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Effect of Firm Attributes on Firm Performance: An Interaction Approach

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Abstract: *This study evaluates the effect of corporate attributes and performance: an interaction approach. The study formulated seven objectives and hypotheses. The study adopted on ex-post facto design and used panel data collected from the financial reports of industrial firms in Nigeria from 2009 and 2018. The data were analyzed using ordinary least square regression. However some preliminary analyses such as descriptive statistics, correlation analyses were carried out. The result indicates that though operating efficiency, assets tangibility and leverage policy has negative and significant effect on performance. Firm age and corporate stability has negative but insignificant effect on performance. Firm growth and firm size has positive but insignificant effect on performance. The result reveals that the combination of operating efficiency with assets tangibility has more impact on performance than combination of any other attributes. This is followed by the combination of firm size with corporate stability.*

Keywords: Corporate, Attributes**,** Performance**,** Tangibility, Leverage, Growth, Size

1.0 Introduction

The low level of economic activities experienced after the economic recession in Nigeria, and by most West Africa countries following the closure of the Nigeria boarder (CBN 2020), may increase the level of uncertainty surrounding business operations, their ability to achieve high profit and long run stability. This couple with the desire by shareholders for wealth maximization, has lead many corporate organizations operating within the region to look inwardly on their unique attributes that can give them competitive edge and enhance their ability to survive.

Corporate attributes are internal variables that influence corporate policy and decision (Shehu, 2009). They are specific variables that enhance the possibility of achieving corporate goal. Shehu, (2009) divided corporate attributes into two basic groups: corporate performance attributes and corporate structural attributes. The corporate performance attributes includes corporate growth and profitability, while the corporate structural attributes include corporate size, corporate leverage, corporate age and management efficiency. According to Suhaila, Kila, Mahamood and Monsur (2008), those attributes distinguishes one firm from another and can determine the outcome of their performance. For instance, corporate size has been considered a very important attribute on profitability. This is because the size of corporate organization can to large extent determines its level of economic activity and the possible economics of scale enjoyed by the firm. Therefore, large companies are more likely to generate lower returns on assets (Driffield, Mahambare & Pal, 2005). The use of leverage in financing operation does provide incentive in form of tax shield which reduces tax liability of the firm thereby increasing the profitability of the firm (Shah, & Khan, 2007). However, it can increase the possibility of bankruptcy. Also, assets tangibility can enhance performance as companies that invest more in tangible assets and may borrow at lower cost if the debt is secured with assets. Operating efficiency is viewed as a company unique factor such as management skills, innovation, cost control, and they can be key determinants of the company's performance and stability (Abuzayed & Molyneux, 2009). Corporate age is believed by Kabiru, Ibrahim, and Ibrahim (2019) to be key factor that determines the level of established standards for most activities and established policy for various aspects of operations.

Most previous studies conducted on corporate attributes focused on some aspect of firm attributes with liquidity or the other, studies like that of Kabiru and Ibrahim (2019), and Alsaeed (2006) examine leverage size and liquidity, Safdar, Hazoor, Toheed and Ammara (2013), firm size and liquidity; Hidayah, (2014), Nasrollah, Zahra and Zahra (2011) firm growth and liquidity; Ulil, Bambang and Djumahir, (2013) firms age, firm size and liquidity, while Ali (2015) focused on firm performance and liquidity. This study introduced operating efficiency, assets tangibility and firm stability as part of firm attributes that can affect performance. The above constitutes the gap in literature which this study filled.

Previous studies did not interact the corporate attributes variables to ascertain the best combination that can enhance their performance than others. This study intends to adopt the interaction approach to ascertain the best combination of attributes that can enhance the performance of firms quoted in the various Stock Exchanges in Africa. The main objective of this study is to evaluate the effect of corporate attributes on performance of quoted companies in Nigeria stock exchange. The paper is structured into four sections. Following the introduction, section two, reviews of related literature. Section three deals with methodology. Section four, result of analysis, conclusion and recommendations.

