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# Determinants of Zombie Status of Listed Oil and Gas Firms in Nigeria

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## ABSTRACT
The study examined the determinants of zombie status of listed oil and gas firms in Nigeria. The independent variables were firm leverage, firm profitability and firm age while dependent variable is zombie status. The study employed the *ex-post facto* research design with a population comprising of listed oil and gas firms on the Nigerian exchange group (NGX) as at the end of 2024. Panel least regression was used to for the test of hypotheses. The results of the study showed that firm leverage, firm profitability and firm age have positive and significant effect on zombie status of listed oil and gas firms in Nigeria. Thus, the study concludes that firm leverage, firm profitability and firm age are determinants of zombie status of listed oil and gas firms in Nigeria. The study therefore recommends that board of directors should consider policy like optimal financing mix that would enhance the profit generating capacity of the firms. The study recommends that to reduce the number of Zombie firms in Nigeria, policy makers should formulate policy that would ensure continuous investment in young firms until they are able to penetrate the market and operate profitably. Also, the management of Zombie firms should consider the use of modern technology to drive operation as this has capacity to enhance the firm's operating efficiency, reduce waste and time, enhance economy of scale and change the status of the firm from zombie to non-zombie.
**Keyword:** Zombie Status; Firm Leverage; Firm Profitability; Firm Age

## 1. INTRODUCTION
The Nigerian oil and gas sector is the fundamental pillar of the nation's economy, historically contributing the largest share of government revenue, foreign exchange earnings, and gross domestic product (GDP) (Central Bank of Nigeria, 2023; Nigerian National Petroleum Company Limited, 2023). Despite operating within this critical and resource-rich industry, a significant and growing number of listed oil and gas firms in Nigeria exhibit symptoms of severe financial distress, languishing in a state of economic non-viability often characterized as "zombie status" (Peters & Fred-Horsfall, 2023).

Zombie firms are entities that are unable to generate sufficient profit to cover their debt-servicing costs over an extended period and survive only through continuous credit infusion or constant financial restructuring, effectively avoiding insolvency (Banerjee & Hofmann, 2022; McGowan et al., 2017). The persistence of such firms poses a severe threat to economic stability. They misallocate capital, crowd out productive investments in healthy companies, stifle innovation, and create significant vulnerabilities within the financial system by tying up bank loans in non-viable enterprises, increasing systemic risk (Acharya et al., 2019; Adediran et al., 2020). The problem is particularly acute in the Nigerian context, where macroeconomic volatilities, fluctuating global crude oil prices, regulatory uncertainties, and pervasive infrastructure deficits exacerbate corporate financial fragility (Dioha et al., 2025).

The existing body of literature has extensively explored broad concepts of corporate failure and financial distress (Altman, 1968; Ohlson, 1980). Furthermore, recent studies have begun to identify the phenomenon of zombie firms globally and in specific developed economies (Andrews & Petroulakis, 2019; Caballero et al., 2008). However, a critical gap remains in the contextualized understanding of this phenomenon within Nigeria's listed oil and gas sector. While studies have focused on aspects like dividend policy (Ezeh et al., 2023) and board characteristics (Ndalu et al., 2023), the specific micro-determinants (e.g., high leverage, firm age, low profitability) that predispose these firms to a zombie status remain largely unidentified, unexplored, and poorly understood.

This lack of knowledge is problematic. Without a clear empirical understanding of these determinants, policymakers, regulators, investors, and corporate managers lack the evidence-based framework needed to formulate effective interventions. For instance, it is unclear to what extent firm-specific factors like earnings quality (a factor studied in the Nigerian context by Ndalu et al., 2023) or leverage constraints (Ezeh et al., 2023) contribute to zombification compared to systemic issues like the persistence of obsolete "Zombie Energy Systems" (Dioha et al., 2025) or inadequate corporate governance structures. This gap hinders the development of targeted strategies to resuscitate viable firms, restructure struggling ones, or exit non-viable entities from the market efficiently.

