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Effect of COVID-19 on the Arab Financial Markets Evidence from Egypt and KSA

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Abstract: *The study aimed to The impact of the COVID-19 on the Arab Financial markets have never been researched, so The present study is undertaken to investigate the impact of the COVID-19 on the Arab Financial Markets .The study applied a the Simple regression model to investigate the impact of the COVID-19 on the Arab Financial Markets during the period from dated 1st April 2020 to 21th May 2020 in Egypt and KSA. Time series data for Statistics data from 1st April 2020 to 21th May 2020 for Egypt and KSA.The study used the Indicator (EGX-30) as a sample for Egyption Stock Exchange and the Indicator (TASI) as a sample for the KSA Stock Exchange. On the process of investigating the effact of the COVID-19 on the financial markets the study assumes the COVID-19 confirmed cases and death cases to be the independent variables, and dependent variables is the trading volume for the Egyption Stock Exchange and KSA Stock Exchange.The study findings revealed that there is a Negativesignificant relationship between the confirmed cases and death cases from COVID-19, the trading volume on (Egyption stock exchange and KSA stock exchange) from 1st April 2020 to 21th May 2020 in Egypt and KSA. That means the COVID-19 had a significant impact on the financial markets from 1st April 2020 to 21th May 2020 in Egypt and KSA.*

Keywords*:COVID-19, Trading Volume, Financial Markets, Egypt, KSA.*

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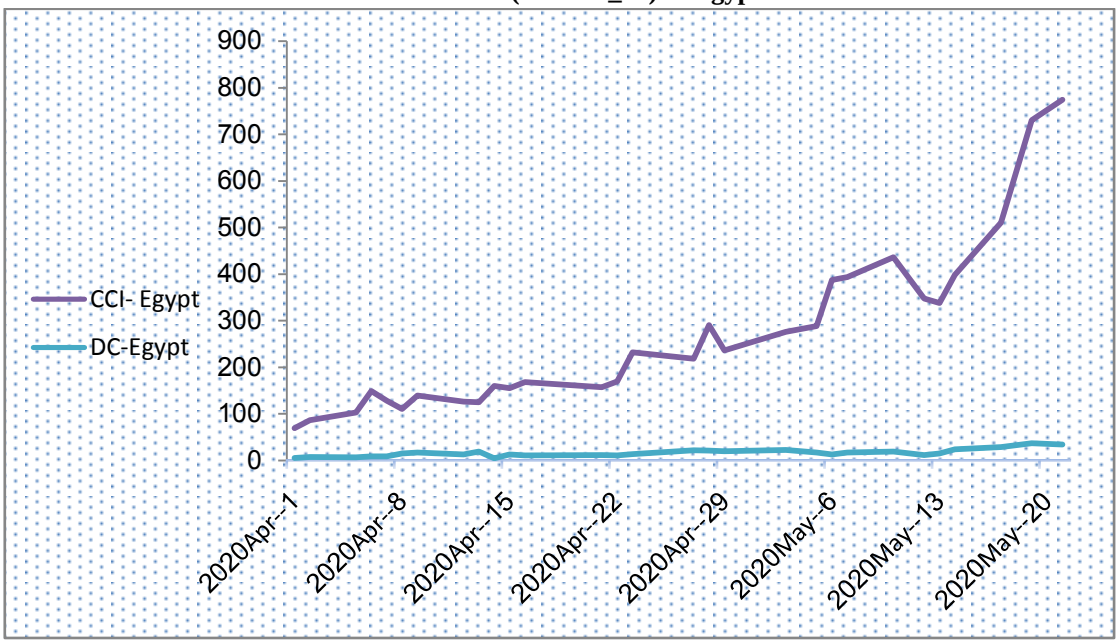
I. Introduction

The globe has always witnessed pandemics, plagues and influenza epidemics from ancient times till present, which negatively impacted a great part of the world on both the economic and social levels. Nowadays, the world has been the scene of the detection of an outbreak of respiratory illness which is a result of a novel Coronavirus COVID-19.The outbreak of the new coronavirus has caused a pandemic of respiratory disease COVID- 19 for which vaccines and targeted therapeutics for treatment are unavailable **Wang et al., (2020)**. The outbreak has caused major concerns about public health around the world. At the same time, there are growing concerns about the economic consequences as homes are required to stay home to slow the spread of the virus. The impact that "pausing" the economy may have on supply chains, households 'demand, and the financial stability of firms, the financial sector, and homes is largely unknown. As a result, policymakers, businesses, and market participants are trying to revise growth expectations in the short-, medium, and long-run.**Gormsen & Koijen (2020)**.The global financial crisis led to major collapses in (2007-2008), but this collapse did not affect the whole world, unlike what we are living in now because of the Corona virus COVID-19virus, as this led to the complete closure of many countries of the world and partially affected some countries. **Sansa (2020)**

