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The Effect of Inflation, Interest Rates And World Oil Prices on Gold Prices in Indonesia With The US Dollar Exchange Rate as an Intermediary Variable

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Abstract

This study aims to determine the effect of inflation, interest rates, and world oil prices on fluctuations in gold prices in Indonesia with the US Dollar exchange rate as an intermediary variable. This research is a type of explanatory research with a quantitative approach. The data used are monthly time series data for 2014 - 2019 with a sample of 72 samples. Hypothesis testing in this study uses path analysis, is a development technique of multiple linear regression. This technique is used to test the amount of contribution shown by the path coefficient on each path diagram of the causal relationship between variables X_1 , X_2 , and X_3 on and its impact on Z . The results of this study indicate that the effect of inflation, interest rates and world oil prices on exchange rates individually has very little effect. The effect of inflation, interest rates, world oil prices and the exchange rate on gold prices individually shows a negative value for inflation and interest rates means that the effect is small, while for the world oil price and the dollar exchange rates shows a positive value which means that it has a large effect on the price of gold. The effect of inflation, interest rates and world oil prices on gold prices through the exchange rate, all variable show a negative value, this indicates that the effect is very small.

Keyword: Inflation, Exchange Rates, Interest Rates, World Oil Prices, Gold Prices

Citation

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1. Introduction

Investment is an activity related to investing in a variety of alternative assets, both classified as real assets, such as land, gold, property, and in the form of financial assets, such as stocks, bonds, or mutual funds. The purpose of investing is to get benefits in the future. One of the investment products that have been known from ancient times until now is an investment in the form of gold. Gold investment is in great demand by many people for reasons of security and the benefits promised. Generally, they choose to invest in gold to get benefits in the long term, because the value-added of gold is not too big in the short term compared to investing in the stock market. Some of the advantages of choosing gold as an investment are as follows: a). There is no risk in gold when holding gold means holding tangible assets that do not depend on others. b). Consistency of purchasing power, when the price of gold falls means that it will not experience a decrease in wealth because gold has zero inflation. c). It does not depend on government decisions, meaning that when holding gold there is no need to worry about government decisions about interest rates and others. d). Assets that are outside the banking system, meaning that holding gold is free from the vortex of a banking crisis that can

arise anytime and anywhere. e). Asset value protection, if inflation is high, the price of gold will increase and when the dollar exchange rate rises, the price of gold will also rise. f). The most effective means of saving for a specific purpose. g). Gold is easy to obtain and very liquid.



Figure 1. Gold Price Movement Chart (IDR / gram), 2011 – 2020

Source: www.goldprice.org

Referring to Figure 1, the price of gold can go up and down, but in the long run, it tends to increase. The current price of gold has increased by more than 300% compared to 10 years ago. The value of this increase is higher than the average rate of inflation in Indonesia. Gold can serve as a hedge for the Indonesian stock market in the long term. This shows that gold can be an instrument of preserving asset value in Indonesia in the long run and found that when extreme shocks occur in the stock market in Indonesia, gold can serve as a haven in the Indonesian (sharia) stock market to Robiyanto (2018). Gold has proven to be a good tool not only to avoid inflation but also to be a profitable investment vehicle. Gold has a limited stock and is not easy to obtain, while the demand for gold never decreases, as a result, the price of gold tends to increase from year to year. The price of gold does not only depend on the demand and supply situation but the price of gold is also influenced by the overall economic situation. Therefore, investors also pay attention to other factors that can affect the price of gold, such as inflation, the US dollar exchange rate, interest rates, and world oil prices.

Inflation can affect gold because if inflation occurs, commodity prices and production costs will increase. As a result, house prices, car prices, basic goods, and gold tended to increase as well. Therefore, when inflation is predicted to occur, the demand for gold usually increases, because gold is considered to protect their wealth from a decrease in the purchase value. This will then affect increasing the price of gold. According to Nurulhuda and Kosasih (2019), inflation has a significant positive effect on Antam's gold price. This shows that when a high inflation rate tends to encourage someone to shift their investment instruments to gold. When inflation rises, the value of the currency falls and so people tend to keep money in gold

When interest rates rise. There is a greater effort to keep money on deposit than in interest-free gold. This will put pressure on the gold price. Conversely, when interest rates fall, the

price of gold will tend to rise. In theory, if short-term interest rates go up, then the price of gold falls. In Indonesia, this theory does not always work. Suharto and MM (2013) in his research stated that if the interest rate would go down, then interest in buying gold would increase so that the price of gold would increase. According to Nurulhuda and Kosasih (2019), if interest rates increase, in the long run, this influence will be one of the factors that can reduce the price of gold, the result of this increase will be in the spotlight of investors who prefer to invest their funds in the money market or savings and deposits. instead of buying gold that has no interest. This of course will reduce the demand for gold and in the end, will weaken the price of gold.

The next factor that affects the ups and downs of gold prices is the world oil price. According to Tanuwidjaja (2009), when the world crude oil price increases, the gold price on the world market will also increase. Indeed, the effect does not occur immediately, but the price of gold must follow the increase. According to Yuswandy (2013), world oil prices have a significant negative effect on market returns. Meanwhile, according to Suwandy, Muharam & Pengestuti (2014), the fluctuation of the LQ 45 index is sensitive to world oil prices in a negative direction which indicates that an increase in world oil prices will cause a decrease in the return on the LQ 45 index.

The weakening of the US Dollar exchange rate usually encourages an increase in world gold prices. This is because investors choose to sell their dollar currency and then buy gold which is considered capable of protecting the value of their assets. Nurulhuda and Kosasih (2019) state that exchange rates have a positive and significant effect on Antam's gold price determination. Because the world gold price is determined using the US Dollar currency, the relationship between the gold price and the dollar is closely related. There are several conditions where when the dollar exchange rate rises, the gold price decreases, the movement of the US Dollar has the effect of fluctuating gold prices.

From previous research which proved different results, the researchers were motivated to carry out further research. Researchers want to know what factors influence the fluctuation of gold prices in Indonesia, so the researcher will further examine the "Effect of Inflation, Interest Rates and World Oil Prices on Gold Prices in Indonesia with the US Dollar Exchange Rate as an Intermediary Variable".

Based on the problems that have been described in the background above, the problems that will be discussed are narrowed down, among others

- 1) How much influence do inflation, interest rates, and world oil prices have on the dollar exchange rate individually?
- 2) How much influence do inflation, interest rates, world oil prices, and the dollar exchange rate have on the price of gold?
- 3) How much influence will inflation, interest rates and world oil prices have on gold prices through the dollar exchange rate as an intermediary variable?

2. Literature Review

2.1. Efficient Market Concept

The price of gold in the market always fluctuates up and down which is a reflection of all related information, how fast the information is reflected in the price of gold indicates how efficient the gold market is. The concept of an efficient market was first put forward by Malkiel (2011) where the level of market efficiency can be divided into 3 according to its

information sources, namely weak-form efficient market, semi-strong form efficient market, and strong form marketplace (strong form efficient). In the market, there is a lot of information, both fundamental, technical, micro, and macro which will affect the price. For investors, the concept of market efficiency is very important in the framework of using and selecting relevant information for decision making.

2.2. Inflation Rate

The theory of inflation is divided into two groups, namely the monetary concept and the non-monetary concept. The classical theory adopts monetarism, where the money supply or the money supply has a direct relationship with changes in the price level. An increase in the money supply pushes the price level upward, and a decreasing money supply pushes the price level downward. So, the Classical Theory is also called the Quantity Theory of Money.

Inflation according to Classical Theory is not related to other macro variables such as interest rates and unemployment rates. In simple terms, it states that the price level or inflation rate will change if the money in circulation does not match the amount demanded. If the money in circulation is greater than the quantity of money demanded, the price level increases, and inflation occurs.

According to the non-monetary concept, namely Structuralist Theory and Post Keynesian Theory. The structuralist theory states that inflation occurs because of an imbalance in the economy. Inflation is associated with structural factors of the economy which can only change gradually and in the long run. This theory shows that inflation is not merely a monetary phenomenon, but also a structural phenomenon. This structural theory reflects cases of inflation in developing countries, for example, crop failure, production rigidity, foreign debt, and foreign exchange rates. This can lead to price fluctuations in the domestic market.

According to the Keynesian Theory, the quantity of money is not the only factor determining the price level. An economy can experience inflation even though the quantity level of money remains constant. Keynesians state that inflation occurs when the total demand for goods and services exceeds the total supply when in a full-employment position or exceeds its potential output. According to Keynes, several factors can influence the price level, namely household consumption expenditure, investment expenditure, government spending, and taxes. Inflation occurs because people want to live outside the limits of their economic capacity, causing the effective demand of society for goods to exceed the number of goods available, as a result, it will cause an inflation gap. The Keynesian model is mainly used to explain the phenomenon of inflation in the short run.

According to Fahmi (2012), there are four categories of the inflation assessment scale, namely:

- 1) Inflation is classified as light (creeping inflation), which is an inflation rate of less than 10% per year. This inflation will have no impact on the economy.
- 2) Inflation is categorized as moderate (moderate inflation), which is an inflation rate between 10% to 30% per year. The impact of this category of inflation is quite felt for people with fixed income.
- 3) Heavy category inflation is an inflation rate between 30% to 100% per year. Where the economic sectors have begun to experience paralysis, except those controlled by the state.
- 4) Inflation is classified as very heavy (hyperinflation), is an inflation rate above 100% per year, and causes a prolonged economic crisis.

According to Nurulhuda and Kosasih (2019), Antam's gold price will increase if inflation rises. If there is an increase in the rate of inflation, when the economic turmoil is uncertain and causes inflation to rise, investors are looking for other alternatives to invest in a safer and easier type, namely gold.

2.3. Interest rate

The interest rate is the price for the use of money which is usually expressed in percent (%) for a certain period. The classical interest rate theory is a theory of demand and supply of savings, where the interest rate is a balancing factor between the demand and supply of investable funds which originates from savings. According to this theory, people's saving is a function of the interest rate. The higher the interest rate, the higher the desire of the people to save. This means that when interest rates are higher, people will be motivated to sacrifice or reduce expenditure for consumption to increase their savings. Investment is also a function of the interest rate (Fahmi, 2012). The higher the interest rate, the lower the people's desire to invest. This is because the cost of using funds (cost of capital) becomes more expensive, and conversely the lower the interest rate, the more the desire to invest will increase. In Indonesia, the nominal interest rate is known as the BI rate, the BI rate is set by the Bank of Indonesia and announced to the public. The BI rate is announced by the Board of Governors of Bank Indonesia at every monthly Board of Governors Meeting and implemented in monetary operations conducted by Bank Indonesia through liquidity management in the money market to achieve operational means of monetary policy (www.bi.go.id)

According to Suharto and MM (2013), an increase in interest rates will result in a decrease in the price of gold and vice versa. Due to the increase in interest rates, investors will prefer to invest their money in the money market or savings or deposits rather than investing in precious metals that have no interest. Nurulhuda and Kosasih (2019) show that the interest rate (BI rate) has a negative effect on the price of gold. If the interest rate increases, in the long run, this effect will be one of the factors that can reduce the price of gold.

2.4. World Oil Prices

Petroleum is a mining material that requires special management before it can be used. Crude oil is processed by distillation to produce petroleum with certain variants. Because the production process is complicated and not all countries have petroleum resources, oil is a very valuable item. Because it is very specific and becomes the foundation of almost all of the earth's population, petroleum management also involves high-level political policies (Basundoro, 2017). Classification of crude oil, namely:

1) Brent Blend

This name comes from the geographic location from which this oil is extracted. This type of oil mixture mainly comes from wells located in the northern seas of Europe. Brent Blend is considered to be a sweet crude oil with a content of 0.37% sulfur and a density of 38.06 degrees. That's because this type of oil is categorized as light crude oil which is mainly used to make gasoline. Most of the Brent Blend is traded in the United States and Mediterranean Countries.

2) West Texas Intermediate (WTI)

This type of oil has low sulfur and density. The sulfur content ranges from 0.24% and the gravity or density is 39.6 degrees. This oil is called sweet and light crude oil and is considered to have good qualities for processing into gasoline. The distillery is mainly carried out in the Gulf area and the United States.

3) Russian Export Blend

This type of oil is the reference for Russian crude and has a density of 32 degrees and a sulfur content of 1.2%. The high sulfur content makes the Russian Export Blend classified as acid oil and has a medium (medium) density. The price of this type of oil is generally determined from the two main delivery locations, namely Italy and the Netherlands.

4) Dubai Crude

As the name suggests, this oil comes from one of the largest oil-producing countries in the world, namely Dubai. The resulting oil has a low density with a gravity of 31 degrees and a sulfur content of 2%. Dubai crude is used as the reference price for oil exported in Asia.

According to Yuswandy (2013), world oil prices have a negative effect on market returns. Indirectly, the increase in world government prices will have an impact on the export and import sectors of a country.

2.5. Exchange Rate

Currency exchange rate or often referred to as exchange rate is the price of one unit of foreign currency in domestic currency or it can also be said that the price of domestic currency against foreign currency. According to Simorangkir (2004), the factors that influence the exchange rate depend on the amount of demand and the amount of supply of foreign exchange. Judging from the factors that influence it, three main factors affect the demand for foreign currency, namely:

1) Import payments.

The higher the imports of goods and services, the greater the demand for foreign currency so that the exchange rate tends to weaken. Conversely, if imports decline, the demand for foreign currency will decline, which will encourage the strengthening of the exchange rate.

2) Capital outflow.

The greater the capital outflow, the greater the demand for foreign exchange, and in the end, it will weaken the exchange rate. Capital outflows include the payment of debts of Indonesian residents (both private and government) to foreigners and placement of Indonesian residents' funds abroad.

3) Speculative activity.

The more foreign exchange speculation activities carried out by speculators, the greater the demand for foreign currency.

The supply of foreign currency is influenced by two factors, namely:

1) Receipt of export results

The greater the volume of export receipts of goods and services, the greater the amount of foreign exchange owned by a country, and ultimately the exchange rate against foreign currencies tend to strengthen or appreciate. If exports decline, the amount of foreign currency held will decrease so that the exchange rate tends to depreciate.

2) Capital inflow

The greater the capital inflow, the stronger the exchange rate tends to be. Capital inflows can be in the form of receiving foreign debt, placing short-term funds by foreigners (portfolio investment), and foreign direct investment.