Therefore, this study is necessitated by the urgent need to investigate the key determinants of zombie status among listed oil and gas firms in Nigeria. The core problem is the unidentified interplay of the factors that cause these firms to become and remain zombies, which in turn stifles sectoral productivity, discourages foreign investment, and undermines the overall economic resilience of Nigeria. Addressing this problem is crucial for revitalizing the sector, ensuring the stability of the financial system, and fostering sustainable economic growth. To achieve this purpose, the following hypotheses were formulated:

**$H_{01}$:** Firm leverage is not a significant determinant of zombie status of listed oil and gas firms in Nigeria.
**$H_{02}$:** Firm profitability is not a significant predictor of zombie status of listed oil and gas firms in Nigeria.
**$H_{03}$:** Firm age is not a significant predictor of zombie status of listed oil and gas firms in Nigeria.

## 2. Review of Related Literature

### 2.1. Zombie Status

Zombie Status refers to firms that are unable to cover debt servicing costs from current profits over an extended period, often surviving through external financial support such as bank forbearance, low interest rates, or government subsidies. These firms typically exhibit low productivity and may crowd out resources from healthier firms, potentially dampening overall economic growth (Banerjee & Hofmann, 2022).

According to Favara et al. (2021), zombie Status is characterized by firms with: (1) leverage above the industry median, (2) an interest coverage ratio (ICR) below 1, and (3) negative real sales growth over multiple years. This approach identifies firms not only struggling with debt burdens but also facing declining growth prospects, ensuring they are distinguished from temporarily distressed firms. This definition is often applied to both public and private firms.

Zombie Status applies to mature firms (typically aged 10+ years) that demonstrate prolonged financial distress, measured by an ICR below 1 for at least three consecutive years. This definition incorporates firm age to exclude startups or young firms that may naturally experience temporary losses. It also often includes low market-based expectations of future profitability (e.g., Tobin’s q below industry median) to capture fundamentally unviable firms (El Ghoul,2021).

According to Dvouletý (2019), zombie firms are firms which are heavily indebted; they are only able to generate adequate cash inflow to pay the interest charges on debts, but the principal amount of the debts still remain unpaid; their capacity to meet loan interest payments is largely a function of continuing reduced interest payments for a period of three consecutive years.

### 2.1.1 Determinants of Zombie Status of Listed Firms in Nigeria

#### 2.1.1.1 Firm Leverage

In corporate finance, firm leverage measures a company's debt burden relative to its earnings capacity, calculated as total debt divided by EBITDA (earnings before interest, taxes, depreciation, and amortization). This ratio assesses a firm's ability to service debt, with higher values indicating greater financial risk (S & P Global Ratings, 2024).

According to Trading Analyst (2025), firm leverage reflects the sensitivity of a company's earnings per share (EPS) to changes in operating income due to fixed financial costs (e.g., interest expenses). A higher DFL indicates amplified profit volatility and financial risk, as seen in firms like Peloton, where debt magnified losses during demand declines

#### 2.1.1.2 Firm Profitability

According to Erikie and Osagie (2024), financial Performance is the measuring of results of a firm's policies and operations in monetary terms. These results are reflected in the firm's return on investment, return on assets, value added, etc. Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Omaliko et al., 2024).

Firm profitability is performance measurement by which organizational as well as management ability and efficiency can be measured**.** According to Dwivedi, 2022), there are two kinds of performance, financial performance and non-financial performance; and financial performance emphasizes on variables related directly to financial report. Dwivedi (2022) also established that financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues.

#### 2.1.1.3 Firm Age

According to Musa, Latif, and Al-Nawaiseh (2020), the age of the company is a significant factor in determining how well it performs. A firm gains operating experience, overcome obstacles, and carry out its social responsibility as the years go by. Smaller businesses can generate more revenue and expand faster than larger ones because they can hire more people, support local economies, develop novel work practices, and provide training for staff members. However, established businesses with a wealth of knowledge, a strong track record, combined resources, and a great deal of experience can outlast challenges and operate more effectively. As a result, one factor that significantly influences a firm's performance is its age.

