# Determinants of Profitability: A Study on Ceramic Industry in Bangladesh

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**Abstract:** This study aimed to establish the key determinants of the profitability of ceramic companies. For this purpose, the data of all ceramic companies were selected from Dhaka Stock Exchange (DSE). The research period covered from 2015-16 to 2020-21. Return on Assets (ROA) and Return on Equity (ROE) were used as the indicators of profitability, while Management efficiency, Capital intensity, Firm size, Sales growth, Liquidity, Working capital, Leverage, Annual inflation, and GDP annual growth were used as the independent variables. Pearson's correlation and ordinary least squares regression models were used to establish the relationship between profitability and its different determinants. The regression analysis showed that liquidity and firm size have a statistically significant positive impact on profitability; others had no significant impact on profitability. Therefore, this research concludes that we should emphasize liquidity and firm size more to increase ceramic companies' profitability.

Keywords: profitability; ceramic industry; Dhaka stock exchange

Abstrak: Penelitian ini bertujuan untuk menetapkan factor utama dari profitabilitas perusahaan keramik. Untuk tujuan ini, data semua perusahaan keramik diseleksi dari Dhaka Stock Exchange (DSE). Periode penelitian dari 2015-16 hingga 2020-21. Pengembalian Aset (ROA) dan Pengembalian Ekuitas (ROE) digunakan sebagai indikator profitabilitas, sedangkan efisiensi manajemen, intensitas modal, ukuran perusahaan, pertumbuhan penjualan, likuiditas, modal kerja, *leverage*, inflasi tahunan, dan pertumbuhan tahunan PDB digunakan sebagai variabel independen. Korelasi Pearson dan regresi *Ordinary Least Squares* digunakan untuk membangun hubungan antara profitabilitas dan determinannya yang berbeda. Hasil analisis regresi menunjukkan bahwa likuiditas dan ukuran perusahaan memiliki pengaruh positif yang signifikan secara statistik terhadap profitabilitas seiring dengan pertumbuhan penjualan, intensitas modal, efisiensi manajemen. Di sisi lain, modal kerja berdampak negatif terhadap profitabilitas; sedangkan faktor lainnya tidak memiliki dampak yang signifikan terhadap profitabilitas. Oleh karena itu, penelitian ini menyimpulkan bahwa kita harus lebih menekankan pada likuiditas dan ukuran perusahaan untuk meningkatkan profitabilitas perusahaan keramik.

Kata Kunci: profitabilitas; industry keramik; bursa efek Dhaka

#### **INTRODUCTION**

Profit is considered one of the most important objectives of any business entity that management strives to achieve in addition to secondary objectives such as increasing market share and sales volume. Profit can serve as an indicator of the level of efficiency of a business. High profit indicates that a business efficiently utilizes its funds (Aparna, 2015).

Al-Jafari and Samman (2015) mentioned that the magic word "profitability" refers to companies' earnings generated from revenues after deducting all expenses incurred during a given period. It is

considered one of the most important goals that the management of every company strives to achieve, and without it, companies will cease.

Ifeduni and Charles (2018) stated effectiveness and efficiency of a firm are sometimes measured by its profitability. Profit is significant; more profit reflects more effective management of resources, and low profits can slow the pace at which a firm progress, and certain obligations or targets may not be met.

According to Bangladesh Investment Development Authority, the ceramic industry started its journey in 1958 and currently consists of around 65 producers. The total domestic market consumption for ceramic products amounted to USD 660 million in FY2017-18, and local production meets the demand for 96% of tableware, 77% of tiles, and 89% of sanitary ware. Over the last decade, the Bangladeshi ceramic industry has witnessed multi-dimensional growth in both domestic (20% average annual growth) and export markets (26% during the last three years), and approximately 200% growth in production capacity in the last five years. The sector directly employs around 48,000 people and is estimated to employ over 500,000 people indirectly. In addition, Bangladeshi ceramics are exported to more than 50 countries.

