ANUK COLLEGE OF PRIVATE SECTOR Accounting Journal

VOL. 1 NO.1 SEPTEMBER, 2024

ISSN 2579-1036

A Publication of College of Private Sector Accounting ANAN University Kwall, Plateau State, Nigeria. Copyright © College of Private Sector ANAN University Kwall, Plateau State, Nigeria.

Published September, 2024.

Web Address: https://www.anukpsaj.com, Email: anukpsaj@gmail.com

All right reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of the copyright owner,

Printed by: MUSSAB Printers, NB, 9 Muri road by gwari road, Kaduna State, Nigeria. Phone contact: 07038776658, Email: meetsuleiman009@gmail.com

Structure of Manuscript

Manuscripts must be typed on A size paper with 12 font size (Times New Roman), not more than 15 pages, double-spaced, and in English. The file name should include the corresponding author's name and a keyword from the title.

Sequence of Manuscript

I. Title page II. Abstract (150-250 words) III. Keywords (3-5) IV. Introduction V. Literature Review VI. Methodology VII. Results and Discussion VIII. Conclusion and Recommendations IX. References (APA 7th Edition) X. Appendices (if necessary) XI. Author Biographies (optional)

Plagiarism Policy

ANUK is committed to maintaining high standards through an indept peer-review process with sound ethical policies. Any infringements of professional ethical codes, such as plagiarism; including self-plagiarism, fraudulent use of data, are seriously frowned at by the journal with zero tolerance.

ANUK implements the Code of Conduct of the Committee on Publication Ethics (COPE), and uses the COPE Flowcharts for Resolving cases of suspected plagiarism or any publication misconduct.

In order to avoid plagiarism cases with the ANUK, the following guidelines must be strictly adhered to by authors:

Authors should ensure that they have written entirely original works, and if authors have used the work and/or words of others that this has been appropriately cited or quoted.

An author should not, in general, publish manuscripts describing essentially the same research in more than one journal or primary publication. Submitting the same manuscript to more than one journal concurrently constitutes unethical publishing behavior and is unacceptable.

Proper acknowledgment of the work of others must always be adhered to. Authors should cite publications that have been influential in determining the nature of the reported work.

Editorial Team

Editor-in-Chief : Prof. Musa Adeiza Farouk Department of Management Accounting, ANAN University Kwall, Plateau State.

Associate Editor: Dr. Saidu Halidu Department of Financial Reporting, ANAN University Kwall, Plateau State.

Managing Editor : Dr. Benjamin David Uyagu Department of Auditing and Forensic Accounting, ANAN University Kwall, Plateau State.

Members Editorial Board

Prof. Joseph Femi Adebisi Dean, College of Private Sector Accounting and DVC ANAN University Kwall, Plateau State.

Prof. Tamunonimim Ngereboa Dean, Public Sector Accounting ANAN University Kwall, Plateau State.

Prof Kabir Tahir Hamid Department of Accounting Bayero University, Kano, Kano State.

Prof. Ekoja B. Ekoja Department of Accounting University of Jos.

Prof. Clifford Ofurum Department of Accounting University of Port Harcourt, Rivers State.

Prof. Ahmad Bello Dogarawa Department of Accounting, Ahmadu Bello University Zaria.

Prof. Muhammad Junaidu Kurawa Department of Accounting Bayero University Kano, Kano State.

Prof. Muhammad Habibu Sabari Department of Accounting Ahmadu Bello University, Zaria.

Prof. Hassan Ibrahim Department of Accounting IBB University, Lapai, Niger State. **Prof. Tochukwu Okafor** Department of Accounting University of Nigeria, Nsukka.

Prof. Muhammad Aminu Isa Department of Accounting Bayero University, Kano, Kano State.

Prof. Ahmadu Bello Department of Accounting Ahmadu Bello University, Zaria.

Prof. Musa Yelwa Abubakar Department of Accounting Usmanu Danfodiyo University, Sokoto State.

Prof. Salisu Abubakar Department of Accounting Ahmadu Bello University Zaria, Kaduna State.

Prof. Isaq Alhaji Samaila Department of Accounting Bayero University, Kano State.

Prof. J.J. Adefila Department of Accounting University of Maidugu, Borno State.

Prof. Chinedu Innocent Enekwe Department of Financial Management ANAN University Kwall, Plateau State.

Dr. Dang Yohanna Dagwom, Department of Public Sector Accounting ANAN University Kwall, Plateau State. **Dr. Abdulrahman Abubakar** Department of Accounting Ahmadu Bello University Zaria.

Dr. Aisha Nuhu Muhammad Department of Accounting Ahmadu Bello University Zaria.

Dr. Abubakar Ahmad

School of Business and Entrepreneurship Amerian University of Nigeria, Yola.

Dr. Suleiman Salami Department of Accounting ABU Business School Ahmadu Bello University Zaria.

Prof. Sunday Mlanga Director Academic Planning ANAN University Kwall Plateau State **Dr. Saheed Adebowale Nurein** School of Business and Entrepreneurship Amerian University of Nigeria, Yola.

Dr. Abdullahi Ya'u Executive Director, ANAN University Business School Gwarimpa Abuja

Dr. Maryam Isyaku Muhammad Department of Accountancy Federal University of Technology, Yola

Dr. Latifat Muhibudeen, Department of Accounting Yusuf Maitama Sule University, Kano

Dr. John Obasi Department of Oil and Gas Accounting ANAN Univerity Kwall Plateau State

Advisory Board Members

Prof. Musa Inuwa Fodio, V.C, ANAN University Kwall, Plateau State

Prof. Kabiru Isah Dandago, Bayero University Kano, Kano State.

Prof. Suleiman A. S. Aruwa,

Department of Accounting, Nasarawa State University, Keffi, Nasarawa State.

Prof. A.M Bashir, Usmanu Danfodiyo University Sokoto, Sokoto State.

Prof. Muhammad Tanko, Kaduna State University, Kaduna.

Prof. Bayero A.M Sabir, Usmanu Danfodiyo University Sokoto, Sokoto State.

Editorial Secretary Dr. Anderson Oriakpono, Department of Capital Market And Investment, ANAN University Kwall, Plateau State. **Prof. Aliyu Sulaiman Kantudu,** Bayero University Kano, Kano State.

Prof. B.C Osisioma, Department of Accounting, Nnamdi Azikwe University, Akwa

Prof. M.A. Mainoma, Department of Accounting, Nasarawa State University, Keffi

Prof. J. C Okoye, Department of Accounting, Nnamdi Azikwe University, Akwa

Prof. J.O. N Ande, Department of Accounting, University of Jos.