2.6. Gold price

Gold as a metal is a chemical element that has the symbol Au and atomic number 79. The chemical properties of gold are inert, meaning that it does not readily react with other chemical elements. Gold will remain shiny even though it has been buried in the ground or at the bottom of the ocean for a long time. Gold is a metal that has a very high value in all cultures in the world, even in its raw form. According to Tanuwidjaja (2009), the benefits of gold in the economic sector are as a medium of trade exchange and used as a country's foreign exchange reserves because of its high and never-depreciating selling value.

2.7. Hypothesis

- H1 : The effect of inflation, interest rates, and world oil prices on the dollar exchange rate individually.
- H2 : Influence of variable inflation, interest rates, world oil prices, and dollar exchange rates on the variable price of gold individually.
- H3 : The effect of inflation, interest rates, and world oil prices on the price of gold through the dollar exchange rate.

3. Research Method

3.1. Research design

This research design uses a causality design, which in this case will analyze the relationship and influence between the variables above, which if there is a relationship, it will also be examined how far the level of influence (significance) of a variable will affect other variables. The approach used in this research is quantitative. Data analysis in this study used time series data regression with a total data of 72 observations.

3.2. Data collection technique

This study uses data collection techniques that are based on secondary data collection or in other words using documentary methods. The method of collecting documentation data in this study was carried out by collecting publication data from the BPS website, BI, and the Trade Portal.

3.3. Operational Research Variables

1) Dependent Variable

a) Gold Price (Y)

Gold price data used in this study are monthly data. The measurement of the price of gold uses the unit price in rupiah per gram. Gold price data in Indonesia is obtained from the site <https://harga-emas.org>.

b) USD Exchange Rate (Z)

The rupiah exchange rate used in this study is the rupiah exchange rate against the USD in the form of the middle transaction rate. Measurement of the rupiah exchange rate uses units of IDR / 1 USD. Rupiah exchange rate data is obtained from the website www.bi.go.id.

2) Independent Variable

a) Inflation (X_1)

The data on the inflation rate used is the inflation rate based on the Consumer Price Index (CPI) which is taken from the monthly data on the website www.bps.go.id with

a calculation in the form of a percentage (%).

b) Interest Rate (X_2)

The measurement of interest rates using the percentage unit (%) is obtained from the site www.bi.go.id.

c) World Oil Price (X_3)

The world oil price is a monetary value set to obtain 1 barrel of oil in US dollars. The data used is monthly data on the price of WTI oil in dollars per barrel.

3.4. Data analysis technique

Hypothesis testing in this study uses path analysis, path analysis is a development technique of multiple linear regression. This technique is used to test the amount of contribution (contribution) shown by the path coefficient on each path diagram of the causal relationship between variables X_1 , X_2 , and X_3 on Y and its impact on Z.

4. Findings and Discussions

Based on the results of calculations using the help of the SPSS for Windows Version 26 program, the results of the data validity test

Table 1. Coefficients^a Dependent Variable Exchange Rate

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1 (Constant)	15595,861	423,287	
Inflation	-231,594	66,538	-,450
Interest Rate	-25,917	86,828	-,038
World Oil Prices	-16,267	4,187	-,362

Source: Output SPSS v.26

Table 2. Coefficients^a Dependent Variable Gold Price

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1 (Constant)	151291,460	113326,664	
Inflation	-8198,752	4223,146	-,239
Interest Rate	-11020,422	5080,487	-,242
World Oil Prices	607,336	270,664	,203
Exchange Rate	34,284	7,091	,515

Source: Output SPSS v.26

From tables 1 and 2 above, a path diagram can be made as below:

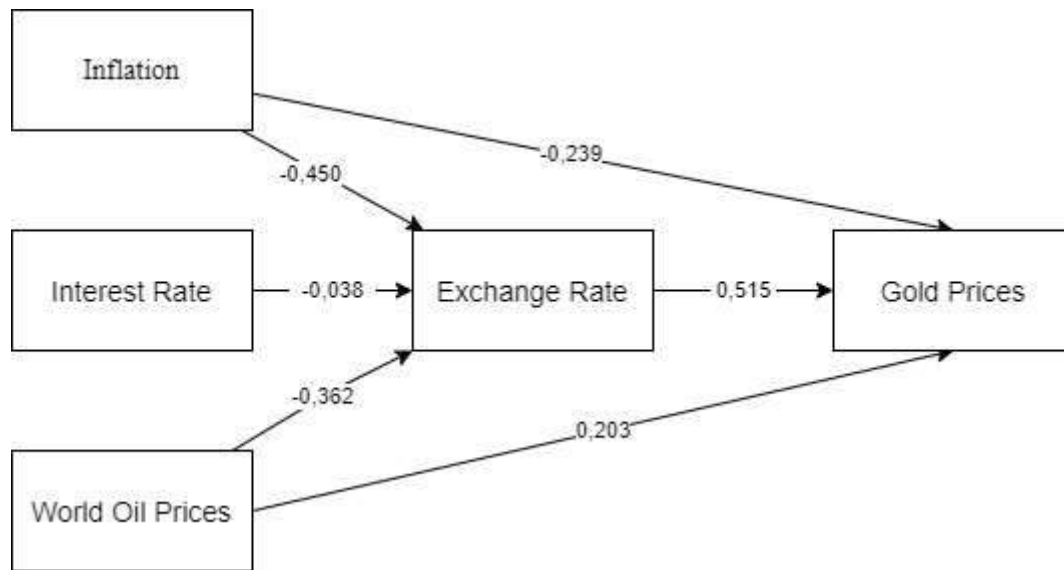


Figure 2. Model Path

Source: author

4.1. Hypothesis testing

- 1) Hypothesis 1. The Influence of Inflation, Interest Rates, and World Oil Prices on Dollar Exchange Rates individually.

- a) Inflation (X_1) to the Dollar Exchange Rate (Z)

Based on Figure 3 above, it can be seen that the Inflation variable has a direct effect of -0.450 on the Dollar Exchange Rate Variable

- b) Interest Rate (X_2) to Dollar Exchange Rate (Z)

Based on Figure 3 above, it can be seen that the Interest Rate variable has a direct effect of -0.038 on the Dollar Exchange Rate Variable

- c) World Oil Price (X_3) to Dollar Exchange Rate (Z)

Based on Figure 3 above, it can be seen that the World Oil Price variable has a direct effect of -0.362 on the Dollar Exchange Rate Variable

- 2) Hypothesis 2. The influence of the variables of inflation, interest rates, world oil prices, and the dollar exchange rate on the variable price of gold individually.

- a) Inflation (X_1) to the Price of Gold (Y)

Based on Figure 3 above, it can be seen that the Inflation variable has a direct effect of -0.239 on the Gold Price Variable

- b) Interest Rate (X_2) to Gold Price (Y)

Based on Figure 3 above, it can be seen that the Interest Rate variable has a direct effect of -0.242 on the Gold Price Variable

- c) World Oil Price (X_3) to Gold Price (Y)

Based on Figure 3 above, it can be seen that the World Oil Price variable has a direct effect of 0.203 on the Gold Price Variable

d) Dollar (Z) to the Gold Price (Y) Exchange Rate

Based on Figure 3 above, it can be seen that the Dollar Exchange Rate variable has a direct effect of 0.515 on the Gold Price Variable

3) Hypothesis 3. The Influence of Inflation, Interest Rates, and World Oil Prices on Gold Prices through the Dollar Exchange Rate.

a) Inflation (X_1) to the Gold Price (Y) through the Dollar Exchange Rate (Z)

Based on Figure 3 above, it can be calculated as follows $-0.450 \times 0.515 = -0.230$

b) Interest rate (X_2) to Gold Price (Y) through Dollar Exchange Rate (Z)

Based on Figure 3 above, it can be calculated as follows $-0.038 \times 0.515 = -0.019$

c) World Oil Price (X_3) to Gold Price (Y) through Dollar Exchange Rate (Z)

Based on Figure 3 above, it can be calculated as follows $-0.362 \times 0.515 = -0.186$

4.2. Discussion

Table 3. Direct Effect, Indirect Effect, dan Total Effect

Variable			Direct Effect	Indirect Effect	Total Effect
X_1	→	Z	-0.450	-	-0.450
X_2	→	Z	-0.038	-	-0.038
X_3	→	Z	-0.362	-	-0.362
X_1	→	Y	-0.239	$(-0.450 \times 0.515) = -0.230$	-0.469
X_2	→	Y	-0.242	$(-0.038 \times 0.515) = -0.019$	-0.261
X_3	→	Y	0.203	$(-0.362 \times 0.515) = -0.186$	0.017
Z	→	Y	0.515	-	0.515

4.2.1. Great Inflation Effect

In the hypothesis test, it was found that the effect of inflation, either directly or indirectly, resulted in a minus value, this means that there was no influence of inflation on the gold price through the dollar exchange rate, this was caused by inflation that occurred during the study period, which was included in the category. mild inflation that is below 10%. Low inflation has little effect on prices as a whole.

The results of this study support the research of Septiawan, Hidayat, & Sulasmiyati (2016) which states that inflation does not affect economic growth. The results of this study do not support the research of Nurulhuda and Kosasih (2019) which found that inflation has a significant positive effect on gold prices.

4.2.2. Great Influence of Interest Rates

As with inflation, the effect of interest rates, either directly or indirectly, shows a minus number. This shows that there is a negative relationship between interest rates that has an impact on the determination of the gold price. If interest rates increase, in the long run, this effect will be one of the factors that can reduce the price of gold. Investors will prefer to

invest their funds in savings or deposits rather than buying gold. When interest rates fall, investors will prefer investing in gold.

4.2.3. Great Influence of World Oil Prices

Indonesia is a world oil importer country since 2004. However, Indonesia is also one of the producers of crude oil and refined oil which is exported abroad, so that Indonesia will also benefit from an increase in world oil prices because this will also be followed by an increase in prices. selling ICP (Indonesian Crude Price).

The world oil price directly has a positive effect value of 0.203 on the price of gold. If there is an increase in world oil prices, then the price of gold will also increase. The increase in world oil prices will increase demand for other energy sources. Indonesia is a world oil importer, besides that, it is also a producer of crude oil and refined oil.

The world oil price through the Dollar Exchange rate a effect value 0.017 to the Gold Price. This implies that through the Dollar Exchange Rate, the Gold Price will not increase or decrease. Broadly speaking, all related aspects will improve with each other. However, in this case, the Dollar Exchange rate does not have much influence on other aspects such as oil and gold. Because in some circumstances it will be very possible for the dollar exchange rate to continue to soar up. In contrast to the oil and gold prices, although they experience an increase, there is little possibility for a decline.

5. Conclusions

Based on the result of the research and discussion the authors conclude that : (1) The magnitude of the influence of inflation, interest rates and world oil prices on the exchange rate individually shows a negative or very small effect; (2)) The magnitude of the influence of inflation, interest rates, world oil prices and the exchange rates on gold prices individually shows a negative value for inflation and interest rates means that the effect is small, while for the world oil price and the dollar exchange rate it shows positive value which means that it has a large influence on prices gold; (3) The influence of inflation, interest rates and world oil price on gold prices through the exchange rate, all variable show a negative value, this indicates that the effect is very small.

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Effects of Corporate Governance on Financial Performance of Commercial Banks in Nigeria

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Abstract

In most developing countries, several cases of collapses or failure in the banking sector were witnessed. Nigeria had witnessed several cases and collapsed in the banking sector. This study investigated the effects of corporate governance on the financial performance of commercial banks in Nigeria. The study used the survey research design. A secondary source of data was used for this research. The data were collected from financial statements of the five (5) commercial banks selected from the Nigerian Stock Exchange listing for fourteen financial years (2003 – 2017). The study utilized the panel Least Squares Regression Analysis as the method. The result indicated that board size had significant effects on financial performance (ROA) of commercial banks in Nigeria, board composition had significant effects on financial performance (ROA) of commercial banks in Nigeria, board gender diversity had significant effects on financial performance (ROA) of commercial banks in Nigeria, the audit committee has no significant effects on financial performance (ROA) of commercial banks in Nigeria, and board independence had significant effects on financial performance (ROA) of commercial banks in Nigeria. The study, therefore, concludes that the weak corporate governance structure in Nigeria contributed immensely to the recent crisis experienced in the Nigerian banking sector. The study recommended that banks develop and implement strategic training for board members and senior bank managers. Nigerian banks should appropriately adopt the international codes of corporate governance to meet the need of the Nigerian environment, among other recommendations.

Keywords: audit committee; board gender diversity; board independence; board size; board composition; financial performance.

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1. Introduction

In most developing countries, several cases of collapses or failure in the banking sector were witnessed. Nigeria had witnessed several cases and collapsed in the banking sector. Some examples include Savannah Bank Plc, Society Generale Bank Ltd, Oceanic Bank, Bank of the North, AfriBank, and Mainstream Bank. With the failure in Nigerian banks and the activities of some of the bank operators, there are concerns about the need to strengthen corporate governance in banks. This will boost public confidence and ensure efficient and effective functioning of the banking system (Soludo, 2004)

In Nigeria, corporate governance has been given the front burner status by all sectors of the

economy. This is in recognition of the failure of the critical role of corporate governance in the success or failure of companies (Ogbechie, 2006). Corporate governance is about building credibility, ensuring transparency and accountability, and maintaining an effective channel of information disclosure that will foster remarkable corporate performance. Corporate governance can therefore be said to refer to the processes and structures by which the business and affairs of institutions are directed and managed in order to improve long-term shareholders' value by enhancing corporate performance and accountability while taking into account the interest of other stakeholders (Tricker, 2009).

In recent times, many country leaders have increased concern over corporate governance due to increased reported cases of frauds, insider trading, and agency conflicts, among other corporations saga (Enobakhare, 2010). Corporate failure has been recently witnessed in both developed and developing countries with the reported cases of the East Asia crises of 1997/98, the collapse of Enron in 2001 and WorldCom in 2002 (Inyang, 2009), and the just-ended global financial crisis of 2007/8. The crises emanated from the poor governance practices from the financial sector (the mortgage market). Since the mortgage market was the mother of the crisis, this has triggered the world leaders to enact some laws, increasing banks' governance. The World Bank is currently helping many economies in undertaking banking sector reformation and restructuring. This exercise will ease, reduce or eliminate some fatal global macroeconomic troubles which have emanated from poor governance of large financial and non-financial institutions (Zaharia, Tudorescu & Aharia, 2010). Against this background, this study seeks to explore the effects of corporate governance on the financial performance of commercial banks in Nigeria. The main objective of this study is to investigate the effects of corporate governance such as board composition, the board size, board gender diversity, board audit committee, and board independence on the financial performance of commercial banks (ROA) in Nigeria.