From the above discussion, it is clear that the ceramic industry is a rising star in Bangladesh, and many research scopes are available here. It is also necessary to find out this industry's potential direction. So, in this research, determinates of profitability regarding the ceramic industry of Bangladesh are focused. For this reason, this paper highlights the 5 ceramic companies enlisted in Dhaka Stock Exchange (DSE) and attempts to determine the profitability determinants. The study's research period covers 2015-16 to 2020-21.

#### LITERATURE REVIEW

Profit is one of the core objectives of any firm for its long-term reputation and survival. Profitability is the profit-making ability considered an essential factor for the perpetual existence of firms. Measuring a firm's profitability or determining how well a business is being run is challenging (Fareed et al., 2016).

Fareed et al. (2016) mentioned that Return can measure profitability on Asset (ROA), Return on Equity (ROE), Net Interest Margin (NIM) and Return on Capital Employed (ROCE) variables but they took ROA as the dependent variable for their study. Rezina et al. (2020), Prasetyantoko and Rachmadi (2008), Khan et al. (2018), Pratheepan (2014), Ehi-Oshio et al. (2013), Nanda and Panda (2018), Aissa and Lefa (2016), and Liuspita and Purwanto (2019) also taken ROA as the proxy of profitability.

On the other side, Zaid et al. (2014), Demsetz and Villalonga (2001), and Gugler et al. (2004) selected ROE as measure of profitability. However, Ifeduni and Charles (2018), Sivathaasan et al. (2013), Akben-Selcuk (2016), and Hossain (2020) accepted ROE and ROA both as the proxy of profitability. This research focused on ROE and ROA both as the proxy of profitability. Hossain (2020) stated that profitability not only depends on the product's success but also on the development of the market for the product and many other internal and external factors. He examined manufacturing companies' profitability determinants. Some researchers addressed firm size, leverage, current assets and sales growth as important determinants of profitability.

Prempeh et al. (2018) examined the determinants of profitability of manufacturing companies in Ghana. They explored that leverage and interest rates have a negative relationship with profitability. In contrast, liquidity and firm size have a significantly positive relationship with profitability but tangibility and GDP have shown no significant relationship with profitability.

Ehi-Oshio et al. (2013) investigated the determinants of corporate profitability in developing economies, mainly focusing on the Nigerian context. They found a positive relationship between firm size and corporate profitability and financial leverage and corporate profitability. However, capital structure and cash liquidity exhibited negative relationships with corporate profitability.

Sivathaasan et al. (2013) investigated factors determining profitability in selected manufacturing companies listed on Colombo stock exchange. They found that capital structure and non-debt tax shield have statistically significant impacts on profitability and that working capital, growth rate and firm size have nonsignificant effects on profitability.

Pratheepan (2014) studied on factors determining the profitability of companies. The finding's revealed size is statistically significant of positive relationship with profitability whereas tangibility shows a statistically significant inverse relationship with profitability but leverage and liquidity indicate insignificant impacts on profitability.

Zaid et al. (2014) examined the determinants of public-based construction companies' profitability in Malaysia. The result showed that liquidity and size have a significant relationship with profitability. The negatively insignificant relationship between capital structure and profitability as well as term premium, interest rate and Gross Domestic Product (GDP) showed nonsignificant relationship.

Al-Jafari and Samman's (2015) study investigates the determinants of profitability for industrial firms in Oman. The result was positive statistically significant relationship present between profitability and firm size, growth, fixed assets ratio and working capital. On the other hand, the average tax rate and the financial leverage variables showed a negative relationship with profitability.

Fareed et al. (2016) researched the impact of key determinants of power and energy sector profitability in Pakistan. The empirical results suggested that firm size, firm growth, and electricity crisis positively impact profitability. However, firm age, financial leverage and productivity negatively influenced the firm profitability. This study also proposed that during the electricity crisis the profitability of power sector is increased even production of this sector is very low.