Prof. Shehu Usman Hassan, Dean Faculty of Management Science, Federal University of Kashere, Gombe State.

1	TABLE OF CONTENT Effect of Audit Driving on Quality of Audit in Listed Denosit Money	
1.	Banks in Nigeria	1
2.	Effect of Board Characteristics on Market Value of Listed Consumer Goods Firms in Nigeria	14
	Bawa Junaidu	
3.	Effect of Financial Risk Management on Financial Performance by Listed Deposit Money Banks in Nigeria Borokini Olukunle Joshua	27
4.	Financial Performance of Quoted Insurance Companies in Nigeria: Does Audit Committee Independence and Board Size Matters Daniel Yohanna Gwanshak, Haruna Muhammed Musa and A.C. Dikki	38
5.	Effect of Forensic Accounting Skills on Tax Fraud Investigation By Federal Inland Revenue Services in Nigeria Dido Elizabeth and Ibrahim Abdulateef	50
6.	Effect of Corporate Governance Mechanisms on Related Party Transactions of Listed consumer Goods Companies in Nigeria Dioha Charles, Musa Inuwa Fodio, and Musa Adeiza Farouk	62
7.	Board of Directors' Attributes and Performance of Commercial Banks in Nigeria Musa Inuwa Fodio, Ahmed Aliyu Kubura & Ibrahim Abdulateef	71
8.	Determinants of Corporate Social Responsibility of Listed Oil and Gas Firms in Nigeria Ibikunle Adedamola Kolawole	85
9.	Impact of Artificial Intelligence on Optimising Revenue Management in Nigeria's Public Sector. Ibrahim Karimu Moses, John Ogbonnia Obasi and Okeh Pius Egbonu	96
10.	Capital Structure Decisions: Does Firm Characteristics Matters? An Empirical Analysis of Listed Manufacturing Firms in Nigeria Muhammed Tahir Dahiru, Haruna Muhammed Musa and Oba Oluwakemi Aisha	109
11.	Oil Price Volatility and Stock Market Return: Evidence from Nigeria Oloruntoba Oyedele	120
12.	Moderating Effect of Auditor's Independence on Chief Executive Officer's Characteristics and Environmental Disclosure Quality of Listed Oil and Gas Firms' in Nigeria. Adama Maimunat Isah and Musa Adeiza Farouk	134
13.	Determinants of Financial Statement Fraud of Listed Deposit Money Banks in Nigeria Malu Margaret	146
14.	Impact of Whistleblowing on Fraud Detection by the Economic and Financial Crimes Commission (EFCC) Barau John Juliet	159

15.	Effect of Corporate Governance on Capital Structure Decisions of Listed Multinational Companies in Nigeria Okauru Joy Onize and Musa Inuwa Fodio	173
16.	Effect of Corporate Governance Mechanisms on Electronic Fraud Prevention in listed Deposit Money Banks in Nigeria Almustapha Ahmed Sadiya, Musa Adeiza Farouk, and Saidu Ibrahim Halidu	182
17.	Effects of Corporate Attributes on Financial Performance of Listed Manufacturing Firms in Nigeria Olanrewaju Olayemi Aina	191
18.	Cash Flow Management and Financial Performance of Listed Financial Service Firms in Nigeria. Usman Muhammad Adam and Shamsu Aliyu	203
19.	Effect of Capital Structure on Dividend Payout Ratio of Listed Pharmaceutical Firms in Nigeria Lawal Opeyemi Taofik	214
20.	Effect of Environmental, Social, and Governance (ESG) Issues on Shareholders' Value among Manufacturing Companies in Sub-Saharan Africa	224
21.	Effect of Firm Internal Attributes on E-Accounting System Adoption Amongst Small and Medium Enterprises (SMES) in Suleja Local Government Area, Niger State Sadiq Suleiman Gabriel, Dang Yohanna Dagwom and Benjamin Uyagu	232
22.	The Impact of Firm Innovativeness on Economic Disclosure Among Listed Non-Financial Companies in Nigeria Isah Baba Bida, Oni Olusegun Opeyemi and Goje Hadiza	246



EFFECTS OF CORPORATE ATTRIBUTES ON FINANCIAL PERFORMANCE OF LISTED MANUFACTURING FIRMS IN NIGERIA

Olanrewaju Olayemi Aina Department Of Accounting, ANAN University, Kwall Plateau State

ABSTRACT

This study investigated the e ect of ÿrm attributes on ÿnancial performance with a focus on listed manufacturing ÿrms in Nigeria. The independent variables is ÿrm size while the dependent variable is the ÿnancial performance proxied by return on assets (ROA). The study adopted the ex-post facto research design. Data were sourced from 41 listed manufacturing ÿrms over a ÿve years period (2018 to 2022) using the annual report of the sampled ÿrms. A null hypotheses formulated for the study was tested using simple regression technique of data analysis. The study was examined using multiple regression technique of data analysis and found that the independent variables of operating expenses, leverage and liquidity have negative and signiÿcant e ect on net proÿt margin of listed manufacturing ÿrms in Nigeria with the exception of ÿrm age which had negative and insigniÿcant e ect on net proÿt margin. The study also concluded that only ÿrm size had a positive and insigniÿcant e ect on net proÿt margin. The study recommended inter alia that listed manufacturing ÿrms in Nigeria should be using equity ynancing than loan ynancing because leverage reduces their bottom line. The study also recommended that since a ÿrm's proÿtability is limited by its high degree of liquidity, manufacturing ÿrms should lower their current asset levels relative to current liabilities.

1.0 Introduction

The ability of firms to forge firm connections is a crucial requirement for their survival and growth. Firms can access a variety of resources, information, markets, and innovation opportunities through their firm relationships. Since firms establish different types of firm relationships for different purposes, such as to access financial capital (relationships with financiers), to commercialize outputs (clients), or to access inputs that are supplied, firm relationships are also crucial for obtaining legitimacy, social status, reputation, and social endorsement (Zahid et al., 2022). Numerous studies on alliances, networks, and entrepreneurship have highlighted the advantages of these connections and proposed that a firm's characteristics play a significant role in determining the nature of its networks and how these networks change in response to resource requirements. Certain characteristics of firm entities have an effect on profitability, either positively or negatively.