2. Literature Review

2.1 Corporate Governance

Larcker and Tayan (2011) view corporate governance as the collection of control mechanisms that an organization adopts to prevent or dissuade potentially self-interest managers from engaging in activities detrimental to the welfare of shareholders and other stakeholders. At a minimum, the monitoring system consists of a board of directors to oversee management and an external auditor to express an opinion on the reliability of financial statements. In most cases, however, governance systems are influenced by a much broader group of constituents, including owners of the firm, creditors, labour unions, customers, suppliers, investment analysts, the media, and regulators.

Okafor (2012) posits that corporate governance connotes the processes involved in the discharge of the mandate of governance in corporate entities. These processes enable the realization of the underlying objective of corporate governance, which is to maximize shareholders' value without compromising the legitimate expectations of other stakeholders.

The concept of corporate governance explains how a company should be run by those put in charge of the company's affairs. Therefore, the centrality of the board of directors in the institutionalization of the tenets of sound corporate governance in every company cannot be denied. The prominence of the board of directors in corporate governance is evident in model definitions of corporate governance which in a nutshell regards corporate governance as the

processes and structures by which the business and affairs of an institution are directed and managed in order to improve long-term shareholder value by enhancing corporate performance and accountability while taking into account the interest of other stakeholders. (Tricker, 2009).

2.2 Financial Performance

There are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenues from operations, operating income, or cash flow from operations can be used, as well as total unit sales. Bank performance refers to how well a bank is doing, especially its profitability index and income statement. To understand how well a bank is doing, we need to start by looking at a bank's income statement, describing the sources of income and expenses that affect the bank's profitability. The bank's profitability can also be seen as a measure of its return on asset (ROA) (Emeka and Bello, 2016).

Santos and Brito (2012) identified that superior financial performance, which can be represented by profitability, growth, and market value, underpins corporate governance practice in organizations. Profitability measures a firm's past ability to generate returns, while growth demonstrates its past ability to increase its size. Increasing size, even at the same profitability level, will increase its absolute profit and cash generation. Their research shows that larger firm size can bring economies of scale and market power, leading to enhanced future profitability. On the other hand, the market value represents the external assessment and expectation of firms' future performance, which must correlate with historical profitability and growth levels while incorporating future market changes and competitive moves. The non-financial performance facets are customers satisfaction, employees' satisfaction, environmental performance, and social performance. But the study focus on the financial performance aspect (profitability).

George and Karibo (2014). defined it as the success in meeting pre-defined objectives, targets, and goals within a specified time target. Some of the aspects that must be considered when defining performance are time frame and its reference point. It is possible to differentiate between past and future performance. Moreover, it has been shown that past superior performance does not guarantee that it will remain superior in the future.

2.3 Empirical Review

Uwuigbe (2011) examined corporate governance and financial performance of banks in Nigeria. The variables used for corporate governance are board size, the proportion of non-executive directors, directors' equity interest, and the corporate governance disclosure index. The research used a regression analysis of panel data methodology was adopted while the content analysis technique, regression analysis, and t-test statistics were analyzed. It was observed from the study that a negative but significant relationship exists between board size, board composition, and the financial performance of these banks. At the same time, a positive and significant relationship was also noticed between directors' equity interest, level of governance disclosure, and performance.

Ahmad, Tariq, Hamad, and Hamad (2014) studied the link between corporate governance and a firm's financial performance using descriptive statistics. The correlation and regression analyses method were used to establish the link between the variables. The study found that board size and board composition have a positive impact on financial performance.

Sanyaolu, Adesanmi, Imeokparia, Sanyaolu, & Alimi (2017) examined the effect of corporate governance on the financial performance of listed deposit money banks in Nigeria from 2007-2016. The study used board size, audit committee, board independence, board gender diversity, and firm size as a proxy for corporate governance while financial performance was proxy with return on asset (ROA). The study randomly examined eight (8) deposit money banks listed on the Nigerian stock exchange and obtained data from the annual reports of the banks from 2007-2016. The data extracted were analyzed using pooled least square method of regression. The study found a significant negative relationship between board size, audit committee, firm size, and return on asset. However, the study found a positive and insignificant relationship between board independence and return on asset of the studied banks.

Udeh, Abiahu, and Tambou (2017) evaluated the impact of corporate governance on firms financial performance in Nigeria. Quoted Banks to determine the bank's financial performance before and after introducing the code of corporate governance in Nigeria. The main objective of this study is to evaluate board composition to determine its impact on firms financial performance. Board composition was used to measure corporate governance, while return on capital employed (ROCE) was used to operationalize financial performance. The study is anchored on the Shareholders Theory. The population of this study comprised fifteen (15) banks whose shares are quoted on the Nigeria Stock Exchange. The judgmental sampling technique was used to select seven (7) banks from the entire population of the study (which makes up the sample size). Data were obtained from a secondary source (published financial statements of the selected quoted banks) covering 2003 – 2014. The method of data analysis utilized was Ordinary Least Squares Regression Analysis. A model was formulated. The findings from this study showed that Board composition has a negative, though insignificant, impact on ROCE during the 2003 – 2008 period and during the 2009 – 2014 period.

Although there have been many studies on corporate governance in many countries worldwide, the majority of these studies have been conducted in developed nations. The methodology used in this study differs from the above-reviewed studies. Furthermore, the extent of the literature review indicates that none of the studies has investigated the effect of corporate governance in Nigeria using current data and other combinations of corporate governance mechanisms used in this study. The constitutes an important gap in the literature that necessitated this study.

3. Research Method

3.1 Research design

The study used the survey research design. The cross-sectional research technique's choice is the premise that the data used in this study was obtained at a specific point in time. The objective is to examine the effect of corporate governance on the financial performance of listed commercial banks in Nigeria.

A secondary source of data was used for this research. The data were collected from financial statements of the five (5) commercial banks selected from the Nigerian Stock Exchange listing for fourteen financial years (2003 – 2017). Namely, First Bank, Fidelity Bank, Zenith Bank, UBA, and GTB. In addition, the study utilized the panel Least Squares Regression Analysis as the method of data analysis.

3.2 Population of the study

The study population consists of all commercial banks whose shares are quoted on the Nigeria Stock Exchange as of December 31, 2017 (which are 15 out of the 21 banks operating in the country). Therefore, the population size is 15 banks. The data for this study is limited to the financial statement of listed banks whose annual reports are available on the Nigeria Stock Exchange (NSE) under the period of study (2003 – 2017). These periods are chosen base on the availability of data.

3.3 Sample and sampling technique

This study employed a purposive or judgmental sampling technique to select five (5) commercial banks out of twenty-one (21) banks operating currently in Nigeria. Namely, First Bank, Fidelity Bank, Zenith Bank, UBA, and GTB. This selection is based only on banks whose shares are quoted on the Nigeria Stock Exchange (NSE) floor and whose financial statements are available. The technique is well suited for determining the sample as it provides an equal probability of selection and minimizes selection bias.

3.4 Model specification

To achieve the study's objective, the mathematical equation has been developed to investigate the effect of corporate governance on the financial performance of commercial banks in Nigeria. Hence, the corporate governance variables include; board size, board gender diversity, board independence, and audit committee, while return on asset (ROA) was used to measure the financial performance of the listed commercial banks. The data used for this study were obtained from the secondary source derived from the annual reports of the sampled banks listed on the Nigerian stock exchange (NSE) for fourteen (14) years from 2003-2017.

The following model was used to examine the relationship between the corporate governance variables on the financial performance of the firm;

$$\text{PERF} = \text{ROA} \dots \dots \dots (1)$$

$$\text{PERF} = f(\text{BSIZE}, \text{ACOM}, \text{BIND}, \text{BCOMP}, \text{BGD}) \dots \dots \dots (2)$$

$$\text{ROA} = \beta_0 + \beta_1 \text{BSIZE}_{it} + \beta_2 \text{ACOM}_{it} + \beta_3 \text{BIND}_{it} + \beta_4 \text{BCOMP}_{it} + \beta_5 \text{BGD}_{it} + \mu_{it} \dots \dots \dots (3)$$

Where:

PERF = Performance, BSIZE = Board Size, ACOM = Audit Committee, BGD = Board Gender Diversity, FSIZE = Firm Size, BIND = Board Independence, μ = Stochastic error term/ random error term. i = Cross-section dimension and ranges from 1 to n number of period. t = Time-series dimension and ranges from 1 to t number of banks. $\beta_1, \beta_2, \beta_3, \beta_4$, and β_5 are the parameters to be estimated. β_0 = Intercept.

Apriori expectation

All explanatory variables are expected to have a positive impact on corporate governance. This can further be written as follows: $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 > 0$.

4. Findings and Discussions

4.1 Pre-test: unit root test

To evaluate stationarity or non-stationarity of variables, Lin, Levin, and Chu (LLC) tests were used. The results of the tests for all the variables in the model are shown in Table 1.

Table 1. LLC Unit Root Test

Variables	Statistics	P-Value	Order of Integration
ROA	-3.14560	0.0008	1(1)
BSIZE	-2.49304	0.0063	1(1)
BCOMP	-5.62508	0.0000	1(1)
BGD	-3.23655	0.0006	1(0)
ACOM	-2.08078	0.0187	1(0)
BIND	-3.78915	0.0001	1(1)

Source: Authors Computation, 2020 (Eview-10.0)

Variables BGD and ACOM, based on LLC Tests, were found the stationary level I (0), but variables ROA, BIND, BCOMP, and BSIZE are not at the stationary level. However, the variable ROA, BIND, BCOMP, and BSIZE were found stationary at first difference 1(1)

Co-integration Estimate

Table-2. Pedroni Residual Cointegration Test

Alternative hypothesis: common A.R. coefficient. (within-dimension)				
	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	1.281813	0.1000	-1.281887	0.9001
Panel rho-Statistic	0.308766	0.6213	1.407418	0.9203
Panel PP-Statistic	-4.415029	0.0000	-4.130378	0.0000
Panel ADF-Statistic	2.442388	0.9927	0.059044	0.5235

Alternative hypothesis: individual A.R. coefficient. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	1.750011	0.9599
Group PP-Statistic	-5.140160	0.0000
Group ADF-Statistic	1.374678	0.9154

Source: Authors Computation, 2020 (Eview-10.0)

As can be seen, according to Panel Statistic P.P.- and Panel ADF-Statistic (within-dimension Statistic) and Group P.P. - Statistic (between-dimension Statistic) test H0 hypothesis suggesting lack of cointegration is rejected, and cointegration or the existence of long-term equilibrium relationship between the variables of the model is accepted. Thus, the model shows a long-run equilibrium relationship among the six variables used in the analysis. It shows that the variables move together in the long run.

Table 3. Panel Least-Squares Error Correction Model Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BSIZE)	-0.108044	0.204546	-0.528211	0.5992
D(BCOMP)	-0.529233	0.273821	-1.932771	0.0577
D(BGD)	0.125467	0.270188	0.464368	0.6440
D(ACOM)	0.487723	0.335757	1.452608	0.1512
D(BIND)	-0.045544	0.061448	-0.741174	0.4613
ECM(-1)	-0.418478	0.120854	-3.462687	0.0010

Source: Authors Computation, 2020 (Eview-10.0)

The ECM (-1) is highly significant. The coefficient of ECM -0.418478 suggests mild adjustment. Nearly 42 percent of the disequilibrium of the previous year's shock adjusts back to the long-run equilibrium in the current year. The results showed that the error correction term ECM(-1) is correctly specified. It satisfies a-priori expectations and statistically significant at the five percent level. The negative sign confirms our earlier conclusion that ROA and its regressors (variables of corporate governance) are indeed cointegrated, and the statistical significance of the error correction term implies disequilibrium in the long run.

4.2 Estimated Regression Model

Table 4. Results of Panel EGLS (Cross-Section Weights) The Model Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.661554	1.315687	5.063174	0.0000
BSIZE	0.080806	0.070482	2.146475	0.0056
BCOMP	-0.134871	0.107905	-2.249904	0.0156
ACOM	-0.142696	0.101803	-0.401688	0.2655
BGD	-0.034225	0.113406	-3.301787	0.0037
BIND	-0.055743	0.017041	-3.271200	0.0017
R-squared	0.626293	Mean dependent var	6.976512	
Adjusted R-squared	0.277473	S.D. dependent var	5.751320	
S.E. of regression	3.457423	Sum squared resid	824.8105	
F-statistic	6.683675	Durbin-Watson stat	1.955373	
Prob(F-statistic)	0.000039			

Source: Authors Computation, 2020 (Eview-10.0)

$$ROA = \beta_0 + \beta_1 BSIZE_t + \beta_2 ACOM_t + \beta_3 BIND_t + \beta_4 BCOMP_t + \beta_5 BGD_t + \mu_t$$

$$ROA = 6.66 + 0.08 BSIZE_t - 0.14 ACOM_t - 0.056 BIND_t + 0.13 BCOMP_t - 0.034 BGD_t$$

The F-statistic examines the overall significance of a regression model, including all the K variables. Therefore, by examining the overall fit and significance of the model, it could be observed that the model has a better fit. That is, the probability F-statistic value of 0.000039 is less than 0.05. The coefficient of determination (R-square), used to measure the goodness of fit of the estimated model, indicates that the model is reasonably fit in prediction. That is, 62.62 percent change in ROA was due to BSIZE, BCOMP, ACOM, BGD, and BIND collectively, while the error term captured 37.38 percent unaccounted variations. It showed that BSIZE, BCOMP, ACOM, BGD, and BIND had a strong significant impact on the financial performance of commercial banks of the Nigerian economy.

The result further shows a negative and significant relationship between BCOMP, ACOM, BGD, and BIND on return on asset, which implies that a unit increase in BCOMP, ACOM, BGD, and BIND will lead to a decrease in the return on asset of the sampled banks. The result also shows a positive and insignificant relationship between BSIZE and the return on asset of the sampled firms. This indicates that a unit increase in BSIZE will lead to an insignificant difference in the financial performance of the sampled banks.

Durbin Watson's (D.W.) statistic of 1.956 (approximately 2). It is indicating that there is no autocorrelation among the variables. It shows an unbiased estimate, and the model could be used for policy decisions.

