index are used as market returns, and the 3-month Treasury bills rate is utilised as the risk-free rate, to compute the excess market returns. The Fama

and French (2015) sampling criteria were employed, and all non-financial 286 firms were included; however, firms with negative B|M were excluded.

The primary goal of this research is to empirically determine the validity of the Fama and French (2015) five-factor model and multidimensional liquidity augmented Azam (2021) six-factor model in explaining the volatility of portfolio returns in the Pakistan equity market. To carry out the test, the following empirical models are used: Structural Equation Modeling (SEM) and OLS multivariate regression. Multidimensional liquidity is utilised as a mediating variable in SEM, whereas it is employed as an independent variable in OLS regression to investigate which factor has explanatory power for portfolio returns in PSX by following Azam (2022d) who empirically used the Consumer Confidence Index in the same vein. SEM is a method for a diverse set of approaches used by researchers in both empirical and observational study throughout the disciplines Boslaugh et al. (2008).

Model Specification

The SEM and multivariate time-series OLS regression are the novel frameworks used in this study, based on the follows specifications:

Fama & French (2015) five-factor model (FF5FM)

$$R_i - R_f = R_f + \beta_m(R_m - R_f) + \beta_s(SmB) + \beta_v(HmL) + \beta_p(RmW) + \beta_i(CmA) + \varepsilon_i \quad (1)$$

Where, $R_i - R_f$ is excess returns of portfolio. $R_m - R_f$ is the excess returns of market. SmB is the Small minus Big firms returns called Size factor. HmL is the High minus Low firms returns called Value factor. RMW is the Robust minus Weak firms returns called Profitability factor. CMA is the Conservative minus Aggressive firms returns called Investment factor. $\beta_m, \beta_s, \beta_v, \beta_p,$ and β_i are the coefficients of market, size, value, profitability and investment factors respectively.

Azam (2021) six-factor model (A-6FM)

$$R_i - R_f = R_f + \beta_m(R_m - R_f) + \beta_s(SmB) + \beta_v(HmL) + \beta_p(RmW) + \beta_i(CmA) + \beta_l(ImL) + \varepsilon_i \quad (2)$$

Where, IML is the Illiquidity minus Liquidity firms' returns called (Liu, 2006) multidimensional liquidity factor. $\beta_m, \beta_s, \beta_v, \beta_p, \beta_i$ and β_l are the coefficients of market,

size, value, profitability, investment and liquidity factors respectively.

Portfolio Construction

Diversification, according to portfolio theory, boosts returns by including uncorrelated assets in the portfolio; hence, portfolio returns outperform investment in individual equities (Jones & Trevillion, 2022). This study

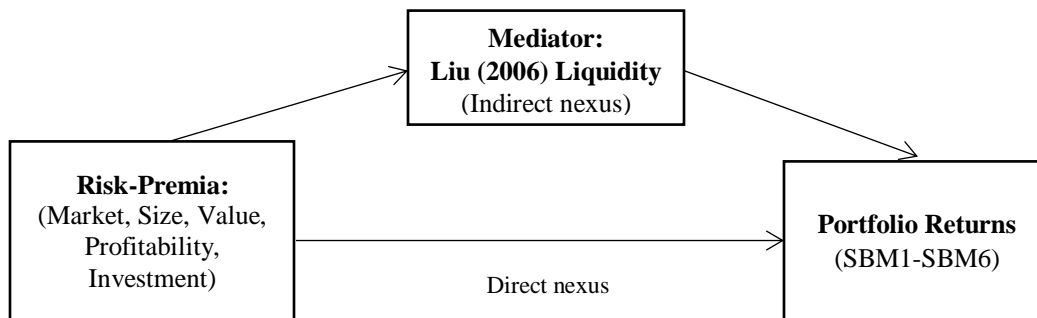
used size-B|M ratios to create six double-sorted imitating portfolios, following Fama and French (1993; 2015). To begin, all firms are separated equally into two categories called Small and Big portfolios. Second, these two portfolios are further subdivided into three categories (2 x 3 portfolios), which are shown in table 1 as Low, Medium, and High B|M ratios firms.

Table 1: Matrix of Portfolio Construction

Size	B M Ratio	Portfolio	Name
Small (S)	Low B M (L)	SL	SBM1
	Med B M (M)	SM	SBM2
	High B M (H)	SH	SBM3
Big (B)	Low B M (L)	BL	SBM4
	Med B M (M)	BM	SBM5
	High B M (H)	BH	SBM6
Size	Small = (SL + SM + SH)/3	Big = (BL + BM + BH)/3	
HML	High = (SH + BH)/2	Low = (SL + BL)/2	

Notes: Table 1 depicts the portfolio creation matrix for six equally weighted portfolios. SL displays a portfolio of stocks with small market capitalizations and low B|M ratios. Similarly, SH displays a portfolio of stocks with small market capitalizations and high B|M ratios. Furthermore, BL displays a portfolio of stocks with large market capitalizations and low B|M ratios. Similarly, BH displays a portfolio of stocks with large market capitalizations and high B|M ratios. The last column depicts the formation of the SMB (size) and HML (value) anomalies.

Figure 1: Structural Equation Modeling using Liquidity as Mediator for FF5FM



Source: author’s compilation.

Notes: The figure 1 depicts the direct relationship between independent risk-premia and 6 portfolio stock returns and indirect relationship using Liquidity as mediator in this study.

Figure-1: SEM using Fama and French (2015) five-factor model including Liquidity as mediating variable impact on 6 excess portfolio returns on PSX.

Empirical Results and Discussions

This research investigates the models described in the preceding part to empirically examine the impact of various factors on various sets of portfolios that comprise of non-financial companies listed on the PSX from January 2010 to June 2022. This research retrieves all stock data from Thomson Reuters DataStream. In this study, the 3-month Treasury Bills rate is utilised as the risk-free rate, which is obtained from the official website of the State Bank of Pakistan. This study employs Fama and French (1993; 2015) dual sort procedure as the Size-B/M ratio to build 6 value-weighted portfolios.

Descriptive Statistics

The following table exhibits the descriptive statistics and correlation matrix of independent and mediating variables to be investigated:

Panel-A of Table 2 displays descriptive statistics for the independent variables market, size, value, profitability, investment, and liquidity (mediating variable). All factors, as illustrated, except market, have moderate mean returns and corresponding standard deviations. The market risk premium averages 0.002 percent and has a minimum fall of -0.46 percent, which is unfavourable for market returns. The HML-value factor, on the other hand, shows the

second-lowest risk premium with a 28 percent reduction, while CMA (investment risk-premium) shows the highest returns with a (0.229) 23 percent incline. The other risk premiums exhibit normal distribution when it comes to the maximum and minimum values. Similar to this, the market shows the largest standard deviation (0.07) at 7 percent, while the liquidity risk premium shows the second-highest value (0.06) at 6 percent. As a consequence, the values in panel A seem to be normally distributed and the dataset does not contain any outliers.

The correlation matrix between the independent variables is presented in panel-B of Table 2. According to the findings, there is a strong correlation between value and market (0.2758), profitability and size (0.6535), investment and market (0.0256), liquidity and market (0.2694), and liquidity and value (0.6366) accordingly. Conversely, this group of couples exhibit negative nexus, as evidenced by size with market (-0.1859), value with size (-0.1964), profitability with market (-0.294) and with value (-0.1613), investment with size, value, and profitability showing (-0.644, -0.2518 and -0.4069), respectively, while liquidity with size, profitability, and investment exhibiting (-0.0134, -0.1345 and -0.2217), respectively.

Table 2: Descriptive statistics and correlation matrix

Panel-A	Variable	RmRf	SMB	HML	RMW	CMA	IML
	Mean	0.001905	-0.01035	-0.02839	-0.00521	0.022248	0.001756
	Std. Dev.	0.07011	0.041432	0.042553	0.030009	0.039639	0.055288
	Min	-0.45966	-0.1526	-0.27753	-0.09243	-0.1359	-0.18123
	Max	0.20034	0.101703	0.103502	0.143691	0.229755	0.111384
	Obs.	210	210	210	210	210	210
Panel-B	Variable	RmRf	SMB	HML	RMW	CMA	IML
	RmRf	1	-0.1859	0.2758	-0.294	0.0256	0.2694
	SMB	-0.1859	1	-0.1964	0.6535	-0.644	-0.0134
	HML	0.2758	-0.1964	1	-0.1613	-0.2518	0.6366
	RMW	-0.294	0.6535	-0.1613	1	-0.4069	-0.1345
	CMA	0.0256	-0.644	-0.2518	-0.4069	1	-0.2217
	IML	0.2694	-0.0134	0.6366	-0.1345	-0.2217	1

Notes: Table 2, Panel-A represents the descriptive statistics of all factors included in the study and mediating variable (liquidity) which consists of mean, standard deviation, maximum and minimum values. Panel-B shows correlation matrix among our test factors and mediating variable.

Structural Equation Model (SEM) Estimates

The following estimations were obtained using the SEM from Fama and French (2015) five-factor model with six equal-weighted portfolios:

Table 3: Structural Equation Model (SEM) Estimates

Endogenous	Exogenous	Coef.	z	P> z	Endogenous	Exogenous	Coef.	z	P> z
SBM1 <-	IML	0.9666	52.68	0.0000	SBM4 <-	IML	0.9813	81.08	0.0000
	RmRf	0.0122	1.04	0.2960		RmRf	0.0138	1.79	0.0730
	SMB	0.3654	11.39	0.0000		SMB	-0.2666	-12.6	0.0000
	HML	0.3576	13.51	0.0000		HML	-0.0311	-1.78	0.0750
	RMW	-1.5386	-44.47	0.0000		RMW	0.1258	5.51	0.0000
	CMA	0.1835	6.35	0.0000		CMA	0.4035	21.18	0.0000
	_cons	-0.0021	-1.96	0.0500		_cons	-0.0001	-0.15	0.8830
	var(e.SBM1)	0.000119				var(e.SBM4)	0.000052		
SBM2 <-	IML	0.9892	30.29	0.0000	SBM5 <-	IML	0.9146	27.51	0.0000
	RmRf	-0.0061	-0.29	0.7680		RmRf	0.0383	1.80	0.0710
	SMB	0.2303	4.03	0.0000		SMB	0.4641	7.99	0.0000
	HML	-0.0341	-0.72	0.4700		HML	0.6841	14.27	0.0000
	RMW	-0.2859	-4.64	0.0000		RMW	0.0486	0.78	0.4380
	CMA	0.371	7.22	0.0000		CMA	0.7705	14.73	0.0000
	_cons	0.0041	2.10	0.0360		_cons	-0.0043	-2.21	0.0270
	var(e.SBM2)	0.000378				var(e.SBM5)	0.000392		
SBM3 <-	IML	1.0187	84.17	0.0000	SBM6 <-	IML	1.0847	34.80	0.0000
	RmRf	-0.0138	-1.79	0.0730		RmRf	-0.0488	-2.46	0.0140
	SMB	0.2666	12.60	0.0000		SMB	0.835	15.33	0.0000
	HML	0.0311	1.78	0.0750		HML	0.1585	3.53	0.0000
	RMW	-0.1258	-5.51	0.0000		RMW	-0.2165	-3.68	0.0000
	CMA	-0.4035	-21.18	0.0000		CMA	1.0148	20.69	0.0000
	_cons	0.0001	0.15	0.8830		_cons	-0.0037	-1.99	0.0470
	var(e.SBM3)	0.000052				var(e.SBM6)	0.000344		
IML <	RmRf	0.0727	1.66	0.0960					
	SMB	0.3486	2.95	0.0030					
	HML	0.8426	10.43	0.0000					
	RMW	-0.2865	-2.23	0.0260					
	CMA	0.0617	0.57	0.5700					
	_cons	0.0263	7.20	0.0000					

Notes: Table 3 presents the findings from a structural equation model that utilised the FF5FM, multidimensional liquidity as a mediating variable, and a six-value-weighted portfolio constructed in accordance with the Size-B|M ratio. The idiosyncratic risk factors are employed as exogenous variables, whilst portfolio stock returns and multidimensional liquidity are used as endogenous variables. Liquidity is used as mediating variable in this study. Coefficients, z-values, and related probability values are displayed in the findings.

The estimation results of risk-adjusted performance of 6 value-weighted portfolios, constructed based on Size-B|M ratio using the Fama and French (2015) five-factor model through Structural Equation Model (SEM) technique are reported in Table 3. The endogenous variables are the excess average portfolio returns (SBM1-SBM6) calculated depending on size and B|M ratio as indicated by (Fama &

French, 1993; 2015). SBM6 is a portfolio that may alternatively be displayed as a BH portfolio. It consists of firms with large Market Capitalization (MC) and high B|M ratio average returns. However, the SBM1 portfolio is featured as an SL portfolio. It consists of firms having a low B|M return and small MC. Risk premiums are utilised as an exogenous variable to investigate the relationship

between endogenous factors and a mediating variable such as multidimensional liquidity.

The results are categorized into two columns, the left hand-side shows portfolio SBM1, SBM2 and SBM3 and the right hand-side shows portfolio SBM4, SBM5 and SBM6 findings accordingly. The findings determine the direct nexus of liquidity risk premium with portfolio excess returns is highly statistically significant. On the other hand, the market risk premium exhibits statistically insignificant relationship with portfolio stock returns except one portfolio SBM6 (-0.0488) which shows significant coefficient. The market-factor show mix results in terms of magnitude, three positive (SBM1, SBM4, SBM5) and three negative (SBM2, SBM3, SBM6) which demonstrates inconsistent with the findings of (Azam, 2022c). For all portfolios, the size-factor produces highly statistically significant findings. Similarly, the value-factor presents as portfolios SBM1, SBM5 and SBM6 show highly significant findings while SBM2, SBM3 and SBM4 (-0.0341, 0.0311 and -0.0311 with probability values (0.470, 0.075 and 0.075) respectively demonstrates insignificant nexus with portfolio excess returns. The direct effect of the coefficients of profitability-factor demonstrate highly statistically significant findings except one portfolio

(SBM5 = 0.0486) however, investment-factor exhibit highly statistically significant association with portfolio returns. The impact of risk-factors on mediating variable (liquidity) demonstrates statistically significant finding in the case of size, value and profitability (0.3486, 0.8426 and -0.2865) respectively. On the other hand, the coefficients of market and investment exhibit statistically insignificant impact on liquidity.

The results demonstrate that CAPM failed to forecast expected returns, leading to its discovery as redundant and a mispriced risk-factor, which is consistent with recent studies such as (Hasler, & Martineau, 2022; Azam, 2021; 2022c; Lohano & Kashif, 2018; Urooj & Shah, 2016). To infer, the monthly returns based on SEM framework show poor CAPM findings in PSX. In addition, PSX offers competitive prices for the remaining risk premiums, which include liquidity, size, profitability, and investment while value risk premium exhibits mix findings. Moreover, this study examines the mediating role of liquidity between risk-factors and portfolio returns and the direct nexus between liquidity augmented five-factors and portfolio stock returns. Conclusively, by employing the liquidity as mediating variable using SEM, we observed the following results:

Table 4: Conclusive estimates for SEM

Factors impact on Liquidity			Factors and Liquidity impact on Portfolio Returns (SBM1-SBM6)							
Factor	P> z	Significance	Factor	SBM1	SBM2	SBM3	SBM4	SBM5	SBM6	Sig.
RmRf	0.096	IS	IML	0.000	0.000	0.000	0.000	0.000	0.000	HS
SMB	0.003	HS	RmRf	0.296	0.768	0.073	0.073	0.071	0.014	IS
HML	0.000	HS	SMB	0.000	0.000	0.000	0.000	0.000	0.000	HS
RMW	0.026	HS	HML	0.000	0.470	0.075	0.075	0.000	0.000	MS
CMA	0.570	IS	RMW	0.000	0.000	0.000	0.000	0.438	0.000	HS
			CMA	0.000	0.000	0.000	0.000	0.000	0.000	HS

Notes: Table 4 displays the conclusive estimates for SEM with liquidity as mediating variable using FF5FM. IS= Insignificant, HS=highly Significant, MS=moderately Significant.

The results display in Table 4 demonstrates that factors such as size, value and profitability has statistically highly significant nexus with liquidity while including mediating variable i.e. liquidity and factors such as size, profitability and investment have statistically highly significant impact on portfolio returns proving the mediating role of liquidity in the model in PSX.

Time-Series OLS Regression Estimates

This study use the time-series OLS regression approach to further study the relationship between factors and average portfolio excess returns and to determine whether or not multidimensional liquidity as a risk factor yields statistically significant findings. The two models below are tested further for examining the performance and robustness of risk-factors impacting portfolio stock returns in PSX.

Fama and French (2015) five-factor model

The time-series OLS regression using FF5FM with six equal-weighted portfolios yielded the following estimates:

Table 5. Time-series OLS regression results for FF-5FM

VARIABLES	(1) SBM1	(2) SBM2	(3) SBM3	(4) SBM4	(5) SBM5	(6) SBM6
RmRf	0.083* (1.854)	0.066 (1.352)	0.060 (1.313)	0.085* (1.925)	0.105** (2.284)	0.030 (0.576)
SMB	0.702*** (5.842)	0.575*** (4.373)	0.622*** (5.015)	0.075 (0.632)	0.783*** (6.316)	1.213*** (8.610)
HML	1.172*** (14.264)	0.799*** (8.895)	0.889*** (10.499)	0.796*** (9.739)	1.455*** (17.170)	1.072*** (11.136)
RMW	-1.816*** (-13.878)	-0.569*** (-3.979)	-0.418*** (-3.097)	-0.155 (-1.194)	-0.213 (-1.582)	-0.527*** (-3.439)
CMA	0.243** (2.203)	0.432*** (3.579)	-0.341*** (-2.994)	0.464*** (4.228)	0.827*** (7.266)	1.082*** (8.362)
Constant	0.023*** (6.269)	0.030*** (7.397)	0.027*** (7.019)	0.026*** (6.955)	0.020*** (5.142)	0.025*** (5.707)
Observations	210	210	210	210	210	210
R-squared	0.737	0.367	0.574	0.445	0.631	0.438

Notes: The t-statistics are presented in parentheses with significance as *** p<0.01, ** p<0.05, * p<0.1. Table 5 presents time-series OLS regression estimates for FF5FM using time span (2010-2022).

The estimation outcomes of the five-factor model established by Fama and French (2015) using the time-series OLS regression approach are shown in Table 5. Average portfolio returns (SBM1-SBM6) created based on size and B|M ratio as proposed by (Fama & French, 1993; 2015) are the dependent variable for all six-OLS regressions. The portfolio that may also be presented as a BH portfolio is SBM6. It comprises of companies with big Market Capitalization (MC) and high B|M ratio firms average returns. The SBM1 portfolio may also be shown as an SL portfolio. It comprises of firms with small MC and low B|M returns.

The results demonstrate that market risk premium have positive but insignificant nexus with portfolio returns for portfolio (SBM2, SBM3 and SBM6) using FF5FM. Similarly, two portfolios (SBM1 and SBM4) show weak but significant nexus while one portfolio (SBM5) presents statistically moderate significant nexus with portfolio returns. The coefficient estimates of size shows positive and statistically significant magnitude (except SBM4) which shows insignificant association with portfolio stock returns. The beta coefficient values of value risk-premium display statistically highly significant and positive nexus with portfolio returns. However, the profitability risk-

premium show highly significant but negative results except SBM4 and SBM5 (-0.155 and -0.213 respectively) shows show negative but insignificant relationship with portfolio excess-returns. Similarly, the coefficients of investment risk-premium demonstrates statistically highly significant but positive except one portfolio SBM3 (-0.341) which shows negative but highly significant nexus with portfolio excess returns. Growing-values are shown by the coefficient of determination (R²) for both portfolios, with SBM1 (R² = 0.737) and SBM2 (R² = 0.367) having the greatest and lowest R-square values, respectively.

Based on the findings above, it is clear that CAPM cannot predict expected returns, hence modest premiums were assumed, which are consistent with recent research such as (Urooj & Shah, 2016; Lohano & Kashif, 2018). In conclusion, the monthly returns based on time-series OLS regression framework show poor CAPM in PSX due to the minimal impact of market returns on portfolio excess returns. In addition, PSX offers competitive prices for the remaining risk premiums, which include size, value, profitability, and investment (Fama and French, 2015).

Liquidity augmented Fama and French (2015) five-factor model

The time-series OLS regression using liquidity augmented FF5FM with six equal-weighted portfolios yielded the following estimates:

Table 6. Time-series OLS regression results for Liquidity augmented FF-5FM

VARIABLES	(1) SBM1	(2) SBM2	(3) SBM3	(4) SBM4	(5) SBM5	(6) SBM6
RmRf	0.012 (1.026)	-0.006 (-0.290)	-0.014* (-1.760)	0.014* (1.760)	0.038* (1.774)	-0.049** (-2.414)
SMB	0.365*** (11.200)	0.230*** (3.966)	0.267*** (12.389)	-0.267*** (-12.389)	0.464*** (7.854)	0.835*** (15.071)
HML	0.358*** (13.284)	-0.034 (-0.711)	0.031* (1.753)	-0.031* (-1.753)	0.684*** (14.028)	0.158*** (3.466)
RMW	-1.539*** (-43.718)	-0.286*** (-4.565)	-0.126*** (-5.421)	0.126*** (5.421)	0.049 (0.762)	-0.217*** (-3.622)
CMA	0.184*** (6.248)	0.371*** (7.098)	-0.403*** (-20.828)	0.403*** (20.828)	0.770*** (14.482)	1.015*** (20.343)
IML	0.967*** (51.793)	0.989*** (29.778)	1.019*** (82.752)	0.981*** (79.715)	0.915*** (27.052)	1.085*** (34.218)
Constant	-0.002* (-1.924)	0.004** (2.065)	0.000 (0.145)	-0.000 (-0.145)	-0.004** (-2.177)	-0.004* (-1.957)
Observations	210	210	210	210	210	210
R-squared	0.981	0.882	0.988	0.983	0.920	0.917

Notes: The t-statistics are presented in parentheses with significance as *** p<0.01, ** p<0.05, * p<0.1. Table 6 shows time-series OLS regression estimates for liquidity augmented FF5FM using time span (2010-2022).

In order to examine the relationship between market, size, value, profitability, investment, and liquidity on portfolio stock returns, Fama and French (2015) five-factor model is employed with multidimensional liquidity (Liu, 2006) as an augmented factor for further robustness by employing the OLS regression technique. The findings are remarkably similar to those of the FF-5FM-OLS regression but slightly better because the market risk-premium exhibit weak significant coefficients in four models (SBM3-SBM6) and only two portfolios exhibit insignificant coefficients (SBM1 and SBM2). With a probability of less than 0.01, the size, investment, and liquidity coefficients show highly statistically significant results shows similarity with (Azam, 2021). The value-premium indicates very significant outcomes for three portfolios (SBM1, SBM5, and SBM6), moderately significant results for two portfolios (SBM3 and SBM4), and negative and insignificant results for one portfolio (SBM2). The

coefficient of determination (R-squared) reveals that liquidity performs better as an independent variable (risk-premium) in the PSX, with explanatory power ranging from 88 percent to 99 percent. Moreover, portfolio R-squared of SBM1 (74% using FF5FM increases to 98% using LFF5FM) indicates a 24% increase, whereas SBM2, SBM3, SBM4, SBM5, and SBM6 exhibit 52%, 41%, 54%, 29%, and 48% increases, respectively.

Conclusively, liquidity as mediating variable as well as risk-premium both explaining the portfolio returns in PSX. Thus, liquidity performs significant contribution as multidimensional characteristics which impact the stock/portfolio returns directly but also mediates between Fama and French five-factors and portfolio returns on PSX. Fama and French (2015) five-factor model is employed with (Liu, 2006) multidimensional liquidity as an augmented factor for further robustness by employing the OLS regression technique which can be presented in the following table:

Table 7. Conclusive estimates for OLS regression

FF5FM	β_M	β_S	β_V	β_P	β_I	LFF5FM	β_M	β_S	β_V	β_P	β_I	β_L
Significance	WS	S	HS	WS	HS	Significance	WS	HS	S	S	HS	HS
Total 6	3	5	6	4	6	Total 6	4	6	5	5	6	6

Notes: β represents Beta-coefficient, M=market, S = size, V=value, P=profitability, I=investment and L=liquidity. WS represents weakly significant, S= significant, and HS=highly significant. Table 7 shows the conclusive table for OLS regression estimates out of total 6 portfolios.

Table 7 demonstrates the conclusive results of OLS regression coefficients out of total 6 portfolios using FF5FM and LFF5FM using monthly data for PSX. The results conclude that market-factor exhibits weakly significant results in both the models while profitability-factor also shows weakly significant results in FF5FM. Moreover, all other-factors demonstrate highly statistically significant coefficients using OLS regression technique for PSX.

Conclusion

Conclusively, the Liu (2006) multidimensional liquidity is statistically significant in both situations: as mediating variable using SEM and as independent variable using OLS regression technique in PSX. The market risk-premium exhibits statistically insignificant results for PSX while size, profitability and investment also show significant findings in the market. The potential investors and portfolio managers need to consider liquidity as benchmark criteria prior to make decision regarding investing in PSX. Furthermore, using time-series OLS regression technique, the findings reveal that market-factor shows weakly significant outcomes in both FF5FM and L-FF5FM while profitability factor in FF5FM. However, other factors exhibit substantially significant findings for the OLS regression framework.