Zahid (2022) opined that firm characteristics can have a favorable or negative effect on a firm's operations and they may include firm size, leverage, liquidity, age, and operational expenses. The ability of a firm to get financing to support its operations and pay its short-term debts on time is one of its key characteristics. Firms employ current assets to boost performance by minimizing operational expenses and winning over creditors and other lenders of capital. This is a result of the fact that all managers who are accountable for making any financial decisions regarding a firm are worried about its actual financial situation.

On the other hand, financial performance which is also called profitability is the capacity of a firm to turn a profit on all of its commercial endeavors. Stated differently, it is the effectiveness of management in utilizing organizational resources to create value for the firm (Eitokpa, 2021). A firm's profitability can be calculated using the amount of capital that the firm has invested. A firm organization's main goals are to maximize profits, generate wealth, and accomplish any other ancillary goals that are deemed significant by the firm organization (Erasmus). For the sake of survival and performance improvement, firms aim to grow profitability, create value in the form of additional cash for their owners, and boost customer and stakeholder satisfaction. As a vital component of the Nigerian economy, the manufacturing sector has undergone several changes to become what it is today. Due to poor performances, the majority of organizations have closed as a result of the industry's severe operating conditions. As a result of this, succeeding governments have worked hard to strengthen this sector by bringing back some of the former organizations (Adeniyi, 2021). This study aims to evaluate the effect of firm attributes on the profitability of quoted manufacturing firms in Nigeria. Given the fundamental challenges that firms face in this era of innovation and modernization in firm, it is important to investigate the factors that affect a firm's profitability in order to allow firms to focus on their competitive advantage.

While considerable research has been done on the effect of firm characteristics on profitability, the majority of these studies have not taken into account some variables, such as firm size, firm age, leverage, liquidity, and operational expenses. Studies on the effect of firm characteristics on firm profitability have been conducted, but in other industries, such as banking, oil and gas, and pharmaceuticals (Chander & Aggarwal, 2022; Augustinus et al., 2022; Andreas 2020). In particular, the limited investigations conducted in Nigeria by Kolawole (2022) and Aliu (2020). Once more, although the manufacturing sector has been the subject of various studies, no research with the same variable composition has been conducted in Nigeria, which creates a gap that this study aims to solve. Moreover, most of these studies used return on assets (ROA) while this study is using net profit margin which is another gap to be filled.

The main objective of the study therefore, is to examine the effect of firm characteristics on profitability of listed manufacturing firms in Nigeria. In line with the research objectives, the study formulated and tested the following null hypotheses:

Ho1: Firm size has no significant effect on profitability of listed manufacturing firms in

Nigeria.

 Ho_2 : Firm age has no significant effect on profitability of listed manufacturing firms in

Nigeria.

Ho₃: Firm leverage has no significant effect on profitability of listed manufacturing firms

in Nigeria.

 Ho_4 : Firm liquidity has no significant effect on profitability of listed manufacturing firms

in Nigeria.

Ho_s: Firm Operating expenses have no significant effect on profitability of listed manufacturing

firms in Nigeria.

The level of profitability in quoted manufacturing firms is of particular interest to all its stakeholders considering their stakes and interest position. The findings of this study shall contribute to understanding mechanisms of profitability in manufacturing firms and the study will recommend ways by which manufacturing firms in Nigeria can improve profitability to align with shareholders' and stakeholders' interest.

2.0 Literature and Theoretical Review

This section covers the conceptual reviews of both dependent and independent variables of the study, empirical reviews and theoretical review.

2.1 Conceptual Reviews

The conceptual review of this study covers the concepts and components of the dependent which is net profit margin and independent variables used in the research which include firm size, firm age, leverage, liquidity and operating expenses.

According to Lang and Zahid et al. (2022), firm characteristics are the many types of information revealed in the financial statements of corporate entities that work as indicators of the firms' performance and quality of accounting information. Firm characteristics may also be described as the operational behavioral patterns of a firm that allow them to accomplish their goals during the course of their operations. Firm characteristics also include the different accounting data that firms present in their financial accounts for a specific accounting period, which can convey information about the success of the firm to different stakeholders. Characteristics of a firm differ amongst corporate entities.

Based on the pertinent data provided on its financial statements for a specific accounting period, the firm's characteristics can be ascertained (Stainer, 2021).According to Dean, Bulent, and Christopher (2020), a firm's performance and commercial success are largely determined by its features. The study employed variables related to firm characteristics such as age, leverage, size, and operating expenses.

According to Hassan (2020), the accounting literature defines firm profitability as profit, return on assets, and economic value. The most crucial indicator of a firm's success is its profitability, since a losing firm cannot thrive. As a result, profitability is crucial to the growth and structure of a firm since it gauges its success and performance and improves its reputation (Nousheen & Arshad, 2022). As a concise indicator of a firm's success or failure, profitability is a crucial component of economic performance. As a result, an extremely lucrative firm can provide its owners with a significant

return on their investment. A firm is considered profitable if it can make more money than its costs compared to its capital base (Victor et al., 2022). Profitability was defined by Owolabi and Obida (2020) as an organization's capacity to turn a profit on all of its firm ventures. They went on to characterize it as effective management of organizational resources to create value for the firm. A firm's profitability can be determined by dividing its total capital expenditure by its overall economic success (Roxana, 2020). Return on equity (ROE), return on sales (ROS), earnings per share (EPS), market capitalization growth, gross and net profit margin (NPM), and return on assets (ROA), economic profit, and Tobin's Q as measure of performance are commonly employed, by most of the studies reviewed on performance.

2.2 Theoretical Review Stakeholders theory

In his initial analysis of the actors in the firm's environment, Edward Freeman proposed the stakeholders' thesis in 1984. His research revealed that "other internal and external actors effected firm behavior besides stockholders as the economic model suggests." The idea is an attempt to describe how a firm interacts with its external environment and behaves in it (Susan, 2019). All the many people and organizations (direct and indirect) that have an effect on or are effected by a firm's decisions are considered its stakeholders. As a result, a group of stakeholders is a set of people who have a rightful claim over the firm. Those involved obtain this rightful ownership through an exchange relationship. The shareholders' understanding of the formation of a firm and its worth is expanded by the notion of stakeholders. In that corporate accountability is now extended to a wide range of stakeholders rather than just shareholders, the stakeholders' theory is an extension of agency theory (Abubakar, 2022).