2.0 Review of Related Literature

2.1 Corporate Attributes

Ali and Isa (2018) define corporate attributes as firm characteristics or specific features that distinguish one firm from another. Those corporate attributes distinguishes a corporate organization from others, they includes: the size, leverage policy, performance, age, firm growth, management efficiency, firm stability etc. those characteristics can influence the level of performance. They can influence the decision and operations of the firm. For instances firm pursuing growth, this will influence the level of resources as firm with high growth rate tend to invest more in assets and other resources that will guarantee it growth than firm with low or stagnated growth. A firm in growing stage will tends to invest but also satisfy its investors in other to ensure their continue investment. A high performing firm with high turnover will require higher level of operation (high inventory, processing and cash) to meet its customers demand. Thus, a firm with high level of turnover, in other to meet its obligations will tends to maintain such level of resources which may be different from others, especially current assets. Older (age) firm is believed by Ericson and Pakes, (1995) to be associated with experience which leads to standardize, coordinate and speed up operation, hence such firm over the years has established standard which help them in determining the level of resources to keep at any point in time compare to younger firms. Older firms due to the standard set for most activities and well established policy for various aspect of operations may perform better than young firms. Liquidity policy like other firm policy's are established over time, tested and adjusted in older firms compare to in new firms. This study used: firm size, operating efficiency, assets tangibility, leverage, firm growth, firm age firm stability as corporate attributes. Refer to figure 1

The above shows the various corporate attributes used in the study. The impact of these attributes to be used differs from one firm to another.

2.2 Operating Efficiency and Performance

Operational efficiency is seen as the extent management uses the company's resources in the achievement of the goals of the firm. Management is vested with the responsibility of using their available resource to achieve the goal of wealth maximization. However, the extent which those resources are used can be determined by the management. The uses of these resources influence the performance of the firms while the inefficient use of resources can lead to a loss of revenue to the firm.

Fleming, Heaney and McCosker, (2005) opine that, the effective and efficient utilization of corporate resources can play a vital role in achieving the corporate objective. The operational efficiency of manager toward resource usage can plays an important role in improving present and future performance of the firm (Mohammed 2108). The inefficient use of resources can increase costs associated with a company's main operating activities which are reported on its income statement. In the study of Chen and Yu (2011), it was observed that increased performance of firms due to efficiency in resource usage occurs when the marginal benefits of assets usage are greater than the marginal costs of acquisition of new assets. However, studies on this issue have produced mixed results. The study hypothesizes as follows: **$H0_1$:** ***Operating efficiency size has no significant effect on performance of quoted companies in Nigeria***.

2.3 Assets Tangibility and Performance

Assets tangibility has been refers to as the proportion of noncurrent assets own and used in generating revenue for the firm in a given year of assessment. It reveals the extent to which tangible assets are used in the production process (Akinsulire, (2011).

The tangibility of a company's assets plays role in determining the cost of borrowing, which may affect the profitability of firms especially firms that are highly levered. Economic theory and empirical studies have suggested that collateral is commonly used in loan contracts to reduce credit risks by decreasing the expected rate of default and increasing the expected loan recovery rates. The use of collateral act as disciplinary tool, as collateral requirements provides lenders the right to repossess collateral at the event of borrower default. Using an asset as collateral can restrict borrowers from asset substitution (Campello & Giambona, 2013).

Lenders can reduce the cost of borrowing for firms with high level of tangible assets compare to firms with low level of tangible assets. The low cost of borrowing can positively affect the overall cost of operation and reduce the possibility of bankruptcy even in a downturn economy. The study hypothesizes as follows: **$H0_2$:** ***Assets tangibility has no significant effect on performance of quoted companies in Nigeria.***

2.4 Corporate Size and Performance

Company size has been identified as one of the major attributes of company, it determine to a large extent the operating and control structure in the company. The size of company is assumed to influence the level of resources at the company's disposal and give the company the opportunity to take advantage of investment opportunities, hire best hands to run its operation. Larger organizations have access to resources, greater market power, and enjoy economies of scale, which they can use to generate stronger competitive capability than their smaller firms. The study of Maja and Josipa (2012) finds that firm size has a positive significant impact on the firm profitability. Similarly, the study of Dogan (2013) on the effect of firm size on profitability has shown that firm size is positively related with profitability. The study of Tarawneh (2006) found that firm's size had positive impact on firm performance while firm market share does not.