Furthermore, the study tests Liu (2006) multidimensional liquidity as mediating variable and as independent variable using SEM and OLS regression techniques, there is possibility to examine numerous proxies of liquidity as mediating variables for further robustness. As the liquidity cannot be measured by one model, therefore, researchers need to thoroughly study various proxies with the same methods to further investigate robust estimates using developed stock markets such as US, UK, Germany. The estimation results might be more appropriate in case more sophisticated econometrics techniques and tools will be applied. The sample size or multiple stock markets may produce more robust estimates. The Tobin-q risk premium can also be augmented with various nested models such as

Fama and French (2015) using the same methods in developed stock markets.

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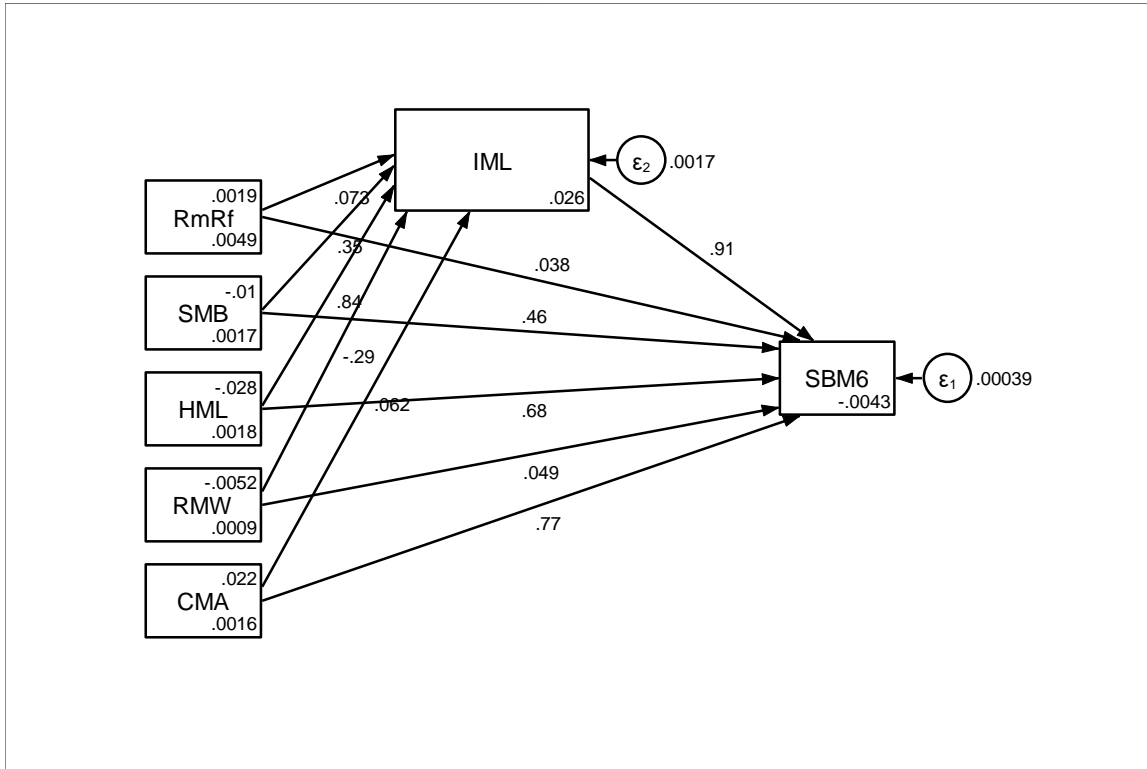
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Appendix-A

Figure 2: Structural Equation Modeling (SEM)



Source: Author's Composition

Figure: Structural Equation Modeling (SEM) using Fama and French (2015) five-factor model with multidimensional liquidity (IML) of Liu (2006) as mediating variable in PSX. The five-factors are independent variables while equal-weighted six-portfolios are, constructed based on Size-B|M ratio, dependent variables of the study.

Appendix-B

Endogenous variables Observed: SBM1 IML

Exogenous variables Observed: RmRf SMB HML RMW CMA

Fitting target model:

Iteration 0: log likelihood = 3005.3004

Iteration 1: log likelihood = 3005.3004

Structural equation model Number of obs = 210

Estimation method = ml

Log likelihood = 3005.3004

```

-----
      |           OIM
      |   Coef. Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
Structural |
SBM1 <- |
  IML | .9666368 .0183499  52.68  0.000   .9306717  1.002602
  RmRf | .0122225 .0117072   1.04  0.296  -.0107231 .0351682
  SMB | .3653506 .0320732  11.39  0.000   .3024882 .428213
  HML | .3575988 .0264673  13.51  0.000   .3057238 .4094738
  RMW | -1.538614 .0346027 -44.47  0.000  -1.606434 -1.470794
  CMA | .1835045 .0288762   6.35  0.000   .1269081 .2401008
  _cons | -.0021219 .0010842  -1.96  0.050  -.0042469  3.18e-06
-----+-----
IML <- |
  RmRf | .072704 .0437392   1.66  0.096  -.0130232 .1584313
  SMB | .3485865 .1181915   2.95  0.003   .1169354 .5802375
  HML | .8426132 .0807828  10.43  0.000   .6842817  1.000945
  RMW | -.2864994 .128616  -2.23  0.026  -.5385822 -.0344166
  CMA | .0616509 .1085084   0.57  0.570  -.1510217 .2743235
  _cons | .0262853 .0036517   7.20  0.000   .0191282 .0334425
-----+-----
var(e.SBM1)| .0001193 .0000116           .0000986 .0001445
var(e.IML)| .0016875 .0001647           .0013937 .0020432
-----

```

LR test of model vs. saturated: chi2(0) = 0.00, Prob > chi2 = .

Endogenous variables Observed: SBM2 IML

Exogenous variables Observed: RmRf SMB HML RMW CMA

Fitting target model:

Iteration 0: log likelihood = 2884.2213

Iteration 1: log likelihood = 2884.2213

Structural equation model Number of obs = 210

Estimation method = ml

Log likelihood = 2884.2213

```

-----
      |           OIM
      |   Coef.  Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
Structural |
SBM2 <- |
  IML | .9892065 .0326613  30.29  0.000   .9251915  1.053221
  RmRf | -.0061388 .0208378  -0.29  0.768  -.0469802 .0347026
  SMB | .2302745 .0570877   4.03  0.000   .1183845 .3421644
  HML | -.0340509 .0471097  -0.72  0.470  -.1263842 .0582824
  RMW | -.2859394 .0615899  -4.64  0.000  -.4066534 -.1652254
  CMA | .3710467 .0513973   7.22  0.000   .2703099 .4717836
  _cons | .0040533 .0019298   2.10  0.036   .0002709 .0078357
-----+-----
IML <- |
  RmRf | .072704 .0437392   1.66  0.096  -.0130232 .1584313
  SMB | .3485865 .1181915   2.95  0.003   .1169354 .5802375
  HML | .8426132 .0807828  10.43  0.000   .6842817  1.000945
  RMW | -.2864994 .128616  -2.23  0.026  -.5385822 -.0344166
  CMA | .0616509 .1085084   0.57  0.570  -.1510217 .2743235
  _cons | .0262853 .0036517   7.20  0.000   .0191282 .0334425
-----+-----
var(e.SBM2)| .000378 .0000369           .0003122 .0004577
var(e.IML)| .0016875 .0001647           .0013937 .0020432
-----

```

LR test of model vs. saturated: chi2(0) = 0.00, Prob > chi2 = .

Endogenous variables Observed: SBM3 IML

Exogenous variables Observed: RmRf SMB HML RMW CMA

Fitting target model:

Iteration 0: log likelihood = 3092.6922

Iteration 1: log likelihood = 3092.6922

Structural equation model Number of obs = 210

Estimation method = ml

Log likelihood = 3092.6922

```

-----
      |           OIM
      |   Coef.  Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
Structural |
SBM3 <- |
  IML |  1.018693  .0121032  84.17  0.000   .9949712  1.042415
  RmRf | -.0138208  .0077218  -1.79  0.073  -.0289553  .0013137
  SMB |  .266574   .0211549  12.60  0.000   .2251112  .3080368
  HML |  .0311266  .0174573   1.78  0.075  -.0030891  .0653424
  RMW | -.1258352  .0228233  -5.51  0.000  -.170568  -.0811025
  CMA | -.4034666  .0190462 -21.18  0.000  -.4407964  -.3661367
  _cons | .0001052  .0007151   0.15  0.883  -.0012964  .0015069
-----+-----
IML <- |
  RmRf |  .072704   .0437392   1.66  0.096  -.0130232  .1584313
  SMB |  .3485865  .1181915   2.95  0.003   .1169354  .5802375
  HML |  .8426132  .0807828  10.43  0.000   .6842817  1.000945
  RMW | -.2864994  .128616   -2.23  0.026  -.5385822  -.0344166
  CMA |  .0616509  .1085084   0.57  0.570  -.1510217  .2743235
  _cons | .0262853  .0036517   7.20  0.000   .0191282  .0334425
-----+-----
var(e.SBM3)| .0000519  5.07e-06           .0000429  .0000629
var(e.IML)| .0016875  .0001647           .0013937  .0020432
-----

```

LR test of model vs. saturated: chi2(0) = 0.00, Prob > chi2 = .

Endogenous variables Observed: SBM4 IML

Exogenous variables Observed: RmRf SMB HML RMW CMA

Fitting target model:

Iteration 0: log likelihood = 3092.6922

Iteration 1: log likelihood = 3092.6922

Structural equation model Number of obs = 210

Estimation method = ml

Log likelihood = 3092.6922

```

-----
      |           OIM
      |   Coef.  Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
Structural |
SBM4 <- |
  IML | .9813069 .0121032  81.08  0.000   .957585  1.005029
  RmRf | .0138208 .0077218   1.79  0.073  -.0013137 .0289553
  SMB | -.266574 .0211549 -12.60  0.000  -.3080369 -.2251112
  HML | -.0311266 .0174573  -1.78  0.075  -.0653424 .0030891
  RMW | .1258352 .0228233   5.51  0.000   .0811024 .170568
  CMA | .4034665 .0190462  21.18  0.000   .3661367 .4407964
  _cons | -.0001052 .0007151  -0.15  0.883  -.0015069 .0012964
-----+-----
IML <- |
  RmRf | .072704 .0437392   1.66  0.096  -.0130232 .1584313
  SMB | .3485865 .1181915   2.95  0.003   .1169354 .5802375
  HML | .8426132 .0807828  10.43  0.000   .6842817  1.000945
  RMW | -.2864994 .128616  -2.23  0.026  -.5385822 -.0344166
  CMA | .0616509 .1085084   0.57  0.570  -.1510217 .2743235
  _cons | .0262853 .0036517   7.20  0.000   .0191282 .0334425
-----+-----
var(e.SBM4)| .0000519  5.07e-06           .0000429 .0000629
var(e.IML)| .0016875 .0001647           .0013937 .0020432
-----

```

LR test of model vs. saturated: chi2(0) = 0.00, Prob > chi2 = .

Endogenous variables Observed: SBM5 IML

Exogenous variables Observed: RmRf SMB HML RMW CMA

Fitting target model:

Iteration 0: log likelihood = 2880.5338

Iteration 1: log likelihood = 2880.5338

Structural equation model Number of obs = 210

Estimation method = ml

Log likelihood = 2880.5338

```

-----
      |           OIM
      |   Coef.  Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
Structural |
SBM5 <- |
  IML | .9145806 .0332399  27.51  0.000   .8494316   .9797296
  RmRf | .0382659 .021207   1.80  0.071  -.003299   .0798308
  SMB | .4641272 .058099   7.99  0.000   .3502551   .5779992
  HML | .6840709 .0479442  14.27  0.000   .590102   .7780399
  RMW | .0486068 .062681   0.78  0.438  -.0742457   .1714592
  CMA | .7704755 .0523078  14.73  0.000   .6679541   .8729968
  _cons | -.004349 .001964  -2.21  0.027  -.0081984  -.0004995
-----+-----
IML <- |
  RmRf | .072704 .0437392   1.66  0.096  -.0130232   .1584313
  SMB | .3485865 .1181915   2.95  0.003   .1169354   .5802375
  HML | .8426132 .0807828  10.43  0.000   .6842817   1.000945
  RMW | -.2864994 .128616  -2.23  0.026  -.5385822  -.0344166
  CMA | .0616509 .1085084   0.57  0.570  -.1510217   .2743235
  _cons | .0262853 .0036517   7.20  0.000   .0191282   .0334425
-----+-----
var(e.SBM5)| .0003915 .0000382           .0003234 .0004741
var(e.IML)| .0016875 .0001647           .0013937 .0020432
-----

```

LR test of model vs. saturated: chi2(0) = 0.00, Prob > chi2 = .

Endogenous variables Observed: SBM6 IML

Exogenous variables Observed: RmRf SMB HML RMW CMA

Fitting target model:

Iteration 0: log likelihood = 2894.0611

Iteration 1: log likelihood = 2894.0611

Structural equation model Number of obs = 210

Estimation method = ml

Log likelihood = 2894.0611

```

-----
      |           OIM
      |   Coef.  Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
Structural |
SBM6 <-  |
  IML |  1.08469  .0311662  34.80  0.000   1.023606  1.145775
  RmRf | -.0488279  .019884   -2.46  0.014  -.0877998  -.009856
  SMB  | .8350074  .0544745  15.33  0.000   .7282393  .9417755
  HML  | .1584615  .0449532   3.53  0.000   .0703549  .2465682
  RMW  | -.2165084  .0587706  -3.68  0.000  -.3316967  -.1013201
  CMA  |  1.01478  .0490446  20.69  0.000   .918654  1.110905
  _cons | -.0036655  .0018415  -1.99  0.047  -.0072748  -.0000563
-----+-----
IML <-  |
  RmRf | .072704  .0437392   1.66  0.096  -.0130232  .1584313
  SMB  | .3485865  .1181915   2.95  0.003   .1169354  .5802375
  HML  | .8426132  .0807828  10.43  0.000   .6842817  1.000945
  RMW  | -.2864994  .128616  -2.23  0.026  -.5385822  -.0344166
  CMA  | .0616509  .1085084   0.57  0.570  -.1510217  .2743235
  _cons | .0262853  .0036517   7.20  0.000   .0191282  .0334425
-----+-----
var(e.SBM6)| .0003442  .0000336                .0002843  .0004168
var(e.IML)| .0016875  .0001647                .0013937  .0020432
-----

```

LR test of model vs. saturated: chi2(0) = 0.00, Prob > chi2 = .

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RESEARCH ARTICLE

How do Student Leaders in a Teachers' College Cope with Stress?

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Abstract

As stress becomes disturbingly high among college students, it becomes one of the common problems that is brought about by their demanding schedules. This qualitative-descriptive research aims to describe how student leaders in a Teachers' College cope with stress. Eight (8) student leaders were identified using purposeful sampling. A duly-validated semi-structured interview guide was used to gather data through online-in depth interviews. Three (3) significant themes and thirteen (13) meaningful categories emerged after using a thematic approach to analyze the data, namely: (1) stressors (organizational, academic, mental, financial, and academic-related support); (2) effects of stress (emotional, physical, and academic); and, (4) coping strategies (emotional support, spiritual coping, goal setting, physical care, and recreational coping). As student leaders balance both academic and leadership roles, they have to skillfully manage stress through their effective coping strategies.

Keywords: Student Leader; Stress; Coping Strategies

Introduction

Stress is a common problem among college students because of their busy schedules (McKiernan et al., 2021). As stress becomes disturbingly high among students (Asif et al., 2018), they become more irritable and angrier towards other students (Brobbe, 2020) moreover, they can be attributing various stressors that they face in school and at home (Simpson, 2018). The most prevalent stressors for them are academic stress, financial stress, and social stress (Devi et al., 2015). Thus, students would devise coping strategies to combat stress and cope with its effects. They cope with stress by engaging in physical activities such as sports, developing social skills, and relaxing (Hatunoglu, 2020).

Previous studies on stressors and coping strategies highlight their relevance in today's educational landscape (Lawton, 2020). The collected research studies on stress encompass undergraduate students (Genesan et al., 2018) but not specifically on the student leaders' well-being (Sia et al., 2020). These papers focus on a different topic as they tend to generalize for convenience, which is insufficient to speak on behalf of a specific group of students (Olape et al., 2017). This concerns student leaders in a teachers' college who are overburdened with schoolwork and organizing events. It is important to address this gap to help student leaders to become more efficient.

This study is anchored on the Transactional Theory of Stress and Coping (Folkman and Lazarus, 1984, Dillard, 2019) which states that stress manifests itself in a variety of ways, including physical, emotional, and behavioral manifestations while coping strategies vary from person to person. This research study aims to describe student leaders, stress, stressors, and coping strategies in a teachers' college. Awareness of various stressors will aid in having interventions for the well-being of student leaders.

Methodology

Research Design

This study used a qualitative descriptive research design based on constructionist epistemology and naturalistic inquiry methodology to investigate a socially constructed reality (Pedroso et al., 2022). Similarly, this study was founded on the Transactional Theory of Stress and Coping, which assesses daily activities, affects emotions, and how people cope with stress (Janse, 2021). Furthermore, stress has been shown to manifest in a variety of ways, including physical, emotional, and behavioral manifestations, with coping strategies varying from person to person (Dillard, 2019).

Informants

Informants

Eight (8) student leaders from a Teacher's College at a public university in the Philippines were included in this research study. They were selected through purposeful sampling (Pedroso, Siason, Roces, & Basbas, 2022). The

inclusion criteria are as follows: (1) he/she is an officially enrolled student at West Visayas State University in the school year 2022-2023; (2) he/she is on the College of Education student roster; and (3) he/she is the chairperson of an accredited organization in the College of Education.

Pseudonym of Informant	Gender	Age	College Organization
Karina	Female	21	English Majors' Organization
Jullius	Male	20	Kapisanang Diwa at Panitikan
Nana	Female	21	Majors' of Values Education
Lesley	Female	20	Association of Early Childhood Education Students
Rafaela	Female	23	Science Teaching Majors' Association
Kimmy	Female	21	Association of General Education Students
Freya	Female	20	Special Education Students' Association
Cecillio	Male	22	Social Science Students' Society

Figure 1: Profile of the Informants

Data Collection Instrument

This study made use of a researcher-made semi-structured interview guide that was validated by three (3) qualitative research experts. Similarly, the interview guide was pilot-tested with three (3) non-participating student leaders. The instrument is divided into two (2) parts. The first part concentrated on the informant's personal details and demographic profile. To maintain flexibility in data collection from informants (George, 2022), the second part included open-ended questions about how student leaders

cope with stress. Furthermore, the Transactional Theory of Stress and Coping (Folkman and Lazarus, 1984; Dillard, 2019) was used to create the interview guide's open-ended questions.

Data Collection Procedure

The data collection process began after the Dean of the college approved a letter to conduct the study. The informants were organized using Facebook Messenger's group chat for easy access. A formal letter of invitation as an informant and a consent form was made available from

the same platform to inform them of the study and confirm their willingness to participate. Following the informant's confirmation, an online orientation meeting was scheduled in which they were informed of their voluntary participation without monetary compensation, as well as assurances of information confidentiality and anonymity of their identity, as pseudonyms were used. Each informant received a Google Meet link through which the in-depth interview was conducted.

Data Analysis

The data gathered from the informants was examined using the five -steps of Braun and Clarke's (2006) Thematic Approach which resulted in the identification of recurring patterns of information, specifically significant themes on stressors, effects of stress, and coping strategies. Using the constant comparison technique, the data revealed more similarities and differences in information, further resulting in the formation of meaningful categories. Triangulation of information through literature and observation was used to establish the findings' validity and reliability. Likewise, the written transcript of the findings was also presented to the informants for approval.

Results

There were three (3) significant themes relating to how student leaders in a teachers' college cope with stress namely: (1) stressors; (2) effects of stress; and, (3) coping strategies.

Stressors

Stressors are particular situations that cause stress within people. Other potential contributing factors include our memories, our environment, or the people in our immediate vicinity (Goodwin, 2022). Stressors of student leaders were divided into five (5) sub-themes namely: (1) Organizational Stress; (2) Academic Stress; (3) Mental Stress; (4) Financial Stress; and, (5) Academic-Related Support.

Organizational Stress

Leadership is a very tough responsibility that one can hold, especially for student leaders who have to juggle academic and organizational tasks. Within the organization itself, there are a multitude of stressors that a student leader faces daily. Organizational stress was subdivided into four (4) categories namely: (1) Unreliable Colleagues; (2) Pressure; (3) Administration Problems; and, (4) Unexpected Changes in Schedules.

- **Unreliable Colleagues**

Some of the student leaders' colleagues within their organization are unreliable or simply cannot perform their duties as officers. This causes stress as these leaders require the full support of all their officers to efficiently run the organization.

Nana: *"Inactive organization officers"*

Kimmy: *"Officers are not committed to their positions"*

- **Pressure**

The pressure of being a chairperson in their organization was very taxing and demanding. Some of these student leaders are new to being chairpersons so the demand to live up to the expectations of their peers was rather high.

Freya: *"I was appointed chairperson last March to serve the organization for the remaining school year. I can say that there's a lot of pressure, especially since this is new to me"*

- **Administration Problems**

As student leaders, they are required to closely work with the school administration for their organization to receive support and permission to conduct activities. However, there seem to be problems in coordination with the administration, leading to many breakdowns in communications and a lack of support for their organization.

Cecilio: *"Lastly, lack of resources in terms of physical facilities to accommodate every single activity and advocacy we want to conduct for the students"*

Julius: *"The tight deadlines of permits, letters, and other paperwork that must be accomplished on time are stressors for me."*

- **Unexpected Changes in Schedule**

In some circumstances, the activities that were planned by the organization could be set back due to a myriad of reasons like unexpected events and natural causes. These setbacks would greatly affect the chairpersons as it is their responsibility to ensure that everything goes according to plan.

Cecilio: *"... the unexpected events and natural phenomenon which hampers our plans, implementation, and preparations"*

Academic-Related Stress

Student leaders are students first and foremost. They are no different from the average student when it comes to what school-related activities are given to them. As such it can be quite difficult to balance their role as a leader and a student. This would be one of their biggest challenges as they need to maintain their grades to continue their studies. Academic-related stress was divided into two (2) categories namely: (1) Studying and (2) Activities.

Studying: Studying for exams is quite difficult for student leaders as their focus is divided between their responsibilities with their respective organizations.

Lesley: *"Studying for exams or working towards deadlines is what I believe stresses me"*

- **Activities**

For a student leader, it can be overwhelming to deal with projects, assignments, and professors, coupled with your responsibilities as a chairperson. This heavy workload can be a source of stress for many of the student leaders interviewed.

Freya: *"Projects, assignments, deadlines, professors, and when you add up the responsibilities of being the head of an organization, the whole deal can be a bit overwhelming, to be honest."*

Cecilio: *"...too much workload in a month, aside from activities being mentioned on our calendar-- there are activities that we need to give our attention"*.

Mental Stress

This stressor is quite a struggle for the informants. They have to endure this mental stress as their responsibilities as student leaders dictate them to be calm in making key decisions for the benefit of the organization. Mental stress was divided into two (2) categories namely: (1) Adjustment Issues and (2) Severe Mental Issues.

- **Adjustment Issues**

Adjusting to a new position and environment is not easy. It requires mental fortitude to adjust to these new changes.

Kimmy: *"That major switch from something I was not used to was, I believe a stressor of mine"*.

- **Severe Mental Issues**

The informant in this category stated they had to deal with severe mental issues like phobias and mental disorders.

Karina: *"From trichotillomania to severe depression to panic anxiety disorder"*

Financial Stress

Student leaders are not paid for their services rendered as chairpersons or whatever positions they may hold. Thus, some of them feel like money is a sensitive topic for them to bring up.

Rafaela: *"Money is a sensitive topic."*

- **Academic-Related Support**

Some student leaders would lack gadgets and other devices for their academic-related responsibilities.

Nana: *"The lack of gadgets for academic use..."*

Effects of Stress

The persistent stress associated with the school has a detrimental effect on student's ability to study, academic performance, achievement of education and employment, sleep quantity and quality, physical and mental health, and drug use consequences (Pascoe, 2019). Effects of stress on student leaders have three (3) sub-themes namely: (1) Emotional Effects; (2) Physical Effects; and, (3) Academic Effects.

Emotional Effects

Student leaders are having a hard time dealing with many things in school, especially since they are holding a huge role in their respective organizations. Student leaders also mentioned that one of the major effects of stress on them is anxiety and mental health issues. Emotional effects were divided into (2) sub-themes namely: (1) Anxiety and (2) Mental Health.

- **Anxiety**

The body and mind's response to stressful, hazardous, or strange events is anxiety, which leads to uneasiness and fear (Javanovic, 2023). Anxiety is divided into four (4) categories namely: (1) Irritation; (2) Panic Attacks; (3) Burnout; and, (4) Mental health.

Irritation. Irritation is a typical emotion and can be brought on by or contribute to a variety of circumstances, such as life stress, lack of sleep, low blood sugar, and hormonal changes (Legg, 2019). Student leaders felt that the effects of these stressors took a toll on their patience leading to self-doubt.