2.3 Review of Empirical Studies

Ofuan and Izien (2022) investigated the connection between profitability and firm size. Twenty-two firms that are listed on the Nigerian Stock Exchange Market comprised the research population. A systematic selection of thirty sample firms was made between 2014 and 2020. The method for analyzing data is panel data regression analysis. They discovered a strong correlation between profitability and firm size. In a similar vein, Gray and Birger (2020) investigated organizational and economic aspects of corporate profitability. More than1000 firms were employed in the study. After gathering data on firm size and return on assets, the multiple regression approach was used to regress the data. The findings showed that organizational factors explain twice as much variance in firm profit rate as economic factors.

Additionally, Ali et al., (2021) studied the financial performance, firm attributes, and corporate

governance of ten Saudi Listed Banks from 2007 to 2022. They analyzed the data using multiple linear regressions and utilized ROA as a measure of financial performance. The findings showed a significant correlation between firm size and ROA as a measure of financial performance. The relationship between firm size and profitability is examined by Pavlos (2022), who based his case on the idea that small firms in developing nations are more likely to experience firm expansion and hence do well. He proved that, for German firms, firm size had a favorable but waning effect on firm efficiency (profitability). The study made use of panel data of 178 firms covering the period 2015 to 2020. His findings imply that while firms can function effectively in both small and large economies, firm expansion potential is not always a limiting issue. However, firms operating in smaller economies are thought to have higher growth potential more than those in larger economies.

In several parts of the world, a lot of research has been done on the connection between a firm's operational costs and profitability; however, very little research has been done in Nigeria. Krishnan (2021) investigated how operating costs affected a firm's profitability. Regression analysis was performed on secondary data taken from the chosen university's annual reports and accounts for the study. The results indicated a significant inverse link between operating costs and financial results. Zaman (2022) carried out additional survey research to examine the effect of activity-based costing on the performance of Australian firms. The research employed regression analysis after gathering primary data. According to his research, there is a significant positive correlation between operating costs and profitability for firms.

Numerous empirical studies have attempted to elucidate how leverage affects a firm's profitability. In a two-year research of Jaiz Bank Plc, Lamidi (2021) conducted an empirical analysis of the financial performance of Islamic banking in Nigeria (2019-2020). Gray Cooper Index was used to gather and analyze time series data. Their research revealed a positive correlation between financial performance and leverage. One of the study's weaknesses is that the annual reports for periods longer than two years were not readily available, which limited how broadly the results could be applied. Furthermore, the study is restricted to a single bank. A study on the corporate governance, firm attributes, and financial performance of eleven Saudi Listed Banks was conducted by Ali et al., (2021) between 2010 and 2019. The study used multivariate regression and correlation to analyze the data and discovered no connection between Saudi listed banks' financial performance and leverage.

Ofuan and Izien (2022) examined the relationship between the age of firms and profitability in light of the structural inertia and learning by doing theories. The research population comprises 202 firms that are listed on the Nigerian Stock Exchange Market. A sample of 30 firms was selected by scientific means between 2015 and 2020. Regression analysis using panel data was employed for the investigation. The study discovered a strong correlation between profitability and firm age. Sumit (2020) investigated how firm age affected profitability at the firm level in Indian firms. Panel data from 1020 firms between 2014 and 2018 were used in the study. The study discovered a negative relationship between profitability (ROA) and age. It was concluded that older firms are more productive but less profitable, while younger firms are more profitable and less productive.

In Spanish manufacturing firms, Alex et al., (2021) investigated how firm performance increases with age. The regression study was limited to firms with three or more employees (62, 259 firms) and examined over 78,891 firms between 2015 and 2019. The results show a negative correlation between profitability (ROA) and firm age. As a result, as a firm ages, it becomes better. This means that as a firm ages, its productivity rises because it can use its increased sales to fuel further growth, but its profitability declines as it gets older.

In financial literature, the relationship between liquidity and firms' profitability is often examined. A firm's liquidity is gauged by comparing its current assets to current liabilities. This ratio helps to assess a firm's capacity to pay short-term debts on time and to supply the cash required for ongoing operations that improve performance. Using panel data from 39 Australian non-listed firms from 2010 to 2020, Hedander (2022) investigated the effect of liquidity on profitability of manufacturing firms in Australia and discovered a statistically significant positive link.

Cheung et al., (2022) also examined how liquidity affected US real estate investment trust firm profitability between 2015 and 2020. Their analysis's findings demonstrated that liquidity has a significant negative effect on firms' financial performance. However, they neglected to provide their statistical analysis tool in their research report. In a similar vein, Hansen and Sungsuk (2022) investigated the relationship between corporate profitability and liquidity in the Indonesian stock market. According to the study, which employed multiple regression analysis on 264 firms between 2010 and 2020, it was found that firms with strong liquidity can produce profitable operations because of its significance to a firm's daily operations.

of five (5) years from 2018 to 2022.

The study's population consisted of 41 manufacturing firms that were listed on the Nigerian Stock Exchange (NSE) in the consumer goods, industrial, materials, and healthcare sectors. These firms were quoted as of January 1, 2018, and they stayed listed until December 31, 2022, as indicated in Census sampling technique was used because all the forty-one (41) listed manufacturing firms with data accessible over the study's five (5) years from 2018 to 2022 made up the study's sample size. For this study, secondary sources of data were used, and data were obtained through the use of statistical and financial formulas for analysis. The panel data analysis employed multiple regressions to determine the correlation between the study's variables. Multiple regression through the aid of STATA 14 was used because it aids in determining the relationships between variables, such as the causes and effects of those relationships.

The study developed a linear regression model to determine the effect of firm characteristics on the profitability of listed manufacturing firms in Nigeria. The purpose of this equation is to test the study hypotheses and obtain the multiple regression results.

NPM_{i,t}= β_{o} + $\beta_{1}FSZ_{i,t}$ + $\beta_{2}AGE_{it}$ + $\beta_{3}LEV_{it}$ + $\beta_{4}LQT_{it}$ + $\beta_{5}OPE_{it}$ + $e_{it.....(1)}$ Where: NPM = (Net Profit Margin) FSZ₌ (Firm size) AGE = (Firm age) LEV=(Leverage) LQT₌(Liquidity) OPE₌(Operating expenses) e_{it} = Error term β_{0} = Intercept (constant) t = time script (t=5) i = firms (i=41) The model specification agrees with the study of Abdullah et al., (2022) considered similar model

Abdullah et al., (2022) considered similar model specification; though firm age and operating expenses are not considered in their study.