Rahman and Yilun (2021) posit that age is an element of organizational capability and resources. A firm's age begins from inception. This is to say that it is the number of years the business has been in existence. The study divided firm age into three categories: young firm, which is defined as an enterprise operating for less than five years; intermediate/mid age firm; which is defined as an enterprise operating for six to ten years and matured/established/older firm which are more than ten years. Oyelade (2019) in the same vein defined firm age in terms of the number of years the firm has been engaged in resource exploitation. The study goes further and split firm age into two groups; new firm and old firm.

## 2.2 Theoretical Framework

### 2.2.1 Credit Market Tightness and Search Frictions

A fundamental theoretical perspective on zombie firm emergence centers on credit market frictions and the concept of credit market tightness. Hamano et al. (2025) develop a theoretical model where search and matching frictions in credit markets create opposing incentives for banks and firms. When credit is abundant (high credit market tightness), banks face elevated search costs to find new borrowers, incentivizing them to maintain relationships with low-productivity firms rather than incur these costs. Simultaneously, firms face lower opportunity costs for terminating existing credit relationships when alternative funding is readily available. This creates an inverted U-shaped relationship between credit market tightness and zombie firm prevalence: initial increases in credit abundance raise zombie shares,

but beyond a threshold, further increases reduce zombie prevalence as firms terminate unprofitable relationships (Mordi et al., 2022)

The credit market tightness and search cost theory of zombie lending suggests that avoidance of search costs incentivizes both banks and firms to maintain suboptimal credit relationships. Firms lower lending standards to bypass expenses associated with finding suitable counterparts, while firms accept unfavorable terms to avoid searching for new lenders (Mordi & Omaliko, 2019). This theoretical perspective helps explain why zombie firms persist even without explicit subsidy programs or government intervention, as the mere existence of transaction costs in credit markets can sustain inefficient firm operations. Thus, the study was anchored on credit market tightness and search friction theory.

**2.3 Empirical Review**

Naimo and Ogbeide (2024) examined determinants of zombie firms using a sample of seventy five (75) listed non- financial firms in Nigeria. The correlation statistics, panel fully modified ordinary least squares (FMOLS) and panel ordinary least squares estimation methods were applied to analyze the data for the period 2012 to 2019. The study evidenced about 17.3% existence of zombie firms in the non-financial sector. Capital adequacy, interest coverage ratio, earnings before interest, and tax and firm age were found to be the key drivers of zombie phenomenon in the Nigeria clime. These drivers of zombie phenomena were also found to contribute adversely to the economic development of Nigeria, although the impact was not significant. The study concludes that the infiltration/prevalence of zombie firms causes a dragging effect on the economy of Nigeria. The study recommends that the regulatory authority should develop a framework with which firms with a zombie status can be monitored and managed in order to safe guide the interest of shareholders and the adverse implication on economic development. Firms whose performances are akin to zombie firms' status should be encouraged by regulatory authorities to embrace mergers and acquisition schemes to avoid loss of shareholders wealth and the dragging effect on the economy.

Ihejirika and Charles (2024) investigated capital structure determinants of Zombie firm status by drawing samples from listed non-finance firms in Nigeria from 2012 to 2021. Long term debt to asset and debt to equity ratio are the capital structure proxies employed in this study while the dependent variable of the study is zombie firm status. Furthermore, the study employed the variables of profitability as the control variable. The population of the study consists of all the listed non-finance firms in Nigeria from 2012 to 2021. As of December 2021, we had 109 firms listed on the floor of the Nigerian Exchange Group (NGX) (NGX Factbook, 2021). The sampling technique employed in this study is the filtering sampling technique since firms were included in the sample on certain selection criteria. Logistic regression is employed to test the hypotheses of this study. Based on the findings of the study, we conclude that a 1% increase in long term debt to asset ratio will lead to about 1% insignificant increase in interest coverage ratio and thus decreasing zombie status of the firms during the period under investigation. We also conclude that a 1% increase in debt-to-equity ratio will lead to about 1% significant decrease in interest coverage ratio and thus increasing zombie status of the firms during the period under investigation.