Khan et al. (2018) examined the profitability of Indian telecom companies. The study's findings revealed that size and growth directly correlate with profitability, whereas leverage had an inverse relationship. Tangibility, non-debt tax shields, liquidity, and bankruptcy probability indicated an insignificant impact on profitability.

Ifeduni and Charles (2018) examined the determinants of profitability of manufacturing organizations in Nigeria. They concluded that size, lagged profitability, productivity and financial leverage are essential determinants, and this sector's profitability is significant not only in the view of the objective of shareholders, but also in growing the Nigerian economy as a whole.

Pervan et al. (2019) examined the influence of different factors on a firm's profitability. The result revealed that a firm's age, labor cost, industry concentration, GDP growth and inflation have a significant influence on a firm's profitability.

Liuspita and Purwanto (2019) investigate what are factors that determine the profitability. The study found that profitability is positively influenced by size, age, lagged profitability, growth, and productivity of the companies.

Rezina et al. (2020) examined the impacts of firm-specific and macroeconomic factors in determining the profitability of the cement industry in Bangladesh. The study found that firm size, age, GDP growth rate, and real interest rate have a positive impact whereas expenses to revenue ratio, leverage, and inflation have a negative impact on the profitability.

Hossain (2020) aimed to establish the crucial determinants of the profitability of manufacturing companies listed on the Dhaka Stock Exchange (DSE). The research showed that liquidity and leverage have a statistically significant negative impact on profitability. On the other hand, managerial efficiency, sales growth and capital intensity have a statistically significant positive impact on profitability. The study also found that firm size, working capital, annual inflation and GDP growth have no significant impact on profitability.

Egbunike and Okerekeoti (2018) explored the interrelationship between macroeconomic factors, firm characteristics, and financial performance of quoted manufacturing firms in Nigeria. They measured financial performance measured as return on assets (ROA). They found a significant effect of inflation and GDP growth rates on ROA.

# **RESEARCH METHODOLOGY**

## Sample Design

There are 5 companies in the ceramic industry in DSE and all are selected for this research. The companies are Fu-Wang Ceramic Industries Limited, Monno Ceramic Industries Limited, RAK Ceramics (Bangladesh) Limited, Shinepukur Ceramics Limited, and Standard Ceramic Industries Ltd.

# **Data collection**

The data were collected from the selected companies' 2020-21 to 2015-16 annual reports.

#### Variables

To assess firms' profitability, return on assets (ROA) and return on equity (ROE) are used as profitability indicators. Here, ROA and ROE are used as dependent variables. Table 1 describes the selected variables.

Variable	Туре	Abbreviation	Measurement
Return on asset	Dependent	ROA	Profit before WPPF/Total asset
Return on equity	Dependent	ROE	Profit before WPPF/Total equity
Management efficiency	Independent	ME	Total revenue/Total asset
Capital intensity	Independent	CI	Total asset/Total revenue
Firm size	Independent	FS	Ln (Total asset)
Sales growth	Independent	SG	$(S_1-S_0)/S_0$
Liquidity	Independent	LIQ	Current asset/Current liability
Working capital	Independent	WC	Current asset - current liability
Leverage	Independent	LEV	Total liability/Total asset
Annual inflation	Independent (External Level)	AI	Annual average increase in the Bangladeshi CPI
GDP annual growth	Independent (External Level)	GDPG	Annual real GDP growth rate

Table 1.	List of V	ariables
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# Hypothesis

The study will test the following hypotheses:

- a. H<sub>1</sub>: There is a statistically significant relationship between management efficiency (ME) and profitability.
- b. H<sub>2</sub>: There is a statistically significant relationship between capital intensity (CI) and profitability.
- c. H<sub>3</sub>: There is a statistically significant relationship between firm size (FS) and profitability.
- d. H<sub>4</sub>: There is a statistically significant relationship between sales growth (SG) and profitability.
- e. H<sub>5</sub>: There is a statistically significant relationship between liquidity (LIQ) and profitability.
- f.  $H_6$ : There is a statistically significant relationship between working capital (WC) and profitability.
- g. H<sub>7</sub>: There is a statistically significant relationship between leverage (LEV) and profitability.
- h. H<sub>8</sub>: There is a statistically significant relationship between annual inflation (AI) and profitability.
- i. H<sub>9</sub>: A statistically significant relationship exists between GDP annual growth (GDPG) and profitability.