The variables definition and measurement of the study are as follows

3.0 Methodology

This study adopted a longitudinal panel design, made up of cross-sectional and time series data over a period ANUK College of Private Sector Accounting Journal. Vol. 1 No.1 Sept, 2024

R	
FOR OF MINARY MICTOR	

3/N	VARIABLE	MEASUREMENT	SOURCES
	DEPENDENT		
l	Net Profit Margin (1 INDEPENDENT	NF Net profit after tax/ turno	Yana 2 020
2	Firm Size (FSZ)	Natural log of total assets	Tanveer and Safd2a022
3	AGE (AGE)	Firm's year from year of infirm2022.	Makato and Pasc2a022
1	LEV (LEV)	Total debt/total assets.	Abdullahi et 210(22)
5	LQT (LQT)	Measured as the ratio of firm's curre as sets to current liabilities.	Owolabi andbida(2023
5	OPE (ØE)	Measured as the ratio of firm's total opeinagt expenses to its total sales	Zaman2(022)

Source: Author

4.0 Results and Discussion

The descriptive statistics of the study data are shown in table 2 as follows:

Table 2 Descriptive Statistics

Variable	Obs	Minimum	Maximum	Mean	Std Deviation
NPM	205	-74.87	71.42	4.3815	16.45567
FSZ	205	12	3.78	1.7622	.86337
OPE	205	2.67	57.29	20.5633	12.26506
LEV	205	7.34	150.45	55.5690	20.70533
AGE	205	8.00	99.00	44.5610	19.09990
LQT	205	.07	36.41	1.6193	3.25000

Source: STATA 14 Outputs

Table 2 displays the total number of observations in the study, which was conducted over a five-year period (2018–2022) and included 41 listed manufacturing firms. NPM has a mean of 4.3815 and a standard deviation of 16.45567, indicating a significant departure from the mean. The lowest and maximum mean values that NPM recorded were -74.87 and 71.42, respectively. This suggests that the lowest-performing firm saw a loss of 74.87%, which is indicative of poor performance. Conversely, the sample firm with the highest profitability earned a positive 71.42% of the firm's turnover.

The natural logarithm of total asset was used to calculate the firm size. The result is a mean score of 1.7622, with a standard deviation of 0.86337, which shows a small departure from the expected mean. This suggests that there is a clustering of the data around the mean. A minimum value of -0.12 and a maximum value of 3.78 are also displayed in the result. This explains a fair amount of variation in the acquisition and investment of the total assets of firms.

In addition, Table 2 shows that the mean value for operating expenses is 20.5633 with a standard deviation of 12.26506, suggesting that operating expenses is highly dispersed from the mean. The values range from 2.67 to 57.29 at the lowest and

maximum values, respectively. This indicates that there is no wide dispersion between operating expenses and net profit margin and this implies that listed manufacturing firms in Nigeria have similar structure of operating expenses

With a mean score of 55.5690, leverage shows that a firm's total debt is used to fund its operations to a greater extent than its assets. Additionally, a significant departure from the mean is indicated by the standard deviation, which is20.70533. In a similar vein, leverage ranges from a minimum of 7.34 to a maximum of 150.45. This explains why some firms function and manage their operations with a high degree of debt (highly leveraged), while other firms consider low debt or a very low level of debt when funding their operations.

Also, the mean score for firm age is 44.5610 while the standard deviation is 19.09990. This suggests that there is a wide dispersion in the firm ages of listed manufacturing firms in Nigeria, which is true because some of the firms were listed in Nigeria Exchange Group many years ago while some were recently listed. From the table, it can be seen that the youngest firm is 8 years old while the oldest one is 99 years based on the disparities in the times of being listed

Additionally, the above table's average score for liquidity is 1.6193, which indicates that firms in the sector can pay their short-term debts (current liabilities). This suggests that a firm has to maintain an average liquidity position of 162% in order to function at an average level. Additionally, the statistics display 3.25000 as standard deviation, which was moderately high because the mean is close to the standard deviation. Additionally, the outcome demonstrates

that the liquidity ratio has a minimum value of 0.07 and a maximum value of 36.41, respectively.

In conclusion, the correlation is used to determine the level of association between dependent variables and independent variables. It further explains the relationship among the independent variables to ascertain if there is multi-collinearity problem.

Table:3Co	rrelation	M atrix				
	NPM	FSZ	OPE	LEV	AGE	LQT
NPM	1.0000					
FSZ	0.3765	1.0000				
	0.0000					
OPE	-0.0475	-0.3049*	1.0000			
	0.4991	0.0000				
LEV	-0.2383	0.1162	0.1120	1.0000		
	0.0006	0.0970	0.1099			
AGE	-0.0657	0.0294	-0.0699	0.1069	1.0000	
	0.3490	0.6761	0.1099	0.1271		
LQT	-0.2931*	-0.3052*	0.181*1	-0.3650*	0.0692	1.0000
	0.000	0.0000	0.0093	0.0000	0.3239	

SourceSTATA 14

Table 3 illustrates that there is a positive and significant correlation ($\beta = 0.376$, sig-value 0.0000) between NPM and firm size. Additionally, there is a weak and negative correlation ($\beta = -0.0475$, sig-value 0.4991) between NPM and firm OPE. Furthermore, there is a significant negative association ($\beta = -0.2383$, sig-value 0.0006) between NPM and leverage. Furthermore, there is a negative correlation and insignificant relation (β -0.0657, sig value 0.3490) between NPM and firm age. Likewise, there is a significant negative association (β -0.2931, sig-value 0.0000) between NPM and liquidity. Based on the correlation coefficients shown above, the highest correlation coefficient is 49% between NPM and operating expenses. None of them is above 80% thresh hold which is required to have problem of colinearity.

Heteroskedasticity Test Results

This test is used to check the normality of residuals in the result. The Breusch-pagan cool-weisberg test for heteroskedasticity was used to test the presence of the heteroskedasticity.

Table 4 : Heteroskedasticity Test

Model	Chi ² (1)	Prob>Chi ²
NPM	19.94	0.0000

Source: STATA 14 Outputs

As shown in table 4 the Prob > Chi² of 0.0000 for the NPM model is significant at 5% level of significance, which suggests that the NPM model has a heteroskedasticity problem. Also, the Prob> Chi^2 for the ROA model is higher than 0.05, which suggests that the ROA model has no heteroskedasticity problem.