Lesley: *"I could get easily irritated, impatient, and have doubts, and feelings of inadequacy."*

Panic Attacks. Panic attacks can also be the result of stress for some student leaders because of the responsibilities that need to be done at a specific time.

Freya: *"Sometimes, I would have panic attacks that would affect my mood and ruin my day."*

Burnout. Stress that is sustained or recurrent can lead to burnout, which is a condition of emotional, mental, and frequently physical weariness. Burnout is also an effect of stress experienced by student leaders as they are constantly doing their duties as leaders (Perina et al., 2023).

Cecilio: *"I feel burned out and unmotivated which leads to sometimes not having an event at all"*

Mental Health. The whole state of your thinking, emotion control, and behavior is referred to as your mental health. Sometimes people encounter a major impairment in this mental functioning. When patterns or changes in thinking, feeling, or acting disturb a person or impair their capacity to function, a mental illness may be present (Pruthi et al., 2020). Some informants would generalize the emotional effects of stress as mental health problems.

Nana: *"Inactive organization officers as a stressor has a big impact, especially on my mental health."*

Physical Effects

Even though you might not be aware of it, stress symptoms could be harming your health. You may believe that the nagging headache, your frequent sleeplessness, or your reduced productivity at work are all symptoms of an illness (Pruthi et al., 2020). An informant noted that they had a lack of sleep, lack of appetite, and lack of rest as a student leader.

Lesley: *"...also, as a student, it affects my overall mental well-being. I got too little sleep, barely had rest, and not eating enough"*

Academic Effects

Stress would also have an impact on the academic performance of student leaders, as they are also required to carry out academic responsibilities to maintain good grades as students. This would make a significant difference in their lives as students because they are also leaders who must consider the other side of being a more responsible individual to fulfill their responsibilities as student leaders.

Cecilio: *"Regarding my academics as a student, these stressors challenged my peace of mind and focus"*

Coping Strategies

Having this aspect is crucial for student leaders as it enables them to manage stress, regulate emotions, build resilience, increase self-awareness, and improve their overall well-being. Student leaders' coping strategies were divided into five (5) sub-themes namely: (1) Emotional Support; (2) Spiritual Coping; (3) Goal Setting; (4) Physical Care; and, (5) Recreational Coping.

● **Emotional Support**

Student leaders face unique challenges and responsibilities that can negatively impact their mental health. Emotional support is an essential coping strategy for them to manage stress and promote their overall well-being. It helps student leaders regulate their emotions, reduce stress levels, and improve their mental health. Accessing emotional support also provides a sense of connection and belonging with others who understand their leadership challenges, allowing them to better manage their responsibilities and make effective decisions. There were (4) various sources of emotional support namely: (1) Oneself, (2) Nature; (3) Friends; and, (4) Family.

Oneself. Being a student leader can be overwhelming, and it's easy to prioritize the demands of leadership over one's own emotional needs. Nevertheless, it's essential to prioritize self-compassion and provide emotional support for oneself to maintain good mental health and prevent burnout.

Freya: *"In dealing with stress, I usually try to calm myself and arrange my thoughts first"*

Karina: *"Every time I wake up, I also don't forget to have self-affirmations to combat negative self-perception."*

Nature. Student leaders can benefit from the calming and reflective qualities of nature, which can help them recharge and maintain their mental health.

Nana: *"I find peace within me and the nature that surrounds me while internalizing positive thoughts that can help me move forward despite challenges"*

Friends. Friends can offer critical support to student leaders by providing empathy, a listening ear, and encouragement. This type of emotional support is essential for student leaders to manage their emotions, decrease stress, and feel connected to others.

Rafaela: *"I maintain emotionally supportive relationships. I request assistance from others."*

Family. Emotional support from family can help student leaders manage their emotions, reduce stress, and

feel a sense of belonging. The family offers a safe space for expression, guidance, and encouragement.

Nana: " I always travel back home despite the distance because I feel recharged when I spend time with my family and nature."

Spiritual Coping

Praying. For student leaders, spiritual coping is a means of managing stress. This involves relying on their religious or spiritual beliefs and practices such as praying to God for strength and peace.

Kimmy: "Above all, praying for me is a coping strategy for dealing with stress."

Goal Setting

Student leaders set goals by giving time to complete tasks. Making innovations would be a great way to cope with stress.

Cecilio: "Complete tasks". " We are always creating a priority list of plans despite that the plate is full.",

Setting Goals. "...give the appropriate amount of time for collection of papers for the permits...",

"Making Innovations", "We innovate. If venues (for our event) are not available, we transfer them online. If not, we look for other possible venues"

Physical Care

Student leaders shared that getting enough sleep, eating a healthy diet, and performing breathing exercises would help them cope with stress.

Breathing Exercises

Karina: "When dealing with stress I take the time to breathe".

Maintaining a Healthy Lifestyle

Kimmy: "One thing that is also important and that I practice to cope with stress is making sure that I get enough sleep and eat a healthy diet".

Recreational Coping

Recreational activities such as joyriding on motorcycles, problem-solving, watching TV shows or movies, spending time outdoors, taking long walks, playing with pets, and doing hobbies were mentioned by student leaders as ways for them to cope with their stress as chairpersons and students.

Watching TV Shows or Movies

Julius: "My stress coping strategies include sleeping, watching my favorite Netflix series, and spending time outdoors."

Kimmy: "I also make time to enjoy things I love to do, such as watching K-dramas and eating my favorite foods."

Joyriding on Motorcycles

Nana: "...riding my motorcycle and road trips"

Playing with Animals

Nana: "... playing with my dogs"

"Practicing Hobbies"

Nana: "Crochet helps me deal with my stress as well."

Taking Long Walks

Freya: "It's important to increase the things that bring me happiness, relief, and joy. I would go on long walks, and buy myself a drink. I also organize and declutter my closet, or take a nice relaxing bath."

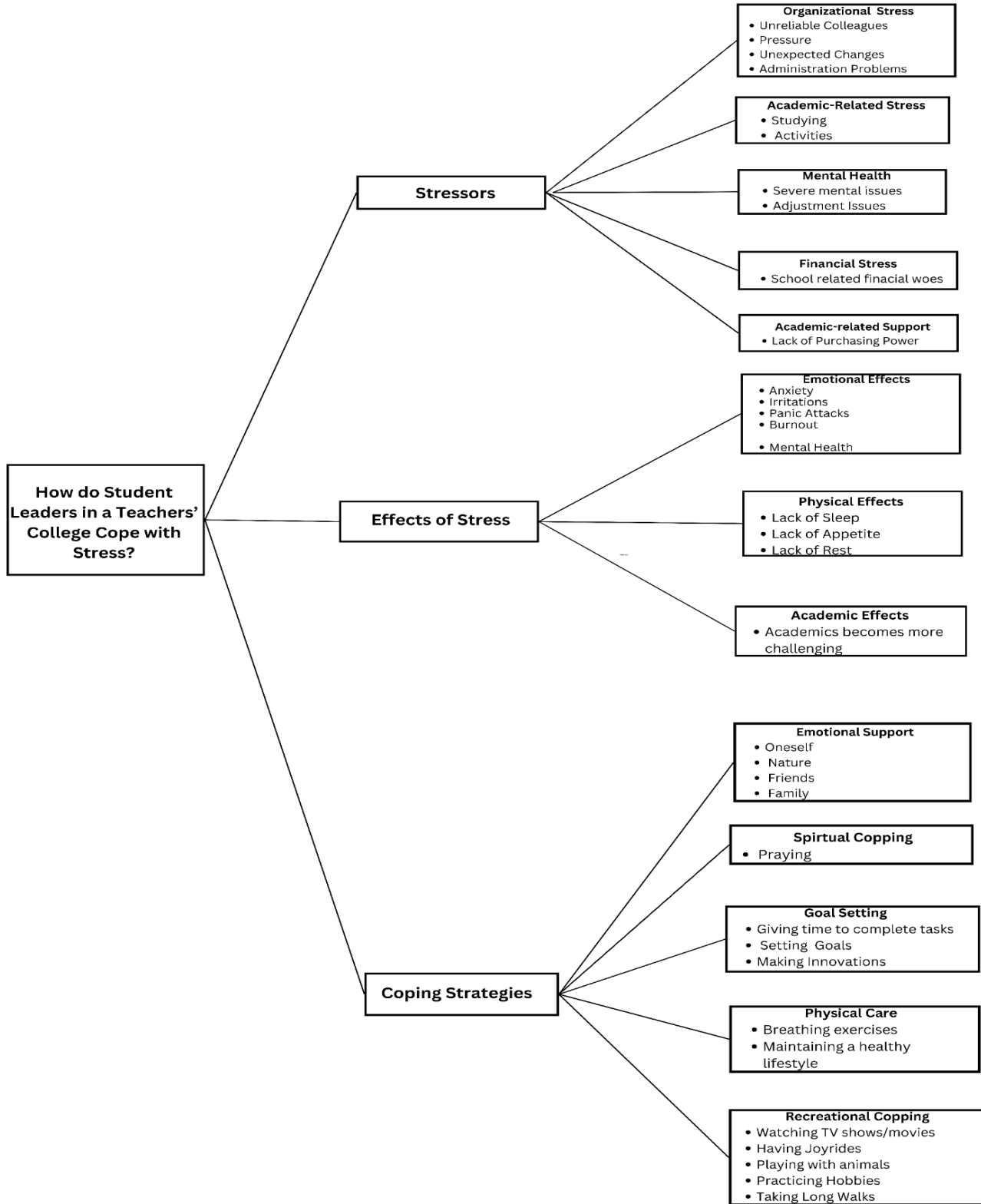


Figure 2: Demonstration on How Student Leaders in a Teachers' College Cope with Stress

Discussion

College students are prone to stress because of their tight schedules (McKiernan et al., 2021). Some of these students would serve as student leaders, which would require them to balance their academic standing with their responsibilities to their organizations. This study aims to describe how student leaders in a teachers' college cope with stress.

Stressors are specific circumstances that make individuals feel stressed. Our recollections, our surroundings, or the individuals nearby are other potential contributing variables (Goodwin, 2022). There are significant negative effects that stress has been discovered to have on people's lives, it is frequently perceived as something that is unhealthy, hazardous, and "must be avoided." (Nerstad et al., 2023).

Our study found that organizational stress has the potential to promote learning and progress, which means it may also be adaptive for people. Therefore, stress is not only to blame for all illnesses and social issues at work or in life; it may also lead to beneficial effects like job-related well-being (Nerstad et al., 2023). Unreliable individuals are unavoidable in any organization. They are regarded as unresponsive, unprincipled, and ineffective (Sonnenberg, 2021). As a result, they become a source of stress for leaders, because these leaders require the support of all of their officers to effectively lead the company. In this study, student leaders believed that by failing to uphold the organization's standards, these unreliable co-officers may bring the entire organization down. Furthermore, the participation of all officers is required for an organization's day-to-day operations. Unresponsive or unreliable coworkers are cited as a source of stress. Similarly, stress is caused by coworker competition, a lack of trust, and a difficult working relationship with a coworker or colleague (Faisal, 2019). Pressure is defined as doing a lot of tasks or making a lot of decisions in very little time, or that people expect a lot from you (Collins, 2022). Some of the student leaders in this study are new to being chairpersons, so the demand to live up to the expectations of their peers was rather high. Therefore, leadership positions can be difficult, which may make a student leader feel worried.

While student leaders are expected to achieve academically, which puts pressure on them to do well (Njaramba et al., 2022), one of the findings of this study pointed out that student leaders cannot perform their duties to the best of their abilities without the support of the administration. So, they felt stressed out due to their inability to make any sort of decision. Similarly, a study conducted in Kenya posited

that communication breakdowns between student leaders and school management were considered very frequent which hampered the services that could be given to the students (Murage et al., 2021).

As college students, their mental health may be impacted by a variety of stress factors, but academic stress may be the most significant one (Barbayannis et al., 2022). First and foremost, student leaders are students. When it comes to school-related activities, they are no different than the average student. As a result, balancing their roles as a leader and a student can be difficult. This will be one of their most difficult challenges because they must maintain their grades to continue their studies. In this study, a student leader's focus is divided between their responsibilities with their respective organizations, making studying for exams difficult. Due to time constraints and pressure, they are unable to focus on both responsibilities. For student leaders, this would be a source of mental exhaustion because stress is characterized by exorbitantly high expectations, high levels of anxiety, self-criticism, and concentration. As a result, exam anxiety and stress are highly correlated among college students (Snober, 2022). According to a Kenyan study, 56.5% of respondents stated that academic endeavors compete for attention with leadership roles very frequently/frequently, while 35.5% stated that the conflict is rare or on an occasional basis only. This would tell that there is difficulty in juggling academic activities and leadership duties (Murage, 2019).

On the other hand, mental stress is a particular stressor that is quite a struggle for the student leaders in this study. They have to endure this stressor as their responsibilities as student leaders dictate them to be calm in making key decisions for the benefit of the organization. College students frequently experience mental health issues. This might be a result of the fact that many traditional and non-traditional undergraduate students find their time in college to be tough (Pedrelli et al., 2016).

Another stress experienced by student leaders in this study is financial stress. It is defined as anxiety-driven stress resulting from a financial event in a person's life (Krupinski, 2021). This particular study shows that a student's participation in various academic and extracurricular activities is impacted by financial stress. As a result, the component to assess students' stress should be taken into account by parents, university administration, and student counselors (Hossain et al., 2023).

Stress has an emotional impact that may show up as anger or aggression, a sense of being out of control, insomnia,

weariness or fatigue, sadness or sorrow, memory or concentration issues, or other symptoms (Racine, 2020). Too much stress also affects the emotions of a person, there are a lot of ways in handling stressors and it will show whether it is handled positively or negatively based on how a person acts towards another person. Anxiety, which produces unease and worry, is the body's and mind's reaction to stressful, risky, or unexpected circumstances (Javanovic, 2023). As they experience anxiety, there is a chance that they will experience panic attacks (Davis et al., 2023). As a student, there will be activities that need to be accomplished at a certain date, some days there are a lot of activities that need to be done on the same day, and this leads to burnout (Perina et al., 2023). Sometimes, students that have too much work, and work all night to cram it all before the deadline become irritable, experience a lack of sleep, and loss of appetite (Goodwin, 2022).

If stress has an emotional effect, it also has a physical effect, the longer the stressors stay the worse the effect becomes. Experiencing stress could increase blood pressure, having a higher risk of heart disease, headaches, and back or neck pain, for it also affects your physical health (Racine 2020). Meanwhile, academic stress has been linked to a variety of negative effects, including ill health, anxiety, depression, and poor academic performance (Deng et al., 2022) and vulnerability to mental health issues such as melancholy and anxiety, sleep disorders, and drug abuse (Pascoe et al., 2019).

This study also highlights the crucial importance of coping strategies for student leaders in effectively managing stress, regulating emotions, building resilience, increasing self-awareness, and improving overall well-being. Coping strategies that focus on emotions aim to decrease tension and stressful circumstances (Wirkus et al., 2021), it enables student leaders to regulate their emotions, reduce stress levels, and enhance their mental health. As this study highlights four sources of emotional support which were from oneself, nature, friends, and family, would mean that student leaders prioritize self-care, offering themselves emotional assistance to ensure good mental health and prevent burnout. One of the coping strategies of student leaders may be found in the ideas of Hunter et al. (2019) who posited that finding solace in nature and spending time outdoors helps them feel positive, peaceful, and calm. Specifically, engaging in nature-related activities for just 20 minutes can contribute to the reduction of stress hormone levels (Hunter et al., 2019).

Additionally, friends and family serve as an invaluable support system, offering understanding, assistance, and

companionship. According to a study conducted by Slepian & Moulton-Tetlock (2019), just simply having a conversation with a reliable friend or coworker has the potential to alleviate your stress levels and foster deeper relationships. Sharing your feelings with someone not only helps improve your overall well-being but also enhances the closeness between individuals.

Another coping strategy highlighted in this study is spiritual coping which involves the utilization of religious or spiritual beliefs and practices to effectively manage stress. The use of religious coping techniques proved to be effective in improving the psychological and social dimensions of individuals' quality of life (Krägeloh et al., 2011). Engaging in activities such as praying, seeking strength from a higher power, and relying on spiritual beliefs help student leaders improve their psychological and social dimensions of quality of life.

Student leaders in this study pointed out that goal-setting allows them to effectively manage their responsibilities by organizing and prioritizing tasks. Likewise, it enables them to create a structured plan, prioritize their workload, and manage their time efficiently, ultimately reducing stress and increasing the likelihood of successful completion.

Physical care is also emphasized as a crucial coping strategy for student leaders. Prioritizing sufficient sleep, maintaining a healthy lifestyle, and engaging in breathing exercises are mentioned as key components. Adequate sleep and a nutritious diet support physical and mental health while breathing exercises promote mindfulness, stress regulation, and relaxation. Both mindfulness breathing and cognitive reappraisal practices yielded a large effect size in reducing test anxiety for undergraduate students. Mindfulness breathing practice showed increased positive automatic thoughts over time, compared to their counterparts, the cognitive reappraisal practice, and the control group (Cho et al., 2016). In addition, higher physical activity levels and longer duration of sleep are associated with lower levels of perceived stress (Moriarty et al., 2021).

Also, recreational coping involves engaging in enjoyable activities to manage stress which in this study include watching TV shows or movies, joyriding on motorcycles, playing with pets, practicing hobbies, and taking long walks. One of the coping strategies mentioned by student leaders is watching TV shows or movies as there is a positive connection between watching TV series and anxiety. This supports the notion that individuals who experience negative emotions are more likely to use binge-watching as a coping mechanism to recover from these undesirable feelings and effectively manage their negative moods

(Boursier et al., 2021). Joyriding on motorcycles makes student leaders embark on road trips and provide a sense of freedom, adventure, and excitement.

Playing with pets is another coping strategy. The presence of animals can have a calming effect and provide emotional support. Spending time with pets allows people to enjoy the love and playful energy that the animals bring, as well as temporarily shift their focus away from stressors. According to Mueller et al. (2021), teenagers who have pets reported increased engagement with their pets and frequently regarded interacting with their pets as a means of stress management. Moving on to practicing hobbies. According to El-shafei et al. (2018), engaging in activities like practicing hobbies and getting enough sleep contributes to a balanced life, relieving work-related stress and increasing compassion satisfaction. Additionally, Seetan et al. (2021) found that practicing hobbies were the preferred strategy for stress relief. Finally, taking long walks and participating in nature group walks regularly was associated with a reduction in perceived stress, depression, and negative emotions, as well as an increase in positive emotions and overall mental well-being (Marseille et al., 2019). Researchers discovered that walking is an effective coping strategy for stress management in this study. Overall, implementing these strategies can greatly enhance student leaders' ability to navigate their responsibilities more effectively and improve their overall quality of life.

This particular study has various limitations that should be noted and addressed in future studies. Firstly, the informants interviewed for the study were only coming from a teacher's college, and as such the transcripts cannot generalize the stressors, effects of stress, and coping strategies of student leaders from other colleges. Furthermore, the number of student leaders, which is eight (8) is a small number that may not be ideal to generalize the findings in the broader scope of student leaders in a teacher's college. Secondly, quantitative research may be utilized to supplement this study so that we can get a better sense of the stress that these student leaders experience through the use of statistical data. Thirdly, the position of chairperson cannot generalize the broader experiences of other student leaders who hold different positions within their organizations, so it is suggested that future studies could focus on these other positions. Fourthly, this study only focuses on the context of the stressors, effects of stress, and coping strategies of Student leaders, future studies may want to focus on different points of interest that are related to the well-being of student leaders. Lastly, our study used online-interview questionnaires that have pre-set questions which can lead to

the transcripts being limited in their scope. Despite the limitations of this study that limited its scope, the results gathered from the study may set the groundwork for future studies on this particular topic.

Conclusion

Student leaders are an important part of any academic institution, as they are the ones responsible for representing the students under them and serving as their voice in the upper echelons of the bureaucracy. Their responsibilities don't end with their organizations but they also must fulfill their academic requirements to maintain their standing as students. So it is no surprise that these student leaders have their own set of stressors that have varying effects on their mental and physical well-being. Because of these stressors, student leaders have various coping strategies that are unique to each one's needs to deal with their academic and leadership Burdens. These leaders go above and beyond to deliver quality service to their constituents, that being the students under their respective organizations without the expectation of compensation or reward. This shows that being a student leader requires true grit and passion as this isn't just a position but it is a responsibility that you will need to bear for the sake of every student that looks up to you for leadership.

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RESEARCH ARTICLE

Financial Inclusion And Economic Growth In Nigeria

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Abstract

Financial inclusion signifies the practice of granting access to financial services and credit to families, enterprises, and administrations at reasonable prices. It encompasses measures designed to augment the utilization of official financial offerings within the economic framework. This research employed an ex-post facto study design to evaluate data on elements like banking penetration, usage of financial services, and access to financial services, concerning GDP growth. Relationships and interactions among these factors were scrutinized using the Autoregressive Distributed Lag Model (ARDL), which displayed strong explanatory capabilities and statistical validity. The research revealed that, without inputs from access to financial services, the usage of financial services, and banking penetration, the self-sustaining gross domestic product (GDP) is negative and statistically noteworthy. Over the short term, a negative link is observed between GDP and access to financial services (AFS); however, in the long term, AFS manifests a positive correlation with real GDP (RGDP). The usage of financial services (UFS) demonstrates a favorable relationship with GDP, accentuating the necessity of bolstering financial literacy and inspiring individuals and enterprises to effectively make use of financial services. The existing phase of banking penetration (BP) exerts a negligible impact on economic growth, but it is vital for policymakers to persistently observe and evaluate its long-term influence. Upholding a facilitative regulatory setting and stimulating rivalry within the banking sector are essential for enduring economic development. The regression analysis furnishes policy suggestions aimed at amplifying access to finance, boosting financial literacy, and confronting issues related to banking penetration. By tackling constraints that limit access to finance, upgrading infrastructure, and diminishing entry obstacles, sustainable economic growth can be achieved. Advocating for financial literacy and encouraging the adoption of financial services have the potential to elevate economic activities and spur GDP growth. Even though the current influence of banking penetration is not significant, it remains crucial for policymakers to keep track of and analyze its future implications.

Keyword: Financial Inclusion, Economic Growth, Usage of Financial Service, Access to Financial Services, Banking Penetration

Introduction

The pursuit of economic growth is a primary objective for most countries, as governments intervene in their economies to allocate resources, distribute wealth, and stabilize conditions. This is particularly important due to the limitations of the free market system. Governments employ monetary and fiscal policies to steer their economies toward development and achieve rapid economic growth. Economic growth is the steady rise over time in a nation's ability to generate goods and services, resulting in higher per capita income. It is driven by technological advancements, institutional changes, and

ideological shifts. Various administrations in Nigeria, including the National Development Plans and initiatives like the Structural Adjustment Program and National Economic Empowerment and Development Strategy, have influenced the country's economic growth. These government policies play a crucial role in supporting economic growth, as enhancing the range, quantity, and quality of goods and services is vital for improving the overall quality of life, especially in developing nations. To bridge the gap between savers and those in need of financial resources for consumption and production, the government must establish appropriate financial structures that act as intermediaries. The financial system facilitates

the drive of money from areas of surplus to areas of scarcity, promoting investment, higher returns on financial resources, and increased productivity. According to Igwe, Edeh, and Ukpere (2014), the financial system of a country serves a broader purpose than just allocating savings to investments. It must effectively utilize available resources for development to function efficiently from within.

According to economic theory, The financial industry is essential to promoting economic growth. The provision of affordable loans by the banking sector to productive sectors of the economy is believed to foster inclusive economic growth. This aligns with Nwafor's (2018) argument that access to financial services is a vital tool for the government to promote economic growth by efficiently allocating productive resources and reducing the cost of capital. Access to formal financial services enables individuals, businesses, and governments to obtain resources for production, consumption, and investment. It enables effective resource allocation and discourages reliance on illegal loan sources like predatory money lenders. The efficient allocation of resources by the financial system facilitates access to capital for investment purposes, promoting economic growth and ultimately improving the quality of life for residents.

ensuring household access to timely and sufficient finance services, businesses, and governments, including economically active individuals with low incomes, at affordable costs, is known as financial inclusion or deepening, as stated by Mwangi and Cheluget (2018). Financial inclusion encompasses initiatives aimed at providing access to and usage of financial services for all members of an economy, thus increasing the utilization of formal financial services within the economic system. The expansion of the economy's productive sectors is facilitated by the health of the financial sector encompassing services such as banking penetration, access to financial services, financial service consumption, and money management.

Banking penetration, which refers to the number of individuals with active accounts in commercial banks, is an important indicator of financial inclusion, as highlighted by Ibor, Offiong, and Mendie (2017). It provides insights into the distribution of financial services within an economy and can be interpreted as the number of individuals with functioning accounts at deposit money institutions. Banking penetration serves as an indicator of economic well-being, particularly in low-income countries. Bank products, such as savings accounts, fixed deposits, current accounts, and loans, allow individuals, businesses, and governments to manage their income and expenses, protect

against unexpected changes, and make investments in human or physical capital. Keynesian economics recognizes the role of currency in transactions, precautionary measures, and speculation by individuals, businesses, and governments. Higher levels of banking services utilization are often observed in urban areas due to factors such as higher income levels, wealth, education, formal employment, and accessibility to digital financial innovations. Conversely, residents in rural areas tend to rely on safekeeping cash or informal money lenders who charge exorbitant interest rates for loans. Consequently, financial service utilization among low-income urban residents is generally lower.