The relationship between firm size and performance seems to be positive in those empirical studies, but this cannot be same with firm in Nigeria. The study hypothesizes as follows*:* **$H0_3$**: ***Corporate size has no significant effect on performance of quoted companies in Nigeria.***

2.5 Corporate Leverage policy and Performance

Upneja and Dalbor, (2001) opine that corporate leverage shows the degree to which a company uses fixed-income securities, such as debt and preferred equity. Leverage financing is commonly employed by a company to achieve a specific or temporary objective, such as acquisition of another business, to effect a buy-out, to purchase shares or fund a one-time dividend, or to invest in self-sustaining cash-generating assets. However, high leverage may be beneficial in boom periods; and it may cause serious cash flow problems in recession periods, because there might not be enough sales revenue to cover the interest payment (Tudose, 2012). In other words, leverage is the advantageous condition of having a relatively small amount of cost yield and a relatively high level of values (Ojo, 2012). The use of leverage requires the payment of interest and repayment of principal amount of the debt, a large part of the firm's cash flow would decrease (Magpayo, 2011). The interest payment and repayment of principal sum (debt servicing) requires cash (liquid assets). Meeting the debt servicing obligation will require the use of resource which is liquid in nature. The use of leverage as observed by Ferreira and Villela (2004) can increase the firms' probability of bankruptcy especially in an unstable economy like that of Nigeria, hence firms most often do prefer the use of internally generated fund instead of financing investment with equity. The study hypothesizes as follows: **$H0_4$: *Leverage policy has no significant effect on performance of quoted companies in Nigeria.***

2.6 Corporate Growth and Performance

According to Sri (2013) corporate growth is the change in the firm total assets, revenue and revenue generating capability. A growing firm invests more in assets and investment with promising return. Logically, a firm in the growing side, will require large proportion of its resource to be liquid or near liquid form in other to meet obligation and build reputation and goodwill among firms. In line with this proposition, Mustafa (2007) argues that companies with as growth options tend to lower the level of their gearing ratios by keeping more liquid asset to take advantage of investment opportunity. However, Michaelas, Chittenden and Poutziouris (1999) believed that the relationship between growth opportunities and performance may be different along sector line. Similarly, Ferrera and Vilela (2004) opine firm with high investment opportunity will tend to maintain higher level liquid assets to avoid financial distress or lost opportunity. The study hypothesizes as follows: ***$H0_5$: Corporate growth has no significant effect on performance of quoted companies in Nigeria.***

2.7 Corporate age and Performance

Corporate age is usually associated with experience in operations and management. Corporate Age is seen as the length of incorporation. Older firms tend to have standard for most activities and well established policy for various aspect of operations. Production and operational policy like other firm policy's are established over time, tested and adjusted in older firms compare to in new firms. However, another view holds that Aging as it is with human process so also with the firm, the human body can be associated with a general decline in the physical functioning of the human body, such as the ability to remember, react, move and hear. However, according to the life cycle effect, younger companies are more dynamic and more volatile in their growth experience than older companies ((Loderer, Neusser, & Waelchli, 2009). Maturity brings stability in growth as firms learn more precisely their market positioning, cost structures and efficiency levels. However, the life cycle effect theorem believes that younger companies are more dynamic and more volatile in their growth experience than older companies. Yasuda, (2005) argued that maturity brings stability in growth as firms learn more precisely, maintain standard and operating efficiency. Maja, Ivica and Marijana (2017) examined the relationship between firm Age and firm performance management using firms quoted under the food industry in Croatian. The study hypothesizes as follows: ***$H0_6$: Corporate Age has no significant effect on performance of quoted companies in Nigeria***

2.8 Corporate Stability and Performance

Corporate stability is the ability of firms to maintain the level of production and operation in the nearest future. Stability strategy focuses on maintaining its present product and market in other to guarantee future performance and avoid risk. Corporate stability deals with the ability of firm to withstand temporary problem such as a decrease in sales, lack of capital or loss of a key staff or customer. The stability plans of business include the investment in assets with present and future value (Dun & Bradstreets 2011).