#### **Regression Model**

 $ROAit = \beta 0 + \beta 1LEQit + \beta 2LEVit + \beta 3SGit + \beta 4MEit + \beta 5CIit + \beta 6FSit + \beta 7WCit + \beta 8AIit + \beta 9GDPGit + \epsilon it$ 

Here " $\beta$ " is the regression model coefficient, "i" indicates firms, and "t" indicates years.

#### **RESULTS AND DISCUSSION**

#### **Descriptive Statistics**

The descriptive analysis shows the mean and standard deviation. Table 2 shows the summarized form of the independent and dependent variables of the 30 firm years. The average ROA and ROE are 8.28% and 4.82%, and the standard deviations of the variables are 21.62% and 13.93%. The average and deviation of working capital and sales growth are above Tk. 69 crore and above 140 crores, respectively, as well as 3.52% and 20.09%, respectively. The summary shows the mean of management efficiency and capital intensity 49.27% and 3.07 respectively where the standard deviations are 3.92% and 1.54. In addition, liquidity and leverage are 1.28 and 0.4172 with deviations 0.5937 and 0.1400.

	Ν	Mean	Std. Deviation
Return on Asset (ROA)	30	0.082780	0.2162452
Return on Equity (ROE)	30	0.048213	0.1392828
Management Efficiency (ME)	30	0.492653	0.3919789
Capital Intensity (CI)	30	3.071497	1.5375258
Firm Size (FS)	30	9.431847	0.5937219
Sales Growth (SG)	30	0.035190	0.2009444
Working Capital (WC)	30	691804199.166667	1425598227.0787208
Liquidly (LIQ)	30	1.283443	0.5926178
Annual Inflation (AI)	30	252.881667	23.8837590
GDP Annual Growth (GDPA)	30	6.751667	1.6108406
Leverage (LEV)	30	0.417223	0.1399919

Table 2. Descriptive Statistics of Variables

#### **Correlation Analysis**

Table 3 shows that ROA is positively correlated with sales growth, liquidity, working capital and GDP annual growth. Additionally, it is negatively correlated with management efficiency, capital intensity, firm size, leverage, and annual inflation. Furthermore, the correlation coefficient of liquidity has the highest positive correlation with ROA and LEV has the highest negative correlation with ROA. From Table 3, it is also noticeable that ROE is positively correlated with all independent variables other than capital intensity, leverage, and annual inflation. In addition, GDP annual growth has the highest positive correlation and leverage has the highest negative correlation with ROE.

	ROA	ROE	ME	CI	FS	SG	LIQ	WC	LEV	AI	GDPA
ROA Sig (2-tailed)	1										
ROE Sig (2-tailed)	0.319 0.086	1									
ME Sig (2-tailed)	-0.008 0.968	$0.060 \\ 0.755$	1								
CI Sig (2- tailed)	-0.149 0.433	-0.112	-0.881** 0.000	1							
FS Sig (2-	-0.008	0.289	-0.781**	0.535**	1						
tailed)	0.969	0.122	0.000	0.002							
SG Sig (2-	0.317	$0.418^{*}$	0.148	-0.283	0.021	1					
tailed)	0.088	0.022	0.436	0.130	0.912						
LIQ Sig	$0.738^{**}$	$0.402^{*}$	-0.211	-0.056	0.231	0.121	1				
(2-tailed)	0.000	0.028	0.264	0.769	0.218	0.524					
WC Sig	0.101	$0.412^{*}$	-0.009	-0.337	$0.494^{**}$	0.155	$0.498^{**}$	1			
(2-tailed)	0.595	0.024	0.962	0.069	0.006	0.412	0.005				
LEV Sig	-0.363*	-0.302	$0.689^{**}$	-0.636**	-0.561**	0.105	$-0.412^{*}$	0.072	1		
(2-tailed)	0.049	0.105	0.000	0.000	0.001	0.580	0.024	0.705			
AI Sig (2-	-0.306	-0.225	-0.152	0.188	0.075	0.123	-0.165	0.096	0.298	1	
tailed)	0.100	0.231	0.422	0.320	0.694	0.516	0.383	0.612	0.110		
GDPG Sig	0.281	$0.462^{*}$	0.164	-0.242	-0.033	0.543**	0.128	-0.029	-0.197	-0.480**	1
(2-tailed)	0.133	0.010	0.386	0.198	0.865	0.002	0.500	0.879	0.296	0.007	