Multi-collinearity Test Results

The Variance Inflation Factor (VIF) was conducted to ascertain the existence or otherwise of multi-colinearity between and among the explanatory variables

Table 5Multcollinearity Test Results

Variable	VIF	1/VIF	
LQT	1.21	0.8279	
OPE	1.18	0.8450	
FSZ	1.18	0.8476	
LEV	1.18	0.8495	
AGE	1.03	0.9691	
Mean VIF	1.16		
SourceSTATA 1@ut	puts		

The variance is not inflated at all, as the VIF = 1 shows that there is no association between the predictors. As a general guideline, VIFs more than 5 should be investigated further, while VIFs more than 10 indicate significant multicollinearity that has to be corrected. Table 5 illustrates that every VIF is smaller than 5, indicating that there isn't a problem with multicollinearity among the independent variables. Comparably, the tolerance value (1/VIF) is nearer 1 but still falls within the permitted range of less

Table 0: Hausman Specification Test Result	Table	6:	Hausman	Specification	Test Results
--	-------	----	---------	---------------	---------------------

ANAN
UNIVERSITY KWALL

than 1. This demonstrates how well the five independent variables fit into the model and is adequate.

Hausman Specification Test Results

Hausman specification test evaluates the significance of an estimator versus an alternative estimator; it helps to differentiate between fixed effect model and random effect model in a panel in order to determine a more effective model.

NPM 12.58 0.0277	Model	Chi2		
	NPM	12.58	0.0277	

Source: STATA 14 Outputs

The Hausman fixed and random effect test revealed a Chi2 value of 12.58 with p-value of 0.0277 that is statistically significant at 5% level of significance. This implies that the test considered the fixed effect as the most appropriate estimator for NPM.

Fixed Effect Regression Results

The predictor variables' combined and overall influence on the explained variable demonstrated that the model is sufficient and devoid of misspecification. At the 1% level of significance, the F-statistics is 0.0000, indicating significance which implies that the variables fit the model quite well. Furthermore, the percentage of the total variance in the dependent variable (NPM) that can be attributed to the independent variables (firm size, firm age, leverage, liquidity, and operational expenses) is indicated by the R^2 value of 0.3630, or almost 36.3%. This indicates that the combined effects of firm size, firm age, leverage, liquidity, and operating expenses account for 36.3% of the overall variation in profitability (NPM) of listed manufacturing firms in Nigeria; other factors outside the scope of this study account for the remaining 63.7% of the variation in profitability.

|--|

Variables	Coefficient	t-value	P-value
Fsz	13.4766	1.95	0.059
Ope	-0.3803	-3.02	0.004
Lev	-0.4321	-4.12	0.000
Age	-0.8421	-1.81	0.078
Lqt	-1.4477	-6.51	0.000
cons	52.3382	1.83	0.075
R^2	0.3630		
F-Statistics			0.0000

Source:STATA 14Outputs

According to table 7 above, firm size explains a positive but negligible effect on profitability with a coefficient of 13.477 and a p-value of 0.059. This suggests that, even in the absence of statistically significant evidence, a 1% increase in firm size causes a 13.47% change in NPM, or that, as firm size increases, NPM increases while maintaining all other variables to be constant. This validates the findings of Owen and Paul (2023), Ofuan and Izien (2022), Ali et al., (2021) who discovered a positive and significant correlation between profit and firm size. The null hypothesis, which claims that firm size has no significant effect on the profitability of listed manufacturing firms in Nigeria, was thus accepted by this study.

Table 7 above shows that, with a p-value of 0.004 and a p-coefficient of -0.3804, operating expenses has a negative and significant effect on net profit margin. It suggests that, while keeping all factors equal, a 1% increase in operating expenses results in a 38% decrease in net profit margin. According to Krishnan (2021), performance is significantly reduced by operating expenses. As a result, the null hypothesis which holds that operating expenses has no significant effect on profitability was rejected by the study. This finding runs counter to Zaman (2022) study, which discovered a significant effect of operating expenses on corporate profitability.

Given that the coefficient is -0.4321 and the p-

value is 0.000, the coefficient of leverage indicates a negative but significant effect on net profit margin (NPM). This suggests that there is a statistically significant 43.21% fall in NPM for every 1% rise in leverage. Given that all other variables are held constant, this suggests that the net profit margin decreases as leverage increases. The conclusion is supported by the statistical significance of the p-value. This outcome corroborates Lamidi (2021) findings, which showed a significant inverse link between leverage and profitability. This explains why firms with large levels of leverage perform worse in times of crisis. However, this runs counter to research by Ali et al., (2021), which demonstrated a strong and positive correlation with profitability. Therefore, the analysis disproves the null hypothesis, which states that leverage has no significant effect on the profitability of Nigerian listed manufacturing firms.

The figures show that firm age insignificantly reduces the profitability of Nigerian listed manufacturing firms. The outcome displays a p-value of 0.078 and a beta coefficient of -0.8421. This suggests that a 1% increase in operational costs led to a 44.7% decrease in NPM. This result is in contrast to Ofuan and Izien (2022) findings, which indicated a positive and significant association between firm age and profitability, this confirms Sumit (2020) findings, which found a negative significant relationship between firm age and firm profitability. The outcome gives rise to acceptance of the null hypothesis's, which stated that firm age has no significant effect on the profitability of listed manufacturing firms in Nigerian.

Given that the liquidity coefficient is -1.4477 with a pvalue of 0.000, Table 8 above suggests that the liquidity coefficient has a significant negative effect on net profit margin. This suggests that, while all other factors are held equal, there is a 14.7% drop in NPM for every 1% rise in liquidity. The difference is considerable at 1%. This finding runs counter to Hedander (2022); Hansen and Sungsuk (2022) findings, which indicated a strong positive association between liquidity and firm profitability. However, it validates the work of Cheung, Chung, and Fung (2022). Thus, there is sufficient evidence in the study to reject the null hypothesis, which holds that the profitability of Nigerian listed manufacturing firms is not significantly affected by liquidity.

5.0 Conclusion And Recommendations

Based on the findings, the study concludes that the independent variables of operating expenses, leverage and liquidity have negative and significant effect on net profit margin of listed manufacturing firms in Nigeria with the exception of firm age which had negative and insignificant effect on net profit margin. The study also concluded that only firm size had a positive and insignificant effect on net profit margin. The study recommends based on the findings; that only needed assets should be invested and acquired by management of manufacturing firms in Nigeria the study also recommends that operating expenses should be minimized in order to increase the profitability, of listed manufacturing firms in Nigeria by maintaining an adequate cost structure of expenses. Similarly, the study also recommended that listed manufacturing firms in Nigeria should be using equity financing than loan financing because leverage reduces their bottom line. This would convey to prospective investors information about the firm's profitability and capital structure.