A stable firm is able to absorb any adverse shocks primarily through it internal capabilities and developed mechanisms, thereby preventing adverse negative effect of events leading disruption of the real economy. Instability in the firm's operations can lead to loss of customer and lenders confidence, breakdown in operating activities or a stock market crash. The study of Geoffrey and Ali (2016on firm stability among grocery business in the UK finds that system stability positively impact on the ability of business firm to generate positive value. A stable firm can focus on the policies that can enhance the profitability of the firms and maintain standard in operation, retain key staff, enhance their possibility of increasing their customer base, withstand the competition. The

study hypothesizes as follows: **$H0_7$:** ***Corporate stability has no significant effect on firm performance among quoted companies in Nigeria.***

3.0 Methodology

The study used panel data and was based on ex-post facto research design. The panel data were collected from the published financial report of all quoted industrial goods firms in the Nigeria Stock Exchange between 2009 and 2018 financial years. In analysing the data, the study adopted multiple regressions however, some preliminary analysis such as descriptive statistics and correlation analysis.

The variables and their proxy were operationalized as follows. Below are the dependent and independent variables and their proxy. Refer to table 3.1

3.2 Model Specification

The model for the study is premised on the objectives. The model is follows:

Tobin Q = f(OPEF, ASSTAN, FSIZE, LEVEG, FGRWT, FAGE, COSTAB) …… 1

Equation 1 is the linear regression model used in testing the null hypotheses formulated.

Where: TobinQ = TOBIN Q, OPEF= Operating Efficiency, ASSTAN = Assets Tangibility, FSIZE = Firm Size, LEVEG = Leverage, FGRWT = Firm Growth, FAGE = Firm Age, COSTAB = Corporate Stability, C_0 = Constant; e = Error term

4.0 Data Analysis and Interpretation

In analysing the data, the study adopted multiple regressions to identify the possible effect firm attributes has on firm performance. The study conducted some preliminary analysis such as descriptive statistics and correlation analysis.

Table 4.1 below, is the descriptive statistics result of the data covering the period of ten years (2009 – 2018) of the quoted companies is used for the study. Refer to table 4.1

Table 4.1 shows the mean (average) for each of the variables, their maximum values, minimum values, standard deviation. The study observed that within the period under review, Tobin q has a mean value of 1.42, maximum value of 2.82 and minimum value of 0.12. The difference between the mean, maximum and minimum value shows that the performance of the firms differs, some firm seems to perform highly than others.

Operating efficiency which shows a mean value of 0.32 maximum value of 1.20 and minimum value of 0.046. This shows that only few of the management are effective in the utilization of the firm resources while majority are not too effective. The result of assets tangibility shows a mean value of 0.41, maximum value of 0.58 and minimum assets tangibility of 0.23. The result shows that the average of firm size is 33.2, maximum value of 19.0 and minimum value of 58.8. The large differences between the mean, minimum and maximum value shows that the firms used are not dominated by lager of small firms.

The result of leverage shows that on the average industrial goods firms maintain a low leverage 0.24, maximum value of 0.455, and minimum value of 0.04. The result indicates that within the period, some firms maintain high level of leverage, while some maintain low level of leverage of about 0.04%. This indicates that few firms are financing their operation and investment using debt compare to the use of equity financing. Firm growth has mean value of 0.24, maximum value of 0.55 and minimum value of 0.01. The result shows that some firm achieve high growth rate while some experience low growth rate. The result of firm age shows a mean value of 18.9 ears, maximum value of 41years and minimum value of 7years. Firm age has been associated with standard, as old firm is assumed to have formulated operative standard in various area of the firm operation. The result of corporate stability shows mean value of 21.6 among the industrial goods firms. Maximum value of 48.9 shows that some industrial goods invest in assets that can guarantee their stability, while the minimum value of 2.29 shows that few firm invest on assets that can guarantee their stability. Refer to table 4.2