Table 3. Correlation Matrix

\*\* Correlation is significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed).

#### **Regression Analysis**

For testing hypotheses, the regression analysis was conducted to determine whether there is a significant relationship between the dependent and independent variables. In Table 4, the R = 0.918 indicates a high degree of positive correlation among the variables in the regression model. R squared is 0.842, indicating that the independent variables can explain 84 percent of the total variation of the dependent variable in the model and the remaining 16 percent variation can be explained by the variables not included in the model. The Durbin-Watson value is showing 2.49 where 2 indicates no autocorrelation. Here, the F value is 11.87 and the p value is 0.00, indicating that the independent variable.

Table 4. Model Summary for Dependent Variable ROA

Model	R	R Square	<b>Adjusted R Square</b>	Std. Error of the Estimate	<b>Durbin-Watson</b>	F	Sig.
1	0.918	0.842	0.771	0.1033877	2.493	11.874	0.000

Table 5 shows the coefficient value of the regression analysis. These coefficients explain to what extent each independent variable impact ROA. The beta coefficient of Liquidity is -1.233 with a *p* value of 0.000, which is statistically positively significant at the 5% level, and it is also supported by Egbunike and Okerekeoti (2018), Prempeh et al. (2018), Chowdhury and Amin (2007), and Zaid et al. (2014), Akben-Selcuk (2016), Hossain (2020), Prempeh, Sekyere and Amponsah Addy (2018), but not supported by Khan (2020).

Model		Unstandardized Coefficients B Std. Error		Standardized Coefficients	t	<b>a</b> .
				Beta		S1g.
	(Constant)	-3.922	1.721		-2.278	0.034
	GDP Annual Growth	-0.031	0.020	-0.233	-1.588	0.128
	Annual Inflation	0.000	0.001	-0.025	-0.172	0.865
	Leverage	0.055	0.332	0.036	0.166	0.870
1	Working Capital	-1.911E-10	0.000	-1.260	-3.898	0.001
1	Liquidity	0.450	0.076	1.233	5.890	0.000
	Sales Growth	0.250	0.152	0.232	1.642	0.116
	Firm Size	0.405	0.146	1.112	2.766	0.012
	Capital Intensity	-0.067	0.047	-0.478	-1.432	0.168
	Management Efficiency	0.366	0.214	0.663	1.713	0.102

Tabla 5	Coofficients	for Do	nondant	Variable	DOA
Table 5.	Coefficients	IOI De	pendent	variable	KUA

a. Dependent Variable: Return on Asset

The beta coefficient of firm size is 1.112 with a p value of 0.01, which is statistically significant at 5% level, supporting Rezina et al. (2020), Egbunike and Okerekeoti (2018), Khan et al. (2018), Akben-Selcuk (2016), Al-Jafari and Samman (2015), Prempeh et al. (2018), and varying Ifeduni and Charles (2018), and Hossain (2020). The beta coefficient of working capital is -1.26 where the p value is 0.001 (at 5% level), supporting Nusbantoro et al. (2018), but opposing Al-Jafari and Samman (2015). The beta coefficient of GDP annual growth, annual inflation, leverage, sales growth, capital intensity and management efficiency are -0.233, -0.025, 0.036, 0.232, -0.478 and 0.663 with p values of 0.128, 0.865, 0.870, 0.116, 0.168 and 0.102, respectively, which are not statistically significant.