Deposit money banks in Nigeria offer a range of accounts, including current, savings, and fixed deposit accounts. Savings accounts are commonly used by individuals with irregular income, while fixed deposit accounts can be opened by anyone. Individuals with stable incomes or regular employment are more likely to utilize current accounts. Opening a bank account is necessary to access financial services provided by banks. However, owning a bank account does not guarantee active usage of the bank's services, as highlighted by Sarma and Pias (2011). Financial inclusion goes beyond the physical presence of bank branches, as well as ICT (information and communication technology) use is transforming how people access and utilize banking services globally. Technology-driven innovations such as USSD codes for money transfers and mobile banking applications have expanded the range of banking services available. Ibor et al. (2017) also emphasize the importance of active utilization of financial services, rather than mere account ownership, when assessing financial inclusion.

The theory of finance-driven growth, first posited by Bagehot in 1873, argues that an absence of financial capital plays a role in earnings disparity and sluggish economic development. Per this viewpoint, financial innovations serve as the linchpin for stimulating advantageous economic growth. Consequently, securing reliable, speedy, and cost-effective avenues for funding is vital for achieving broad-based advancement, narrowing income gaps, lessening poverty levels, offering equitable chances, incorporating people who are socially and financially disenfranchised into the economic framework, enhancing economic robustness, and cushioning the blow of economic shocks (Serrao et al., 2012).

Inhabitants of rural areas frequently encounter obstacles when it comes to utilizing banking and financial services,

largely due to widespread educational deficiencies. Inadequate and incorrect information programs further limit their understanding of the benefits of banks and their services. This deprives people of potential investment and consumption opportunities. Onaolapo (2015) agrees with this view and emphasizes that without inclusive financial systems, the poor must rely on their limited savings for future investments, while micro and small businesses struggle to pursue growth prospects due to limited earnings. These factors contribute to persistent income disparities and hinder economic growth.

Despite the expansion and globalization of the payment system and financial markets, a significant portion of the population remains excluded. The government and financial sector authorities aim to create favorable conditions for an open and competitive market, while financial inclusion refers to providing affordable banking services to underprivileged and low-income groups. By analyzing the effects of banking penetration, the use of financial services, and access to financial services on the country's economic growth, this article seeks to investigate how government policies linked to financial inclusion affect economic growth in Nigeria.

Literature Review

Conceptual Review

Financial Inclusion

The supply of financial services to diverse societal sectors is known as financial inclusion, including impoverished individuals, socially marginalized groups, micro, small, medium, and large-scale enterprises, and governments. It aims to ensure that qualified financial service providers meet the financial and social security needs of these previously excluded groups, accommodating their circumstances and specific requirements.

Financial inclusion, according to the Reserve Bank of India (2008), is the process of granting access to suitable financial goods and services from established institutions to vulnerable groups, such as the weaker portions and low-income groups. This access needs to be offered honestly, openly, and at reasonable costs. Financial inclusion is defined by the Central Bank of Nigeria (2012) as a situation in which people have simple access to a wide choice of financial products that are catered to their requirements and supplied at competitive costs. Payment services, savings accounts, credit options, insurance, and revenue-generating opportunities are some of these items.

Access to Financial Services

The financial sector plays a crucial role in connecting those with excess funds to those in need of financial resources for consumption and investment. Deposit money institutions serve as intermediaries, directing deposits from individuals who have surplus funds to those who require them.

Demand and supply factors are used to evaluate access to financial services. On the demand side, it is determined whether financial services like deposits, credit, and mobile accounts are readily available. The supply side takes into account the accessibility of household savings, insurance, and loans. Indicators including the number of bank deposits, loans, and mobile accounts per 1,000 individuals in the population are used to gauge the accessibility of financial services, according to Beck et al. (2013). The importance of holding a bank account as a crucial indicator of financial inclusion and mobility is also emphasized by Sarma and Pias (2011). This indicator would have a value of 1 when each adult person in a nation had a bank account. The number of bank savings accounts, lending accounts, and mobile accounts can be used as a percentage of 1,000 adults to construct this indicator in the lack of information on the population that is banked. In this study, the dimension of access to financial services was calculated using the number of bank savings, loans, and mobile accounts held by particular institutions expressed as a proportion of the adult population.

Economic Growth

Economic growth refers to the ongoing improvement in the standard of living within a country, region, or city, accompanied by continuous changes in the industrial base of the economy Ray, (1998). It represents the gradual increase in the production of goods and services by industry. While per capita income has traditionally been a favored indicator of economic development, it is not the sole measure. GDP (Gross Domestic Product) has been commonly used to assess economic development, represents the market value of all finished products produced in a country over a certain time period. However, GDP was originally developed for assessment purposes rather than measuring economic development.

Economic growth entails the expansion of a country's capacity to generate products and goods, encompassing various factors such as commercial inventions, government expenditures, personal spending, and investments in construction. Two measures have been established to

quantify economic development. The first is GDP, which is considered the broadest indicator of economic output and development, and the second is GNP (Gross National Product), which measures the value of output for activities covered by the national accounting system over a specified period. GDP, representing the annual value of changes in real national production, provides a monetary measure of economic development. The growth or trend in potential GDP is referred to as long-term GDP. GDP per capita is often used to compare countries with different population sizes World Bank (2012).

Empirical Review

Ilemona and Ome (2021) conducted a study to explore the impact of financial evolution on equitable advancement in Nigeria, leveraging chronological records from 1986 to 2019. Various indicators were utilized as surrogates for fiscal deepening, encompassing the money supply's proportion to GDP, credit available to the private sector in relation to GDP, aggregate national reserves against GDP, and borrowing rates. Utilizing the Autoregressive Distributed Lag (ARDL) approach for estimation, the researchers found that aspects like the money supply, private-sector credit, and overall national savings had a positive correlation with Nigeria's equitable progress. Conversely, lending rates showed a negative correlation. The study concluded that public authorities should focus on enhancing the fiscal infrastructure by elevating these key ratios to facilitate inclusive growth.

Adegboyegun and collaborators in 2021 probed the dynamics between financial inclusion and fiscal development in Nigeria. They evaluated factors such as Gross Domestic Product, rural credit availability, deposits originating from rural sectors, the count of banking facilities, and prevailing interest rates. The data, covering 1986 to 2018, was analyzed through the ARDL and Causality frameworks. The analysis revealed that interest rates severely hindered economic prosperity, whereas financial inclusion offered significant benefits. A unidirectional relationship between fiscal development and financial inclusion was established by the causality analysis, where rural loans emerged as a crucial element. The study advised that lending to rural areas should be done at more reasonable rates and with fewer administrative hurdles to boost inclusive growth.

In 2021, Mahmood and his team delved into the effects of human assets and digital financial inclusion on the economic expansion of various Chinese provinces. They

gauged digital financial inclusion based on its scope, depth, and digital adoption level. The factual outcomes indicated that the economic enlargement of China's regions was notably steered by both human resourcefulness and digital fiscal inclusion. To achieve superior economic growth rates, the paper suggested amplifying digital fiscal inclusion and investing in human asset cultivation.

Nwafor, in 2018, assessed the link connecting financial inclusion and Nigeria's economic ascension. Employing the Two-Stage Least Squares Regression Technique with data ranging from 2001 to 2016, the study demonstrated that financial inclusion had a significantly positive effect on Nigeria's economic vitality. The report advocated that Nigerian financial institutions should engineer products that cater to economically underserved areas, thus enhancing GDP per capita and overall economic upliftment.

In another related study, Thomas (2017) scrutinized the relationship between ease of capital acquisition and a nation's economic ascent. The focus of this inquiry was on how the engagement with financial services contributes to fiscal enhancement. By utilizing post-hoc analytical procedures and data from 2007 to 2015, the General Method of Moments (GMM) was implemented for estimation. The analysis showed that greater financial accessibility correlates with elevated income per capita. Additionally, low-income countries appeared to benefit more than their middle-income counterparts when it came to fiscal growth due to enhanced financial access.

Similarly, in 2017, Dinesha executed a data-based analysis focusing on the interplay between equitable progress and fiscal literacy in India. Employing retrospective analytical methods, the study made use of diverse regression econometric models. The findings revealed that financial literacy significantly aids in broadening access to resources, fostering responsible financial conduct, and empowering people to launch ventures that contribute to poverty alleviation.

Furthermore, Lenka and Bairwa (2016) examined financial inclusion and its effect on economic growth across the South Asian Association for Regional Cooperation (SAARC) nations from 2004 to 2013. Utilizing an ex-post-facto approach, they formulated a Financial Inclusion Index via Principal Component Analysis (PCA). The study disclosed that financial inclusion had a meaningful impact on economic prosperity during the years in question. Interestingly, this analysis did not incorporate the endogenous variable of Nigeria's GDP or the four exogenous variables of banking reach, utilization of

financial services, access to financial service or accessibility, and monetary management. This leaves an avenue open for future research to explore these aspects.

Theoretical Review

Financial Intermediation Theory

The study is grounded in the financial intermediation theory, originally proposed by Gurley and Shaw in 1960. This theory explains the role of banks as intermediaries between savers and borrowers in an economy. It highlights the influence of finance on resource allocation efficiency and economic opportunities for individuals from different socioeconomic backgrounds. Banks offer various financial services such as deposit mobilization, savings, and provision of liquidity, among others. Banks can develop and offer specific financial products through intermediation to meet the demands of various consumers. When banks are able to earn larger returns that meet their costs, this happens. Furthermore, banks are a result of market imperfections since they wouldn't be necessary in a perfect market with no transaction or information costs.

The financial intermediation theory elucidates how commercial banks bridge the gap between individuals and businesses with surplus funds and those in need of funds for consumption and production. Banks act as intermediaries by collecting deposits from savers and providing these funds to borrowers who require them. Investors and depositors are risk-averse and face uncertainty regarding future opportunities. Through intermediation, banks assist investors in avoiding long term illiquid investments that may yield high payoffs for future consumers. Financial market frictions, as highlighted by Demirgüç-Kunt, Beck, and Honohan (2008), are crucial mechanisms that can lead to persistent income inequality and poverty gaps if not addressed. The level of accumulated capital, combined with imperfect financial markets, determines the extent to which individuals, particularly those with limited resources, can access funds for investment in consumption and physical capital.

Financial growth, modernization growth, and integrated income models are closely intertwined with the promotion of financial inclusion. Reducing market imperfections and enhancing financial market efficiency, as observed by Demirgüç-Kunt and Klapper (2012), expands individual opportunities and creates positive incentives. As financial intermediaries, commercial banks are essential for promoting sound corporate governance, lowering risk, and

facilitating efficient economic transactions. By increasing the level of financial inclusion, banks aim to mitigate market frictions, reduce information asymmetry, and address market imperfections among users, as emphasized by Hannig and Jansen (2010)

Methodology

The approach used in this study encompassed gathering and scrutinizing data via a retrospective research model. Information related to variables like banking outreach, engagement with financial services, availability of financial options, fiscal management, and the expansion of Gross Domestic Product (GDP) were taken into account. The dataset for the inquiry was obtained from the statistical bulletins of the Central Bank of Nigeria, which supplied trustworthy chronological data.

For the purpose of data interpretation, the study employed the ARDL analytical framework. This statistical methodology permitted the exploration of interrelationships and trends among the variables being scrutinized. By leveraging the ARDL model, the researchers were able to establish a sturdy foundation for evaluating both long-range and near-term impacts among the variables, thereby facilitating insightful inferences from the analysis.

Model Specification

To accomplish the specified objectives, the investigation employs the Autoregressive Distributed Lag (ARDL) framework. In this model, the outcome variable is considered to be influenced by both its past readings and the prior as well as present measurements of other factors (independent variables). Below is a representation of the functional linkage between financial inclusion and economic growth:

$$GDP = f(UFS, AFS) \text{ --- (1)}$$

where:

- GDP = Gross Domestic Product
- UFS = Usage of Financial Services
- AFS = Access to Financial Services

It is expressed explicitly as

$$GDP_t = \alpha + \beta_1 UFS_t + \beta_2 AFS_t + \mu_t \text{-----} (2)$$

Where;

- α = intercept
- $\beta_1 - \beta_2$ = parameter estimates of the regressors
- u_1 = stochastic error terms.

The bounds testing approach implies estimating the following autoregressive distributed lag model for banks asset:

$$\begin{aligned} \Delta GDP_{t-1} = & \theta_0 + \beta_1 UFS_{t-1} + \beta_2 AFS_{t-1} \\ & + \beta_3 \sum_{k=1}^p \omega_k \Delta UFS_{t-k} \\ & + \sum_{j=1}^p \omega_j \Delta AFS_{t-k} \\ & + u_{1t} \dots (3) \end{aligned}$$

u_{1t} is the white noise error term

$\beta_1, \omega_k, \beta_2, \gamma_j, \eta_i, \alpha_j$ and ρ_j are parameters to be estimated

$p = (1, 2, \dots, k)$ are lag lengths to be determined empirically using Akaike information model selection criteria.

Note: the isolation of the long-run coefficients, π_1 s, and η_1 s make the remaining variables stationary.

$$\begin{aligned} \Delta GDP_t = & \alpha + \sum_{i=1}^q \beta_1 GDP_{t-1} + \sum_{i=1}^q \beta_2 UFS_{t-1} + \\ & \sum_{i=1}^q \beta_3 AFS_{t-1} + \beta_4 \Delta GDP_{t-i} + \beta_5 \Delta UFS_{t-i} + \\ & \beta_6 \Delta AFS_{t-i} + \mu_t \text{-----} (4) \end{aligned}$$

Table 1: Descriptive Statistics

	GDP	AFS	UFS	BP
Mean	52098.99	57166.63	140669.3	3897.848
Std. Dev.	57551.22	89953.19	265091.6	1607.308
Skewness	1.017969	1.655643	2.056170	-0.02274
Kurtosis	2.921858	4.281684	5.927014	1.238478
Jarque-Bera	5.707834	17.33507	35.03328	4.269412
Probability	0.057618	0.000172	0.000000	0.118279
Observations	33	33	33	33

Source: Authors Computation, (Eview-12), 2023

Specifying the equation in ECM will be as follows;

$$\begin{aligned} \Delta GDP_t = & \alpha + \sum_{i=1}^q \beta_1 GDP_{t-1} + \sum_{i=1}^q \beta_2 UFS_{t-1} + \\ & \sum_{i=1}^q \beta_3 AFS_{t-1} + \beta_4 \Delta GDP_{t-i} + \beta_5 \Delta UFS_{t-i} + \\ & \beta_6 \Delta AFS_{t-i} + ECM \text{-----} (5) \end{aligned}$$

Where:

Δ = First difference operator

α = Constant parameter

β_1, β_2 to β_{10} = Parameter Co-efficient

μ_t = Error term

ECT = Error correction term

Results and Discussion

The results of this study are presented in several stages. Firstly, descriptive statistics are provided to analyze the mean, standard deviations, and auto-correlation properties of the dataset. This sets the foundation for further examination. Secondly, a Unit Root test is conducted to determine the stationarity properties of the series. This test helps assess whether the variables exhibit a stable behavior over time. Thirdly, the ARDL model and post-estimation tests are performed and the corresponding results are presented. These tests provide insights into the relationships and dynamics between the variables under investigation. Table 1 has the presentation of the descriptive statistics.

The mean values of (AFS), (UFS), and (BP) are 89953.19, 140669.3, and 3897.848, respectively. However, their respective standard deviations of 89953.19, 265091.6, and 1607.308 indicate significant fluctuations in these variables. The data for AFS, UFS, and BP are not well distributed, exhibiting considerable variability.

The skewness values for GDP, AFS, and UFS are positive (1.017969, 1.655643, and 2.056170), indicating a right-skewed distribution. This suggests that the data for these variables are skewed towards higher values. On the other hand, the skewness value for BP is negative (-0.02274), indicating a left-skewed distribution.

The kurtosis values for all variables (GDP and BP) are less than 3 (2.921858 and 1.238478), suggesting a flatter distribution (platykurtic) compared to a normal distribution.

The Jarque-Bera statistics results indicate that GDP and BP follow a normal distribution, as their respective prob values are higher than 0.05. However, AFS and UFS show probability values less than 0.05, indicating that these variables do not follow a normal distribution.

Table 2: UNIT ROOT TEST

The unit root test is conducted to check if their is stationarity in the variables used in the analysis.

Summary of ADF unit Root Text Result

VARIABLES	ADF TEST STATISTICS	CRITICAL VALUES	PROB VALUE	ORDER OF INTEGRATION
GDP	-5.795814	-3.562882	0.0092	I(1)
AFS	-10.68301	-3.562882	0.0000	I(1)
UFS	-4.568344	-2.998064	0.0295	I(1)
BF	-6.236279	-3.562882	0.0001	I(1)

Source: Authors Computation, (Eview-12), 2023

Note: The test includes both Trends and Intercepts and all at 5% level of significance.

Each variable in the model showed stability upon utilizing the first difference, as evidenced by the results of the

Augmented Dickey-Fuller (ADF) test, and this was statistically meaningful at a 5% level of significance. Consequently, the null hypothesis of a unit root was rejected for all variables under examination.

Table 3:Cointegration Bound Test

F-Bounds Test		Null Hypothesis: No levels of relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	7.674094	10%	3.47	4.45
K	3	5%	4.01	5.07
		2.5%	4.52	5.62
		1%	5.17	6.36

Source: Authors Computation, (Eview-12), 2023

The F-statistic, with a value of 7.674094, surpasses both the lower threshold of 4.01 and the upper critical value of 5.07, based on the 5% significance level as displayed in Table 3. Owing to the co-integration present among the variables in the model, there's a likelihood of a stable,

long-term relationship between the dependent and independent variables. Consequently, we dismiss the null hypothesis suggesting a lack of long-term relationship at a 5% significance level.

Table 4:
ARDL Model Results of the Short-Run, Long-Run ECM
Dependent Variable: GDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12869.63	1954.075	-6.58605	0.0001
@TREND	458.119	133.1372	3.440954	0.0063
D(GDP(-1))	0.253827	0.161766	1.569094	0.1477
D(AFS)	-0.020835	0.013201	-1.5783	0.0456
D(AFS(-1))	-0.181722	0.02479	-7.33057	0.0000
D(AFS(-2))	-0.09158	0.018478	-4.95614	0.0006
D(AFS(-3))	-0.035027	0.020543	-1.7051	0.119
D(UFS)	0.013766	0.002169	6.347289	0.0001
D(UFS(-1))	-0.031535	0.004145	-7.60764	0.0000
D(UFS(-2))	-0.01132	0.002692	-4.20454	0.0018
D(UFS(-3))	-0.015945	0.002043	-7.80397	0.0000
D(BP)	0.004414	0.600366	0.007353	0.9943
D(BP(-1))	-2.062587	0.562894	-3.66426	0.0044
CointEq(-1)*	-0.20801	0.032928	-6.31706	0.0001
R-squared	0.977058			
Adjusted R-squared	0.950586			
F-statistic	36.90931			
Prob(F-statistic)	0.00000			
Durbin-Watson stat	2.391707			
LONG-RUN				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFS	0.545674	0.2951	1.849116	0.0442
UFS	0.181722	0.082954	2.190646	0.0233
BP	20.90958	10.83138	1.930463	0.0824

Source: Authors Computation, 2023 (Eviews-12)

The high R-squared (R2) value of 0.977, which shows that around 98% of the variations in the gross domestic product (GDP) can be explained by the changes in the independent variables included in the model, is a reflection of the independent variables' predictive power. The remaining 2% is made up of variables that the model was unable to account for. There is a significant connection between the independent variables and the GDP, as indicated by the high R-squared value of 98%. The meager 2% unexplained

component shows that the independent variables' explanatory ability is only somewhat compromised.

The probability (prob) value of the F-statistic, which is 0.00000 and less than 0.05, supports the conclusion that the model is appropriate for economic and policy-making objectives. The F-statistic's significance shows that the model's overall explanatory power is statistically significant.

Additionally, the Durbin-Watson statistic of 2.391707 indicates the possibility of negative autocorrelation, which

denotes a relationship between the model's mistakes across time.

Discussion of Findings

The constant term implies that the autonomous gross domestic product (GDP) is negative and statistically significant at -12869.63, with a probability (prob) value of 0.0001, in the absence of contributions from financial access, financial service use, and banking penetration.

The relationship between GDP and access to financial services (AFS) is inverse in the near term. GDP is predicted to drop by -0.020835 for every unit rise in AFS. This relationship has a probability value of 0.0456, which indicates statistical significance. AFS does, however, demonstrate a long-term positive association with real GDP (RGDP). RGDP is anticipated to rise by 0.545674 for every unit increase in AFS. With a probability of 0.0442, this positive connection is statistically significant.

The short-term relationship between GDP and UFS usage is one of positive correlation. The GDP increases by 0.013766 for every unit increase in UFS. The relationship has a probability value of 0.0001 and is statistically significant. Similar to how UFS sustains a positive association with GDP over time. The GDP increases by 0.181722 for every additional unit of UFS. The probability value for this beneficial affect is 0.0233, making it statistically significant.

However, the current level of banking penetration (BP) has a negligible and advantageous impact on economic expansion. Economic growth is 0.004414 percent higher in

the present time for every unit change in banking penetration. However, this change is deemed statistically insignificant, with a probability value of 0.9943, which is above 0.05.

The error correction term (ECT) is statistically significant at the 5% level, is negative, and is less than one. According to the coefficient value of -0.20801, it takes around 20.80 percent per year to restore a long-run link between the dependent variable and the independent variable when there is disequilibrium.

Diagnostic Tests

An investigation of the residuals was carried out to check for potential serial correlation and heteroskedasticity in order to confirm the model's robustness. To ascertain if there is a connection between the error terms at various intervals, the Breusch-Godfrey Serial connection LM Test was applied. This test aids in determining if the residuals exhibit serial correlation.

Additionally, the Breusch-Pagan Godfrey Heteroskedasticity Test was employed to investigate the presence of heteroskedasticity in the residuals. This test examines whether the variance of the error terms remains constant or varies across different levels of the independent variables.

By conducting these tests, we can assess the presence of serial correlation and heteroskedasticity in the residuals, which are crucial considerations for evaluating the reliability and robustness of the model

Residual-Based Diagnostic Tests

Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.416677
p-values	0.2974

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.114085
p-values	0.4461

Source: Authors Computation, 2023 (Eviews-12)

As shown by the derived p-value of 0.2974 for the F-statistic of 1.416677, the Breusch-Godfrey Serial Correlation LM test findings indicate that the null hypothesis of "no serial correlation" cannot be discarded.

Therefore, there is little evidence to support the idea that serial correlation exists in the ARDL model's residuals.

Similar to the Breusch-Pagan-Godfrey heteroskedasticity test results, when the null hypothesis of "homoskedasticity" is taken into account, the F-statistic of 1.114085 is statistically insignificant with a p-value of 0.4461. This implies that the model's residuals do not include any meaningful evidence of heteroskedasticity.

Conclusion

The regression model that was used to examine the correlation between the independent variables (access to finance, use of financial services, and banking penetration) and the gross domestic product (GDP) has good explanatory power and statistical significance. Approximately 98% of the variations in GDP can be accounted for by changes in the independent variables in the model, according to the high R-squared value of 0.977. The remaining 2% reflects elements that the model did not account for.

1. **Financial Access:** In light of the adverse link between Access to Financial Services (AFS) and GDP in the short-term, regulators should zero in on isolating and tackling the elements that limit financial accessibility. This might encompass upgrading fiscal frameworks, endorsing Financial Inclusion initiatives, and mitigating hurdles for entry for financial organizations. Long-term strategies aimed at ameliorating access to financial services could bolster Economic Growth, corroborated by the affirmative relationship between AFS and real GDP (RGDP).
2. **Utilization of Financial Services:** With the positive association seen between Usage of Financial Services (UFS) and GDP, both in immediate and extended periods, the necessity to advance financial literacy and incentivize both individuals and enterprises to engage with financial services effectively stands out. Policymakers should earmark campaigns that elevate financial understanding and advocate for the uptake of financial services like savings accounts, insurance policies, and investment instruments. This has the potential to amplify economic operations and enhance GDP expansion.

3. **Banking Reach:** Even though the existing stage of Banking Penetration (BP) doesn't have a significant influence on economic growth, regulators should persist in scrutinizing and evaluating the repercussions of banking penetration across durations. While present study doesn't show a statistically meaningful correlation, future shifts or transformations in the banking sphere could carry implications for Economic Growth. It remains crucial to sustain a facilitative regulatory backdrop and inspire competition in the banking sector to enhance an environment that is conducive and favorable for lasting economic development.

Declaration: I Nelson Christopher declare that this journal paper has been written by us. It has not been presented in any previous publication.