4.3 Post- Estimation Diagnostics Tests

Serial L.M. test: More so, the regression model is free of serial correlation going by the result of the serial L.M. test.

Table 5. Serial L.M. test:

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	5.562572	10	0.8506
Pesaran scaled LM	-0.992239		0.3211
Pesaran CD	-0.759441		0.4476

Source: Authors Computation, 2020 (Eview-10.0)

From table 5. the P-value of Breusch-Pagan LM, Pesaran scaled L.M., and Pesaran CD were 0.8506, 0.3211, and 0.4476, and were greater than 0.05; thus, we accept the null hypothesis that there is no serial correlation among the variables used in the model.

Normal Distribution Test

It is a test for the normality distribution assumption of the error term. The result shows the properties of the residuals. Significantly, the Jarque-Bera statistics test whether the residual from our equation violates the normality assumption of the OLS technique.

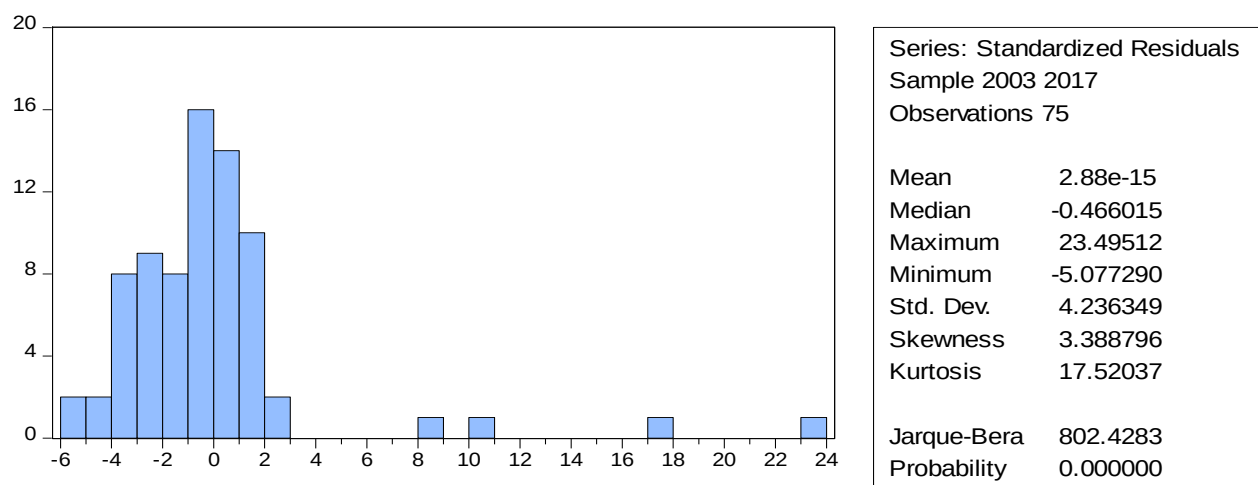


Figure 1. Source: Normal Distribution Test

Authors Computation, 2020 (Eview-10.0)

In figure 1, the hypothesis of non-normality is rejected since the p-value of the Jarque-Berra statistics is less than 0.05 (assuming a 5% level of significance). Therefore, the residuals are normally distributed.

4.4 Discussion of Findings

From our research objectives above and our results, the parameter estimate of the board size (BSIZE) showed that it relates positively with the financial performance (ROA) of commercial banks in Nigeria and was found statistically significant. The obtained result is similar to Ahmad, Tariq, Hamad, and Hamad (2014), which shows that Board Size has a positive and significant impact on the financial performance of firms. In addition, Kyereboah-Coleman and Biekpe (2006) concluded with a positive relationship between a firm's

performance and board size. They argued that a large board size brings in more management skills and professionalism, making it very difficult for the CEO to manipulate the board.

The results above show that board compositions have a negative but significant impact on financial performance return on assets (ROA). These findings agreed with Udeh, Abiahu, and Tambou's (2017) findings, which show that board compositions had a negative relationship with the financial performance of quoted banks.

Audit committee size (ACOM) had a negative and insignificant relationship with the financial performance of quoted banks .this was in line with the works of Sanyaolu, Adesanmi, Imeokparia, Sanyaolu, & Alimi (2017)

Board independence (BIND) and board gender diversity (BGB) are negatively but significantly related to the financial performance of quoted banks .this was in line with the works of Sanyaolu, Adesanmi, Imeokparia, Sanyaolu, & Alimi (2017).

5. Conclusion

This study focused on finding out the triggers of financial performance in the banking sector, of which Corporate Governance proved to be an essential issue for many commercial banks. It has been established in selected literature that corporate governance affects stakeholders and the banks as a whole, corporate governance affects the potential or ability of a bank to reach its market share both domestically and globally, corporate governance also determines the banks' ability to fulfil its social objectives with its clientele and society at large. This study has also established that that corporate governance practices have measurable effects on banks' operational performances. The study, therefore, concludes that the weak corporate governance structure in Nigeria contributed immensely to the recent crisis experienced in the Nigerian banking sector.

Certain limitations were encountered in the course of this study. Key among these include Unavailability of Data, time and funds limitation, a variable used in the model, the model used and the methods of data analysis, and the sources of Data used.

This study empirically investigated the effect of corporate governance on the return on assets of banks in Nigeria as a proxy for financial performance. Other proxies for financial performance, such as return on equity (ROE), can also be used in further studies. The limitations of the study have prompted the researcher to recommend the following areas for further studies. Literature review indicates that most studies have been carried out on huge firms or banks. Further research should be devoted to small and medium-scale enterprises in Nigeria and Africa as a whole. This is because SMEs account for over 80% of the total number of enterprises found in this region and had several corporate governance issues. Further research is also required on non-financial aspects of firms and banks. A study comparing financial and non-financial aspects of firms or banks may most likely elicit variation in the relationship between corporate governance and the value of a firm.

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Status of Professional Skills in MBA Graduates, Its Challenges, and Way forward in Kathmandu Valley: Evidence from Professional Skill Index

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Abstract

Today's MBA courses are continuous preparation-based teaching-learning practice to meet the requirements that industries expect from MBA graduates and further enhance their skills and knowledge that would aid them to fit in the job market. Thus, this study tries to assess the status of professional skills in MBA graduates, its challenges, and the way forward with the help of a professional skill index. Based on descriptive analysis, this study is conducted among 280 employers who employ MBA graduates, and a structured questionnaire was applied to collect information. The purposive sampling method was used to select the samples of 280. The study is conducted in Kathmandu valley as many MBA colleges and banks, finance companies, insurance companies, industries, and many private companies are located in Kathmandu valley. So, the graduates also choose Kathmandu valley in the maximum number to pursue their further career. The study's findings revealed that professional skills are generally looked up into hard skills and soft skills, and 100% of organizations look for professional skills possessed by candidates while hiring them. However, they give 100% attention to soft skills possessed by MBA graduates and 99.2% attention to hard skills possessed. In soft skills, an organization thinks communication skills are must by graduates, whereas they prioritize typing skills hard skill. Therefore, this study concludes that MBA students and colleges should focus on enhancing graduates' communication skills. Likewise, being in today's computerized business world typing skill is a must for graduates. Finally, MBA graduates must develop professional attributes among themselves to fit in today's job market.

Keywords: MBA graduates, professional skills, hard skills, soft skills, organizations, hiring process, Kathmandu valley.

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1. Introduction

People's desire for a higher education standard in the world is proliferating (Hazelkorn, 2015). Every year higher education institutions are added, and graduates are increasingly admitted. The increasing number of graduates is devoted to the quality and value of higher education and higher education institutions give the capacity for employment of graduates or self-initiatives. There are thousands of MBA graduates yearly (Mabey & Thomson, 2000). Given the sparse analysis of leadership capacity in the MBA program, it is not shocking that the MBA students do not have the same abilities (Ghannadian, 2013; Devkota et al., 2021). This lack of soft skills has financial consequences for employers. For example, a soft skills deficit

in the UK (Hurrell, 2016) could have a damaging effect on the UK economy (Clarke, 2016; Beenen, Pichler, & Davoudpour, 2018).

Training is defined by learning experience as a planned process to change attitudes, knowledge, or skills to achieve efficient performance in various activities. Further, according to Sabir et al. (2019), learning is defined as a change in an employee's permanent behaviour due to direct and indirect work experience. Therefore, soft-talents training can be construed as a systematic process through which soft talents in an individual are developed. Soft skills cannot be taught but can only be developed by training and human capital management, and skills management (Choudary & Ponnuru, 2015). With the recent move from the job market to current role-and-trust and career management skills, the higher education research & development skills needed to handle the workforce proactively and successfully manage the career-building process based on lifelong learning and adaptability. Nevertheless, the capacity for student career development in universities (Watts, 2017) remains unrealized mainly, and many universities continue to remain unfulfilled in this regard.

It is relatively easy to train new graduates when they acquire the necessary qualifications at college. On the other hand, even if they are so necessary for working lives, soft qualifications, generally known as "manager skills," are not quickly learned. Usually, these abilities can be classified into three major categories: personal qualities, leadership capacity and problem management, and decision-making (Shakir, 2009). In terms of personal and professional development, diplomas, directly and indirectly, impact their knowledge and skills gained from the MBA program. The progress of technology means that the people participate in different questions and issues on the international market and the company's business success (Buenviaje et al., 2016). A person must have transferable skills to make them 'employable.' In addition to sound technical understanding and experience, managers also specify the number of skills from an employee they like (Paudel et al., 2018). It is like teamwork, problem-solving, self-management, business knowledge, post-coordination literature and numeracy, ICT knowledge, the ability to use one's initiative, and follow instructions and leadership skills where necessary (Gowsalya & Kumar, 2015).

Most business people and companies in Nepal think that an individual should receive an MBA to advance his career. Nevertheless, commercial schools are using traditional instruments like case studies, workshops, documentaries, and talks (Devkota et al., 2021). However, theories are not usually practiced in real life. MBA students in Nepal know a lot but cannot put it into practice. Therefore, the study in the field of employee's perception towards the need for professional skills in MBA graduates is required in the Nepalese context. It is the first study in this field in the context of Nepal. It covers the set of professional skills needed for the MBA graduates necessary in the corporate world. These skills consist of communication skills, leadership skills, problem-solving skills, risk-taking skills, decision-making skills, and so on. This study will be beneficial for both employers and MBA graduates as it helps the employer locate the MBA graduates in the Kathmandu Valley and know the level of performance. Similarly, MBA graduates will also know what skills they need to get a job in the market.

Further, this study is organized as: the second section covers the research method followed by the literature review in the third section and the result and discussion in the fourth section. Finally, section five concludes the study.

2. Literature Review

This section includes concept of professional skills, employers' perception towards the need of professional skills in MBA graduates in Nepal, current status, and importance in organizations.

2.1. Concept of Professional Skills

Various researches have been done on the professional skills needed in the students before going to the market. We all know how importance is this for the students as well as for other people. However various researchers have given various definitions and opinions towards it. Professional characteristics are included in the professional values and attitude. It has enlisted various skills which are very much important in professional life (Paudel et al., 2018). They are communication skill, problem solving skill, decision making skill, team work skill, etc. (Wessels, 2005). Further, professional skills are those which help in proper utilization of resources and increasing personal as well as organizational capability (Bhatt & Grover, 2005). Moreover, professional skill is a set of competency knowledge and capabilities that people have and utilize in their professional life (Walker et al., 2009). In addition, professional skill are those skills which are acquired to enhance the knowledge and capabilities so that people can improve their performance, increase confidence, have greater understanding of their task and responsibility (Wabule, 2016). Furthermore, professional skills convert people from novice to expert as they go through different stages (Walker et al., 2009). Here, it can be concluded that professional skills are the set of skills which help to increase your capabilities and knowledge and thus improve performance by optimum utilization of resources and brings benefits for individual as well as organization.

2.2. Development of Professional Skills in Students

In the development of professional skills, the method LBD (Leadership by Design) and the KJ system (sometimes referred to as affinity diagrams) were modified to an iterative approach. This LBD technique uses scientific papers to define and deliver trustworthy findings by identifying new links between existing knowledges (Mahasneh & Thabet, 2016). Moreover, a Japanese technique that organizes a wide range of ideas or themes into a connective structure, using cards / sticky notes is an KJ process that makes decision and solves problems (Mahasneh & Thabet, 2016). The KJ technique was updated to be used in the LDB (Logical Database) process as a tool.

2.3. Types of Professional skills

Hard skills generally require specific processes or realistic activities in the working environment that are ideally easy to observe, calculate and evaluate. On the other hand, even though soft skills are very important in working life, which are usually called people's skills, are not easily taught. Such qualities can usually be classified into three main categories: personal attributes, leadership talents, and knowledge for problem solving and decision-making. In this sense, hard and soft skills are complementary (Shakir, 2009). Regarding types of professional skills, 'communication skill' is a people's need, which is expressed by keeping good eye contact, showing a different vocabulary and tailoring the language to your audience, listening efficiently, presenting ideas, communicating well and concisely, and working well within a community (Aliu & Aigbavboa, 2019). In the similar manner, 'critical thinking and problem-solving skill' can be defined as the experience that students should be able to recognize it to apply expertise intellectually, creatively, innovatively, and analytically. Under this dimension, the ability of the graduates to recognize and evaluate complex situations and

to make justifiable decisions is important. Similarly, 'team work skill' is the attributes in collaboration that include the ability to work, communicate and achieve a common objective for people from different backgrounds. Occasionally, the role of a member and community participant is required to be shared by students (Shakir, 2009). Further, in the context of 'leadership skill', Seetha (2014) argues that graduates also need to be able to understand and share the position of a leader and group member. Furthermore, Hairi et al. (2011) contends that 'entrepreneurship skill' is the capacity to recognize organizational behaviours and to design, build and analyze business plans leading inevitably to self-employment.