Table 6.	Model	Summary	for	Depend	lent V	Variable	ROE
		2					

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	<b>Durbin-Watson</b>	F	Sig.
1	0.901	0.812	0.727	0.727971	2.543	9.573	0.000

Then again for testing hypotheses, the regression analysis was conducted to determine the mentionable significant relationship between the dependent variables and independent variables. In Table 6, the R = 0.901 indicates a high degree of positive correlation among the variables in the regression model. R squared is 0.812, indicating 81 percent of the total variation of the dependent variable can be explained by the independent variables and the remaining 19 percent variation can be explained by the variables not included in the model. The Durbin-Watson value is showing 2.54 where 2 indicates no correlation. Here the F value is 9.57 and p value is 0.00, it indicates the independent variables reliably predict the dependent variable.

Table 7 shows the coefficient value of the regression analysis. These coefficients explain to what extent each independent variable impact ROE. The beta coefficient of Liquidity is 0.539 with a p value of 0.029, which is positively significant at the 5% level, and it is also supported by Akben-Selcuk (2016), Zaid et al. (2014), but disagreed by Hossain (2020). The beta coefficient of SG is 0.327 with a p value of 0.047, which is statistically significant at the 5% level. This means the sales growth has a significant positive impact on ROE, supporting Hossain (2020). The firm size's beta coefficient is 0.971 with p value of 0.039, this is statistically significant, and it is also agreed by Ifeduni and Charles (2018),

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Akben-Selcuk (2016), Zaid et al. (2014), and Hossain (2020). The beta coefficient of capital intensity is 1.60 (p value 0.000) which is also statistically significant, and the result is also accepted by Goldar and Aggarwal (2005), and Hossain (2020), but opposed by Dickinson and Sommers (2012). The beta coefficient of management efficiency is 2.306 (p value 0.000), which means this is also statistically significant and the result is also the same by Jamali and Asadi (2012), and Hossain (2020). The beta coefficient of GDP annual growth, annual inflation, leverage and working capital are 0.197, -0.097, -0.086 and 0.195 with p values of 0.232, 0.544, 0.717 and 0.587, respectively, which are not statistically significant.

Madal		Unstandardized Coefficients		<b>Standardized Coefficients</b>		<b>G!</b> .
IVI	louel	В	Std. Error	Beta	ι	51g.
	(Constant)	-3.068	1.212		-2.532	0.020
	GDP Annual Growth	0.017	0.014	0.197	1.232	0.232
	Annual Inflation	-0.001	0.001	-0.097	-0.618	0.544
	Leverage	-0.086	0.234	-0.086	-0.368	0.717
1	Working Capital	1.904E-11	0.000	0.195	0.551	0.587
I	Liquidity	0.127	0.054	0.539	2.356	0.029
	Sales Growth	0.227	0.107	0.327	2.120	0.047
	Firm Size	0.228	0.103	0.971	2.207	0.039
	Capital Intensity	0.145	0.033	1.600	4.379	0.000

0.819

Table 7. Coefficients for Dependent Variable ROE

Management Efficiency a. Dependent Variable: Return on Equity

GDP annual growth is externally influenced, and here all types of producers are present; for this reason, the ceramic industry was not high lightened. The annual inflation, which is also an external factor and includes all household purchases, and the research period covered the Covid-19 period; that total time economy of the world faced a poor situation, so may this reason the variable presented no significant effect. Lastly, leverage, which represents the ability to meet the financial obligation, fluctuated among the firms; this was not statistically significant.

0.150

2.306

5.446 0.000

#### CONCLUSION

This study focused on identifying the remarkable factors that control the ceramic sector's profitability and the extent to which these determinants impact on profitability. Here, ROA and ROE are taken as the proxy of profitability.