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RESEARCH ARTICLE

Battle of the Gr8's: A Game-Based Strategy to improve academic writing skills of Grade 8 Learners

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Abstract

This classroom action with the goal of overcoming the students' academic writing challenges by enhancing the students' mechanics, organization, grammar, style, and composition determined the effectiveness of the researcher-made game-based strategy as an intervention on enhancing the academic writing skills of selected Grade 8 students in English at Goldenville School of Montessori Inc. for the school year 2022-2023. To determine the academic writing skills of the participants of the study before the intervention, pre-writing that requires students to compose a narrative essay on a specific topic has been administered. The students identified with difficulties were subjected for the intervention. The researchers held post-writing activities that determined the effectiveness of the game-based strategy in their academic writing performance in English. With a Purposive sampling method as the sampling technique to identify the ideal participants of the data gathering procedure, the researchers found several results after the implementation of the proposed intervention, specifically the significant difference between the scores of the respondents in the pre-writing and post-writing using the five-week intervention plan for Grade 8 students. Further analysis pondered that there was a significant difference in the academic performance between the pre-test and post-test scores of the Grade 8 students in terms of the game-based strategy in improving the academic writing skills of those students. Through the implications, the recommendations: conduct similar studies for Grade to Grade 10, implement this similar intervention to all quarters/grading periods and use differentiated instructional materials to make the game livelier and to catch the attention of the students.

Keywords: Game-based strategy; Academic writing skills; Classroom-based action research

Introduction

The ability to communicate in English is vital in the 21st century, especially in the Philippines wherein the Second Language (L2) is English. Students were often discouraged from using English in their spoken or written language even though it is taught to them during their pre-elementary and elementary level. Language instructors, particularly English language teachers, were looking for the best approach and technique for improving their students' English proficiency, especially in writing. Writing is considered the most difficult skill to teach since it covers a wide range of knowledge such as grammar rules, punctuation, syntax, and many more. Because of that technicality, students are still in need of guidance from their teacher to create an error-free writing output. In addition, writing is also considered as one of the most important skills because writing is also used for communication purposes. By mastering English as a communication tool, students are required to converse and generate suitable English texts through

written communication. Grammar and vocabulary should be acquired by pupils for them to grasp writing and use it in real-world communication.

When writing, most ESL learners struggle with consistency and cohesiveness (Belkhir & Benyelles, 2017). Several factors contribute to these issues. Huy (2015) stated that the usage of various elements of language in writing, such as grammar, was a factor that underlies students' issues in writing, and they frequently have problems with punctuation while writing. Furthermore, there are intrinsic elements to students such as students' motivation that impact students' writing skills (Dhanya & Alamelu, 2019).

Meanwhile, inefficient teaching approaches, according to Fareed et al. (2016), are one of the primary causes of students' writing issues. Rico (2014) also mentioned that the most important aspect impacting students' writing skill was teachers' instructional technique. This was because learning approaches can impact students'

enthusiasm in learning, particularly writing. The usage of learning techniques also has an impact on the quality of students' writing as well as their motivation. As a result, teachers must experiment with innovative teaching approaches in addition to established ones in order to fulfill learning objectives (Adas & Bakir, 2013). The researchers chose the game-based activities as an intervention in coping with the problem. The study consisted of four stages: observing, planning, doing and reflecting. The first stage, the researchers first observed the challenges that the Grade 8 students were facing, which was their academic writing activity in their English subject. After the researchers observed the problem, the researchers planned their intervention for the problem and how the researchers executed the intervention. When the researchers finalize the plan, the researchers proceed on executing the intervention which is tackled in the preceding chapter. Reflection was done after the execution of the intervention that resulted in the outcome of the study.

According to Ndirika (2013), the use of games in instruction is based on the need to make learning interesting to the learners, to develop a learning culture that aligns with the learners' interests, and to encourage activity-based learning. As stated by scholars, game-based learning accommodates diverse learning styles, enhances learning and memory capacity, and boosts learners' problem-solving ability and creativity, among other natural benefits. As per Stathakis (2016), game play has the potential to improve students' grasp of new ideas and concepts. Scholars state that games may teach critical thinking abilities, creativity, teamwork, and excellent sportsmanship. Several studies have also proven the effectiveness of educational games in improving learning. Fakokunde (2016) indicates that instructional games have a considerable influence on students' learning outcomes in social studies, which Adeyemi and Ajibade (2011) also support. Sowunmi and Aladejana (2013) show that simulation games increase primary school students' performance in science, whereas Watson, et al. (2011), citing Cankaya and Karamete (2019), show that instructional games improve the students' performance in mathematics. In accordance with Olatoye, et al. (2014), when students play games, their vocabulary- building performance improves.

When it comes to academic writing, teachers must inform pupils that there are no 'native-like' standards. To improve students' writing competency, we must clearly teach the writing processes as well as particular tactics. It is beneficial for writing teachers to understand different ways of teaching writing. However, teachers must recognize that simply assisting students with idea development and preparation, as well as teaching the rhetorical techniques of certain genres, is insufficient to help students improve their writing. Teachers should

also teach students the socio-cognitive approach to writing, which considers readers' expectations, socio-cultural settings, and the thinking processes involved in planning, organizing, and composing/revising essays. Teachers must emphasize to children that writing is a recursive, complicated process. To move forward, we must reread and edit our writing. An excellent piece of writing should be revised several times. This is true not only for new authors, but also for seasoned ones. Understanding this might help clear up a common misperception among students: that only inexperienced writers will require major modifications to their work. The socio-cognitive method to writing guarantees that students determine the essay's macro-rhetorical aim and that all content in the essay contributes to this goal. Readers will be able to understand the one item or one important lesson that they may take away (Cheung Yin Ling, 2016).

Based on the K-12 Department of Education Curriculum, students need to know how to write letters, short messages, advertisement, news, electronic mail, etc. Moreover, students should be able to master the new genres of text which require the students' writing skill. The teaching of writing in Junior High School is just as important as the teaching of other skills as basic language skills. Students should master academic writing skills as well as other skills since academic writing skills also contribute to improving students' competence in communication. Teaching academic writing in junior high school was a good way to prepare students in the globalization era. In conclusion, good academic writing skills are required to achieve both academic purposes and communicative purposes.

The researchers observed that some of the Grade 8 students still find it difficult to accomplish their formal writing activity without the help of their subject teacher. Furthermore, the Grade 8 students' written output in their formal theme writing book received various criticism from their subject teacher. Some of the common remarks are capitalizations, margins, redundancies, spellings and many more. It shows that some of the grade 8 students still have difficulty in terms of their academic writing. Through this research the Academic Institutions and Administrator may promote game-based strategy as an intervention to the students who are having a difficulty in their academic writing and, the students were the main beneficiaries of this study because it also helped them to widen their vocabularies that they may use in writing their ideas. In addition, the outcome of this study benefited the future researchers as they know that they can use game-based strategy in helping students who were struggling with writing.

The main aim of the study was to determine the effectiveness of a game-based strategy in enhancing the academic writing skills of Grade 8 students in English at

Goldenville School of Montessori Inc. Specifically, it seeks to answer the following questions:

1. how may the writing skills of the Grade 8 students be described in terms of mechanics, grammar, organization, style, and composition of pre-writing and post-writing before and after exposing them to game-based strategy; and
2. is there a significant difference between the writing skills in pre-writing and post-writing when they are exposed to game-based strategy?

Methodology Research Design

This study was classroom-based action research since its nature was to improve the quality of action inside the classroom. The researchers performed classroom action research in this study with the goal of overcoming the students' academic writing challenges by enhancing the students' mechanics, organization, grammar, style, and composition with the use of game-based strategy. This action research may assist educators in identifying answers to difficulties in the classroom and, perhaps, to enhance students' success.

This study used pre-experimental as a research design. According to Gormandy, (2014) pre-experiments are the most basic type of research design. In a pre-experiment, either a single or multiple groups are observed after some agent or treatment that was thought to cause change. The chosen design was preferred because it was concerned with examining the relationship of game-based strategy to the student's writing skills. This method of study allows researchers to make inferences about the relationship between independent variables and dependent variables. It also reduces variability, making it easier for the researchers to find differences in treatment outcomes. This study aimed to determine whether the use of a Game-Based Strategy may improve the writing skills of the Grade 8 students in Goldenville School of Montessori Inc. The experimental method was the appropriate method to use in this study.

Sampling Technique

Purposive sampling was used in this study that considered the researchers to select respondents with the characteristics that were needed in the study. The researchers conducted the pre-writing first to determine the respondents. Students who received a score of 12 points and below were subjected to be part of this study. The Grade 8 students of Goldenville School of Montessori served as the participants of the study. Specifically, the researchers identified the participants of the study by means of pre-writing activity. Afterward, the students who were reflected as having difficulty in writing proficiently were subjected to be the respondents of the study.

Data Gathering Procedure

The researchers first asked for permission to conduct the study in Goldenville School of Montessori, Inc. by a submitted request letter to the principal of the school and to the researchers' research critique. Further letters were given to the evaluators of the pre-writing and post-writing essays to ask for their permission to evaluate the essays of the respondents; the researchers ensured that the letter mentions the confidentiality of their responses to the evaluation form.

The students were informed regarding the purpose of the study. These participants were assured that their answers would be treated with the utmost confidentiality. The researchers distributed the question for the pre-writing to the students of grade 8 in the afternoon session. The question was related to the previous and current educational situations in the Philippines that had been answered by the students with a minimum of 150 words and a maximum of 200 words. The respondents only had 60 minutes to answer the question.

The result of the pre-writing helped the researchers establish and assess the 'level of difficulty of students who have been the respondents of the study. After determining the respondents, the researchers executed the five-week intervention plan which was a game-based strategy.

The post-writing had been done after the five-week intervention plan, and the scores from the pre-writing and post-writing were assessed through the use of Paired-Sample T-test to determine the significant difference between the dependent and independent variables.

The impact of game-based strategy on the academic writing skills of grade 8 students was the focus of this study. The data was collected from students in the afternoon session of Grade 8 at Goldenville School of Montessori throughout the school year 2022- 2023. Other students who were not included in the afternoon session of grade 8 students were not included in the scope of this study. The research was carried out using a game-based strategy with the students' essays which served as the references. The researchers' technique allowed them to determine the effects of game-based strategy on the academic writing skills of Grade 8 students.

The study was done with the assessment of students' writing. Using this strategy, the researchers determined that the game-based strategy helped Grade 8 students in creating good academic writing.

Proposed Intervention

This research proposed the use of a five-day game-based strategy for Grade 8 students with difficulties in

academic writing in Goldenville School of Montessori, Inc.

The researchers asked permission to conduct the study at Goldenville School of Montessori Inc, by submitting a request letter to the Principal of the School. For permission to conduct the study, in which Grade 8 students were the respondents, the researchers asked the class adviser of the students regarding the students' academic writing. In order to carry out this investigation, this was the initial step. Prior to submitting a letter to the principal, the researchers' school waited for their professor to give the all-clear to begin conducting the study.

The researchers informed the teacher adviser from Grade 8 Ruby to conduct the study. The researchers signed copies of the formal theme activities from the first and second quarters of their English subject from the English instructor of Grade 8 Ruby students. The researchers selected the Grade 8 - Ruby students. Students in grade 8 were still instructed in their formal theme writing.

The Pre-writing had been completed in the third week of February and the post-writing had been done in the last

week of April. When the result of pre-writing was disclosed, the researchers selected students who gathered 12 points and below to be the respondents. In order to enhance and mold the students' talents and pinpoint the grammatical structures and punctuations they struggled with; this study was carried out.

The researchers created a Pre-writing and Post-writing activity that determined the effectiveness of using game-based strategy in their Academic writing performance in terms of English Subject at Goldenville School of Montessori, Inc. To determine the academic writing skills of the participants of the study before the intervention, pre-writing has been administered. The pre-writing asked students to compose a narrative essay on a specific topic. The decision to employ the composition of a narrative essay for collecting data obeys the straightforward connection of the instrument to the dependent variable of this study which was academic writing skills. Every week, the researchers gave activities to Grade 8 students at Goldenville School of Montessori Inc. followed by a post-writing after the intervention.

Table 1. Activities to be done per week in the study

Week	Activity	Focus	Process
1.1	Mechanics: Spelling, Punctuation, and Capitalization	ABCD Corners	<ol style="list-style-type: none"> 1. Each corner of the room will be labeled as A, B, C, and D. 2. Then the researcher will read a question and students move to the corner of the correct answer. 3. The researcher will randomly call on students to defend their answers from different corners. 4. Students who get wrong answers will be eliminated from the game.
1.2		Paste-it-on	<ol style="list-style-type: none"> 1. Students will be grouped into four (4). Each group will have a set of punctuation marks that they will paste on the board. 2. Each group will have one representative per question, but their teammates can still help them to decide what punctuation mark is correct. 3. Only the first group to paste their punctuation mark will be acknowledged. However, if the answer of the first group is incorrect, other teams can steal the point. 4. If none of the groups got the correct answer, the teacher will discuss what is the correct punctuation in the given sentence. 5. The group that will garner the

			highest point be the winner.
2	Grammar	Preposition Simon's Says	<ol style="list-style-type: none"> 1. The class will form a 4 batch. 2. Each student of the batch will stand and choose one object that everyone has and can use while playing such as pencil, book, chair or folder. 3. The teacher will serve as the leader in the game. 4. Each student must follow the leader and do the action, but only when Simon says. (ex. Simon says put your pencil under your chair.) If a student follows a command that is not preceded by "Simon says" and does a wrong motion, they are out. 5. The game will start per batch. Each student in every batch who loses will get a consequence. 6. The consequence will be truth or dare. The student will choose between truth or dare and will pick a paper in a box regarding the consequence he/she chooses. 7. In the box filled with papers, who chose "truth" or "dare" includes different questions/actions that will not violate their rights and also the school.
3	Organization	Word Jumble Race	<ol style="list-style-type: none"> 1. The researchers will write out 8 sentences with the use of different colors for each sentence. 2. It will be cut out to have a handful of words. 3. A basket will be used to carry on the words. 4. The students will be grouped into four (4) and will be given two sentences each. 5. The group of students who arrange it correctly in a short period of time will be the winner.

4	Style: Sentence Flow and Variety	Scatter-gories (Parts of Speech)	<ol style="list-style-type: none"> 1. The students will be split into three groups and ask them to note down the categories on their pieces of paper. Categories are namely verbs, adjectives, and adverbs. 2. The researchers will randomly pick a letter from the mini basket they made containing the letters AZ and give students 2 minutes to think of a word for each category, beginning with that letter. 3. Once the time is up, allocate points for unique answers, i.e., if two teams write down the same word for a category then neither gets any points. 4. Repeat the game with different letters.
		Human Sentence	<ol style="list-style-type: none"> 1. Students will be grouped into two. 2. Every member of the group will have a word assigned to them. 3. Students are tasked to create as many sentences as they can in their given words in the span of 5 minutes. 4. The group that creates more sentences will be the winner of the game.
5.1	Composition	Pair to Know Me (Biography Writing)	<ol style="list-style-type: none"> 1. The students will pair up. When every student has their own partners, they will get a piece of paper and a pen. 2. The students will ask each other with the help of the guide questions the teacher will present on board. 3. Each student will have ten sets of questions to be asked and they will jot down the answers of their pair. 4. When they are done with the questions, they will write a biography about their partners. 5. The content of the biography will be based on the answers of their pair.
5.2		Free Writing	<ol style="list-style-type: none"> 1. Find a place to focus and concentrate on writing. 2. Set a timer for at least 10 minutes. 3. Start writing and don't stop going back and editing your words. 4. Keep writing even if you can't think of what to say. When you're stuck, write "I don't know what to say" and then continue. 5. Stop writing when you hear the timer's alarm. 6. Read what you wrote and circle, highlight or underline any exciting ideas. 7. Ask, "Can I write an essay or paper about any of these ideas?" 8. Select your idea and decide if you

			want to try looping for more ideas related to your topic.
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The researchers utilized Paired-Sample T-test as a statistical technique to find out the average Pre-writing and Post-writing scores of Grades 8 students. The researchers also used the weighted mean that determined the average pre-writing and post-writing scores. The Statistical Method was used to calculate the average scores of the pre-writing and post-writing. The evaluators score the content of the post-writing and pre-writing using rubrics ranging from 0-4 scales: style, organization, mechanics, composition, and grammar.

Instrument

In this study, the researchers used pre-writing that determined the respondents that reflected the desired characteristics of the researchers. While in the post-

writing, the intervention has already been applied to know if there was a difference in terms of their writing skills with the use of the game-based strategy. The essay writing was carefully prepared to be answered by a group of people designed to collect data and results. The question was related to the previous and current educational situations in the Philippines that had been answered by the respondents with a minimum of 150 words and a maximum of 200 words.

The researchers adapted and modified the writing Rubric of University of Cambridge (Lim, 2012) was employed, which measured four categories based on a 1-4 scale: style, organization, mechanics, composition, and grammar. This rubric had been used by the evaluators that assessed the pre-writing and post-writing of the Grade 8 students.

Table 2. Rubrics for Pre-test and Post-test

Category	4 Expert	3 Competent	2 Developing	1 Beginner	0 Poor
Mechanics: Spelling, Punctuation, and Capitalization	Punctuation, spelling, and capitalization are correct. No errors.	Punctuation, spelling, and capitalization are generally correct, with few errors. (1-2)	A few errors in punctuation, spelling, and capitalization (3-4)	Distracting errors in punctuation, spelling, and capitalization	Did not answer anything to his/her paper
Grammar	Sentences are structured powerfully; with a rich, well-chosen variety of sentence styles and lengths.	Effective and varied sentences; few syntactical errors or colloquialisms	Sentences show structural errors; little or no variety; little grasp of sentence flow	Simple sentences are used almost exclusively; with frequent errors in structure and syntax.	
Organization	Sentences are structured powerfully; with a rich, well-	Effective and varied sentences; few syntactical errors or	Sentences show structural errors; little or no variety;	Simple sentences are used almost exclusively; with frequent errors	

	chosen variety of sentence styles and lengths.	colloquialisms	little grasp of sentence flow	in structure and syntax.
Style: Sentence Flow and Variety	Writing is smooth, skillful, and coherent. Sentences are strong and expressive with varied structures.	Writing is clear and sentences have varied structures.	Writing is clear, but sentences may lack variety.	Writing is confusing and hard to follow. Contains fragments and/or run-on sentences.
Composition	Must be able to compose a minimum of 150 words and a maximum of 200 words. Two paragraphs are composed.	Must be able to compose a minimum of 130 words and a maximum of 149 words. One paragraph is composed.	At least a minimum of 100 words and a maximum of 129 words. One paragraph is composed.	Less than 99 words are used. One paragraph is composed.

The researchers adapted and modified the level of proficiency in writing of ACTFL Proficiency Guidelines 2012, which measured the writing skill level of students. There were five levels namely: novice, advance beginner, competent, proficient, and expert. This guideline had been used by the researchers to assess the level of proficiency students possessed in pre-writing and post-writing based on the score they attained.

Table 3. Proficiency Level Guideline

ACTFL Proficiency Guidelines (2012)	
Score scale	Verbal Description
17-20	Expert
13-16	Proficient
9-12	Competent
5-8	Advance beginner
0-4	Novice

Data Analysis

Data that were gathered from the intervention were examined using the frequency count technique, to find the average pre-writing and post-writing scores of Grade

8 students. The researchers also used the weighted mean that determined the average of the pre-writing and post-writing scores. The evaluators scored the content of the pre-writing and post-writing essay using a rubric with responses ranging from 0-4 wherein 4 was the highest point.

On the other hand, to identify if there is a significant difference between the pre-writing and post-writing scores of the students, the researcher utilized Paired-Sample T-Test. In research from Statistic Solutions

(2022), this kind of T-test, sometimes called the Dependent Sample T-test as a statistical procedure that determined whether the mean difference between two sets of observations was zero. In a Paired Sample T-test, each subject or entity was measured twice, resulting in pairs of observations.

Results and Discussions

Description of the writing skills of Grade 8 students in terms of mechanics, grammar, organization, style, and composition

Table 5. Frequency and Percentage of Pre-Writing Results

Criteria	(4)	%	(3)	%	(2)	%	(1)	%	(0)	%
Mechanics, punctuation, and capitalization	0	0	6	27.27	7	31.81	8	36.36	1	4.54
Grammar	0	0	10	45.45	8	36.36	3	13.63	1	4.54
Organization	2	9.09	7	31.81	8	36.36	4	18.18	1	4.54
Style	3	13.63	3	13.63	9	40.90	6	27.27	1	4.54
Composition	3	13.63	1	4.54	9	40.91	8	36.36	1	4.54

Legend: 4-Expert 3-Competent
2-Developing 1-Beginner
0-Poor

Table 5 shows the characteristics of Grade 8 students' writing skills through the use of pre-writing activity conducted before the implementation of the intervention plan game-based strategy among the Grade 8 students that comprises a 5-week intervention program. The scores were recorded and ranked based on the given rubric which ranges from 1-4. The results showed that the average score of the categories distinguished poor performance among the pupils. In scaling the number of scores in Mechanics (spelling, punctuation and capitalization), the majority of the students did not show mechanical proficiency wherein eight of the students (36.36%) got the score of 2 points which represented a meaning of students committed three to four errors in punctuation, spelling, and capitalization on their pre-writing activity. There were no students who got a perfect score (4) as regards to the mechanics. In tabulating the grammar criteria of the rubric, the results reflect a satisfactory performance among ten students in which they comprised 45.45% of the entire population. They scored 3 points which is an indication that students have a capacity to create effective and varied sentences with few syntactical errors or colloquialisms. The organization of most students received poor outcomes. Most of the students (8) (36.36%) got 2 points which

appears to be that students can create texts or writings that was connected with a use of basic and high frequency linking words. Next criterium was the style in which most of the students (40.90%) got 2 points which shows that their writing was clear, but their sentences may lack variety. Lastly, for the composition wherein nine or 40.91% of the students got a score of 2 points which means that they can compose at least minimum of 100 words and a maximum of 129 words and one paragraph.

The study of Murray and Christison (2011) states five competencies that must be achieved in Academic Writing. First, students were able to have a high level of organizational competence so that the ideas in their writing were clearly understandable which the respondents failed to attain since most of them got a rating of 2(36.36%). Next, students also have high accuracy in writing by paying attention to technical terms to avoid misunderstanding their meaning which eight out of 15 (36.36%) respondents acquired 2 as their rating. Third, students as writers need to control the use of grammar so that information is conveyed which shows that they were knowledgeable in grammatical rules as 45.45% of them obtain a rating of 3. Furthermore, the author must know the vocabulary in the discipline and then students as writers must be able to integrate all these competencies to produce a style that is suitable for the reader and certain context.

Table 6. Pre-writing Activity Scores

Respondents (N)-15			
Score Scale	Verbal Description	Tally	Percentage
17-20	Expert	0	0%
13-16	Proficient	0	0%
9-12	Competent	6	40%
5-8	Advanced beginner	8	53.33%
0-4	Novice	1	6.67%

As table 6 presented, the scores of the pre-writing activities of the students only ranges from 0-12 points wherein 0 was the lowest score and 12 was the highest. The table exhibits that most of the students were at the advanced beginner level of their academic writing skills which indicates that they have distracting errors in punctuation, spelling, and capitalization. Students' sentences showed structural errors, little or no variety, and a little grasp of sentence flow. Their writing style was tagged as confusing and hard to follow and contains fragments and/or run-on sentences. The respondents under this level only construct less than 99 words up to 129 words. Followed by 6 respondents who got scores ranging from 9-12 which was under the competent level which reveals that they still have few errors in

punctuation, spelling, and capitalization. They have effective and varied sentences and few syntactical errors or colloquialisms. Their writing style is clear and sentences have varied structures. There was one student under the novice level in terms of academic writing skill wherein the respondent did not write anything on his/her paper.

As table 6 presented, the scores of the pre-writing activities of the students only range from 0-12 points wherein 0 was the lowest score and 12 was the highest. The table exhibits that most of the students were at the developing level of their academic writing skills, followed by 4 respondents who got scores ranging from 11-12 which was under the expanded level.

Table 7. Frequency and Percentage of Post-Writing Scores

Criteria	(4)	%	(3)	%	(2)	%	(1)	%	(0)	%
Mechanics, spelling, punctuation, and capitalization	7	31.81	6	27.27	2	9.09	0	0	0	0
Grammar	0	0	14	63.63	1	4.54	0	0	0	0
Organization	3	13.63	11	50	1	4.54	0	0	0	0
Style	3	13.63	10	45	2	9.09	0	0	0	0
Composition	10	45	1	4.54	4	18.18	0	0	0	0

Legend: 4-Expert 3-Competent
2-Developing 1-Beginner
0-Poor

Table 7 shows the number of students' scores for the post-test. The respondents became 15 students only, who need improvement in the different categories of the rubric. These students got the lower scores 12 and below. The scores of the 15 students in Grade 8 has arisen after the implementation of the intervention game-based strategy among the Grade 8 students that comprises a 5-week intervention plan. The scores were evaluated with the use of the same rubric that has been used in evaluating the pre-test.

In scaling the scores in the Mechanics (spelling, punctuation, and capitalization) 7 of the students or 46.66% of the respondents got a higher score of 4 which means most of the students has no error in punctuations, spelling and capitalization, 6 or 40% of the student scored 3 which means students only has 1-2 errors and 2 or 13.33% of the students scored 2 which means they got 3-4 errors. Most of the students (14 or 93.33%) got a higher score of 3 showed that the respondents only got a few syntactical errors or colloquialisms. While only 1 or 6.66% respondent got a lower score of 2 means that the respondent's sentences show structural errors, no variety, and a little grasp of sentence flow.