2.4. Skills Seeking by the Organizations

Substantial consideration is given to the relevant work experience and qualifications of MBA students in the job selection process. Investment in advanced education is therefore important to adapt the competences to the need for jobs (Brunner et al., 2018). New pupils must be fully-equipped with knowledge and expertise with a growing number of employees, and great emphasis should be placed on their educational accomplishments in their respective fields (Fernando et al., 2016). In this sense, students should focus actively on improving personal skills like ethical behaviour, self-motivation, teamwork, and communication skills (Suleman & Laranjeiro, 2018). Further, knowledge and ideals, synonymity with jobs, have to continuously be improved as they are of tremendous benefit for employment (Ruge & McCormack, 2017). The transition by the students of the MBA program of learned knowledge and abilities to their respective jobs is equated to an increased engagement of continuous learning and work-related skills, which are important factors of productivity and efficiency. We become an important part of the knowledge-based society that leads to the social well-being of their workers and people (Buenviaje et al., 2016).

3. Method

3.1. Study Area

Province 3, Nepal was taken as the area of the study. Most big organizations, business houses, and financial institutions are located in Kathmandu Valley. Kathmandu valley is enriched with 28 commercial banks, nine development banks, 18 finance companies, eight microfinance companies, Balaju industrial and Patan Industrial estates, and many private companies. In addition, 36 MBA colleges affiliated with different universities are also located in Kathmandu valley. Maharjan et al. (2020) have asserted that two types of MBA studies are being offered in Kathmandu valley, first, they are affiliated with domestic universities and others are affiliated with international universities. Therefore, Kathmandu valley is the principal city where most MBA graduates look for a job after completing their studies, so Kathmandu valley is chosen as a study area.

3.2. Population and Sample

Employers or organizations hiring MBA graduates from different Kathmandu valley colleges were considered the population of the study. However, the following formula was used to determine the sample size for the study as $n_0 = (z^2 PQ)/l^2$ (Cochran et al., 2004).

Where, n_0 = sample size required for study, Standard tabulated value for 5% level of significance (z) = 1.96, p = Prevalence of need of professional skills for MBA graduates of 50 % = 0.5, Allowable error that can be tolerated (e) = 5%. However, if the allowable error that can be tolerated (e) = 6%. In calculation, $n = (1.96)^2 \times 0.5 \times 0.5 / (0.06)^2$ that results total

266.78 respondents. We also added 6% non-response error 6%, i.e., $266.78 \times 6/100$ (i.e., 13.34). Thus, adding all these results, the representative sample should be $(266.78 + 13.34) = 280.12 (\approx 280)$. Therefore, 280 was considered a sample for this study and for the selection of this sample, the purposive sampling method, was used.

3.3. Study Design and Data Collection Instruments

A descriptive research design is used for the study. Both primary and secondary data were collected and used to make the study more effective. Primary data were collected with the help of a structured questionnaire, whereas secondary data were collected from different journals, articles, books, websites, which aided in literature generation.

4. Result and Discussion

4.1. Socio-Demographic Analysis

. In this study, the study covers the response of 53% female respondents and 47% male respondents. Likewise, 62.5% of respondents were between the ages of 25-35 years, i.e., youths and those at the peak of seeking job. Similarly, the age of the respondents representing below 25, 35-45, and above 45 is 15%, 62.5%, and 1.4%, respectively.

Education level is most important in the organization, especially, for people seeking a good company/organization for job. The study found that 55.3% of respondents had an intermediate level of education, 40.35% of interviewees had a bachelor level of education. In contrast, only 4.28% had Master's and above level of education. Regarding the organization type, most (55.71%) of the respondents are from the bank, and financial institution, followed by the service sector (38.57%), others (2.85%), school-colleges (1.78%), and only 0.35% represents insurance companies. As many MBA students are attracted to banking than other sectors, the banking sector at maximum level can be relevant for the study. In such circumstances, a faculty cannot achieve its college objectives for students' intellectual and personal development, it needs to work together with other people who work with students where students spend most of their time (Banta & Kuh, 1998).

4.2. Requirement of Professional Skills in MBA Graduates

The study revealed that 99% of respondents hire MBA graduates in their organization, which also shows the scope of MBA graduates in different organizations. In this context, Benjamin and O'reilly (2011) have argued that MBA programs typically focus on the skills required by general managers but are unaware of those required by their graduates to succeed in their early careers. Thus, it can be said that organizations are ready and motivated to hire MBA graduates if they meet the requirements and competencies. In this sense, as the businesses are proliferating, employers are searching for employees with multiple skills and knowledge, they seek knowledge and skills in the employee so that they can grow business to the next level and improve the employability and capability of the business seniors (Robles, 2012). Moreover, MBA offers value to both MBA graduates and the organizations that employ them. This value is based mainly on the knowledge and skills learned during the duration of the MBA program (Gupta & Bennett, 2014). Despite these facts, one study also finds out that female undergraduates are good at developing mentality; self-awareness; ability to overcome worst circumstances; the ability to maintain equal energy in any work; communication skills; and teamwork at any given time (Ravindran & Bandara, 2015). Now, among 280 respondents, 86.42% of respondents told that the number of MBA graduates in their organization is

between 0- 100; 7.5% of respondents stated the number is between 101 -500; 3.92% of respondents told there are around 501- 1000 MBA graduates in their organization; and remaining told that there are more than 1000 MBA graduates in their organization, which shows that organization are employing the vast number of MBA graduates, depending on the nature and size of their business and organization. Moreover, Pfeffer and Fong (2002) point out that management skills can be regarded as a core component of economic development. The study further showed that 80% of respondents hire MBA graduates as per need; 16% of the respondents hire MBA Graduates yearly; 2% of the respondents hire MBA Graduates semi-annually, etc.

4.3. Professional Skills Index

The study conducted on 100% of respondents exhibited that 100% of organizations seek professional skills in their candidates. Other organizations generally categorize professional skills into complex skills and soft skills. The study shows that hard and soft skills are must for all the candidates for their job. As per the surveyed organizations, 100% of soft skills are required while selecting the candidates for the job, whereas 99.2% of respondents stated hard skills are important while selecting candidates for the job. In this regard, although employers want incredibly soft skilled workforce, new workers must be hard-skilled and soft skill is mutually complementary in this regard (Robles, 2012).

Furthermore, skill-based models, knowledge, and skills have been built and are based upon three main types of skills: (1) dynamic problem-solving ability, (2) constructing abilities and (3) social judgement skills. The models recognize that knowledge and ability are dependent on the results (Mumford et al., 2017). Now, interpersonal skills, problem-solving, leadership, creativity, emotional maturity, entrepreneurial spirit, team building, professional competence, work ethics, and previous employment are among the essential employability skills frequently described in the literature (Crosling and Ward, 2002; Friga et al., 2003; Pinard and Allio, 2005; Jackson, 2010).

Table 1. Professional Skills Index

Skills	Yes	%	No	%
<i>Soft Skills</i>				
Communication Skill	276	98	4	2
Teamwork Skill	247	82.21	33	11.79
Problem Solving Skill	220	78.57	60	21.43
Decision Making Skill	168	60	112	40
Critical Analysis Skill	129	46	151	54
Adaptability Skill	130	46.42	150	53.48
Stress Management Skill	140	50	140	50
Time Management Skill	176	63	104	37
Interpersonal Skill	175	62.86	105	37.14
Leadership Skill	146	52	134	48
Conflict Resolution Skill	113	40.3	167	59.7

<i>Hard Skills</i>				
Computer Skill	177	63.2	103	36.8
Project Management Skill	132	47	148	53
Typing Skill	183	65.36	97	34.64
Writing Skill	97	34.64	183	65.36
Foreign Language Skill	36	13	244	87
Presentation Skill	94	33.6	186	66.4
Coding Skill	22	8	258	92
Book Keeping Skill	91	32.5	189	67.5

Table 1 indicates the essential soft and hard skills sought by the organization while hiring any MBA graduates. The study uncovers that MBA graduates must develop numerous soft skills to be competitive in the job market. Communication skills are of prime importance as 98% of organizations look for their communication skills while hiring candidates. On the other hand, though conflict management and conflict resolution skills requirements are emerging as hot cake in the organization, only 40.3% of organizations look for this skill. Also, it is said that MBA graduates must make the critical analysis as the job market would want them to perform their tasks critically. In such circumstances, multiple findings demonstrate that improving the employability skills of recent MBA graduates will aid in closing the skill gap existing in the industry and academia (Hughes et al., 2011; Taylor and Hooley, 2014; Abrahamson et al., 2016; Agarwal et al., 2019). However, on the contrary, our study reveals that 54% of organizations do not seek critical analysis skills in MBA graduates.

Similarly, soft skills and hard skills are equally essential to be maintained by MBA graduates. The study shows that most organizations (65.36%) look for hard skills in MBA graduates. Most of the works are based on computers and laptops, and as MBA graduates generally tend to perform officer level task organization, they make sure that they possess good typing skills. Likewise, the least of respondents (8%) wanting complex skill for MBA graduates is a coding skill, i.e. as only a specific job would require such skill, it is not necessary for every MBA graduate. Despite a long tradition of efforts to develop classes and services that concentrate on professional skills, business people, instructors, and re-seekers continue to criticize business programming for lack of relevance to fundamental issues of industry and organization (Bennis & O'Toole, 2005; Pfeffer & Fong, 2002). One promising solution to the problem is to focus on a small number of fundamental skills (Butler et al., 2008).

Moreover, 87% of organizations do not think knowing a different foreign language is required for MBA graduates as Nepalese organizations use Nepali and English languages. Sound knowledge of these two languages would be enough to get into any job. Similarly, presentation skills are thought to be important skills for MBA graduates. However, 66.4% of organizations stated that they do not look for presentation skills while hiring MBA graduates. In this scenario, Bhatnagar (2020) has asserted that several factors like weak links between industry and academia, low impact research output, and a lack of freedom for MBA faculty members to introduce innovative courses cause the skill gap in MBA.

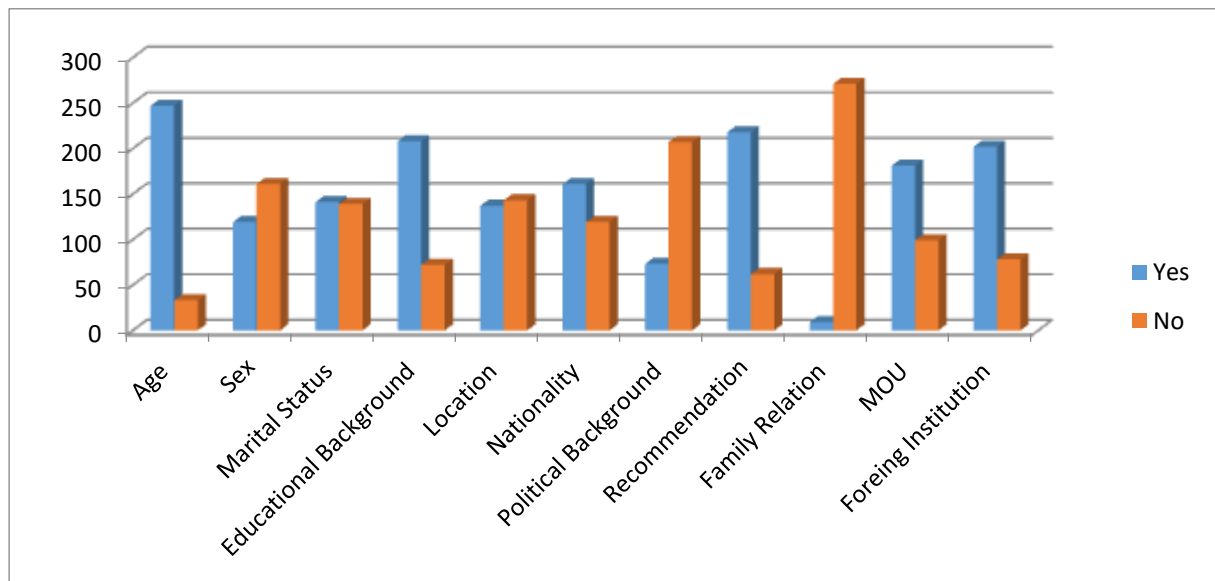


Figure 1: Link Variables and Personal Biography

4.4. Personal Biography

Figure 1 reveals that 88.21% of organizations consider the age factor while hiring MBA graduates. For the importance of age in handling the companies, Hill (2004) found that the average ages of 10 branch managers and nine sales managers were 36 and 30. Likewise, on a positive note, 57.5% of respondents state they do not differ between genders while selecting candidates, which means a better opportunity is provided to the potential candidates. Similarly, professional skills are analyzed by 100% of organizations while selecting the best candidates. Similarly, 72.1% of organizations revealed that they would opt for MBA graduates with foreign-affiliated institutions. 77.8% of them hire graduates based on recommendation, whereas 74.28% of respondents think educational background plays an important role while selecting candidates. Also, 96.8% of them stated that family relations are rarely considered while hiring MBA graduates. 64.64% of organizations state that the MoU (Memorandum of Understanding) they signed with colleges and institutions is also considered up to a certain extent while hiring MBA graduates.

4.5. Challenged Faced During Hiring Process

According to this study, 89% of respondents stated that they do not face any challenges while hiring MBA graduates, whereas 11% of organizations stated they face problems up to a certain extent. Most of the common challenges the organization faces in the hiring process are incompetent candidates, challenging to decide whom to select from a large number of applicants. Further, it takes a long process to screen data and select among a large number of applicants. Regarding such circumstances, Chia and Holt (2008) argue that business schools have seemed to be generating MBA graduates who are unprepared for the challenges of the real world.

88% of respondents stated that problems are being faced at a moderate level followed by a low level, i.e., 9% and 3% faced challenges at a superficial level. Also, 66% of respondents revealed a skills gap between skills MBA graduates possess and the skills that organizations want. Also, 78% of organizations stated that it is costly for an organization to provide training

to MBA graduates after hiring them.. In this sense, taking into account about what needs to learn or want to learn and how and who learn, adult learning is affected by demography, globalization, and technology (Jowett & Stead, 1994).

4.6. Managerial Suggestions

In this section, respondents responded about solving the problems they have faced and how to get the desired candidate for organizations. The managerial solutions provided by the respondents are: properly checking the skills and qualifications of the applicant and choosing the best of them (20%); providing attractive benefits (55%); choosing the right recruitment company (30%); using an Applicant Tracking System (30%); implementing and using employee referral programs (10%); connecting colleges and university (25%); better recruitment process and recruitment tool (65%); creating good images of organization, hiring team should be adequately trained (45%); involving managers and other staff during the selection process and in other decision, best use of social media organization site and other recruitment tools. 23.2% of respondents think a better recruitment process would help to solve such a problem. Likewise, only 3.57% think applying an employee referral process would aid to solve such challenges. In this regard, McCall (2010) stated that when emerging managers struggle early on or fail to know the correct lessons from their experiences, they are less likely to lay the groundwork necessary to execute and learn from even more demanding experiences later in their careers. In such conditions, learning theory has been introduced to the principle of multiple intelligences. Learning is seen as the relationship of dozens of different functional fields, each with its strengths and weaknesses in a particular human learner (Robles, 2012). Moreover, the most frequently considered by the employers is a clear need for social skills that demonstrates the preparation and desire to develop meaningful connections with an education that employers have regularly stated their wish to share information and create students for opportunities (Bedwell et al., 2014).