Banerjee and Hofmann (2022) using firm-level data on listed non-financial companies in 14 advanced economies, document a rise in the share of zombie firms, defined as unprofitable firms with low stock market valuation, from 4% in the late 1980s to 15% in 2017. These zombie firms are smaller, less productive, more leveraged, invest less in physical and intangible capital and shrink their assets, debt and employment. Their performance deteriorates several years before zombification and remains significantly poorer than that of non-zombie firms in subsequent years. Over time, some 25% of zombie companies exited the market, while 60% exited from zombie status. However, recovered zombies underperform compared to firms that have never been zombies and they face a high probability of relapsing into zombie status.

Idehen and Osamwonyi (2020) examine the prevalence of zombie firms in the Nigerian economy. A survey of firms listed in the Nigerian stock exchange between 2005 and 2015 was carried out with a view to finding out if there are zombie firms in the economy. The findings show that zombie firms are prevalent in virtually all the sectors of the Nigerian economy with the highest number found in the

industrial goods sector while the lowest number was found in the agricultural sector. The findings also show evidence that support the likelihood of a firm becoming a zombie at age 40 and above.

Issam et al. (2018) examined zombie firms from the period 2010 and 2013 across nineteen European nations, using firm-level data for over 1,000,000 firms, with special consideration of 3 main alternative measure of zombie firms for the purpose of robustness. The outcome of the research indicates that zombie firms were on the rise in Europe based on 2013 as compared to 2010. The result also points out that zombie firms were high in Greece and Spain and minimal in Czech Republic and Slovakia, respectively. The analysis also clearly differentiated between the size and age of the companies. The result indicates that larger and very old companies were more likely to be in a zombie status compared to very small and younger companies. However, companies that were quite young, with at least 3 years of age, using incorporation age as a benchmark were deliberately omitted from the selected sample size.

Barros, Caires, and Pereira (2017) examined the phenomenon of firms with negative equities in Portuguese. They reported the existence of zombie firms in that country. The study by Adalet-McGowan and Andrews (2017a) established the existence of zombie firms and concluded that such firms in zombie status are capable of causing a dragging effect on an economy of a country.

Adalet-McGowan et al. (2017) conclude that in addition, zombie firms are characterized by capital misallocation and stalling technological diffusion. Evidence suggests that the zombie firm problem in Europe is also connected to banking sector weakness and bank forbearance. According to the submission of the findings, reviving productivity growth, will, require policies to diversify the source of corporate financing and bank lending towards market-based and equity financing. These gains are, accordingly, partly realized via the restructuring of weak firms, which in turn spurs the reallocation of capital to more productive firms. The findings, according to the authors, carry strong policy implications, in light of the fact that there is much scope to reform insolvency regimes in many OECD countries and given evidence that rising capital misallocation and the increasing survival of low productivity firms have contributed to the productivity slowdown.

## 3. METHODOLOGY

An *ex post facto* design was used in the study based on the fact that the data for the study was secondary which already existed and cannot be controlled. The population of the study consists of all the seven (7) listed oil and gas firms on Nigerian Exchange Group (NGX) as at December 31, 2024, covering the period 2015-2024. Based on this, a total of 7 firms formed our sample size with 70 observations. The data was collected from the annual accounts and annual accounts of the sampled oil and gas firms in Nigeria. Panel regression model was used to examine the determinants of zombie status of listed oil and gas firms in Nigeria.