In terms of organization, only 3 or 20% of the students got a higher score of 4 which means that the respondents' text was generally well-organized and coherent, using a variety of linking words and cohesive devices. While most of the students (11 or 73.33%) got a score of 3 which means that the text was connected and coherent, using basic linking words and a limited

number of cohesive devices. Only 1 or 6.66% of the student got a score of 2 means that the text was only connected using basic, high frequency linking words. 3 out of 15 respondents got a higher score of 4 in the category of style (sentence flow and variety) which means writing was smooth, skillful and coherent. Sentences were strong and expressive with varied structures. While most of the students (10 or 66.66%) got a score of 3 which means writing was clear and sentences have varied structures. Only 2 or 13.33% of the students got a score of 2 means that writing was clear, but sentences may lack variety. In the last category, which was the composition only 10 or 66.66% of the respondents got a higher score of 4 which means the text of the students reached the minimum words of 150 and a maximum word of 200. Only 1 or 6.66% got a score of 3 means that the paper was composed of a minimum of 130 words and a maximum of 149 words. Lastly, 4 or 26.66% got a lower score of 2 which means the respondents' answer consists of a minimum of 100 words and a maximum of 129 words. According to Arcagok (2021), a game was known to play key role in the lives of not only humans but also all living things. Games, which are beneficial for different purposes for people of all ages, have fundamental contributions to the education and development of individuals. In this sense, games had to be integrated in curricula not only as an entertainment tool but also as an educational tool.

Table 8. Post-writing Activity Scores Respondents (N)-15

Score Scale	Verbal Description	Tally	Percentage
17-20	Expert	8	53.33 %
13-16	Proficient	7	46.67 %
9-12	Competent	0	0 %
5-8	Advance beginner	0	0 %
0-4	Novice	0	0 %

In table 8, it presented that the respondents got a score from 13 to 20. 7 students or 46.67% of the students got a score of 13-16 who were classified as proficient. The

remaining 8 students or 53.33% of the students got a highest score of 17-20 who were classified as experts. This table showed how the respondents improved after the implementation of the game-based strategy. After the implementation of the intervention, all of the respondents were knowledgeable in constructing their own sentences. There were only a few errors in terms of their spelling, punctuation, and capitalization, ranging from 1 – 2 errors only, there were also a few students who found no errors in their papers. As well in their grammar, only few syntactical errors have been found. In terms of their organization, the respondents used a variety of linking words and cohesive devices that helped their sentences to be organized. In addition, the style (sentence flow and variety) the sentences were strong and expressive with varied structures. Lastly was their composition, before they only got 99 –129 words but this time they got a minimum word of 130 and a maximum word of 200. This only shows the effectiveness of the intervention that has been implemented to them.

The significant difference between the writing skills in pre-writing and post-writing when they are exposed to Game-Based Strategy

After the implementation of the intervention, the pre-writing results revealed low level skills in academics writing pertaining to mechanics (spelling, punctuation, and capitalization), grammar, organization, and style of the respondents that caused them to get low scores of 0,5,7,8,10,11 and 12 in their pre-writing activity. The post-writing results showed a higher level of writing skills in terms of the said categories in the rubric. The respondents got higher scores of 14, 15, 16, and 17 in the post test after intervention. The results of the pre-writing and post-writing indicate that the 5-week intervention plan or the game-based strategy was successful in increasing the participant’s knowledge about the said category in the rubric comparatively to the study of Berrin and Derya (2022) wherein the writing skills of the students also increase due to educational games they employed. The increase in knowledge suggests that the game-based strategy implemented in the Grade 8 Students was effective in helping participants enhance their knowledge in constructing sentences. Each game-based strategy that has been implemented every week shows improvement in students’ knowledge about writing proficiency.

The result in the present study resembled the findings of Sofwan and Artyanni (2015) which also developed game-based strategies in learning to develop the products. The results of the observation, interview, test, questionnaire, and expert validations showed that the Battleship Game contributed to the process of learning English. Considering the result of the pre-test and the post-test, it was proven that studying the grammar of

procedural text by using Battleship game will increase Junior High School students’ writing skill.

In addition, according to Allen (2014), results indicated that, for all students, interactions with W-Pal led to increases in writing performance and more positive attitudes towards the system (engagement, motivation, and perceived performance). For L1 students, game difficulty was a significant predictor of boredom; however, for the L2 students, game enjoyment predicted both their motivation and perceived writing improvement. Notably, the L2 students’ game ratings accounted for more variance in these daily reports than did the ratings of L1 students. This study suggests that L1 and L2 students experience similar benefits offered by game-based strategy practice in an ITS. Further, the strategy link between game attitudes and overall daily perceptions of training may be stronger for L2 students than L1 students.

Table 9. Comparison of the Mean Score of Pre-Test and Post-Test of Grade 8 Learners

	N	Mean and Standard Error	Standard Deviation	T-stat	P<0.05	Verbal Description
Pre-test	15	8.20 ±0.82	3.17	2.45	0.006	Highly significant
Post-test	15	16.07±0.30	1.16			

Table 9 shows the computed T-test and p-value. In the pre-test, N was the total of respondents which was 15. The mean of the student’s scores in the pre-test and posttest. The pre-test got a mean of 8.20 with a standard deviation of 3.17, while the post- test got a mean of 16.07 with a standard deviation of 1.16. The standard error in the pre-test got 0.82 while the post-test got 0.30. The result of the T-stat in the pre-test and post-test got 10.25. The p-value was used to help determine the significance of the hypothesis test results in statistics. The p-value resulted in 0.004, which was lower than 0.05 alpha or the significance level. The result suggests the rejection of the null hypothesis and the acceptance of the alternative hypothesis. This means that there was a significant difference between the writing skills in pre-writing and post-writing when they were exposed to the intervention. The result implied that the intervention used in the form of a game-based strategy was an effective tool in improving the academic writing skills of Grade 8 students.

Conclusions and Recommendations

The major conclusion was that there was a significant

difference between the scores of the respondents in the pre-writing and post-writing using the five-week intervention plan for Grade 8 students. With that being said, the five-week intervention plan through game-based strategies helps the students gain more knowledge about the effectiveness of the intervention for those Grade 8 pupils who were having difficulties in academic writing particularly in essay writing. This means there was a significant difference in the academic performance between the pre-test and post-test scores of the Grade 8 students in terms of the Game-Based Strategy in improving the academic writing skills of those students.

This study revealed the effectiveness of using the 5-week intervention plan or the game-based strategy as a solution to the writing difficulty of the students in Grade 8 in terms of mechanics (punctuations, spelling, and capitalization), the use of grammar, organization, the style (sentence flow and variety), and lastly is the composition of words. Similar studies can be done by future researchers, but they should focus on another aspect of writing such as the students' writing attitudes towards their writing. From the results collected, researchers recommended that future researchers conduct similar studies in Grade 5 to Grade 10, since it is a game-based strategy, the students will enjoy and learn at the same time without getting disinterested in the game. Future researchers can do similar studies in all quarters. The researchers recommended to future researchers to have a simple token as a prize whenever they got the highest score or whenever they win in every game, light consequences may also be given to the students who will get a lowest score. The researchers also recommended to use instructional materials, Power Points, energetic or joyful music to make the game livelier and to catch the attention of the students.

Declaration

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RESEARCH ARTICLE

Challenges and Coping Strategies of Campus Advising in the Post-Pandemic

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Abstract

Student organizations have a significant role in preparing students for real-world experiences. However, due to the effects of COVID-19 on various institutions, including schools, students, especially campus advisers, have faced challenges and opportunities in facilitating these organizations. This study used qualitative descriptive research design to describe the challenges and coping strategies of campus advisers in advising student organizations in the post-pandemic. Using criteria, five campus advisers from different organizations at the college were selected. The semi-structured instrument guide constructed by the researchers was utilized to gather data. Informants were personally provided with a printed interview questionnaire to serve as a guide during the interviews. Smartphones and audio-voice recording were utilized to accurately capture informants' responses. Thematic data analysis was conducted on the collected data. The results included two significant themes such as challenges and coping strategies. Further, seven meaningful categories emerged from the analyzed data. The findings revealed that campus advisers before, during and after the pandemic encountered challenges such as competing priorities, resource constraints, pandemic induced issues and administrative and logistical challenges. Regardless, coping strategies were used including self-management, social support and adaptive coping. Despite the promising career prospects and opportunities in advising, advisers face significant challenges that impact their well-being. Yet, they employ diverse strategies to overcome these obstacles as resilient individuals.

Keywords: Covid-19 Pandemic; Campus Student Advisers; Student Organizations; Challenges; Coping Strategies

Introduction

Student organizations play a huge role in equipping students for the real world. However, as a result of the changes brought about by COVID-19, which have had an impact on a variety of institutions, including schools, students, in particular campus advisers, have encountered difficulties as well as opportunities when it comes to facilitating student organizations.

Advisers are crucial in ensuring students' success (Harris, 2022). They assist students in building and sustaining a healthy environment where they can study and grow, develop leadership abilities, and form relationships with other students. They offer direction and support to students as they navigate the collegiate world. As the head, they drive student organizations to the right path of leadership (Maglipas, 2019). Campus advisers may find this work

rewarding, but just as students struggled with the unexpected change brought on by the pandemic, advisors too had to adjust to the new setting with limited face-to-face interaction. This allowed them to take on their roles virtually, which posed various challenges and profound opportunities (Burelison, Chaille, Christ, Klosterman, Huff, & Rust, 2021).

Before the onset of the pandemic, educational activities handled by student organizations were often held in person, however, those procedures taken by organizations to carry out a project or present an event were modified by the COVID-19. As a result, online engagement activities such as webinars and social media platforms have replaced in-person events (Pridmore, 2021). From figuring out how to hold virtual meetings to navigating the complex logistical

challenges of organizing events online, campus advisers have had to adapt quickly to ensure that student organizations can continue to operate effectively in a virtual environment. Considering that most of the older generation of educators is not tech-savvy, unlike the younger generations (Adams et al., 2022), this use of technology helped them develop ICT skills and adapt to the modern age. In spite of this benefit, the transition to remote teaching or advising of student organizations increased the workload of teachers by adding to their responsibilities at home, resulting in an increased level of stress and demands that negatively affect their wellbeing (Kraft & Simon, 2020). With the bombardment of tasks, cases of mental health issues increased not just in the younger population but also among the professionals, in particular, the educators. As a result of these challenges that hampered the productivity and effectiveness of teachers, most used coping strategies to adapt to the new setting. This includes seeking social support, engaging in physical activities such as aerobic and anaerobic exercises, as well as getting involved in leisure activities (Andrade, Bosano, & C, 2021). Being optimistic and prepared (Ashok et al., 2022) was also one of the effective coping mechanisms for teachers. Nevertheless, with the decreasing cases of COVID-19, the shift to post-pandemic followed, ensuing new adjustment strategies to take in view of the transition to blended learning.

Several studies were conducted on the challenges and opportunities faced by teachers during the pandemic (Burelison, et.al., 2021, & Dahlgren, 2015). Though these studies may have tackled the various experiences of educators, little research has been conducted focusing on the experiences of campus organization advisers in handling student organizations, their struggles, and their coping mechanisms in particular. Drawing on these perspectives, this study aims to describe the experiences of campus advisers' in advising student organizations in the post-pandemic. Specifically, this paper intends to describe the challenges encountered by campus advisers while advising student organizations in the post-pandemic and the coping strategies they utilized in order to adjust to the new setting. Anchored on the Social Cognitive Theory (Bandura, 1988), which explains how external and internal factors such as the environment, personal ability, and past experiences influence the behavior of an individual (LaMorte, 2022). The outcomes of this study may also aid the school administration and educational sectors in administering and implementing programs for campus advisers or educators in

general that will help them take their roles to a higher level while supporting their needs and well-being.

Review of Related Literature

Campus organization is one of the essential components of school culture, enabling students to develop their full potential and become better-functioning members of society. However, like any educational setting, campus organizations cannot function effectively without the support of an advisor. Highlighting the growing significance of education in our society, Miller (2022) emphasized the role of student organizations and academic advisors in achieving institutional mission and student success. In addition, given the increasing global political issues and the emphasis on developing more reliable leaders of the future, there is a growing role for student organizations and leadership programs, considering that through this, there's a probability of developing multinational leaders (Alajmi & Kalitay, 2019) who have the power to speak, solve problems, and confront challenges.

In the campus setting, with the increasing number of student organizations, academic advisors stand at the peripheral, continuously promoting leadership development for students. As a career counselor, mentor, teacher, and coach, academic advisors assist students in developing their decision-making, planning, goal-setting, and problem-solving skills (McClellan, 2013), which is one of the essential characteristics of a leader. The advisor's impact is seen as critical, not only for the success of the group but also for the successful transition of students into professional employment after graduation (Osta, Amadoro, & Bakrania, 2022). This is also highlighted in journalism organizations, where advisors are a valuable factor in the level of attachment of the organization and its members to the university, as well as the overall enhancement of college experiences (Filak & Pritchard, 2007). Though academic advisors may not often involve themselves in formal leadership within the campus, considering their hectic schedule, they are still powerful advocates of leadership behind student leaders (Gomez & Hintz, 2021). For some, leadership activities such as being an advisor to an organization may be daunting, yet they can also be rewarding. Not only does it allow them to develop professionally, but for educators, it is also fulfilling to see their students excel.

In spite of the growing practices within student organizations, with the proclamation that the world has been hit by COVID-19, pre-pandemic leadership efforts were put on hold. Due to the limitations of social interaction, face-to-face classes in educational institutions were temporarily suspended (Ahmed, Haq, & Saha, 2023). Eventually, this resulted in the modification and adjustment of organizational activities. Campus organization members highlighted the significant challenges that they had never expected to encounter during their time serving their organizations. Campus advisors, in particular, held greater responsibility for navigating these changes. Considering the number of studies focusing on the experiences of students, little is known about the perceptions of advising among institutional leaders who shape advising structure and practice (Menke et al., 2020). McGill (2021) argues that the role of academic advising in higher education is often misunderstood. Which is why, during the pandemic, the amount of stress accumulated by advisors is concerning. During the pandemic, the number of individuals who are susceptible to emotional distress increased, and this does not only include the students but also the adults, in particular the advisors (Gewartz, 2021). As “first responders”, academic advisors became responsible for addressing students’ stress, anxiety, and urgent situations (Flaherty, 2020). With this, beyond the traditional tasks of handling coursework and scheduling, the advisor’s role has expanded (McCarthy et al., 2022), requiring them to maintain composure and quality while managing additional responsibilities. Nevertheless, with the strenuous workload that advisors carry, balancing their professional and personal lives is a huge struggle (Ding, 2021). The pressure to perform their role as advisors and educators eventually leads to burnout that has become detrimental to their own mental and emotional well-being (Aljawarneh et al., 2022). In most cases, this results in the inability of advisors to connect with their students, losing their chance to help them the way they want.

The approach to academic advising varies across college campuses to cater to each institution’s unique needs. However, the COVID-19 pandemic has posed challenges, particularly in a virtual context, hindering advisors from effectively serving students (Yoder, 2021). Moosa’s (2021) case study at a South African university emphasized how advising during the pandemic differs greatly from the pre-pandemic era. The results of their study also indicated dissemination of information as one of the major obstacles

in their advising career during the pandemic. Taking into consideration the need to transfer to online modes, both synchronous and asynchronous (Osta et al., 2022), this highlighted social inequalities when it comes to students’ access to necessary sources such as good internet connectivity, electronic devices, and electricity (Naughton, 2021). Additionally, the unpreparedness of teachers for distance teaching and learning contributed greatly to their substandard performance (Atiles, Almodovar, Dias, & Vargas, 2021). Their knowledge and skills in using technology also contribute to this issue. Considering the teachers’ and students’ generation gap, educators are in need of time to adjust and prepare for these changes (Rosalina, Elyani, Nasrullah, 2020).

To add to that, financial transactions are one of the significant factors in the success and effectiveness of an organization (Diaz et al., 2020). However, considering the tight budgeting within some institutions, funding is often an issue (Baillieul & Crowder, 2021). With the impact of the COVID-19 pandemic on the world economy, the school system faced significant challenges in allocating its resources (Chambers et al., 2021). Student organizations in particular faced inadequate funding, which often resulted in receiving no support at all. Money and funding are linked with organizational success, but with decreasing support, this often results in the postponement of organizational activities and projects (Wikibooks, 2021). Most often, student organizations would resort to grant writing and fundraising activities to achieve their goals. At some point, members of the organization, particularly the advisors, would risk their own pockets for the attainment of their objectives and for the betterment of the organization.

For educators, it is common for them to undergo challenges that will continuously test their heart and passion for teaching (Ghasemi et al., 2022). Yet, despite all that, some teachers would still choose to serve their institution and, most of all, the students. Campus student organization advisors, for example, have issues that they seldom talk about. In spite of the struggles, they faced in maintaining their professional lives as educators, club advisors, and personal lives, they tried to put up with them using various methods (Mommers, Schellings, & Van der Want, 2018). With the problems faced by advisors during the pandemic, Messineo & Tosto (2022) highlighted the significance of cognitive reappraisal and positive attitudes in lowering perceived stress. This is also supported by the study conducted by Nazari et al. (2023), which stated that

approach-coping strategies are one of the most effective ways to maintain a positive state of mind. With the burden that they carry as an advisor in the new setting where their profession and personal life co-exist, adjustment methods are needed.

Aside from expressing themselves, advisors also began to understand the role of their mentoring relationships with other teachers as a source of mutual support (Mosley et al., 2022). Sharing their experiences and struggles and asking for advice on what to do when problems arise will help them have a more positive outlook. Their competence and perceived efficacy in managing and teaching their students also contributed to their adaptation (Herman, Huang, & Sebastian, 2021). Environmental factors such as conducive advising space with adequate facilities contribute to their adjustment processes (Fox & Walter, 2022). Advisors also emphasized how exercising, do-it-yourself activities, and meditation help them take a break as they engage in heavy tasks (Asbury, 2021).

With the everyday challenges as advisors, the best way that they could do it is to face these problems and adapt for their own well-being (Ciuhan, Iliescu, & Nicolau, 2022). When it comes to technological challenges, although it has been a struggle for advisors to navigate it for communication purposes, they are highly willing to learn if they could benefit from it (Cailin, 2021). Despite the challenges, campus advisors perceived the changes as another way to learn something new and be more confident in using online teaching tools (El-Din et al., 2021). With this, we can infer that, in spite of the struggles experienced by campus advisors in their advising career from the pre-pandemic to the post-pandemic era, they are willing to go against the odds equipped with personal and external support.

Methodology

Research design

This study used qualitative descriptive research design which aims to describe the challenges and coping strategies of campus advisors in advising students' organizations in the post-pandemic. Qualitative descriptive research design is appropriate to use in the study since this method is a useful way to utilize when your goal is to describe a specific event that takes place, the who, what, and the how (Lambert & Lambert, 2012).

Participants and Sampling

In selecting the informants, the researchers utilize purposeful sampling to allow the researchers in selecting informants based on a specific criterion or purpose (Nikolopoulou, 2022). Five (5) campus advisers from different organizations at the college were selected using this method. The inclusion criteria include (a) a student organization adviser, (b) male or female, and (c) experienced at least four (4) years of advising student organization; at least one (1) year before the pandemic, two (2) years during the pandemic, and at least two (1) year in the post pandemic. Additionally, (d) they should be an adviser of the same organization all throughout the required years of experience.

Instrument

This study used a semi-structured instrument guide duly validated by three (3) experts in qualitative research to gather data surrounding the challenges and coping strategies of student organization campus advisers in the post-pandemic period. To ensure the validity and reliability of the instrument, it underwent consultation and was validated by three (3) experts in qualitative research. Voice recording was also utilized to record the interview discussions, which is essential in analyzing the data. The validated instrument is divided into three (3) sections which includes; (1) the letter of consent to participate in the study; (2) the information sheet, which contained data about the informants, such as their name, sex, age, the student organization that they are spearheading, and years of experience in advising the student organizations; and (3) the research question, specifically designed to gather information of the challenges and coping strategies of campus advisers in advising student organizations in the post-pandemic.

Data collection

Prior to the data collection, selected informants were provided a copy of a letter asking for their consent to participate in the study and explaining that their participation is highly optional. Furthermore, the scheduling of interviews took into consideration the informants' availability and preferences.

As part of the data collection process, informants were personally provided with a printed interview questionnaire to serve as a guide during the interviews. Smartphones and audio-voice recording were utilized in order to accurately capture informants' responses. It is noteworthy that while some informants choose to provide their responses through a written questionnaire considering their hectic schedule, others prefer the interview format. Additionally, the researchers communicated with the informants directly to verify their consent and utilized Messenger for further clarification. Throughout the study, the research data were kept confidential, and pseudonyms were also utilized for privacy and anonymity.

Data analysis

In analyzing the collected data, the researchers utilized Braun and Clarke's (2006) stages on thematic analysis. Thematic analysis is a qualitative method of analysis that interprets patterns that will answer the research questions (Chawla & Wood, 2021, as cited by Pedroso et al., 2022). The process involved transcription of the recordings and written responses, examination of the data to identify patterns and recurring elements related to campus advisers' challenges and coping strategies, categorization of the data based on these identified patterns, and generating themes. Further, each theme was then evaluated in order to gain a better understanding of the participants' experiences.

Results and Discussion

Results

To describe the challenges and coping strategies of student organization advisers, two (2) significant themes were generated. These were (1) Challenges and (2) Coping Strategies that were utilized in order to cope up with the challenges perceived.

Challenges

Campus organization advisers have identified significant barriers or challenges in their advising experiences prior to the pandemic, during, and in the post pandemic. Divided into four (4) sub-themes, this category includes (1) competing priorities, (2) resource constraints, (3) Administrative and Logistical Challenges, and (4) Pandemic Induced Issues.

Competing Priorities

As a learning facilitator in a physical or virtual classroom, teachers are expected to perform different roles (Ong & Quek, 2023). And just like students who have several responsibilities aside from studying, educators too have other tasks to fulfill. The struggle to manage and balance the demands and expectations of both academic requirements and responsibilities associated with being an adviser, and member of an organization often results in role overload and role strain (Robinson et al., 2023).

Competing priorities include (1) balancing work-life responsibilities and (2) recognized students' struggles.

Balancing Work-Life Responsibilities

In the Philippines public-school teachers often undergo work overload as a result of demanding teaching and non-teaching-related tasks (Geronimo & Olegario, 2020). Bombarded with paperwork and non-teaching activities, they frequently experience stress and headaches, and other health issues (Huang et al., 2022). Additionally, as organization advisers, they face perceived challenges in harmonizing work and personal life on another level. Grace, one of the informants, tells about her struggles while juggling motherhood and advisory roles.

"Being a mother of a toddler and at the same time being an adviser of an organization is one of the challenges that I've experienced prior to the pandemic. It was somehow difficult but I was able to manage."

Recognized Students' Struggles

Students' competing priorities as learners and members of the organization also plays a part in the working process within the organization. Considering that each member is crucial for running the team (Bunteng, 2022), acknowledging their challenges in juggling multiple tasks is important.

One of the informants, Amber states:

"Submissions of articles were delayed because the staff had a backlog in their academics", as she identified the struggles of the members in keeping up with various assigned tasks."

Resource Constraints

Inadequate resources can have a significant impact on the efficiency of organizing events, projects, and acquiring necessary equipment (Issa, Patterson, & Tu, 2023). The lack of sufficient funding for example, availability of manpower, experience, facilities, and participation, are equally vital for the overall success and sustainability of the organization. Resources constraints, as experienced by campus organization advisers, include (1) insufficient funding, and (2) lack of facilities.

Insufficient Funding

Most organizations are dependent on the assistance of universities or the government, (Unit4 Communications, 2023). However, when funding falls short, it can significantly impact the organization's ability to meet its objectives, deliver valuable programs, and provide necessary resources for its members.

Based on the responses provided by the informants before the pandemic, campus advisers, specifically Jake, and Adeline, mentioned the lack of sufficient budget for programs which resulted in challenges when implementing projects and events.

Renee supported this by emphasizes:

“Before, during and after the pandemic, the number one problem faced by the organization was insufficient funding, considering that some student organizations don't receive financial support from the university unlike other organizations such as the publication.”

She added, “We have a lot of activities that students would like to implement, but due to the financial restraints, we were not able to push through”

Adeline also tells:

“Organization relies on fundraising from events they held, but due to classes being online, there was no capital for future projects.

Furthermore, in the post pandemic, the financial issue has been heightened. Adeline stated that as they shifted back to a face-to-face setting, they encountered even worse financial issues. On the other hand, Jake states:

“It is difficult to come up with a budget since we have a lot of programs and plans such as conducting workshops, concerts and joining competitions”.

Lack of Facilities

Apart from lack of funding, lack of facilities can also have an influence on the performance of an organization (Moaiad, 2022). Without appropriate facilities, communication, decision-making, and productivity may suffer, limiting the organization's overall effectiveness.

Before the pandemic, Jake pointed out that lack of practice and training areas was one of the difficulties that they have encountered. Considering that their organization specializes in performances such as dances, the absence of adequate training areas posed a significant challenge.

Adeline also stated that in the post-pandemic, there was “no area for organization or bulletin board” highlighting the scarcity of spaces for effective organization of information and collaboration.