Operating efficiency is negatively associated with firm performance (TOBINQ & OPEF -0.13). This reveals that the level of operating efficiency is negatively associated with the performance of industrial goods firms. Assets tangibility is positively associated with firm performance (TOBINQ & ASSTAN 0.258). This reveals the more firm invest in tangible assets the better they tend to perform especially on the long run. Firm size (TOBINQ & FSIZE -0.108), and Leverage (TOBINQ & LEV -0.197),

has shown that firm size and leverage policy are negatively associated with performance of industrial goods firms. Firm growth (TOBINQ & FGRWT 0.053), firm age (TOBINQ & FAGE 0.012), and corporate stability (TOBINQ & COSTAB 0.041), and firm age has positive (weak) association with firm performance. The result shows that the level of operating efficiency is positively associated with asset tangibility, firm size, firm growth, leverage, and negatively associated with firm age and firm stability. In checking for the presence of multi-colinearity, the study observed that no two variables were perfectly correlated using the 75% association benchmark. This shows the absent of multi-colinearity among the variables used in the study.

Fixed and Random Effect Test: The summary result of Tobin q model, Hausman effect test used by the study to select between fixed and random effect, which affect the data used in the study is presented below. Refer to table 4.3.1.

The Hausman effect test result shows a chi-square value of 17.7 and probability value 0.04, the chi-square probability value is less than 10 percent. Based on the result, the study accepts the fixed effect and rejects the random effect. The fixed effect was to correct the problem of heterogeneity in the data used for the study. Refer to table 4.4

In analysis result table above, the study observed that the R-sq(adj) 0.359(35.9%) this indicates that all the independent variables jointly explain about 35.9% of the variation in the firm value of the sampled firms. This reveals that about 35.9% of the firm performance can be attributable to the firm attributes. The F-statistics value and its probability value show that firm attributes model is appropriate and statistically significant at 1% levels. The Durbin Watson statistics result was 1.8, this can be approximated to two, and this indicates the absence of autocorrelation in our model hence the model used is appropriate for the study.

The analysis result of operating efficiency, leverage policy, firm age, corporate stability on firm performance shows coefficient value of -1.71, -1.80, -0.01 and -0.01 respectively. The coefficient value indicates that operating efficiency, leverage policy, firm age, corporate stability negatively affects the level of performance among industrial goods firms in Nigeria. Assets tangibility (3.42), firm size (0.01), and firm growth (0.95) positive coefficient value indicates that firm size, Assets tangibility and firm growth positively affect the performance of industrial goods firms in Nigeria. The probability value of operating efficiency (0.006), leverage policy (0.046), firm age (0.509), corporate stability (0.464), firm size (0.413), firm growth (0.217) and assets tangibility (0.013). The probability value indicates that operating efficiency, assets tangibility, leverage policy, have significant effect on firm performance. While firm size, firm growth, firm age and corporate stability have insignificant effect on firm performance. The result indicates that though operating efficiency and leverage policy negative significant effect on performance. Firm age and corporate stability has negative but insignificant effect on performance. Firm growth and firm size has positive but insignificant effect on performance.

Interaction result

No firm has a single attributes and no single attribute can wholly drive performance of a firm. The interaction result shows the best combination of the attributes that lead to better performance. Below are the result and its interpretation. Refer to table 4.5.

The interaction result shows that operating efficiency interacting with assets tangibility has positive coefficient value of (8.66), operating efficiency interacting with firm size has negative coefficient value (-0.09), leverage interacting firm growth has with negative coefficient value (-0.52), firm age interacting with corporate stability (-0.00) and firm size interacting with corporate stability has positive coefficient value (0.00). The coefficient value indicates that operating efficiency interacting with assets tangibility and firm size interacting with corporate stability has positive impact on performance. The probability value reveals that operating efficiency interacting with asset tangibility, operating efficiency interacting with firm size, firm age interacting with corporate stability, and firm size interacting with corporate stability has significant effect on performance of industrial goods firms.

The result reveals that the combination of operating efficiency with assets tangibility has more impact on performance than combination of any other attributes. This is followed by the combination of firm size with corporate stability.