Furthermore, the study recommends that since a firm's profitability is limited by its high degree of liquidity, manufacturing firms should lower their current asset levels relative to current liabilities.

References

- Abdullah, A., Madya, Ayoib, B., &Khaled, S. (2022). An empirical investigation of factors associated with firm performance: Evidence f r o m k i n g d o m o f S a u d i Arabia.*International Conference on E-firm, Management and Economics IPEDR 25.*
- Abubakar, A.S. (2022). The cross-national diversity of corporate governance: Dimensions and determinants. *The Academy Management Review*, 447-465.
- Adeniyi A. A. (2021) "An Insight info Management Accounting; Lagos: Value Analysis Consult.
- Agustinus, Prasetyantoko&Rachmadi (2022). Determinants of corporate performance of listed firms in indonesia.*European Scientific Journal 11.*
- Alex, C. Augusti, S. & Mercedes, T (2021).Like Milk or Wine: Does firm performance Improve with Age?*Papers on Economics and Evolution*
- Ali, F. A., Mohammed, S.B., & Amer, M.A. (2021). Corporate governance, firm attributes and financial performance of Saudi listed banks. *World Review of Firm Research*, 5 (3), 282 ñ 295.
- Aliu, N.O. (2020). Effect of Capital Structure on the Performance of QuotedManufacturing Firms in Nigeria. Master Thesis, Department of Accounting and Finance, Ahmadu Bello University, Zaria
- Andreas, S. (2020). Determinants of profitability: An analysis of large Australian firms. Intellectual Property Research Institute of Australian working paper.no.3, Electronic Journal 1.
- Chander, S.&Aggarwal, P. (2022). Determinants of Corporate Profitability; An Empirical study of Indian Drugs and Pharmaceutical

Industry. Institute of Management Technology and Audience.

- Dalvi, M. R. & Baghi, E. (2014). Evaluate the relationship between firm performance and stock market liquidity. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 4(1); 136-144.*
- Eitokpa,O. (2021). Determinants of financial performance of listed foods and beverages firms in Nigeria. Department of Accounting, Ahmadu Bello University, Zaria. Unpublished M.Sc thesis.
- Erasmus, F. K. (2022). Effect of size and age on firm performance: Evidence from microfinance institutions in Tanzania.*Research Journal of Finance and Accounting*
- Gray, S. H. &Birger, W. (2020). Determinants of firm Performance: The Relative Importance of Economic and Organizational Factors. *Strategic Management Journal 10 (5) 399-411.*
- Hansen, S. & SungSuk, K. (2022). Influence of stock liquidity to firm value in Indonesian Stock Market. International Conference on Firm, Economics and Accounting, 20-23 March, Thailand
- Hassan, S. U. (2022). Financial reporting quality, does monitoring characteristics matter? An empirical analysis of Nigerian manufacturing sector. *The Firm & Management Review*, 3(2); 147-161.
- Hedander, J. (2005). Focus, liquidity and firm value: An empirical study of listed property trusts in Australia. Building and real estate economics, *Royal Institute of Technology, Stockholm.*
- Kolawale, O. O. (2022). Determinants of Value Creation in the Nigeria Banking Industry: Panel Evidence.
- Laurent, W. (2020). Leverage and Corporate performance. A Frontier Efficiency Analysis on Europeans Countries.
- Makoto, N. & Pascal, N. (2022). Do older boards affect firm performance? An Empirical analysis based on japanese firms.*Financial Management Association, Asian conference*
- Nousheen, T. & Arshad, H. (2022). Effect of firm specific factors on profitability of firms in food sector. *Open Journal of Accounting* 2(2).
- Ofuan. J. I., & Izien. F. O,(2016), Firm age, size and profitability dynamics: A test of learning by doing and structural inertia hypotheses. *Firm and Management Research*, 5(1), 29-39.
- Owen, G & Paul, G. (2023).Firm size and export performance: Some empirical evidence. *Productivity Commission Staff Research paper, Canberra.*
- Owolabi, S. A & Obida, S.(2022). Liquidity

management and corporate profitability; case of selected manufacturing firms listed on NSE. *Firm Management Dynamics 2 (2)* 10-25

- Pavlos, C. (2007). The Firm Size Performance Relationship: An Empirical Examination of the Role of the Firm's Growth Potential.Institute for Communication Economics, Department of Management, University of Munich; Judge Firm School, University of Cambridge.
- Roxana, D.P.(2020). Analysis of the relationship between liquidity and profitability,
- Sumit, k. (2020). Effect of firm Size and Age on firm level Performance: Some evidence from India.*Review of Industrial Organization 12,* 231-24.
- Susan, k. (2019). Toward a new theory of the firm: A critique of stakeholder theory. *Management Decision*, 317-328
- Tanveer, A. &Safdar, R. (2022). Determinant of leverage of automobile sector firms listed in karachi stock exchange by Testing Pecking Order Theory. *Journal of Firm Studies Quarterly*, 2022.
- Victor, C., Samuel, A.& Eric, K.B. (2022). The relationship between liquidity and profitability of listed banks in Ghana. *International Journal of Firm and Social Sciences 14 (3)*
- Yana, S. (2020). Factors that Determine Firm Performance of New Zealand Listed Firms. *Master of Firm, Auckland University of Technology*
- Zahid, B. Ali, A. Shahid, M. & Muhammad, N. (2022). Empirical Investigation of the Factors affecting Firm' s Performance : A Study Based on the Food Sector of Pakistan.
- Zaman, M. (2022). The effect of activity based costing on firm performance: The Australian experience. *International Review of Firm Research Papers*, 5(4); 200-208.