### 3.1 Measurement and Operationalization of Variables

**Table 1: Variable Measurements**

| Variable | Proxy | Measurements | Source | A Priori Expectations |
|---|---|---|---|---|
| **Independent** | | | | |
| Firm Leverage | FLEV | Debt/Total Assets | Ogbeide (2021) | It is expected to have a positive effect |
| Firm Profitability | FPROF | Equity/Paid up Capital | Barroso & Pérez-Calero. (2011) | It is expected to have a positive effect |
| Firm Age | FAGE | Using the Age of Incorporation | Ogbeide & Okpamen (2015 | It is expected to have a positive effect |
| **Dependent** | | | | |
| Zombie Status | ZS | Negative Equity | Binh et al. (2020) | |

**Source: Author's Compilation (2025)**

### 3.2 Model Specification and Justification

In line with the previous researches, the researcher designed and developed a model in examining the determinants of zombie status of listed oil and gas firms in Nigeria.

The functional model modified for the study is shown below as thus:

**ZS = F (FLEV, FPROF, FAGE)**

The explicit form of the regression modified for the study is expressed as thus:

$$ZS_{it} = \beta_{0+} \beta_1 FLEV_{it} + \beta_2 FPROF_{it} + \beta_3 FAGE_{it} + \mu$$

Where:

ZS = Zombie Status

FLEV = Firm Leverage

FPROF = Firm Profitability

FAGE = Firm Age

μ = Stochastic Term

$\beta_1 - \beta_3$ = Coefficient of Regression Equation

$\beta_0$ = Constant coefficient (intercept) of the model

'*A Priori*' is given as: $\beta_0, \beta_1, \beta_2, \beta_3 > 0$

**Decision Rule:** accept Ho if P-value >1-5% significant level otherwise reject Ho

## 4. DATA ANALYSIS AND RESULTS

**Table 2: Descriptive Statistics**

| | ZS | FLEV | FPROF | FAGE |
|---|---|---|---|---|
| **Mean** | 0.17 | 0.27 | 0.18 | 3.12 |
| **Median** | 0.14 | 0.24 | 0.00 | 0.18 |
| **Maximum** | 0.77 | 5.00 | 5.00 | 56.0 |
| **Minimum** | 0.01 | 0.00 | 0.00 | 5.00 |
| **Std. Dev.** | 0.13 | 0.21 | 0.47 | 0.77 |
| **Skewness** | 2.92 | 0.20 | 1.57 | 1.47 |
| **Kurtosis** | 2.48 | 5.92 | 2.89 | 2.12 |
| **Jarque-Bera** | 310.3 | 21.7 | 33.6 | 28.9 |
| **Probability** | 0.34 | 0.67 | 0.88 | 0.20 |
| **Sum** | 10.51 | 54.7 | 186.9 | 13.23 |
| **Sum Sq. Dev.** | 1.03 | 211.1 | 370.2 | 2.97 |
| **Observations** | **70** | **70** | **70** | **70** |

**Source: E-View 12 Computational Results (2025)**

From Table 2 above, the mean (average), maximum values, minimum values, standard deviation and Jarque-Bera Statistics (Normality Test) were shown. The results provide some insight into the nature of the listed oil and gas firms in Nigeria used in this study. First, it can be observed that on the average, in a 10-year period (2015-2024), the sampled firms were characterized by a positive net asset per share (NAPS) value of 0.17. This implies that firms NAPS determines zombie status of listed oil and gas firms in Nigeria. The distribution is platykurtic since the kurtosis (2.48) is less than 3, implying that the outliers are few. The Jarque-Bera probability of 0.34 is greater than 0.05, which means that the distribution of net assets per share comes from a normal distribution.