The majority of the organizations think HR should be liable to solve such problems. At the same time, others departments and senior officers like managers should take responsibility for such problems. Likewise, respondents also suggested that if the organization focuses on proper selection, improvement in the hiring process, choosing media partners for the advertisement of recruitment, and using social media as a platform for recruitment, it would be better to improve its hiring process.

5. Conclusion

This paper aims to assess the status of professional skills in MBA graduates, its challenges, and the way forward. The acquired skills and knowledge of MBA graduates are reflected in their professional life and search for a job. Therefore, providing MBA graduates with such skills that enhance their productivity and efficiency later when they enter the corporate world should be a core responsibility that MBA colleges should take. In contrast, students should equally support them. Only then the process can be fruitful. As this study tried to analyze the professional requirement that the organization expects from MBA graduates, no organization would entertain graduates who would not possess professional skills, i.e., hard skills and soft skills. However, organizations are found to be focusing more on soft skills that graduates possess. As communication skills and typing skills are the top skills generally seen by the organization during the hiring process, MBA colleges should try to enhance the communication skills of their students along with their typing skills. Also, some organizations

are found to have challenges at a moderate level during the hiring process, including not matching skills and not getting expected answers from the candidates. Thus, the organization should screen the applicants beforehand and only shortlist graduates match the skills that the organization require for the vacant post. Likewise, graduates should also polish themselves before going to the interview to know job requirements and descriptions and prepare themselves accordingly. Though this study tried to analyze skills required by MBA graduates, being the first of this kind of study in the Nepalese context, this study might have missed some crucial aspects that could be covered in future study. Likewise, as the study only covers Kathmandu valley, further study can incorporate other significant areas of Nepal for a more effective outcome. Also, this study was limited by 280 respondents due to various constraints, which can be increased further to make the study robust. Finally, this study only includes descriptive analysis, so future studies can be done incorporating empirical parts, representing the output more effectively to concerned parties.

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Measuring the Relationship between Crude Oil Price, Stock Market and Gold Price with Reference India

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Abstract

India is one among the highly potential market for the oil consumption. When we are considering the industrial line, natural gas and oil industry, it portrays a great significant influence on the economic growth and development through the GDP and per capita flow of income. The year-wise statistics was collected for two decades from 2000 to 2019 and the everyday prices such as gold price, Nifty opinions and Crude oil prices are intended and taken the annual averages of it. The aim for selecting the data from the year 2000 to 2019 is very vital. It was selected to find out the influence of new financial policy 1991 after 10 years of its application. Moreover, the main implication of this work is to find the causal association among these financial variables. The price of gold is considered as 24 carat, the average price was taken for analysis. The ANOVA model has been applied to predict the relationship between the variables in order to find out the cause and effect. It reveals the positive correlation between the variables. It is also revealed from the study that the price of gold had an exponential increase over a period of two decades and alongside the Nifty points also increased in the same period of time. On the whole, it is found from the data that the gold price is having the positive relation with Nifty points of the stock market and the crude oil price did not have any influence on the determination of gold price.

Keyword: Crude Oil Price, Stock Market, Gold Price, MANOVA, India

How to Cite

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1. Introduction

Gold is labelled as valuable metal and the gold is called as eminence of identity of people in India. It is taking a very important worth in two methods namely traditional importance and investment value. The traditional value ascends as the gilded is careful as a promising product. The speculation value ascends due to its inflationary nature. There are many details for the Indian persons to purchase gold such as slushy value, extended term investment, asset formation, expressive values, and inflation for corporate gifting and rewards. It is quite significant to study the nature and determination of the oil prices in India. India is one among the highly potential market for the oil consumption. When we are considering the industrial line, natural gas and oil industry, it portrays a great significant influence on the economic growth and development

through the GDP and per capita flow of income. It has been recoded as fifteen percent of India's gross domestic product. The monthly oil prices trend have been given for December 2020 as follows, the petrol and diesel have opened the first day of December starting at 82.34 rupees and 72.42 rupees per litre in India. While compare to the closing price of the last month prior to December 2020, both the petrol and the diesel price have fluctuated greatly in India. It has been registered as 82.34 rupees per litre and the diesel reached at 72.42 per litre. The chief idea behindhand the gold and oil relative is the one which proposes that prices of crude oil partially account for inflation. Increases in the price of oil result in increased prices of gasoline which is derived from oil. If gasoline is more expensive, than it's more costly to transport goods and their prices go up. There are factors which influences the fuel prices such as cost of raw petroleum (crude oil),

2. Literature Review

Sjaastad (2008) inspects the experiential and hypothetical connotation between main stock conversation charges and gold rate by smearing prediction error of data. It exposed the vacillations in the worth of gold caused from detached exchange proportions of numerous currencies. He too established that the association among the two variables are straight and it was mostly influenced on the basis of dollar price. Harry *et al* (2009) strained to prove the association amongst unpolished oil, discussion rate and creation marketplace price of agrarian goods. They have made arithmetical test such as ADF test and Johansen test over an epoch of time and it established that there was no long term. Patel (2013) endeavored to found the unpremeditated connotation between Indian stock market and value of the gold in India. His work is tested that all connected variables are in motionless in Augmented Dickey-Fuller numerical test, the co-integration test demonstrates that there is a stock overtone amid gold prices and all stock directories and the Grager Causality arithmetical test established that causality inaugurates from gold price to stock exchange values.

Subashini & Poornima (2014) have made an efforts to check the association among gold, crude oil price and dollar exchange rate in India by applying daily figures for the time period from first January 2009 to till 31st December 2013. They originated from the study that all three variables are directly correlated.

Girish et al (2015) exhibits the relationship between exchange rates of American currency against Indian rupee and gold price in India. The study stresses the changes in gold price due to fluctuations in exchange rates before and after recessional periods. The data was tested with granger causality and found that relationship is direct between the two variables.

Tripathy (2016) meant to discover the short and long run connotation amid the price of gold and the stock market in India. The results of his study reveals that the stock market and the price of gold are at stationary at its level. The consequences have found that there is no causal association between the variables. But in additional arithmetical test, the study found a long run association between the gold price and stock market.

Ranjusha et al (2017) examined to establish the connection between the value of gold and exchange rate market. The examination exposed that the there was a integration among the two variables by smearing arithmetical tools and verified by the hypothesis.

Sankararaman et al (2018) observed that the long term connotation between the American dollar exchange values and the 5 selected product prices. Among the 5 goods two are gold and crude oil, which is consuming the unintended association with conversation rate of dollar.

Muhammad, Ashiq AM & Shanmugasundaram, G (2020) in their paper evaluated the impact of oil prices and exchange price on a sectoral level for Indian stock market and reported the exchange rate is having great influence on stock indices as compare with oil process.

3. Research Methodology

This contemporary study was conceded out with the provision of ancillary data composed from numerous sources such as gold council of India, National Stock Exchange and Security Exchange Board of India (SEBI). The year-wise statistics was collected for two decades from 2000 to 2019 and the everyday prices such as gold price, Nifty opinions and Crude oil prices are intended and taken the annual averages of it. The aim for selecting the data from the year 2000 to 2019 is very vital. It was selected to find out the influence of new financial policy 1991 after 10 years of its application. Moreover, the main implication of this work is to find the causal association among these financial variables. The price of gold is considered as 24 carat, the average price was taken for analysis. The value of Crude oil and Nifty points were also yearly means are taken. The present investigation applied numerous econometric implements such as Johansen cointegration, Granger causality to observe long period suggestion between the economic variables. This study also analyzed the association between the variables.

4. Analysis and Interpretation of Results

The mean price of the gold from 2000 to 2019 have been collected for the study purpose.

Table.1 Average Price of Gold, Nifty Points from Year 2000 to 2019

Year	Gold Price 24ct (p/g)	Nifty Points	Crude Oil Price (\$)
2000	440	1417.6174	30.38
2001	430	1121.012551	25.98
2002	499	1056.0244	26.19
2003	560	1234.233004	31.08
2004	585	1755.250791	41.51
2005	700	2268.910558	56.64
2006	840	3357.0938	66.05
2007	1080	4571.292369	72.34
2008	1250	4331.744898	99.67
2009	1450	4118.425	61.95
2010	1850	5461.124603	79.48
2011	2640	5335.912551	94.88
2012	3105	5325.298008	94.05
2013	2960	5915.764859	97.98

2014	2800	7364.659671	93.17
2015	2634	8285.924696	48.72
2016	2862	8092.718293	43.58
2017	2966	9590.717944	50.84
2018	3143	10750.67327	64.9
2019	3522	11434.77377	57.05

Source: SEBI & NIFTY, Various Years

The price of the gold has increased exponentially over a period of time from the year 2000 to 2019. It was increased from Rs.440 per gram for 24 carat gold to 3522 in the year 2019.

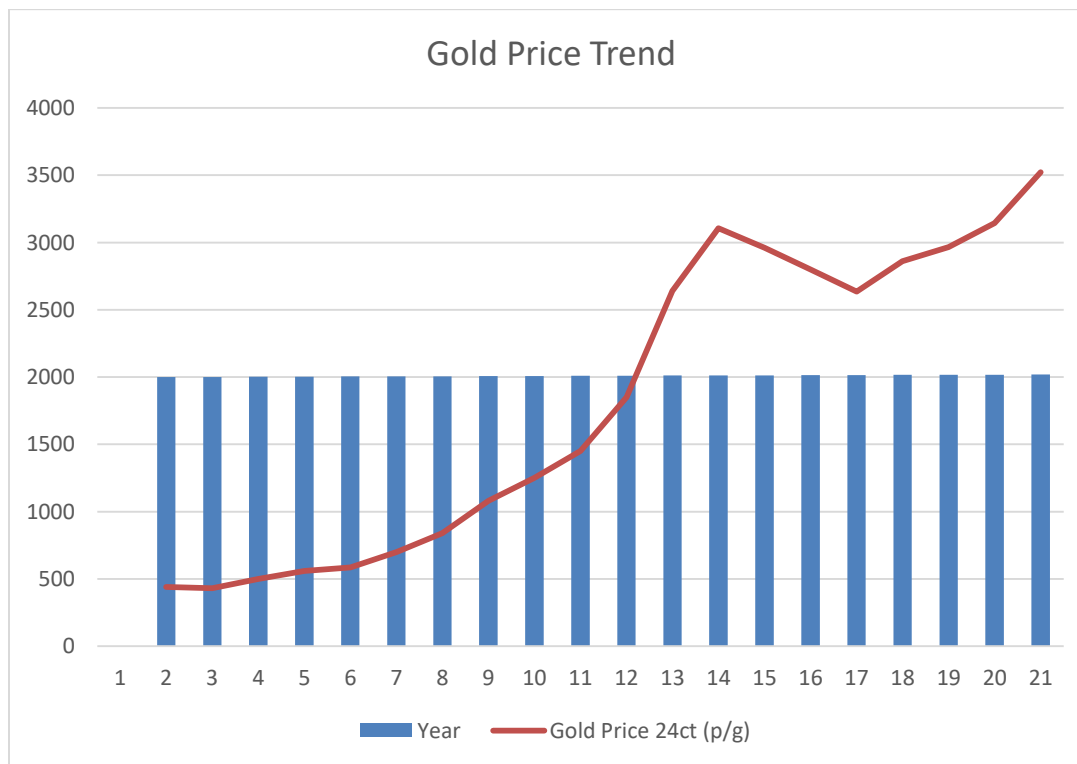


Figure 1. Gold Price Trend

The price trend of NIFTY also registered a graded increase over a period of two decades from 1417 to 11434 points.

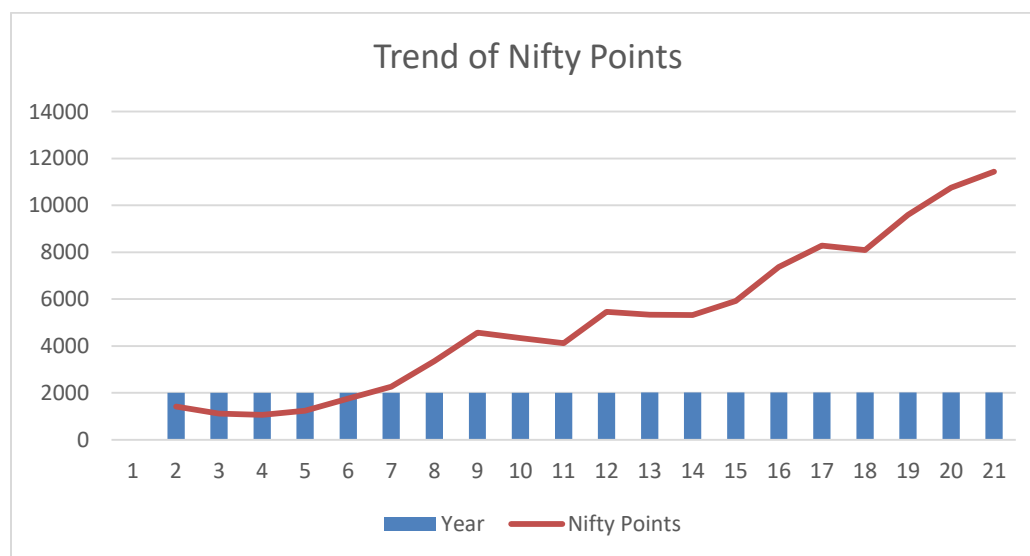


Figure 2. Trend of Nifty Points

The crude oil price have not shown a greater changes as gold and the NIFTY point changes. It is evident from the collected data, the crude oil price have grate fluctuations of up and down.