First, liquidity shows a significant positive impact on profitability, supporting Egbunike and Okerekeoti (2018), Prempeh et al. (2018), Chowdhury and Amin (2007), Hirsch and Hartmann (2014), Hirsch et al. (2014), and Zaid et al. (2014), but varying from Eljelly (2004), and Hossain (2020). Second, firm size also shows a significant positive impact on profitability. It is supported by Rezina et al. (2020), Egbunike and Okerekeoti (2018), Khan et al. (2018), Akben-Selcuk (2016), Al-Jafari and Samman (2015), Prempeh et al. (2018), and contradicted by Ifeduni and Charles (2018), and Hossain (2020). Third, sales growth is showing statistically significant impact on profitability, supporting Jamali and Asadi (2012), McGivern and Tvorik (1997), and Hossain (2020). Fourth, capital intensity presented a statistically significant relationship with profitability. The exact relationship is also found by Goldar and Aggarwal (2005), and Hossain (2020), but the opposite relationship was found by Dickinson and Sommers (2012). Fifth, management efficiency also positively connected, supporting Jamali and Asadi, (2012), and Hossain (2020). Sixth, working capital shows a negative relationship with profitability. It is supported by Nusbantoro et al. (2018) but opposed by Al-Jafari and Samman (2015). Seventh, annual inflation has insignificant negative relationship with profitability, supporting Hossain (2020), and Hassan and Muniyat (2019), but varying from Pervan et al. (2019). In addition, GED annual growth is not statistically significant, varying from Rezina et al. (2020), Hassan and Muniyat (2019), and Egbunike and Okerekeoti (2018). Lastly, leverage is not statistically significant, and it varies from Ifeduni and Charles (2018), and Al-Jafari and Samman (2015), Sivathaasan et al. (2013), and Ehi-Oshio et al. (2013).

From above discussion, it can be said that the ceramic company's managers, policy makers and investors should concentrate on those determinates which are statistically significant in this study. Finally, the limitations of the research were that it focused on DSE listed firms, more variables would have been better. So, this research will be more beneficial if the researcher consider the aforesaid points.