Pandemic Induced Issues

As a result of the pandemic, various challenges have risen that are either new to the society or were heightened, and among the prevalent issues tackled and experienced by individuals, campus advisers in particular, are issues related to technology and the restrictions on movement and social interaction. This includes (1) technological constraints and (2) social constraints.

Technological Constraints

The transition to remote learning led to the introduction of various technologies and educational applications (He, Li, & Zhang, 2021) to address the learning barriers that occurred as a result of the restrictions. Despite its contribution in continuing education, various constraints are experienced by teachers, students (Suci et al., 2021), and campus organizations. One of these challenges is the issue of low internet connectivity and technical problems. Renee tells:

“...when we have webinars, we had a hard time gathering audiences considering their connectivity, and as for the facilitators, we also struggled with the preparation due to the varying level of internet connectivity.”

She also added that if they really want to have a tech run, they need to stay up late where the connection is much better. The fear of technical errors often caused worries about the success of the program. Similar concerns were also expressed by

“Technical issues such as internet and device failure were a barrier for proper communication”

“Meeting online was hard because some were living in far places with poor connectivity or no Wi-Fi.”

Social Constraints

Social constraints during the pandemic forced face-to-face events to be canceled as a precaution. With this, individuals were isolated (Hoessinzadeh et al., 2022), and student organization activities were either postponed or canceled. For student organizations, this presents one of the greatest challenges in managing the club.

As stated by one of the informants, “meeting the officer in person and cancellation of all in person activities” was one of the changes that they must face during the transition. This experience resonated with Renee and Jake as well. They tell: “...we find it hard to implement those activities (community engagement) considering the limitations in social interaction.”

“There’s so much fire with the officers and members but quite overwhelming due to the changes in schedule and adjustments in the new normal.”

Furthermore, with the lack of social interaction and reliance on online learning, several problems were identified in terms of member relationships and engagement. Amber shares:

“The staff were used to being isolated...they were not close to each other because of the pandemic so the new staff did not have any personal connections with the older staff and thus got in the way of work.”

Adeline continues:

“There is a lack of interest and participation from students. They were used to online classes”, she also added that “first year officers struggle with organization responsibilities due to lack of experience.”

Administrative and Logistical Challenges

Administrative and logistical challenges include (1) permit processing difficulties and (2) conflicting schedules.

Permit Processing Difficulties

In the post-pandemic the student organization advisers have identified new obstacles that hinders them in implementing their planned activities. Among these is the rising difficulty and complexity of processing permits. Due to the number of

papers needed for the approval, student organizations faced difficulties in obtaining the necessary permits from relevant campus authorities for organizing events (Kelbaugh, 2020). Consecutively, Renee and Adeline share:

“One of the challenges that we currently face is the processing of permits for the implementation of our activities. We need to prepare a lot of documents for approval and it’s a huge struggle especially when it’s an outside activity.”

“Events have to happen late or not at all due to the difficulty of getting signed permits from the University.”

Conflicting Schedules

Scheduling is one of the most effective ways to manage everyone’s time (Profit.co, 2022). Not only does it make things efficient, but it also enables individuals to perform well on their daily tasks. However, in the context of student organization, scheduling conflicts can still arise despite efforts to plan activities.

Adeline, one of the informants, expressed difficulty in scheduling events proposed by the organization due to conflicts with university events.

The school’s calendar is often packed with university events, making it challenging to determine the appropriate timing for project implementation. Additionally, the availability of guests, speakers, or students involved can also contribute to these scheduling challenges. Amber says: “Synchronizing schedules for face-to-face meetings are hard because the staff came from different majors whose classes ended differently”

Coping Strategies

In light of the challenges that have emerged as a result of diverse circumstances, the campus advisers have employed coping strategies to facilitate adaptation and resilience. These coping strategies are identified into three (3) categories, namely, (1) self-management, (2) social support, and (3) adaptive coping.

Self-Management

Self-management, include (1) time management and prioritization, and (2) motivation and positive mindset.

Time Management and Prioritization

Individuals who practiced time management were able to prevent procrastination and did not necessarily spend more time on their personal tasks, but rather allocated their time more evenly across different tasks. Moreover, their time management efforts resulted in a more balanced distribution of work time leading up to deadlines (Häfner, Oberst, Stock, 2014). Grace and Amber share:

“I always apply my principle of structure allot of time to all the tasks needed to be accomplished and stick to it.”

“Good time management and self-discipline, focus, thinking about love life.”

Motivation and Positive Mindset

Motivation attracts individuals to take action based on various factors such as instrumental values, obligations, rewards, performance, competition, and external evaluation. The combination of internal and external motivations greatly impacts an individual's ability to self-regulate (McClain, 2023).

Grace stated that as she struggled with the challenges related to her responsibilities as an educator, mother, and organization adviser, she continued to provide time for her family and self as a way to cope. She tells:

“Self-care is very important as well as family bonding”, she says. Additionally, during the pandemic, she also stated that: “One way to handle the cancellation of in-person events and activities for the organization is to accept it and not dwell much on it.”

On the other hand, Amber’s statement also coincides with Grace by stating “Que sera sera” which means what will be, will be.

Amber also emphasizes the importance of self-discipline and focus, while Jake and Grace state that:

“Purpose and passion should come together.” and “...having a positive mindset and sticking with a good vibes mantra helps in coping up with the stress and struggles in handling issues in the organization.”

“The students were very eager and motivated, so as an adviser, I have to perform my duties as expected so I can guide them to implement the planned activities.”

Social Support

Social support includes (1) effective communication, and (2) guidance network.

Effective Communication

Communication is one of the significant elements in running an organization. It not only contributes to maintaining high-quality performance (Agyeiwaa & Arboh, 2022) but also fosters a harmonious environment (Azevedo et al., 2022). Campus advisers have recognized the importance of effective communication before, during and after the pandemic as a means to address challenges within their respective organizations.

Renee and Adeline expressed similar sentiments, stating that in order to cope up with challenges they have faced, they maintained “Open communication using various mediums such as social media”.

Adeline also utilizes words and encouragement to “empower officers and let them gain more experience”.

Guidance Network

When an individual perceives social support, there are only two things that could happen: improved quality of life and having a positive outlook despite adversities (Bakken, 2023). In the context of being an educator, sufficient social support can significantly help in managing stress, effectively utilize social support resources, and develop more positive behavior towards challenging situations (Jing, Li, & Sheng, 2022). Renee and Jake tell:

“When I see that the university is supporting the organization, it motivates me to continue serving and provide guidance to our students.”

“There are times WVSU has given us a budget with our programs, and our activities have been well received by our community and people around us. It gave me a lot of motivation to continue reaching our goals and purpose. Still working with a more positive impact and attitude of gratitude.”

Adaptive Coping

Facing various challenges, campus advisers have developed adaptive strategies that aids them in navigating and managing challenging situations. Adaptive coping, namely (1) digital adaptation, and (2) lifelong learning.

Digital Adaptation

COVID-19 had changed the old-ways of implementing organization activities upside down (Wijaya, 2023), and

with the deepening integration of technology in the life of every individual, specifically in the education sector, every individual had no other choice but to embrace it. Grace stated that in order for her to cope up and continue serving her organization. She tells;

“.... just went with the flow and used whatever technologies that can help with my advising work.”

Renee also stated the significance of technology during remote advising, thus, despite the challenges that she faced in relation to technology she still used various social media platforms to communicate with the officers.

Lifelong Learning

Another way for them to cope is by considering the situation as an opportunity to learn and improve their skills, particularly in advising and utilization of technology, regardless of the setting they are in (Elyakim, McHaney, Reyachav, 2023).

In relation to the difficulty in processing the documents or permits needed for implementing the projects, Renee shares: “When it comes to the processing of the papers, I just remind the students to acknowledge the fact that all activities need approval from the university in case there will be any problems that occur during the implementation of the project.”

This allowed her and the students to view the complexity of processing the papers as a positive one instead of dwelling on the negative aspect that will contribute to their struggles.

On other hand Jake stated that in order to cope up, he often involved himself and the members in “online meetings and learning”, which help the members active while continuously improving their skills.

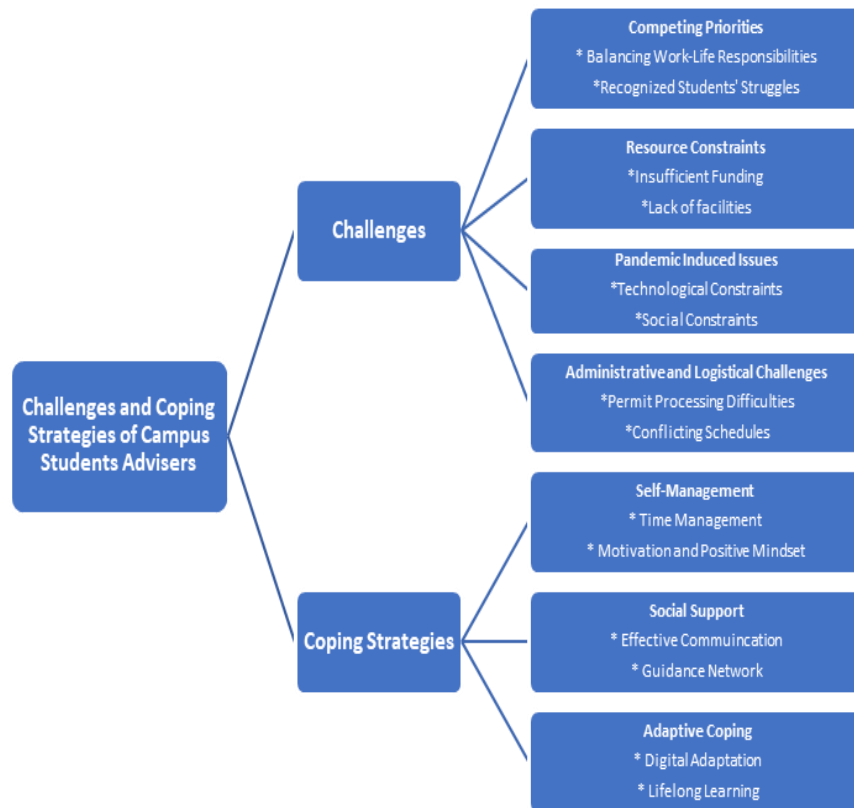


Figure 1. Demonstration of meaningful categories of the study

Discussion

This study aims to describe the challenges and coping strategies of campus advisers' in advising student organizations post-pandemic. Specifically, this paper intends to describe the challenges perceived by campus advisers while advising student organizations in the post-pandemic period and the coping strategies they utilized in order to cope with the challenges they've faced. The campus adviser's experiences were elaborated into two (2) significant themes, which are perceived obstacles and coping techniques. Seven (7) major categories were then identified after careful examination of the informants' data. Academic advising is undeniably one of the most challenging professions out there. It encompasses a wide range of roles, including being a facilitator of learning, a guidance counselor, a friend, and perhaps most importantly, a second parent. With these various roles, it is not difficult for advisors to feel exhaustion and stress (Zang et al., 2022). Nevertheless, they persist in fulfilling their tasks because they understand the immense value of their role. As per Alagappan et al. (2021), academic advising is tightly linked to achieving academic goals, career ambitions, and the overall development of a student. In the context of student organizations, advisors serve as the pioneers who empower and motivate students as they develop leadership and interpersonal skills (Student Organizations, 2023). While advising can be a fulfilling career that presents professional and personal opportunities (Bird, 2023), encountering challenges in the teaching profession is inevitable (Mommers et al., 2018). Additionally, with the eruption of the COVID-19 pandemic, the constant shift from face-to-face to remote learning and vice versa led to an increase in the difficulty of running student organizations.

Throughout the pandemic, both before and after it, campus student organization advisers have encountered numerous challenges while providing assistance to their organization. One of these is achieving balance between personal and professional life which proves exceedingly difficult for advisors (Lynch, 2022). The informants' testimony clearly reflects the struggles they experienced while juggling their roles as educators, student organization advisers, and parents. The demanding workload often results in fewer breaks, increased stress, and role strain among advisors (Abarintos & Marinella, 2021). Additionally, advisors express concern over students' engagement in the organization, considering that students face similar

challenges in balancing their various responsibilities both within and outside the organization (Yadav, 2023). Based on the results of the study, campus advisers' identified students' academic backlogs as one of the reasons that influence their participation, resulting in delayed work progress within the organization.

Consequently, another issue that plays a huge role in running the organization is limited resources. Many schools, and public schools in particular, are dependent on government funding (Allegretto, Garcia, & Weiss, 2022). However, with restricted funding and specific budget allocations, student organizations often face scarcity. Receiving little to no financial support from the university, which often depends on the decision of the administration (LSU, 2023), this results in the obstruction of planned activities and projects (Kalola & Kavale, 2017). Campus advisers highlighted that, among the challenges that they have encountered in their advising experience, financial problems stay on top of everything. To accomplish their objectives and perform their duties, they most often rely on fundraising activities. Sometimes, campus groups also encounter difficulties in their fundraising activities (Wang, 2023), which results in the last option: utilization of their own pockets. In accordance with this issue, a lack of facilities also follows. With the limited funding received by the school, a lack of physical facilities is common (Yangambi, 2023), and the production of additional spaces for organization is unlikely. This scarcity also impedes the overall productivity of the organization; specifically, it influences collaboration among the members and the organization of information.

When the COVID-19 pandemic outbreak occurred, everything changed for running a student organization (Cobb, 2021). The closure of universities resulted in isolation (Leal et al., 2021), modification, or cancellation of gatherings (Tallo, 2020). Lockdowns and restrictions on social interaction forced a shift to remote interactions or a transition to a virtual setting for work or education. The findings of the study illustrated how the pandemic immensely impeded their organizational duties as a result of social constraints. Unable to continue community engagements and other activities, this led them to modify their approaches and rely heavily on technology to continue their tasks. However, despite the aid provided by various social media platforms and technological devices, technological issues are more prevalent. Both teachers and students experienced technical difficulties such as poor

internet connections and a lack of necessary equipment (Belyakova et al., 2022). This results in difficulty in implementing programs and events online and a barrier to proper communication, as stated by the informants.

After the pandemic, as the transition back to face-to-face settings took place, campus advisers identified new issues within the organizations. While many organizations, including the Pakistani Student Association, are facing challenges in recruiting new members (Roessler, 2022), the informants specifically highlighted difficulties related to permit processing and scheduling as their main concerns. Considering the number of papers needed for approval, the campus advisers and the members of the organization are having a hard time completing the necessary documents, especially when organizing activities outside the campus premises. Furthermore, scheduling activities becomes a struggle due to the frequent overlap with university events. Consequently, the campus student advisers stated that due to the scheduling issues, some of their activities have been postponed or rescheduled. Additionally, the busy schedules of the members, guests, and speakers also contribute to these delays and the productivity of the organization.

In response to the challenges faced by campus advisers in advising student organizations before, during, and after the pandemic, they employed a range of coping strategies. Among these are self-management, social support (Andrade et al., 2021), and adaptive coping.

Academic advising services frequently emphasize the importance of time management as a valuable strategy for managing stress. Those who failed to establish effective time management skills during the pandemic experienced a decline in motivation and tended to engage in academic procrastination (Kalman, Macias Esparza, Weston, 2022). Furthermore, this study corresponds to the responses given by the informants, who emphasized the role of effective time management in allowing them to allocate more time to personal pursuits, family, and various non-work-related activities.

Additionally, this study found that academic advisers harness motivation as a coping strategy to navigate their own challenges and maintain their professional well-being. By staying motivated, advisers are able to inspire and guide their students effectively, creating a positive cycle of support and achievement. This finding aligns with McClain's study (2022), where academic advisers recognized the exceptional resilience exhibited by their African American male students as a powerful source of

motivation. Despite facing various difficulties in their academic, career, financial, and personal lives, these students showcased unwavering determination. The advisers were motivated to gain a deeper understanding of their students' unique characteristics and expressions of resilience. Moreover, when advisers receive support from people around them and from the university, it reinforces their sense of purpose and value in their role. This support fosters a positive work environment and boosts advisers' morale, inspiring them to go above and beyond their duties. They also used adaptive coping strategies, where despite the technological issues in remote settings, advisers embraced technological tools and platforms to stay connected with the students (Junco, 2016), acknowledging the importance of effective communication within the organization. They also utilize technology to assist students in achieving their academic goals and enhance accessibility for both students and advisers, promoting relationship-building and personalized student learning (Cass & Hammond, 2015).

In periods characterized by elevated stress and excessive demands, academic advisers employ coping strategies to prevent burnout and maintain manageable workloads. These strategies involve implementing measures such as reducing one-on-one time with students and establishing standardized procedures for their services. Essentially, when advisers encounter limited resources and lack supportive supervisors, they tend to rely on behaviors that distance them from their students to effectively handle their workload (Survase, 2022). However, the informants in this study provided contrasting responses, with some advisers viewing challenging situations as an opportunity for personal growth and skill enhancement.

Indeed, campus student advisers had faced numerous challenges throughout their experience in advising student organizations. However, despite these challenges, they continue to uphold their duties, and face these obstacles equipped with various coping strategies. With these findings in mind, the researchers recommend that the university where the informants have affiliated implement interventions that would address their struggles, specifically when it comes to the lack of financial support and facilities. This current study has limitations that should be considered by future researchers. Firstly, it is Qualitative Descriptive Research with a limited number of campus student organization advisers, which limits the experiences shared by the informants. Secondly, the researchers utilized a mixed-methods approach involving interviews and written

questionnaires, which may be susceptible to self-reported bias. Lastly, due to the limited literature related to this study, future researchers could provide more relevant resources to improve the study's reliability. However, despite these limitations, this paper provides adequate findings that shed light on the challenges faced by campus student advisers and the coping strategies they employed. The discoveries from this study could be significant in addressing the identified challenges.

Conclusion

Campus advisers are important members of student organizations because they serve as leaders, facilitators, guides, and sources of support for members and officers. They are critical to the success of both learners and the organization as a whole. Despite the rewarding career opportunities that advising provides, they face numerous challenges that have a significant impact on their overall well-being, both personally and professionally. Nonetheless, campus advisers are resilient people who are always willing to help.

Flexibility and adaptability are one of the characteristics that campus advisors make use the most to adjust with the changes in their workplace. During stressful times, campus advisers changed their coping strategies depending on the problems that they are facing. This shows their ability to come up with creative solutions even when resources are limited, and there's not much supervision. With this, as a crucial part of an educational community, it is important for universities to understand the challenges faced by every advisor and take steps to help them. This could include providing financial support, better facilities to improve advisers' productivity, and finding ways to decrease their workload for the sake of their well-being. Recognizing the role they play, and supporting them does not only contribute to their own development but for the entire educational community.

While this study gives insights into advisers' challenges and how they cope, it doesn't cover everything, and there's more to explore. Future research could look deeper into the experiences of advisers in different educational settings, with a larger and more diverse group. Long-term studies could also give a better understanding of how campus advisor's experiences change overtime, especially in the ever-changing world of higher education.

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RESEARCH ARTICLE

Public procurement accounting as a tool to end corruption in Ghana: Forensic Accounting Perspective

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Abstract

This study's goal was to show how, by applying natural principles to human laws, forensic accounting might be utilized as a tactic to combat corruption in public procurement. Ten public universities in Ghana were selected for the survey, and in 2023 it examined views regarding policy fairness, government performance, and deterrent. 109 questionnaires were distributed to the procurement officers of the selected institutions using a simple random sampling. The collected data were subjected to a multiple linear regression analysis using the Smart PLS software. The study concluded that forensic accounting was ineffective in stopping procurement misconduct. It also discovered that there is currently very little usage of forensic accounting by the government. Governments at all levels ought to be more interested in forensic accounting and accountants, the report suggests, in order to keep an eye on and look into fraud cases that have been shown to be fraudulent. The management of the procurement authority needs to improve the criminology training provided to accountants and auditors. This training should concentrate on topics such as the nature and extent of financial crimes, ethical concerns, investigation, and remediation. This is necessary if forensic science is to be utilized as the primary tool for corruption and fraud prevention. The administration must also give careful consideration to the impartiality, independence, and reason of the courts.

Keywords: Forensic Accounting; Corruption Prevention; Public Procurement

Introduction

A lot of people don't know how important forensic accounting is for settling disputes that can't be settled within the parameters of the rules of evidence. The use of financial and investigative abilities to open cases within the framework of the rules of evidence is known as forensic accounting, or investigative accounting. Accounting in many different countries and have been making conscious and unconscious attempts to commit fraud. For this reason, forensic accounting gained widespread notice in the 1930s when CPA Frank Wilson was assigned to investigate the financial activities of infamous criminal Al Capone. This has led to several research on forensic accounting by academics all around

the world, but the findings have been contradictory and ambiguous on the actual impact of forensic accounting in poor countries like Ghana. Moreover, rather than focusing on the prevention of corruption, most research to date has focused on the use of forensic accounting in corruption detection. Moreover, the bulk of study emphasis is directed toward banks and well-functioning stock markets, with little attention paid to other industries. Thus, it makes sense to carry out an empirical inquiry into the influence of forensic accounting on public procurement as a novel strategy to corruption prevention in Ghanaian public universities.

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Literature Review

Introduction

When it comes to obtaining the materials, labor, and services required for government programs and projects, the procurement process is an essential component of the financial system of the government. It all comes down to how the public sector purchases products and services. Public authorities' purchases of products and services might potentially fall under this category. The Ghana Institute of Procurement and Supply defines procurement as the acquisition of products, works, consultation, or other services by hiring, purchasing, or any other contractual methods. The process of acquiring products or services from a public institution using public funding is another definition of public procurement. The major role is hence the procurement of products, which may also entail the acquisition of services.

Theoretical Review

Public Procurement Act and forensic accounting's deterrent effects

The people must be discouraged by the current procurement act. In international politics, deterrence is the technique of preventing someone, generally a nation-state, from acting in an undesirable way. It involves instilling terror in people, communities, and states, making them afraid to do or repeat illegal acts. In Ghana, one of the goals of the criminal code is to dissuade potential offenders. This clause allows for either broad or specific deterrent.

While the special deterrence effect aims to stop a person from committing new crimes, the general deterrence effect's main goal is to dissuade the broader population from participating in future criminal acts. Therefore, it is imperative that the Ghanaian Procurement Act be formulated appropriately.

Government's anticipated role in Corruption Prevention

Public procurement is one of the government functions that is most vulnerable to corruption. Aside from the amount of transactions and the financial interests at play, other factors that raise the danger of corruption include the complexity of the process, the tight relationship between

public officials and corporations, and the huge number of parties. The direct costs of corruption include lower-quality goods, services, and work; increased costs; and misallocations that result in the loss of public monies. It is anticipated that a government would be able to reduce procurement fraud and corruption with the aid of the principles of integrity, openness, stakeholder involvement, accessibility, electronic procurement, and supervision and control.

The Procurement Act of Ghana

Public procurement is a government process that is particularly vulnerable to corruption. The multitude of players, the volume of transactions, and the financial interests at stake all contribute to the heightened danger of corruption, as does the complexity of the process and the tight link between public officials and corporations. Reduced quality of goods, services, and works; increased costs; and loss of public monies owing to misallocations are some of the direct consequences of corruption. Governments are supposed to reduce procurement fraud and corruption by implementing the following principles: integrity, openness, stakeholder involvement, accessibility, electronic procurement, and supervision and control.

Empirical Reviews

When Enofe (2019) discusses the use of forensic accounting in emerging economies such as Nigeria, she points out that there are several obstacles in the way. However, Indian stock corporations have been adopting computer forensic accounting tools and data mining techniques to ignore the organization's internal auditing system failure. Muhammad Aminu Isa and Shafi'u Abubakar Kurf (2020) provide more evidence of the efficacy of forensic accounting in fraud investigations. The standard of internal control in Nigerian businesses. Research conducted in 2017 by Bassey Eyo, Ahonkhai, and Ohimai Ebahi indicates that the discovery of fraud in Nigerian enterprises is mostly unaffected by forensic accounting and litigation support.

Conceptual framework of the study

With this in mind, and after reading a plethora of literature (books, articles, journals, etc.), we made an effort to construct the conceptual framework of this study in three parts. The purpose of the study is to investigate the impact

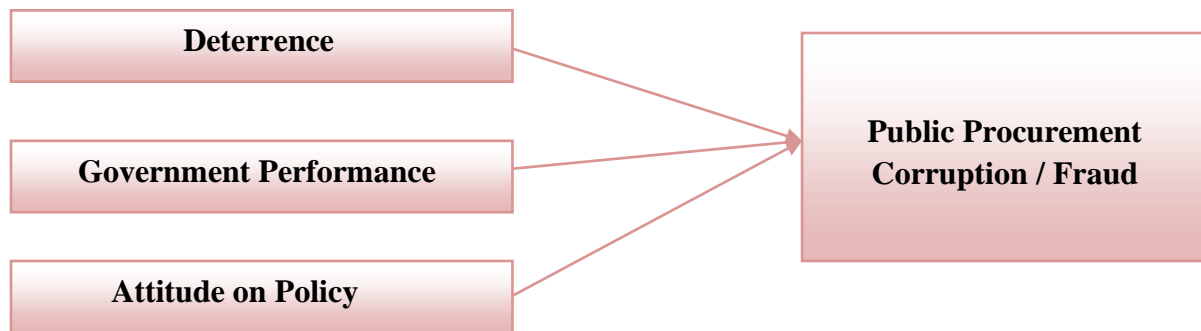
of forensic accounting on corruption prevention in its entirety, so the following section presents the hypotheses that have been developed along with the conceptual framework that supports them. The hypotheses were developed through careful comprehension and articulation

of a wide range of literatures (theoretical and empirical) that are then put to the test.