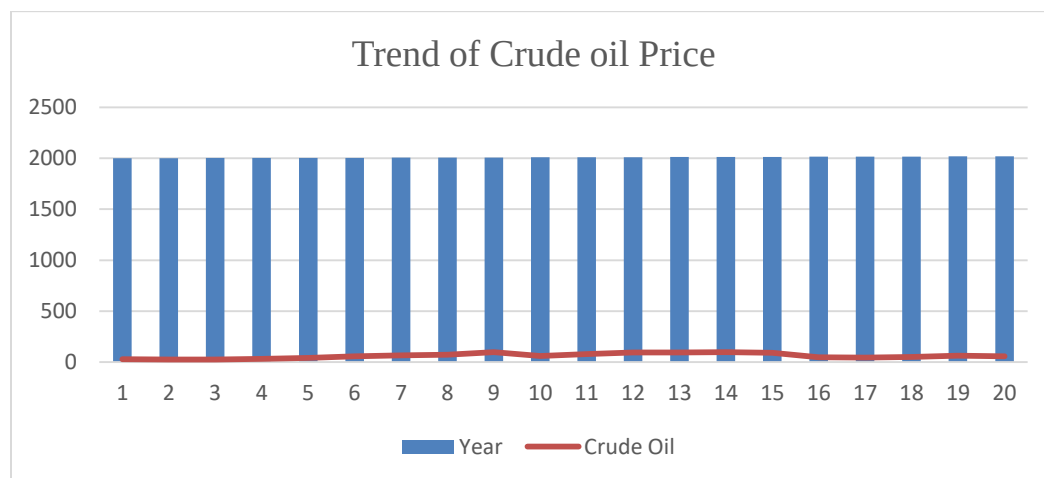


Figure 3. Trend Crude oil Price

Following table 2 brings the descriptive statistics of the collected data such as minimum, maximum and mean value of gold price, Nifty points and crude oil.

Table. 2 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Gold Price	20	430.00	3522.00	1815.8000	1128.84541
Nifty Points	20	1056.02	11434.77	5139.4586	3261.38398
Crude Oil	20	25.98	99.67	61.8220	25.00425
Valid N (listwise)	20				

The minimum price was Rs.430 for gold and the maximum is recorded as 3522 with the average of 1815.80 rupees. The Nifty point's minimum was 1056.02 and the maximum of 11434.77 with the mean value of 5139.45686. Likewise, the crude oil price was recorded with the minimum value of 25.98 and maximum was 99.67 with the mean value of 61.8220.

4.1 Correlation Between The Variables

The correlation between gold price and Nifty were calculated. The correlation is significant at 0.000 level. It is found from the analysis that the gold price and the Nifty points are having the positive correlation between these variables.

Table. 3 Correlations

		Gold Price	Nifty Points
Gold_Price	Pearson Correlation	1	.912**
	Sig. (2-tailed)		.000
	N	20	20
Nifty_Points	Pearson Correlation	.912**	1
	Sig. (2-tailed)	.000	
	N	20	20

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

It is also found from the study that there was a positive correlation between gold price and the crude oil price in India.

Table. 4 Correlation

		Gold Price	Crude Oil
Gold Price	Pearson Correlation	1	.505*
	Sig. (2-tailed)		.023
	N	20	20
Crude Oil	Pearson Correlation	.505*	1
	Sig. (2-tailed)	.023	
	N	20	20

Table. 5 Correlation

		Nifty Points	Crude Oil
Nifty Points	Pearson Correlation	1	.339
	Sig. (2-tailed)		.144
	N	20	20

Crude Oil	Pearson Correlation	.339	1
	Sig. (2-tailed)	.144	
	N	20	20

4.2 Regression Analysis

Table 6. Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	119.829			
Final	.000	119.829	19	.000

Link function: Logit.

Table 7. Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	12.778	342	1.000
Deviance	18.861	342	1.000

Link function: Logit.

The regression model is very much fit for the present data set and executed for the further analysis to figure out the

Table 8. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935 ^a	.875	.860	421.71597

a. Predictors: (Constant), Crude_Oil, Nifty_Points

Table 9. ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	21188193.121	2	10594096.560	59.569	.000 ^b
Residual	3023354.079	17	177844.358		
Total	24211547.200	19			

a. Dependent Variable: Gold_Price

b. Predictors: (Constant), Crude_Oil, Nifty_Points

The ANOVA model has been applied to predict the relationship between the variables in order to find out the cause and effect. The calculated F value of 59.569 with the significance at 0.000 level. It reveals the positive correlation between the variables.

Table 9. Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-291.581	268.080		-1.088	.292
1 Nifty	.290	.032	.837	9.185	.000
Points					
Crude Oil	10.011	4.113	.222	2.434	.026

a. Dependent Variable: Gold Price

It is also found from the analysis that there is no relationship between Nifty points and Crude oil price.

5. Conclusion

Based on the present analysis, it has been found that there was an association between the gold price fluctuation with respect to crude nifty points and crude oil price. It is also revealed from the study that the price of gold had an exponential increase over a period of two decades and alongside the Nifty points also increased in the same period of time. On the whole, it is found from the data that the gold price is having the positive relation with Nifty points of the stock market and the crude oil price did not have any influence on the determination of gold price.

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Analysis of the Financial Performance of Selected Cement Industries of Bangladesh

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Abstract

This paper aims to analyze the financial performance of industries of Bangladesh, which are performing a crucial role in the current economic development trend of the country. Heidelberg Cement Bangladesh Ltd, Crown Cement, Lafarge Holcim and Meghna Cements are selected for analysis for their 70% of market share coverage of the cement industry. Competency of selected leading four cement companies are looked over here with some financial parameters like Return on Asset (ROA), Return on Equity (ROE), Earnings Per Share (EPS), Total Debt Ratio (TDR), Current Ratio (CR), Net Working Capital Ratio (NWCR), Assets Turnover Ratio (ATR) and mean value analysis technique. In preferred financial parameters and mean value analysis technique Heidelberg Cement Bangladesh Ltd has a good position, and in most cases, Meghna Cements obtained the lowest score. To attain desired efficacy in the cement industry of Bangladesh shortly, some prime recommendations such as reduction of production cost, prioritization on economies of scale, and business augmentation have come up here.

Key Words: Financial Performance, Ratio Analysis, Cement Industry.

How to Cite

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1. Introduction

According to Bangladesh Cement Manufacturers Association (BCMA), 76 companies are playing in this sector. The selected four covers 70% of the market share. Their business model and competency performance are recently analyzed according to their annual report 'Chhatak Cement Factory', the first cement factory of Bangladesh, started its journey in 1941, long before the emergence of Bangladesh in the world map (Chhatak Cement Factory, 2021). Since then, the cement industry has grown a lot, where 31 companies are currently running a business (Bangladesh Business Directory, n.d). The total world production of cement was expected to be around 4.4 billion metric tons in 2020, and during 2016, the global production capacity of cement stood at 4200 million tons (Teri, 2017). As per one of the (UN, 2014), reports the majority of the 2.5 billion new urban inhabitants was projected to be in Africa and Asia in the period to 2050. This indicates the future high demand for cement

consumption of the developing nations. As one of the fastest-growing economies with a growth rate of 8.15 per cent recorded in the fiscal year 2019 (Bangladesh Bank, 2021), Bangladesh will undoubtedly be a part of this massive concrete urbanization and development. The cement industry is expected to be a booming sector (Abedin, 2020). More than USD3.5 billion was budgeted in FY19 for the seven infrastructure megaprojects, including bridges, rail lines, power plants, and a metro rail (as cited in Lightcastle Analytics Wing, 2019). To that end, it is important to analyze the prospect of the cement industry of Bangladesh. There have been significant research works in the field of the cement industry. This review article is an addition to that whereby we focused only on some financial key performance indicators (KPIs) of selected firms of Bangladesh in recent years. By reviewing the financial KPIs, we can have a clear picture of the financial performance, efficiency and potentiality of the firms which have been dominating the market and thus the industry lately. An overview of the financial health of the significant firms and companies are therefore expected to improve the decision-making process of the stakeholders in future.

2. Literature Review

Daryanto (2018) conducted a study on measuring the financial performance of the cement industry during infrastructure development in Indonesia by using the decree of the ministry of SOEs No.KEP-100/MBU/2020 and descriptive financial ratio on two state-owned cement industries, PT. Semen (Indonesia) and PT Semen (Baturaja). The study showed PT. SB and PT. SI ran the business on firm financial performance in the periods. Furthermore, it gave some excellent advice for managers of the cement industry about financial performance.

Dhivya et al. (2017) conducted a study on the financial performance of the cement industry of ACC Limited in India. The analysis of the study was for the periods of 2011-2015 by using liquidity ratio, probability ratio, solvency ratio, and trend analysis. The study's main aim was to analyze the probability, liquidity, operational position and examine the company's financial structure. The study showed that the liquidity position of the company was satisfactory. Hence, the company met its short-term liabilities. Nevertheless, the profitability position was not much attractive. They recommended maintaining good cash positions and increasing the effective utilization of sales.

Gopi (2018) conducted a study on the financial performance of the cement industry in India by using the extended DuPont approach of three cement industries. The extended DuPont approach emphasized ROE, pretax margin, asset turnover, interest burden, tax efficiency and equity multiplier. The results showed a decline in the profitability (ROE) during the periods, and the financial performance of all three companies seemed to be similar by ROE with minimal deviation. It also showed that the calculation of ROE was not relevant for making rational economic decisions.

Hoque, et al. (2015) studied working capital management and profitability of the cement industry in Bangladesh. They research six listed cement companies using ratio analysis, correlation matrix and regression analysis based on secondary data. The study found that profitability and working capital positions over the study period were not satisfactory, and there was a significantly positive correlation between profitability and working capital components. Moreover, the impact of day sales outstanding on profitability ratios was negative. The study recommended that the selected cement companies should reduce day sales outstanding to improve profitability.

Hossain & Huq (2014) conducted a study on the credit strength of the cement industry in Bangladesh by using Altman's Z score and ratio analysis. The study showed that only the Heidelberg cement industry stayed in the safe zone, but other companies could not move into the safe zone because of their limited liquidity ratios. However, the trend of growth and performance of the cement industry increased day by day. They maintained the growth rate at around 20 per cent to 25 per cent in the medium to long term. The result also showed that only 20 per cent of the companies were in a safe position. However, the present study has made an effort to the financial performance of cement industries in Bangladesh.

Kaura & Balasubramaniam (1979) conducted a study on inter-firm comparison of financial performance of selected cement companies in India by using ratio analysis. The result showed that liquidity, profitability, and financial structure ratios declined during the study period. It also showed that many cement industries' profitability and liquidity position had been constrained because of inadequate supply of raw materials and insufficient power supply.

Majeed, et al. (2017) conducted a study on the analysis of the financial progress of the cement industry in Pakistan by using Altman's Z score. The study result showed that the analysis of the financial progress was satisfactory during the study period. They recommended to the investors to invest their money for making a high rate of return. The analysis of the study periods was better than the past analysis.

Mizan & Hossain (2014) examined the financial soundness of the cement industry of Bangladesh. They analyzed five different cement companies by using Altman's Z-score and used one way ANOVA techniques. However, the study showed that only two companies were financially strong position, one was financially sound, but the other two were at serious risk of financial distress. It also recommended that the managers should take the necessary steps to reverse the situation.

Muslumovi (2005) studied privatized companies' financial and operating performance in Turkish cement industries. The main aim of the study was to examine the impact of privatization on financial and operating performance. Findings of this study showed that privatization was declining the value-added, shareholders profitability and ROA. It also showed that privatization did not improve the efficiency of the cement industries. However, the findings were inconsistent with prior cross-sectional studies done in various countries regarding privatization.

Rajashekar & Keshavarz (2019) researched the impact of environmental management accounting on the financial performance of the cement industry in India. They analyzed two different companies by using ratio analysis. The study's main aim was to find a relationship between the factors of environmental management accounting and financial performance. The study showed that the two selected companies' environmental management accounting and reporting performance gradually improved concerning environmental disclosure practices. Both the companies had justified energy consumptions practices and effective use of fossil fuels.

Rezina, et al. (2020) conducted a study on profitability determinants of the cement industry in Bangladesh. The main aim of the study was to examine the impact of firm-specific and macroeconomic factors in determining the profitability of the cement industry of Bangladesh with all listed cement industries in the stock exchange by using ROA, the expense to revenue

ratio, leverage, age, inflation rate, GDP growth rate and real interest rate. ROA was considered as a profitability measurement of the firms. The study found that leverage as a firm-specific variable and GDP growth rate, actual interest rate as macroeconomic variables had a significant impact on profitability. The results showed that firm size, age, GDP growth rate and real interest rate positively impacted. In contrast, the expense to revenue ratio, leverage and inflation harmed the profitability.

Saeedi, A. & Mahmoodi (2011) conducted research on the relationship between capital structure and firms' performance on 320 listed companies of Tehran Stock Exchange for 2002-2009. The study was conducted by four measurement techniques- ROA, ROE, EPS and Tobin's Q as the dependent variables and three capital structures as independent variables. The analysis showed no significant difference between ROE and capital structure, also showed that firm performance, which was made by calculating EPS and Tobin's Q, was significantly and positively associated with capital structure while showed a negative relationship between capital structure and ROA.

San & Heng (2011) researched the Malaysian construction sector's capital structure and corporate performance using ROA, ROE, and GM measurements techniques. The study was conducted for finding out the relationship between capital structure and corporate performance of firms before and during the crisis (2007) over 49 construction companies. Moreover, the results showed a relationship between capital structure and corporate performance and showed no relationship between the variables investigated.

Soni (2018) conducted a study on the financial performance of JK cement of India using ratio analysis techniques. The objective of the study was to analyze the financial positions of selected companies. The study showed that the current and quick ratios were below the standard but fulfilled its short-term liabilities. The debt-equity ratio was more than the standard level, and the inventory turnover ratio fluctuated in research periods. The study suggested that if the JK cement could not decrease the debt-equity ratio, it might be at risk of bankruptcy.

Venkatacham & Kasthuri (2016) conducted a study on the financial performance of the cement industry in India by using an analysis of variance (ANOVA) for the periods of 2006-2007 to 2015-2016. The study's objective was to examine the financial performance of the cement industry in India and investigate the factors affecting the cement industry based on a profitability model. The study result showed that all the ratios analyses impacted the profitability positions of the cement industries. The study recommended that the industry reduce the interest burden by giving quality products and building brand image. It also recommended that management should utilize maximum production capacity.