The average firm leverage (FLEV) for the sampled firms was 0.27 with a standard deviation value of 0.21. This means that firms leverage is a determinant of zombie status There is also a high variation in maximum and minimum values of FLEV which stood at 5.00 and 0.00 respectively. This wide variation in FLEV values among the sampled firms justifies the need for this study that firm leverage determines zombie status of listed oil and gas firm in Nigeria. The distribution is leptokurtic since the kurtosis (5.92)

is more than 3, implying that the outliers are many. The Jarque-Bera probability of 0.67 is greater than 0.05, which means that the distribution of firm leverage comes from a normal distribution.

The mean firm profitability (FPROF) for the sampled firms was 0.18. This means that firms profitability determines the zombie status of listed firms in Nigeria. There is also a wide variation in maximum and minimum values of FPROF which stood at 5.00 and 0.00 respectively. This wide variation in FPROF values among the sampled firms justifies the need for this study that firm profitability determines zombie status at a degree risk of 0.47%. The distribution is platykurtic since the kurtosis (2.89) is less than 3, implying that the outliers are few. The Jarque-Bera probability of 0.88 is greater than 0.05, which means that the distribution of firm profitability is not different from a normal distribution.

The average firm age (FAGE) for the sampled firms was 3.12. This means that firm age is a determinable factor for zombie status in Nigeria. There is also a high variation in maximum and minimum values of FAGE which stood at 56 and 5 respectively. This wide variation in FAGE values among the sampled firm justifies the need for this study that firm age is a determinant of zombie status of listed oil and gas firms in Nigeria. The distribution is platykurtic since the kurtosis (2.12) is less than 3, implying that the outliers are few The Jarque-Bera probability of 0.20 is greater than 0.05, which means that the distribution of firm age does not deviate from normal distribution.

In an effort to establish the nature of the correlation between the dependent and the independent variables and also to ascertain whether or not multi-collinearity exists as a result of the correlation between the variables, table 3 was incorporated which provides an insights into the nature and extent of correlation among the independent variables and how they are related to the dependent variable.

**Table 3: Correlation Matrix**

| Variables | ZS | FLEV | FPROF | FAGE |
|---|---|---|---|---|
| ***ZS*** | 1.0000 | | | |
| ***FLEV*** | 0.1077 | 1.0000 | | |
| ***FPROF*** | 0.0647 | -0.0918 | 1.0000 | |
| ***FAGE*** | 0.0742 | 0.1156 | 0.1912 | 1.0000 |

**Source: E-View 12 Computational Results (2025).**

Table 3 above shows the relationship between all pairs of independent variables and dependent variable used in the regression model. It reveals that all the independent variables have positive correlation with the dependent variable (ZS) while some of these components of determinants of zombie status have negative relationship with one another. The values on the diagonal are all 1.0000 which shows that each variable is perfectly correlated with itself. In checking for multi-collinearity, we noticed that no two explanatory variables were perfectly correlated. This means that there is an absence of multi-collinearity in our model.

**4.1: Test of Hypothesis**

**Table 4: Result on Determinants of Zombie Status of Listed Oil and Gas Firms in Nigeria.**

Dependent Variable: ZS
Method: Panel Least Squares
Date: 09/10/25 Time: 11:58
Sample: 2015 -2024
Periods included: 10
Cross-sections included: 7
Total panel (balanced) observations: 70

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| FLEV | 0.414983 | 0.097883 | 4.239581 | 0.0008 |
| FPROF | 0.408994 | 0.105913 | 3.861603 | 0.0024 |
| FAGE | 0.336601 | 0.075133 | 4.480092 | 0.0000 |
| C | 0.133516 | 0.031571 | 4.427409 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.757441 | Mean dependent var | 1.028979 |
| Adjusted R-squared | 0.729419 | S.D. dependent var | 3.015098 |
| S.E. of regression | 2.939653 | Akaike info criterion | 5.006985 |
| Sum squared resid | 2030.766 | Schwarz criterion | 5.050753 |
| Log likelihood | 592.8312 | Hannan-Quinn criter. | 5.024624 |
| F-statistic | 7.160587 | Durbin-Watson stat | 2.230972 |
| Prob(F-statistic) | 0.000958 | | |