4.3 Recommendations

- The study recommends that management of industrial goods firms in Nigeria should formulate policy that will be geared toward enhancing their operating efficiency and strengthen existing policy if any, in other to align them with present reality.
- The study recommends that management of industrial goods firm in their drive to enhance their performance should increase the level of their assets. Increasing the level of assets tangibility will give lender and investor good impression the increment in investment and accessing credit at low cost can lead to better performance.
- The study recommends that management of industrial goods firms should consider increasing the size of their firms, this will enable them enjoy the benefit of economic of scale, which can positively impact on their performance.
- The study recommends that management of industrial goods firms should reduce their leverage policy, as serving high leverage may pose challenges to the survival and performance of the firm.

- The study recommends that management of industrial goods firms should increase the growth rate of their firms. As the investment in growth enhancing programs may significantly drive the performance of the firm in future by enhancing their market share.
- The study recommends that management of industrial goods firms in Nigeria should consider their firm age when formulating policy and programs that will be geared toward enhancing their performance.
- This study recommends that management of industrial goods firms should invest more in firm stability programs and activities.

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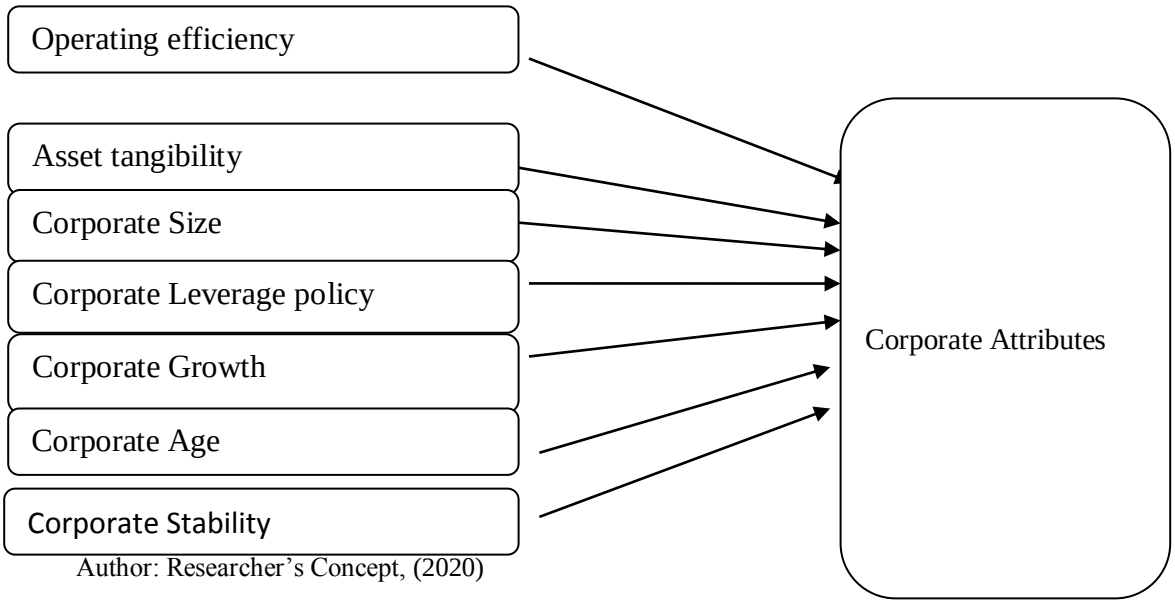
Figure 2. 1: Corporate attribute and firm performance



Author: Researcher's Concept, (2020)

Table 3.1 Measurement of Variables

Variables	**Measurement / proxy**	**Authority**
Firm performance	Tobin q	Olatunji and tajudeen (2014)
	ROA	Agnes (2013)
Operating efficiency	Operating expenses / sales	Agnes (2013)
Assets tangibility	Fixed assets - intangible assets / total assets	Akinsulire (2011)
Firm size	Log of total asset	Agnes (2013)
Leverage policy	Total debt / equity	Agnes (2013)
Firm growth	Changes in total revenue (% Δ Revenue)	Mohammed and Usman (2016)
Firm age	Year of incorporation to the period covered by the study	Agnes (2013)Pickering (2011)
Firm stability	Log of investment in R&D	Dun and Bradstreets (2011)