3. Research Method

This study aims to show the current financial health of cement industries of selected companies in Bangladesh. This study is based on comparative analysis and is quantitative. The scope of the study is limited to the only cement industry. This review was conducted based on secondary data collected from audited financial statements of selected companies' publications, such as: Annual Report of Crown Cement 2015-2019, Annual Report of Heidelberg Cement 2015-2019, Annual Report of LafargeHolcim Bangladesh 2015-2019, Annual Report of Meghna Cement Mills 2015-2019. For empirical analysis, the study covered a period from 2015 to 2019. Five years of data are taken due to the availability of

reliable data sources. Four cement companies- Heidelberg Cement Bangladesh Ltd, Crown Cement, Lafarge Holcim and Meghna Cements Mills Ltd, had been selected for this study because they play a vital role in this industry. Based on the data of published annual reports of the selected companies, the study measured the financial parameters like Return on Asset (ROA), Return on Equity (ROE), Earnings Per Share (EPS), Total Debt Ratio (TDR), Current Ratio (CR), Net Working Capital Ratio (NWCAR), Assets Turnover Ratio (ATR), Account Receivable Turnover Ratios (ARTR) as the financial KPIs to examine the performance of the cement industry and compare the data of the selected companies.

4. Findings and Discussions

Under this section, the study analyses the financial parameters, like ROA, ROE, EPS, TDR, CR, NWCAR, ATR, and ARTR of the DSE listed four cement companies in Bangladesh.

4.1 Return on Asset (ROA)

Return on asset indicates how profitable a company is relative to its total assets (ROA= Net income/Average total assets).

Table-1: ROA of selected cement companies (In percentage)

Companies	2015	2016	2017	2018	2019	Mean
Heidelberg Cement Bangladesh Ltd	14.34	14.80	9.20	8.43	(2.56)	7.47
Crown Cement	5.26	3.69	1.60	1.30	(0.0069)	1.65
Lafarge Holcim	8.63	7.55	2.73	3.96	5.25	1.87
Meghna Cements Mills Ltd	-	0.84	1.40	1.18	0.89	1.08
Mean		6.72	3.73	3.71	.89	

Source: Authors' Calculation Based on the Data of Annual Report

Table 1 shows that the ROA varied in each year, but mostly it showed a decreasing trend from 2015 to 2019 for each of the companies, although the data of Meghna group was not found (In 2015, Meghna group Cement Mills Limited did not publish their annual report). Moreover, Heidelberg and Crown both showed negative ROA during the year 2019. If we compare among the companies, Heidelberg had the highest ROA in 2015, which was 14.34, and Crown had the lowest ROA during 2019, which was negative 0.0069. The Mean technique for comparing the analysis refers to the Heidelberg Cement Bangladesh Ltd obtained a maximum mean(7.47), whereas Meghna Cements Mills Ltd achieved a minimum mean (1.08).

4.2 Return on Equity (ROE)

The Return on Equity is a measure of the profitability of a business with the equity (ROE= Net income/Equity).

According to Table 2, Heidelberg is showing a decreasing trend in terms of the ROE from 2015 to 2019, with a bit of increase in 2016, which was not sustainable eventually. Even the ROE of this company is showing a negative figure in the year 2019. On the other hand, Crown shows a gradual decrease in ROE, which fell from 11.07 to negative 1.92, which is not a good picture of the company's financial health. The other two companies- Holcim and the Meghna group, show quite ups and downs from 2015 to 2019. Among the four

companies, Heidelberg had the highest ROE in 2015, which was 24.26, but at the same time, it had the lowest ROE in 2019, which was negative 6.66. Holcim showed the highest ROE in 2019, which was 9.15.

Table 2. ROE of selected cement companies (In percentage)

Companies	2015	2016	2017	2018	2019	Mean
Heidelberg Cement Bangladesh Ltd	24.26	26.97	17.09	15.58	-6.66	13.245
Crown Cement	11.07	9.31	4.43	3.51	-1.92	3.8325
Lafarge Holcim	11.47	9.94	3.71	6.12	9.15	7.23
Meghna Cements Mills Ltd	-	4.85	7.92	9.44	8.79	7.75
Mean		12.77	8.288	8.663	2.34	

Source: Authors' Calculation Based on the Data of Annual Report

Heidelberg Cement Bangladesh Ltd has a maximum mean value (13.25) for four years, and Lafarge Holcim had a minimum mean value. According to the mean technique in ROE, Heidelberg Cement Bangladesh Ltd had a good position.

4.3 Earnings Per Share (EPS)

Earnings per share is a significant financial measure, which indicates the profitability of a company. EPS are presented in Table 3.

Table 3. EPS of Selected Cement companies

Companies	2015	2016	2017	2018	2019	Mean
Heidelberg Cement Bangladesh Ltd	24.81	26.69	14.21	12.59	-4.57	12.23
Crown Cement	5.01	4.45	2.13	1.69	-0.89	1.85
Lafarge Holcim	1.38	1.21	0.43	0.73	1.08	0.87
Meghna Cements Mills Ltd	-	3.42	2.91	3.62	2.92	3.22
Mean		8.943	4.92	4.658	-0.365	

Source: Authors' Calculation Based on the Data of Annual Report

Among the selected companies, the Meghna group is showing the highest EPS (2.92) of 2019, although that is too low to depict a company's better performance. According to the data, Heidelberg had the lowest in 2019, which was negative 4.57, but it had the highest EPS in 2015. If we consider the case of Crown cement, it showed a decreasing trend throughout 2015-2019. According to the Mean value in EPS, Heidelberg Cement Bangladesh Ltd retained in highest position (12.23), and Lafarge Holcim is at the lowest position (0.87).

4.4 Current Ratio

The purpose of the Current Ratio is to measure if a company can currently pay off short-term debts by liquidating its assets. CR can be measured as: $CR = \text{Current Assets} / \text{Current Liabilities}$. The current Ratios of the four companies are presented in Table 4.

From 2015 to 2019, both the Heidelberg and Crown cement companies showed a gradual decrease in Current Ratios. Heidelberg's CR fell from 1.96 to 0.77 in the 2015-2019 period. For the same duration, Crown's CR came down at 1.01 from 1.28. The other two companies, Lafarge Holcim and Meghna group, also reflected an overall decrease in CR over five years. In 2015, Lafarge Holcim had the highest Current Ratio among the four, which was 2.96. Crown's performance was better than the others in 2019, which had a CR of 1.01. According to the mean technique of CR, Lafarge Holcim has the maximum mean value of 2.03; on the other hand, Meghna Cements Mills Ltd has the lowest mean (1.01) among the four

Table 4. CR of selected cement companies

Companies	2015	2016	2017	2018	2019	Mean
Heidelberg Cement Bangladesh Ltd	1.96	1.73	1.59	1.25	0.77	1.335
Crown Cement	1.28	1.21	1.15	1.1	1.01	1.1175
LafargeHolcim	2.96	3.21	2.72	1.29	0.88	2.025
Meghna Cements Mills Ltd	—	1.07	1.05	1.13	0.8	1.0125
Mean		1.805	1.628	1.193	0.865	

Source: Authors' Calculation Based on the Data of Annual Report

4.5 Net Working Capital Ratio

To measure the networking capital ratio, a company needs to calculate the liquidity of its assets. An increasing net working capital ratio indicates that the business is investing more in liquid assets than fixed assets. NWCR can be computed as follows:

$NWCR = (\text{Current Assets} - \text{Current Liabilities}) / \text{Total Assets}$. NWCR is presented in Table 5.

The NWCR represent a decreasing trend for all the selected companies during the period of 2015-2019. Heidelberg showed the highest NWCR in 2015 (0.31) and lowest in 2019 (-0.09). Comparing to the other three companies, Crown had at least a positive NWCR in 2019, which was 0.004; the others had a negative ratio in 2019. In the above analysis, it is observed that all the selected companies did not maintain enough NWC. The NWCR is not satisfactory during the study period. Heidelberg Cement Bangladesh Ltd here also maintains the highest mean value .125. Meghna Cement Mills Ltd. Obtained the lowest mean of 0.01.

Table 5. NWCR of Selected Companies

Companies	2015	2016	2017	2018	2019	Mean
Heidelberg Cement Bangladesh Ltd	0.31	0.28	0.22	0.09	-0.09	0.125
Crown Cement	0.13	0.1	0.07	0.05	0.004	0.056
LafargeHolcim	0.25	0.28	0.27	0.06	-0.04	0.1425
Meghna Cements Mills Ltd	–	0.05	0.04	0.08	-0.13	0.01
Mean		0.178	0.15	0.07	-0.064	

Source: Authors' Calculation Based on the Data of Annual Report

4.6 Total Debt Ratio

The total debt ratio is a quick way to see how much of a company's assets are available via debt. TDR can be computed as:

$$\text{TDR} = \text{Total Liabilities} / \text{Total Assets}$$

Table 6. Total Debt Ratio of Selected Cement Companies

Companies	2015	2016	2017	2018	2019	Mean
Heidelberg Cement Bangladesh Ltd	0.41	0.45	0.46	0.46	0.62	0.4975
Crown Cement	0.53	0.6	0.64	0.63	0.64	0.6275
LafargeHolcim	0.24	0.24	0.26	0.35	0.43	0.32
Meghna Cements Mills Ltd	-	0.83	0.82	0.87	0.9	0.855
Mean		0.53	0.545	0.578	0.6475	

Source: Authors' Calculation Based on the Data of Annual Report

The TDR represent the increasing trend during the study period. Heidelberg Cement raised its TDR from 0.41 in 2015 to 0.62 in 2019. The Crown, LafargeHolcim types of cement also showed a rising figure over times, which were 0.53 to 0.64 and 0.24 to 0.43, respectively. The Meghna group represented the highest TDR in 2019, which was 0.90. Crown Cement has the highest mean value, .62, whereas Meghna Cement obtained the lowest mean of .32.

4.7 Assets Turnover Ratio

This ratio is a good indicator of how good a company uses its assets to generate revenue. ATR can be computed as:

$$\text{ATR} = \text{Sales} / \text{Average Total Assets}$$

Table 7. Assets Turnover Ratio of Selected Companies

Companies	2015	2016	2017	2018	2019	Mean
Heidelberg Cement Bangladesh Ltd	1.07	1.04	1.12	1.32	1.18	1.165
Crown Cement	0.64	0.53	0.64	0.76	0.73	0.665
LafargeHolcim	0.59	0.57	0.59	0.57	0.5	0.5575
Meghna Cements Mills Ltd	-	0.65	1.06	0.8	0.95	0.865
Mean		0.698	0.853	0.863	0.84	0.8131

Source: Authors' Calculation Based on the Data of Annual Report

The ATR of all selected companies is unsatisfactory because the standard level of total assets turnover of 1.50 is acceptable for an industry. However, all other cement industries are below 1.50. Heidelberg Cement Bangladesh Ltd has the highest mean value 1.66, but LafargeHolcim has the lowest mean

4.8 Accounts Receivable Turnover Ratio

The ARTR ratio is to evaluate how quickly a company can collect funds from its customers. ARTR can be measured as:

ARTR= Sales/Average Accounts Receivable

ARTR can be presented in table-8.

Table 8. Account Receivable Turnover Ratio of Selected Companies

Companies	2015	2016	2017	2018	2019	Mean
Heidelberg Cement Bangladesh Ltd	10.23	9.26	8.59	13.65	13.22	11.18
Crown Cement	8.46	5.86	5.24	4.3	3.53	4.7325
LafargeHolcim	12.08	7.88	7.06	4.17	7.57	6.67
Meghna Cements Mills Ltd	-	3.39	3.75	4.02	6.77	4.4825
Mean		6.598	6.16	6.535	7.7725	

Source: Authors' Calculation Based on the Data of Annual Report

The ARTR represented the decreasing trends for Crown and LafargeHolcim cement. The other two, Heidelberg and Meghna group, showed increasing trends of ARTR from 2015 through 2019. Account Receivable Turnover Ratio mean technique Heidelberg Cement Bangladesh Ltd has the highest mean 11.18 Meghna Cements Mills Ltd has the lowest mean of 4.48

The study of comparative analysis about selected cement companies visualized several findings. Based on Mean Technique, Heidelberg Cement Bangladesh has a good position, and in several indicators, Meghna Cement Mills Ltd. It is at the lowest position and profitability analysis Heidelberg Cement Company scored at the highest position than the others. Contrarily Crown Cement scored lowest along with the average performance of remaining. The current ratio measurement indicates that LafargeHolcim is at the highest condition. It refers to the solvent ability to cover its short term liabilities by cash.

Nevertheless, the other three companies are relatively in a weak position. Leverage ratio analysis indicates Meghna Cement Company is in most favorable condition than others. Based on turnover ratio analysis, Heidelberg Cement Company is in the highest position than the others. Crown Cement is in the lowest position. The other two companies show the average results. All the companies should increase their ATR. The above analysis indicates that Heidelberg Cement Company is in a relatively strong position to collect the credit more efficiently. The other three companies are in a safe position. However, Crown Cement, LafargeHolcim Cement and Meghna Cement should increase their ARTR.

Some recommendations based on the findings of selected cement companies are given below:

The study recommended that the selected cement companies should focus on cost reduction.

- a. To hold a balanced liquidity position, cement companies should invest their extra liquid assets to increase production volume.
- b. The expense ratio is an essential factor for all cement companies. So, they should prioritize reducing the expense ratio.
- c. The study recommends that cement companies expand their businesses to achieve an optimum size and enjoy economies of scale. An optimum size will ultimately strengthen financial performance.
- d. To ensure maximum profitability, an appropriate cost accounting system should be set up in cement companies.
- e. Cement companies should pay more attention to the volume of capital and leverage for better financial performance.
- f. To enlarge the business and generate more revenue, cement companies should expand their sales.

5. Conclusion

The objective of this study was to evaluate the financial health of cement companies in Bangladesh during the period 2015-2019. The financial performance of the selected cement companies was measured with the use of various ratio analyses. Results of the study show that ROA, ROE and EPS are the factors that significantly affect the performance of cement companies in Bangladesh. The study also found that Heidelberg Cement Company is in a relatively strong position on the basis of mean analysis of the financial performance indicators. The other three companies are in a safe position. Thus, for further growth and development of the cement companies, the study recommended that management take some strategic steps like introducing a mechanism that reduces costs, developing human resources development programs, relaxing pricing rules etc. Moreover, modern techniques could be

adopted for asset management. The findings of this research are expected to contribute to a better understanding of the financial health of cement companies in Bangladesh.

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