# REFERENCES

- Aissa, S. B. & Goaied, M. (2016). Determinants of Tunisian hotel profitability: The role of managerial efficiency. *Tourism Management*, 52, 478-487.
- Akben-Selcuk, E. (2016). Does firm age affect profitability, Evidence from turkey. *International Journal of Economic Sciences*, 5(3), 1-9.
- Al-Jafari, M. K. & Samman, H. A. (2015). Determinants of profitability: evidence from industrial companies listed on Muscat Securities Market. *Review of European Studies*, 7, 303.
- Aparna, K. (2015). Determinants of profitability-a firm-level study of steel authority of India Limited (SAIL). *Journal of Business Management & Social Sciences Research* (JBM&SSR), 4(12), 1-4.
- Demsetz, H. & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7(3), 209-233.
- Dickinson, V. & Sommers, G. A. (2012). Which competitive efforts lead to future abnormal economic rents? Using accounting ratios to assess competitive advantage. *Journal of Business Finance & Accounting*, 39(3-4), 360-398.
- Egbunike, C. F. & Okerekeoti, C. U. (2018). Macroeconomic factors, firm characteristics and financial performance: A study of selected quoted manufacturing firms in Nigeria. *Asian Journal of Accounting Research*, 3(2), 142-168.
- Eljelly, A. M. (2004). Liquidity-profitability tradeoff: An empirical investigation in an emerging market. *International Journal of Commerce and Management*, 14(2), 48-62.
- Ehi-Oshio, O. U., Adeyemi, A., & Enofe, A. O. (2013). Determinants of corporate profitability in developing economies. *European Journal of Business and Management*, 5(16), 42-50.
- Fareed, Z., Ali, Z., Shahzad, F., Nazir, M. I., & Ullah, A. (2016). Determinants of profitability: Evidence from power and energy sector. *Studia Universitatis Babes-Bolyai*, 61(3), 59.
- Goldar, B. & Aggarwal, S. C. (2005). Trade liberalization and price-cost margin in Indian industries. *The Developing Economies*, 43(3), 346-373.
- Hassan, S. R. & Muniyat, S. (2019). *Factors influencing the profitability of pharmaceutical companies in Bangladesh*. In MESSAGE FROM THE CONFERENCE CHAIRS (p. 770).
- Hossain, T. (2020). Determinants of profitability: A study on manufacturing companies listed on the Dhaka stock exchange. *Asian Economic and Financial Review*, 10(12), 1496-1508.
- Ifeduni, A. S. & Charlse, O. (2018). The determinants of profitability of manufacturing firms in Nigeria. *International Journal of Economics, Commerce and Management*, 6(4), 479-493.
- Jamali, A. H. & Asadi, A. (2012). Management efficiency and profitability in Indian automobile industry: From theory to practice. *Indian Journal of Science and Technology*, 5(5), 2779-2781.
- Khan, T., Shamim, M., & Goyal, J. (2018). Panel data analysis of profitability determinants: Evidence from Indian telecom companies. *Theoretical Economics Letters*, 8(15), 3581-3593.
- Klaus, G., Mueller, D. C., & Yurtoglu, B. B. (2004). Corporate governance and the return on investment. *Journal of Law and Economics*, 47(2), 589-633.
- Liuspita, J., & Purwanto, E. (2019). The profitability determinants of food and beverages companies listed at the Indonesia stock exchange. *International Journal of Scientific & Technology Research*, 8(9), 197-202.
- McGivern, M. H. & Tvorik, S. J. (1997). Determinants of organizational performance. *Management Decision*, 35, 417-435.
- Nanda, S. & Panda, A. K. (2018). The determinants of corporate profitability: an investigation of Indian manufacturing firms. *International Journal of Emerging Markets*, 13(1), 66-86.

- Nusbantoro, A. J., Utami, E. S., & Sanjaya, N. A. (2018). The determinants of profit change in manufacturing companies at the Indonesian Stock Exchange. *Review of Management and Entrepreneurship*, 2(1), 17-30.
- Pervan, M., Pervan, I., & Ćurak, M. (2019). Determinants of firm profitability in the Croatian manufacturing industry: Evidence from dynamic panel analysis. *Economic Research-Ekonomska Istraživanja*, 32(1), 968-981.
- Prasetyantoko, A. & Rachmadi, P. (2008). *Determinants of corporate performance of listed companies in Indonesia*. University Library of Munich, Germany.
- Pratheepan, T. (2014). A Panel Data Analysis of Profitability Determinants: Empirical Results from Sri Lankan Manufacturing Companies. *International Journal of Economics, Commerce and Management*, 2(12), 1-9.
- Prempeh, K. B., Sekyere, A. M., & Addy, E. K. A. (2018). A Multivariate Analysis of Determinants of Profitability: Evidence from Selected Manufacturing Companies Listed on the Ghana Stock Exchange. *Journal of Accounting, Business and Finance Research*, 2(1), 26-33.
- Rezina, S., Ashraf, A., & Khan, M. A. (2020). An inferential study on the profitability determinants of the cement industry in Bangladesh. *Asian Finance & Banking Review*, 4(2), 8-21.
- Sivathaasan, N., Tharanika, R., Sinthuja, M., & Hanitha, V. (2013). Factors determining profitability: A study of selected manufacturing companies listed on Colombo Stock Exchange in Sri Lanka. *European Journal of Business and Management*, 5(27), 99-107.
- Zaid, N. A. M., Ibrahim, W. M. F. W., & Zulqernain, N. S. (2014, February). The Determinants of Profitability: Evidence from Malaysian Construction Companies. In Proceedings of 5th Asia-Pacific Business Research Conference (pp. 17-18).

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