Table 4.1 Descriptive Statistics

Variable	Mean	StDev	Minimum	Median	Maximum	Skewness	Kurtosis
TOBINQ	1.4179	0.7405	0.1200	1.3719	2.8200	0.05	-1.03
OPEF	0.3163	0.2376	0.0460	0.2700	1.2000	1.94	3.73
ASSTAN	0.4124	0.0723	0.2300	0.4200	0.5800	0.24	-0.07
FSIZE	33.17	10.39	19.01	31.60	58.83	0.94	0.02
LEV	0.2367	0.0873	0.0400	0.2200	0.4550	0.38	0.10
FGRWT	0.2442	0.1302	0.0100	0.2100	0.5500	0.30	-1.04
FAGE	18.85	13.20	7.00	17.00	41.00	0.25	-1.40
COSTAB	21.600	9.589	2.290	21.040	48.939	0.47	-0.04

Sources: Researcher's summary of descriptive statistics 2020

Table 4.2 Pearson Correlation

	TOBINQ	OPEF	ASSTAN	FSIZE	LEV	FGRWT	FAGE
OPEF	-0.133						
ASSTAN	0.258	0.309					
FSIZE	-0.108	0.553	-0.121				
LEV	-0.197	0.006	0.003	0.195			
FGRWT	0.053	0.284	0.149	0.030	-0.129		
FAGE	0.012	-0.334	-0.152	-0.475	-0.120	0.289	
COSTAB	0.041	-0.143	0.081	0.140	0.062	-0.052	-0.192

Cell Contents Pearson correlation

Table 4.3.1 **Correlated Random Effects - Hausman Test**

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	17.73536	7	0.0430

Source: Summary of hausman effect test result (2020)

Table 4.4 below is the summary of the regression result adjusted for fixed effect.

Cross-section random effects test equation:
Dependent Variable: TOBINQ
Date: 04/22/20 Time: 00:32
Sample: 2009 2018

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	*1.605131*	*0.815540*	*1.968182*	*0.0403*
OPEF	*-1.707749*	*0.609118*	*-2.803642*	*0.0064*
ASSTAN	*3.418142*	*1.349785*	*2.532361*	*0.0133*
FSIZE	*0.012097*	*0.014696*	*0.823159*	*0.4129*
LEV	*-1.795461*	*0.885960*	*-2.026572*	*0.0461*
FGRWT	*0.950265*	*0.763480*	*1.244649*	*0.2170*
FAGE	*-0.006312*	*0.009525*	*-0.662707*	*0.5095*
COSTAB	*-0.006797*	*0.009231*	*-0.736282*	*0.4638*

Effects Specification

Cross-section fixed (dummy variables)

R-squared	*0.401878*	*Mean dependent var*	*1.417895*
Adjusted R-squared	*0.358674*	*S.D. dependent var*	*0.740441*
S.E. of regression	*0.679161*	*Akaike info criterion*	*2.224810*
Sum squared resid	*35.97826*	*Schwarz criterion*	*2.681819*
Log likelihood	*-88.67846*	*Hannan-Quinn criter.*	*2.409476*
F-statistic	*2.108021*	*Durbin-Watson stat*	*1.845817*
Prob(F-statistic)	*0.015914*		

Table 4.5 Analysis of Result
Cross-section random effects test equation:
Dependent Variable: TOBINQ
Date: 04/22/10 Time: 00:38
Sample: 2009 2018

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.347815	0.311269	4.330063	0.0000
OPEF*ASSTAN	8.655414	3.067900	2.821283	0.0060
OPEF*FSIZE	-0.093068	0.024965	-3.727947	0.0004
LEV*FGRWT	-0.522245	2.268728	-0.230193	0.8185
FAGE*COSTAB	-0.000828	0.000362	-2.289325	0.0247
FSIZE*COSTAB	0.000470	0.000219	2.148453	0.0347

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.588634	Mean dependent var	1.417895

Adjusted R-squared	0.464145	S.D. dependent var	0.740441
S.E. of regression	0.676949	Akaike info criterion	2.201497
Sum squared resid	36.66078	Schwarz criterion	2.604741
Log likelihood	-89.57112	Hannan-Quinn criter.	2.364438
F-statistic	2.318553	Durbin-Watson stat	1.955589
Prob(F-statistic)	0.009820		