ANUK College of Private Sector Accounting Journal. Vol. 1 No.1 Sept, 2024

(R)	
// //	
/ / // / // 14.0	Copyright 1985-2015 StataCorp LP
Statistics/Data Analysis	StataCorp
	4905 Lakeway Drive
MP - Parallel Edition	College Station, Texas 77845 USA
	800-STATA-PC http://www.stata.com
	979-696-4600 stata@stata.com
	979-696-4601 (fax)

Single-user 8-core Stata perpetual license: Serial number: 10699393

. swilk npm fsz ope lev age lqt

Shapiro-Wilk W test for normal data

Variable	Obs	W	v	z	Prob>z
mqn	205	0.80580	29.602	7.805	0.00000
fsz	205	0.98378	2.473	2.086	0.01849
ope	205	0.94855	7.843	4.745	0.00000
lev	205	0.94628	8.188	4.844	0.00000
age	205	0.96379	5.519	3.935	0.00004
lat	205	0.24747	114.708	10.925	0.00000

. su npm fsz ope lev age lqt

Max	Min	Std. Dev.	Mean	Obs	Variable
71.42	-74.87	16.45567	4.381512	205	npm
3.78	12	.8633698	1.762195	205	fsz
57.29	2.67	12.26506	20.56327	205	ope
150.45	7.34	20.70533	55.56902	205	lev
94	3	19.0999	44.56098	205	age
36.41	.07	3.249995	1.619317	205	lqt

. pwcorr npm fsz ope lev age lqt, sig star (5)

	npm	fsz	ope	lev	age	lqt
npm	1.0000					
fsz	0.3765* 0.0000	1.0000				
ope	-0.0475 0.4991	-0.3049* 0.0000	1.0000			
lev	-0.2383* 0.0006	0.1162 0.0970	0.1247 0.0749	1.0000		
age	-0.0657 0.3490	0.0294 0.6761	0.1374* 0.0494	0.1069 0.1271	1.0000	
lqt	-0.2931* 0.0000	-0.1811* 0.0093	-0.1309 0.0614	-0.3650* 0.0000	-0.0692 0.3239	1.0000

ANUK College of Private Sector Accounting Journal. Vol. 1 No.1 Sept, 2024



· TEA HDW ID7 ODE TEA GAE TAG		req	npm	fsz	ope	lev	age	lqt
-------------------------------	--	-----	-----	-----	-----	-----	-----	-----

Source	SS	df	MS	Number of	obs =	205
Model Residual	19612.929 35628.0199	5 199	3922.5858 179.035276	F(5, 199) Prob > F R-squared	=	21.91 0.0000 0.3550
Total	55240.9489	204	270.788965	Adj R-squa Root MSE	red = =	0.3388 13.38
npm	Coef.	Std. Err.	t	P> t [95	& Conf.	Interval]
fsz ope lev age lqt _cons	7.353979 .1123033 3350729 0596087 -1.878239 13.4304	1.178533 .0830874 .0490883 .0498233 .316792 4.528219	6.24 1.35 -6.83 -1.20 -5.93 2.97	0.000 5.03 0.17805 0.00043 0.2331 0.000 -2.5 0.003 4.5	29963 15415 18729 57858 02939 00954	9.677994 .276148 2382729 .0386406 -1.253539 22.35985

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity Ho: Constant variance Variables: fitted values of npm

> chi2(1) = 19.94 Prob > chi2 = 0.0000

. vif

Variable	VIF	1/VIF
lqt ope fsz lev age	1.21 1.18 1.18 1.18 1.03	0.827932 0.845082 0.847679 0.849549 0.969130

Mean VIF 1.16

. xtreg npm fsz ope lev age lqt, fe

Fixed-effects (within) regression	Number of obs =	205
Group variable: panel	Number of groups =	41
R-sq:	Obs per group:	
within = 0.3630	min =	5
between = 0.1500	avg =	5.0
overall = 0.1527	max =	5
	F(5,159) =	18.12
corr(u i, Xb) = -0.8038	Prob > F =	0.0000

[95% Conf. Interval] npm Coef. Std. Err. t P>|t| 13.47663 6.149403 2.19 0.030 1.331578 fsz 25.62167 -.3803726 .1714426 -2.22 0.028 -.7189711 -.0417741 ope lev -.4321222 .0561333 -7.70 0.000 -.5429853 -.3212592 .6107353 -.8421411 0.170 .3640587 -2.048341 age -1.38 lqt -1.447654 .3431424 -4.22 0.000 -2.125359 -.7699491 _cons 52.33822 35.93905 1.46 0.147 -18.64127 123.3177 21.403083 sigma_u sigma e 9.5114646 rho .83508099 (fraction of variance due to u i) F test that all u_i=0: F(40, 159) = 5.87 Prob > F = 0.0000

. estimates store fixed

. xtreg npm fsz ope lev age lqt, re



Random-effects GLS regression Group variable: panel	Number of obs Number of groups	=	205 41
R-sq:	Obs per group:		
within = 0.3279	min	=	5
between = 0.3574	avg	=	5.0
overall = 0.3402	max	=	5
	Wald chi2(5)	=	97.67
corr(u_i, X) = 0 (assumed)	Prob > chi2	=	0.0000

npm	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval]
fsz ope lev age lqt	8.141836 0095397 383265 064015 -1.717302	1.914765 .1135134 .0504526 .0877972 .3123091	4.25 -0.08 -7.60 -0.73 -5.50	0.000 0.933 0.000 0.466 0.000	4.388965 2320218 4821503 2360943 -2.329417	11.89471 .2129425 2843798 .1080642 -1.105188
_cons	17.16127	6.596903	2.60	0.009	4.231576	30.09096
sigma_u sigma_e rho	9.7254724 9.5114646 .51112346	(fraction	of varia	nce due t	:o u_i)	

. stimates store random

. hausman fixed random

	Coeffi	cients ——		
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fixed	random	Difference	S.E.
fsz	13.47663	8.141836	5.33479	5.8437
ope	3803726	0095397	3708329	.1284806
lev	4321222	383265	0488572	.0246066
age	8421411	064015	7781261	.6043916
lqt	-1.447654	-1.717302	.2696482	.1421609

b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 12.58 Prob>chi2 = 0.0277

. xtreg npm fsz ope lev age lqt, robust fe

Fixed-effects (within) regression Group variable: panel	Number of obs Number of groups	=	205 41		
R-sq:	Obs per group:				
within = 0.3630	min	=	5		
between = 0.1500	avg	=	5.0		
overall = 0.1527	max	=	5		
	F(5,40)	=	22.61		
corr(u i, Xb) = -0.8038	Prob > F	=	0.0000		

		(Std.	Err. adj	justed fo	r 41 clusters	in panel)
npm	Coef.	Robust Std. Err.	t	P> t	[95% Conf.	Interval]
fsz ope lev age lqt	13.47663 3803726 4321222 8421411 -1.447654	6.927659 .1257703 .104945 .4660815 .2223651	1.95 -3.02 -4.12 -1.81 -6.51	0.059 0.004 0.000 0.078 0.000	5246967 6345638 6442239 -1.784127 -1.897071	27.47795 1261813 2200205 .0998448 9982375
	21.403083	28.66991	1.83	0.075	-5.605826	110.2823
sigma_e rho	9.5114646 .83508099	(fraction	of varian	nce due t	o u_i)	