**Source: E-View 12 Computational Results (2024).**

**4.2: DISCUSSION OF FINDINGS**

The coefficient of determination $R^2$ shows 0.76 indicating that the overall model explained 76 percent of the total variations in the dependent variable. Thus shows that these variables (FLEV, FPROF & FAGE) can only explain 76 percent of change in determination of zombie status leaving 24 percent unexplained. This is to say that there are other factors that could determine zombie status of listed firms in Nigeria other than the variables inherent in the study. The sig. (or p-value) is .0000 which is below the .01 level; hence, we conclude that the overall model is statistically significant, or that the variables have a significant combined or joint effect on the dependent variable. With this, the researcher affirms the validity of the regression model adopted in this study.

The results of the regression are therefore slated below as follows:

***$H_{01}$: Firm leverage is not a significant determinant of zombie status of listed oil and gas firms in Nigeria.***

This hypothesis was tested and the result of this regression as exposited on table 4 indicates that the relationship between FLEV and ZS is positive and significant; this can be justified with the P-value (significance) of 0.0008 which is less than the 1% level of significance adopted. Likewise the result of positive coefficient of 0.415 indicates that the extent to which a firm is been funded by debt determines zombie status of firms in Nigeria. We therefore accepted the alternate hypothesis which contends that firm leverage is a significant determinant of zombie status of listed oil and gas firms in Nigeria. This is in tandem with the findings of Idehen and Osamwonyi (2020) and Issam et al. (2018) on the determinants of zombie status of firms.

***$H_{02}$: Firm profitability is not a significant predictor of zombie status of listed oil and gas firms in Nigeria.***

This hypothesis was tested and the result of this regression as exposited on table 4 indicates that the relationship between FPROF and ZS is positive and significant; this can be justified with the P-value (significance) of 0.0024 which is less than the 1% level of significance adopted. Likewise the result of positive coefficient of 0.409 indicates that firm profitability is a determinant of zombie status of listed oil

and gas firms in Nigeria. We consequently accepted the alternate hypothesis which contends that firm profitability is a significant predictor of zombie status of listed oil and gas firms in Nigeria. This aligns with the findings of Naimo and Ogbeide (2024) and Ihejirika and Charles (2024) who reported that firm profitability determines zombie status of firms.

***$H_{03}$: Firm age is not a significant predictor of zombie status of listed oil and gas firms in Nigeria.***

This hypothesis was tested and the result of this regression as exposited on table 4 indicates that the relationship between FAGE and ZS is positive and significant; this can be justified with the P-value (significance) of 0.000 which is less than the 1% level of significance adopted. Likewise the result of positive coefficient of 0.337 indicates that firm age determines zombie status of listed oils and gas firms in Nigeria. We therefore accepted the alternate hypothesis which contends that firm age is a significant predictor of zombie status of listed oil and gas firms in Nigeria**.** The finding is in consonance with the study of Banerjee and Hofmann (2022) on the determinants of zombie status of firms.

## 5. CONCLUSION

The study from the statistical analysis notes that firm leverage, firm profitability and firm age have positive and significant effect on zombie status of listed oil and gas firms in Nigeria. Hence, the study concludes that firm leverage, firm profitability and firm age are significant predictors of zombie status of listed oil and gas firms in Nigeria.

### 5.1 RECOMMENDATION

In lieu of the findings of the study, the following recommendations were made as thus:

1. The study recommends that board of directors should consider policy like optimal financing mix that would enhance the profit generating capacity of the firms.
2. The study recommends that to reduce the number of Zombie firms in Nigeria, policy makers should formulate policy that would ensure continuous investment in young firms until they are able to penetrate the market and operate profitably.
3. Also, the management of Zombie firms should consider the use of modern technology to drive operation as this has capacity to enhance the firm's operating efficiency, reduce waste and time, enhance economy of scale and change the status of the firm from zombie to non-zombie.

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