Hypothesizes

- H1: Forensic accounting can help avoid procurement fraud.
- H2: To combat corruption, the government is arming itself with forensic accounting.
- H3: The policy is in favor of using forensic accounting to combat corruption.

Table 1: Conceptual Framework



Source: Deterrence theory, Social psychology, theory of planned behavior and prior studies

Methodology

This study employed an explanatory research design and a quantitative research technique to offer new insights into quantifying the effect of forensic accounting on public procurement. In 2023, 151 procurement officials employed by 10 of the oldest public institutions in Ghana were the subjects of a research aimed at better understanding the ways in which their vast expertise influences their behavior. To choose a sample of 109 units from the 10 public institutions, a proportional simple random cluster sampling approach

was used. This resulted from the universities' inherent mutual exclusion, which caused the research to split them up into clusters. Because samples were chosen from each stratum to conduct the study simultaneously, it improved the representativeness of the samples and increased the study's effectiveness and cost efficiency. As a result, the following Yamane (1967) formula was used to choose responders from the entire population:

$$n = \frac{N}{(1+N(e)^2)}$$

Where; n = required sample size, N= total population and Ne= margin of error.

The choice of the data collection method is done after choosing a problem-solving research design. The information was gathered via a questionnaire with a total of sixteen (16) items and a five-point Likert scale that was structured and closed-ended.

Each responder received a single copy of the questionnaire that was presented in the same order and had exactly the same wording. The researcher also needed to consider the sequence in which the questions should be answered while designing the questionnaire. The researcher used trained research assistants to make sure that responders understood every question. This was done to guarantee both the quality of the data acquired by the questionnaire and the quality of the questions on it.

A quantitative data analysis approach was utilized to explain the population from the sample utilizing descriptive and inferential statistics tools in order to organize, summarize, analyze, and explain the data in this study. After data collection was finished, data were coded, modified, and loaded into Smart PLS to ascertain the influence of independent factors on procurement fraud (corruption). The mean index was then used to aggregate a set of Likert type items representing related qualities into a single composite variable.

As a result, the study used the analytical model described below:

Table 2: Regression Result

Dependent Variable: PF / C

Sample: 1109

Included observations: 109

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.907087	0.106928	45.89130	0.0000
D	-0.094366	0.045836	-2.058764	0.0404
GP	-0.257403	0.092754	-2.775125	0.0059
POF	-0.097726	0.068121	-1.434594	0.1525
R-squared	0.537703	Durbin-Watson stat		1.816171
Adjusted R-squared	0.529732			
Prob. (F-statistic)	0.230310			

Source: Survey of sampling units and own computation, 2023

$PF = \beta_0 + \beta_1 D + \beta_2 GP + \beta_3 POF + \epsilon$; which later gave the following equation.

Where; **PF/C**= Procurement Fraud / Corruption

D = Deterrence

GP = Government Performance

PoF = Policy Fairness

Prior to conducting the basic regression, the study proceeded with the regression process after conducting all necessary diagnostic tests of the model. In order to ensure the reliability of the instrument and prevent ambiguity in the study, 0.918 was assigned to the internal consistency of the instrument using Chronbach's alpha prior to the actual investigation.

Results and Discussion

109 procurement officials from the ten public institutions that were chosen for the study were given questionnaires, which were then utilized for additional analysis. The model was resilient and suited for additional regression after passing all necessary diagnostic tests for the assumptions of the classical linear regression model, including the error having zero mean, heteroskedasticity, auto correlation, normality, and multi-collinearity.

Since the R-squared values indicate how well the regression model explains the actual fluctuations in the dependent variable, it is possible to infer from the preceding table that the regression results showed the impact of explanatory factors on the dependent variable.

The table's corrected R² value shows that the forensic accounting variables in the model accounted for 52.97% of the variability in public procurement fraud. The null hypothesis, according to which all of the coefficients are collectively zero, should be rejected, as shown by the regression F-statistic (23.03) and the p-value of zero associated with the test statistic. It suggests that changes in the dependent variable might be explained by the independent variables in the model.

The hypothesis behind this study was that forensic accounting may discourage corruption and fraud in procurement. But since the coefficient of deterrence was negative and statistically significant at the 5% level with a p-value of 0.0404, the outcome defies the premise. This demonstrates that in the chosen public institutions, forensic accounting was unable to prevent procurement fraud. The research aligns with the findings of Alabdullah, Alfadhl, Yahya, and Rabi (2013), who discovered a noteworthy correlation between the efficacy of control and auditing organizations and forensic accounting. It is compared to the research of Muhammad Aminu Isa and Shafi'u Abubakar Kurf (2020), which demonstrates the value of forensic accounting in reducing fraud and improving the caliber of internal control in Nigerian businesses. This study confirms the findings of Bassey Eyo, Ahonkhai, and Ohimai Ebahi (2017), who demonstrated that forensic accounting and legal help had little to no impact on preventing fraud in Nigerian businesses. Also, it was hypothesized that government is exploiting forensic accounting as fraud prevention tool. Still, the result is in antagonistic to the hypothesis since the coefficient of government performance remained negative and statistically significant at 5% level with a p-value of 0.0059.

Therefore, it appears that the government's use of forensic accounting in the procurement system to avoid fraud is not very widespread among the public colleges that were chosen.

It mostly agrees with Enofe's (2019) study, which observed that there are several obstacles to the use of forensic accounting in developing nations like Nigeria. However, this study is in direct opposition to the findings of Ashwin R. et al. (2018), who discovered that in Indian

stock markets, failures of internal auditing systems of the firm have been disregarded using data mining techniques and computer tools of forensic accounting.

Furthermore, the study postulated that the Ghanaian procurement system's policy supports the use of forensic accounting as a fraud and corruption prevention tool. In the meanwhile, the coefficient of policy fairness remained negative and, with a p-value of 0.1525, was statistically insignificant at the 5% level, meaning that the outcome does not adhere to the hypothesis. From this point on, it suggests that the system's receptivity to the use of forensic accounting to avoid fraud is still dubious, although not at all.

Conclusion and Policy Direction

The analyses conducted yield strong evidence that support several conclusions, such as the government's dubious or insignificant use of forensic accounting. Moreover, it was discovered that forensic accounting was powerless to stop procurement fraud and corruption.

Therefore, we urge governments at all levels to show interest in forensic accounting and accountants in order to monitor and look into incidents of suspected and verified fraud and corruption. In addition to placing a strong emphasis on reason, impartiality, and the independence of the legal system, the management of the public procurement authority should provide accountants and auditors with training in criminology, with a focus on the dynamics and scope of financial crimes, fraud and corruption prevention, ethical issues, deterrence, detection, investigation, and remediation.

Possible further research

Subsequent studies might focus on examining how forensic accounting affects procurement fraud in Ghana's government sector.

Declaration

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Table 1 . Conceptual Framework

Table 2. Regression Results

RESEARCH ARTICLE

Effect of Female board member on firm Performance: Evidence from Pakistan

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Abstract

This study examines the impact of women on boards as corporate governance on corporate performance, with a focus on evidence from Pakistan. The study used a sample of 100 non-financial corporations listed on the Pakistan Stock Exchange, selected using a dedicated sampling methodology and covering the period from 2010 to 2019. The results of the survey shown that women board members have a significant impact on the company's performance, indicating that women have effective management skills in asset management and related activities. The literature unanimously supports the idea that the presence of women on boards of directors has a significant impact on company performance. The importance of this study lies in the fact that it explores the different dimensions of women on boards of directors as aspects of corporate governance, providing valuable insights into the decision-making process of investors. In particular, the study contributed to the literature by addressing gaps associated with emerging economies, particularly in Pakistan, as most existing research focuses on developing countries.

Keywords: Corporate Governance; Firm performance; Female Board Member

Introduction

Corporate governance is a method of governing a corporation's activities for the benefit of all stakeholders (not just shareholders), which ultimately leads to improved financial performance. It is the collection of procedures, practices, policies, laws, and institutions that influence how a corporation (or company) is directed, administered, or controlled. "Corporate governance refers to how a corporate body's affairs are or should be conducted in order to serve and protect the individual and collective interests of all stakeholders" (Bin Tariq & Butt, 2008). The failure of large companies like WorldCom and Enron has contributed to the increased interest in corporate governance. Countries have made disclosure levels and transparency mandatory in order to strengthen company governance practices. Financial organizations collapsed as a result of corruption, poor corporate governance, and a lack of transparency. Because of poor governance practices, shareholders' trust in both public and private corporations in the nation completely decreased. According to (Buchdadi, Ulupui, Dalimunthe, Pamungkas, & Fauziyyah, 2019).

The daily operation of the business should be conducted in a way that serves the interests of the shareholders, and

this requires an effective system of corporate administration. It aids in maintaining control over the board of director's work. Since their main duty and obligation is to oversee management to ensure appropriate accountability to shareholders and other stakeholders, the board of directors plays a crucial role in the corporate governance system. Corporate governance improvement is one of the most important aspects of laying a solid foundation for a company's long-term success. Corporate governance, on the other hand, is a topic that has sparked a lot of discussion. To understand why these arguments are made, one should look at the essence of the debate (Ibrahim, Rehman & Raof 2010). The SECP plays a role in setting listing requirements and overseeing the stock exchange. Pakistan's corporate landscape is dominated by state-owned enterprises, multinational corporations, and family-owned businesses. Corporate ownership is concentrated among large families who control listed companies through cross shareholding and pyramid structures. Unfortunately, many family-owned firms lack future growth strategies or innovative initiatives, often preferring the status quo and exhibiting stagnation in the market. The remaining parts of the study as structured as follows; the second part is composed of literature review,

the third part present methodology, the fourth part present the results and the last part is composed of conclusion and recommendation.

Literature Review

After the financial crisis of 2008, which resulted in the collapse of numerous financial institutions and the virtual bankruptcy of several sectors, there has been a surge of interest in corporate governance from researchers, academicians, and governments, including global organizations. As Cheffins (2011) has pointed out, the concept of corporate governance came to prominence in the United States in the 1970s. The importance of corporate governance increased significantly after the collapse of Enron and Arthur Andersen in the United States, as well as similar incidents in the United Kingdom, such as the Marconi case. As a result, international organizations around the world are increasingly concerned about the challenges posed by governance issues. The International Monetary Fund has asked that the debt reduction scheme include governance changes (Khanchel, 2007). In 1999, the Organization for Economic Co-operation and Development (OECD) introduced its influential principles of corporate governance. Its objective is to assist member and non-member countries in the evaluation and strengthening of their legal, institutional and regulatory frameworks, in order to improve corporate governance standards (Néstor and Thompson, 2001). In empirical studies, female board members are frequently examined. The presence of female board members reflects the board's diversity (Donaldson, 1990). In addition, (Smith, 2006) looked at three different reasons why females on boards are important. To begin with, female board members typically have a better understanding of a market than male board members. As a result, this knowledge will help the board make better decisions. Second, including women on the board of directors can improve the company's reputation in the community, which can have a positive impact on the company's overall performance. In addition, appointing women to the board of director's helps other board members better understand the business environment. In addition, this study shows that the presence of women on boards of directors can have a positive impact on the professional development of junior female employees within a company. Therefore, the impact of women on boards of directors on a company's performance is evident through direct and indirect contributions.

When women are appointed to a company's board of directors, different perspectives emerge when discussing board members' viewpoints (Goyal, Sergi, & Esposito, 2019). Previous research into the participation of women on boards of directors has yielded mixed results (Ionascu,

Sacarin, & Minu, 2018). For example, studies (Wang, Zhang, & Zhang, 2020) and (Ionascu et al., 2018) discovered a positive correlation and a significant effect on women's participation on boards of directors. Meanwhile, research (Post & Byron, 2015) found no evidence of a positive and significant link between women on boards of directors and company performance. In the United States, (Adams & Ferreira, 2009) did not find a positive correlation or a significant influence on company performance when women served on the board of directors. Different results could be due to differences in organisational structure, applicable regulations, and regulations in different countries (Diri, 2017).

According to Aldamen & Duncanin (December 2006) Women directors provide three things that males are less likely to do: They extend board discussions in order to better reflect the interests of a diverse range of stakeholders, including workers, consumers, and the general public. They can be more persistent than men in seeking solutions to tough problems (perhaps because as one male CEO put it, "guy shave a gender imperative to appear as though they understand everything"). Furthermore, they tend to take a more collaborative approach to leadership, which promotes communication among directors as well as between the board and management. Decisions However, reaping the benefits of these contributions is contingent on having the appropriate number of women. Solo female board members may feel lonely and alienated. When they are effective, it is not because they are the only woman, but because they are. Adding a second woman to a board can help minimize feelings of isolation, but it does not necessarily result in change and may generate new challenges. Two women may be viewed as a different group and must be cautious not to appear to be colluding. Furthermore, they maybe indistinguishable from one another. "I raised a question at a board meeting that led the board to take some crucial action," one lady stated. Later, the chairman complimented the other female board member for addressing the issue. No one spoke forward to correct him."

Empirical studies frequently focus on female board members. The female board individuals mirror an enhanced trait of the board (Dutta và Bose, 2006). Furthermore, (Smith, 2006) looked at three different reasons to acknowledge the significance of female board members. In the first place, female board persons usually have a better understanding of a market in assessment with male persons. As a result, the board's decisions will benefit from this comprehension. Second, female board persons will get improved pictures the sight of the local area for a firm and this will add emphatically to company's appearance. Thirdly, if female board members are appointed, they will have a better understanding of the business environment. Additionally, this schoolwork

found that junior female employees' career development can be positively impacted by female board members. Subsequently, a company's exhibition is improved straightforwardly and in a roundabout way with the presence of female board individuals.

Previous evidence confirms the significant impact of boards on the financial risk assumed by banks (McNulty, Florackis, & Ormrod, 2013). The role of a woman director goes beyond ethical considerations that affect business performance (Poletti-Hughes & Briano-Turrent, 2019); (Zalata, Ntim, Aboud, & Gyapong, 2022). (Muller-Kahle & Lewellyn, 2011) and (Lewellyn & Muller-Kahle, 2012) argue that board structure and CEOs' psychological processes influence disproportionate risk-taking decisions in subprime lending. Results from the psychological writing and tentative economics show that women are generally risk-averse, which is evident in their investment decisions. (Charness, Gnezy, & Kuhn, 2012); (Gulamhussen & Santa, 2015) Risk aversion is more pronounced in the face of financial risks because they place greater emphasis on adverse factors in decision-making (Olsen & Cox, 2001). A large body of empirical evidence from behavioral finance confirms women's increased risk hatred when make economic and investment decisions (Barber & Odean, 2001); (Halko, Kaustia and Alanko, 2012. Keltner et al. (2003) argue that the relatively low power of female directors has led them to focus on the negative characteristics of risky behavior rather than aligning risk decisions with shareholder preferences. (Kamas & Preston, 2012) characteristic the consequences to differences in trust that affect women's competitiveness relative to men. In addition, (Rudman, 1998) develops self-confidence and describes the effect of female modesty, in which women tend to underestimate their own accomplishments and lack confidence in their abilities in the workplace. Miller and Úbeda (2012) argue that women are extra perceptive to decision-making environments. (Croson & Gneezy, 2009) concluded that gender differences in self-confidence, emotional responses to dangerous situations, and perception of uncertain situations are the main factors influencing gender differences in risk-taking. This association is expressed by the following hypothesis.H1. There is a negative association between female directorship and bank risk taking.

In developing countries, there are often no or very few women on boards (symbolism) (Mahadeo and Soobaroyen, 2012); (Par. N. Abdullah, Ismail, & Nachum, 2016). Theoretically, from the perspective of resource dependency theory, women on the board of directors can assure stakeholders of the diversity of the company; increase its legitimacy; and the connection with the external environment (Lućkerat). In addition, proponents of agency theory argue that women directors can play an important role in reducing agency costs

because they can bring new perspectives to the board and make complex decisions (Carter, Simkins, & Simpson, 2003). Empirical evidence on the impact of women on company boards is mixed financial performance. For example, (Mahadeo, Soobaroyen, & Hanuman, 2012), Luckeath-Rovers (2013), (Ntim, 2015), and (S. Murphy). N. Abdullah et al., (2016) found a positive correlation between the proportion of women on boards and business performance. Conversely, (Ahern & Dittmar, 2012) found a negative correlation, while (Marimuthu & Kolandaisamy, 2009) found no correlation between the proportion of women in the performance of sand and gravel companies. The CMHA Guidelines (2002) recommend that the process of appointing directors should take into account gender equality. Based on the theory of resource dependence, women on the board of directors can strengthen the legitimacy of the company and provide more connections to the external environment (Carter et al., 2003). Therefore, the following assumptions are proposed.H1. Women on boards improve Tanzanian listed firms' financial performance.

Hypothesis H1: "Female board of director positively contribute to firm performance"

Research Methodology

Study Period and Sample Selection

The study focused on the population of non-financial companies listed on the Pakistan Stock Exchange (PSX). At the heart of this study is a carefully selected sample of 100 companies between 2010 and 2019 using targeted sampling techniques. In order to collect the essential data for analysis, an integrated approach is used, using annual reports, balance sheet analysis and information directly from the company's website. This rigorous approach ensures a thorough review of the selected company, allowing for a thorough exploration of the impact of corporate governance practices on the company's performance in a given context.

Statistical Tools for Data Analysis

We use various statistical tools, such as SPSS and MS Excel, to process the collected data for statistical analysis.

Data Analysis

Descriptive Statistics

The descriptive statistics are presented in Table 1. The average value of Tobin's Q is 1.396, indicating that the market value of the selected non-financial corporations exceeded the book value on average over the entire

sampling period. This suggests that investor sentiment is positive, indicating confidence in the firm's ability to use its capital efficiently (Lewellen and Badrinath, 1997). In addition, the return on equity averages 14.5%, which means that, on average, these companies are profitable over the specified period, which can contribute to a higher Tobin Q.

The FBM (Female Board Members) were almost 13% which can play a vital role in firm performance.

Table 1: Descriptive Statistic of Female Board Member and Firm Performance

Variables	Obs	Mean	Std. Dev	Min	Max
TBQ	200	1.396	1.149	0.465	16.550
ROE	200	0.145	1.138	-32.646	10.635
FBM	200	0.133	0.243	0.000	1.000

Return on Equity ROE: It is measured as (NI/Total Equity)

TobinQ TBQ: It is calculated as follows: (Market value of equity+ BV (debt)/BV (Total assets))

FBM numbers of Female board of Members

Correlation analysis

Performing a correlation analysis is essential to evaluate the variables considered, and Table 1 summarizes the results of the study, including all the variables included in the study. The aim of this analysis is to examine the relationship between variables using Pearson's correlation coefficients. As shown in the table, the results show a statistically significant correlation for all variables. This suggests that there is no significant Multicollinearity among the independent variables, with all Pearson coefficients being less than 0.7 (Alin, 2010).

Table 2. Correlation Matrix of Corporate Governance Variables (Female Board Member)

	TBQ	ROE	BSIZ	FBM	CEOD	BW E	BE L	INDD RTR
TBQ	1							
ROE	0.12	1.00						
FBM	0.02	0.26	0.109	1				
	67	63	3					

Model Specification

This research employs a specific econometric model for its analysis.

$$Y: \beta\alpha + \beta FB_{it} + \epsilon_i \tag{1}$$

at this point Y is dependent variable, $\beta\alpha$ is constant, β is coefficient of clarifying variable (Corporate Governance Facet i.e. Female Board Member) FB it is explanatory variable and ϵ_i is error term.

Between 2010 and 2019, this study used return on equity (ROE) as a financial ratio to measure a company's performance. Various statistical tests are used to evaluate the variables and determine the best analysis model. The evidence included cooperative, fixed-effect, and random-effects models. Subsequently, conclusions were drawn based on the results of the Hausman test and the redundant fixed effect (PEF) test. The results show that the most appropriate model for the execution of econometric equations is the fixed-effects model. This decision ensures that the chosen model meets the statistical requirements and provides a solid framework for further analysis.

$$Y: \beta\alpha + \beta FB_{it} + \epsilon_i \tag{2}$$

Analysis of redundant fixed-effect tests revealed a noteworthy result, as the F-statistic was found to be statistically significant for this period. This result suggests that the fixed-effect model is more suitable for our study than the common-effects model. Similarly, Hausman's test emphasizes this preference for fixed-effect models, as chi-square values are also statistically significant. The combined significance of the F-statistic and chi-square values led us to conclude that the most appropriate model for our study was a time-period fixed-effect model. This decision, based on the statistical significance observed in both tests, confirms the robustness and relevance of the fixed-effect model in our analytical framework.

Female Board Members and its Effect on firm performance

$$Y: \beta\alpha + \beta FB + f(\text{controlvariables}) + \epsilon_{it} \tag{3}$$

In the examination using redundant fixed-effect tests, the importance of the F-statistic during this period emphasizes the applicability of the fixed-effect model compared to the general-effects model. Similarly, the Hausman test highlights the importance of chi-square

values, thus confirming the applicability of the fixed-effects model compared to the random-effects model. Given the importance of the F-statistic and chi-square values, our studies tend to use a fixed-effect model to divide the periods. This selection was guided by statistically significant results in both tests, affirming the

relevance and applicability of the fixed-effect model on the specific parameters studied. Table 2 shows correlation, table 3 shows fixed effect model and table 4 shows fixed effect tests.

Table 3. Redundant fixed effect model

Pool: BASIC

Test period fixed effects			
Effects Test	Statistic	d.f.	Prob.
Period F	5.922377	(7,1985)	0.0000
Period Chi-square	41.339710	7	0.0000

Fixed Effects (Period)

Year	Difference	Actual Constant
2010	0.055928	0.125551
2011	-0.237447	-0.167824
2012	0.737469	0.807092
2013	-0.202239	-0.132616
2014	-0.301064	-0.231441
2015	0.234956	0.304579
2016	-0.273217	-0.203594

Effects Specification

R-squared	0.060174
Adjusted R-squared	0.053545
F-statistic	9.078022
Prob(F-statistic)	0.000000
Durbin-Watson stat	2.137848

Table 4. Fixed effect tests

Redundant Fixed Effects Tests				
Pool: BASIC				
Test period fixed effects				
Effects Test		Statistic	d.f.	Prob.
Period F		6.069569	(7,1985)	0.0000
Period Chi-square		42.356343	7	0.0000
Correlated Random Effects - Hausman Test				
Pool: BASIC				
Test period random effects				
		Chi-Sq. Statistic		
Test Summary			Chi-Sq. d.f.	Prob.
Period random		42.486981	7	0.0000

Table 5: White period standard errors & covariance (d.f. corrected)

Dependent Variable FP Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.072832	0.02736	2.661978	0.0078
FP_?	1.115825	0.58167	1.918311	0.0552
FP_?*FBM_?	0.011669	0.005898	1.978311	0.048
FP_?*BETA_?	0.211676	0.081272	2.604533	0.0093
FP_?*GOWTH_?	-0.01666	0.008469	-1.95998	0.0501
FP_?*EPER_?	-0.013136	0.004567	-2.87637	0.0041
FP_?*SIZE_?	-0.07161	0.03665	-1.95385	0.0509

Fixed Effects (Period)		
Year	Difference	Actual Constant
2008	0.062126	0.134958
2009	-0.240734	-0.167902
2010	0.73102	0.803852
2011	-0.196061	-0.123229
2012	-0.326128	-0.253296
2013	0.260218	0.33305
2014	-0.274631	-0.201799
2015	-0.015809	0.057023

Effects Specification

R-squared	0.063908
Adjusted R-squared	0.057305
F-statistic	9.679787
Prob(F-statistic)	0.000000
Durbin-Watson stat	2.112825

Table 5 presents the results of the regression for the performance of the firm (FP) and women members of the boards of directors (FBM). The results showed that the relationship between women directors (FBM) and company performance (FP) was negative and very significant. This finding is consistent with the findings of other researchers, such as Zakarai (2014), Bhojraj, and Sengupta (2003). The results show that increasing the number of women on boards of directors is beneficial for the company. This is attributed to their diverse skills, their effective ability to monitor and control, and their ability to effectively supervise activities. In addition, they help control the risk of default associated with debt. From these results, we can conclude that the results support the H2 hypothesis and reject the null hypothesis, suggesting a positive correlation between the number of women directors (FBM) and their impact on company performance (FP). Essentially, as the number of women on boards increases, so does the company's performance.

Conclusion

This study examines the impact of corporate governance attributes, particularly board experience, on corporate performance, and is based on variables observed in Pakistan. The study focused on a sample of 100 non-financial companies listed on the Pakistan Stock Exchange between 2010 and 2019. The results of the study show that increasing the number of women on the board of directors is beneficial for the company. This is

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attributed to their diverse skills, their effective ability to monitor and control, and their ability to effectively supervise activities. In addition, women board members help control the risk of default associated with debt. Based on these results, it can be concluded that this study supports the H2 hypothesis and rejects the null hypothesis, establishing a positive correlation between the number of women directors (FBM) and their impact on company performance (FP). Essentially, an increase in the number of women board members (FBMs) corresponds to an improvement in the company's performance.

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