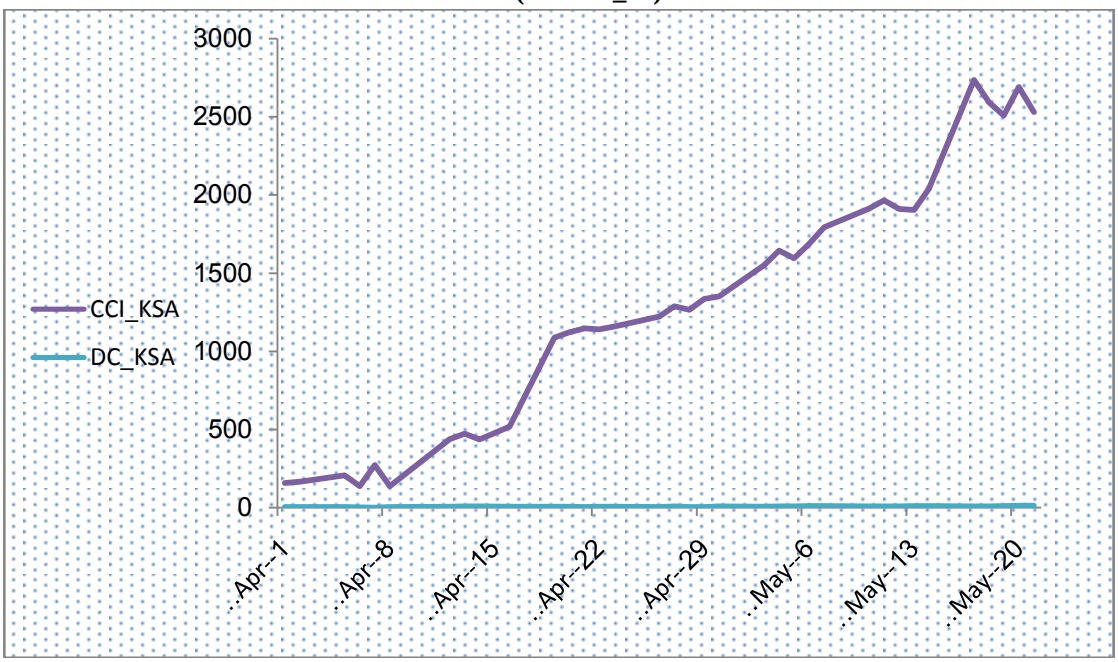
Figures (1) and (2) illustrate the developments of Coronavirus spread during the study period, in Egypt and KSA as follows:

Figures (1)
Coronavirus (COVID_19) in Egypt



DC= Death Cases of COVID-19
CCI= Confirmed Cases of COVID-19

Figures (2)
Coronavirus (COVID_19) in KSA



DC= Death Cases of COVID-19
CCI= Confirmed Cases of COVID-19

II. Motivation of The Study

Globally, Different Monetary International organisations and platforms have alerted that the recent COVID-19 will have serious effects on the global Markets and perhaps the effects will surpass the 2007/2008 world economic crises. World Economic Forum, (2020, pg.1), insisted that, "Globally, the Covid-19 shock is severe even compared to the Great Financial Crisis in (2007–2008). Therefore, the study seeks to show the effect of COVID-19 on Arab financial markets.

Therefore, this paper tries to answer the following questions:

A. Does the Confirmed cases of COVID-19 affect the trading volume on the Egyptian Stock Exchange (EGX-30)?
B. Does the death cases of Covid-19 affect the trading volume on the Egyptian Stock Exchange (EGX-30)?
C. Does the Confirmed cases of COVID-19 affect the trading volume of the KSA Stock Exchange (TASI)?
D. Does the death cases of COVID-19affect the trading volume of the KSA Stock Exchange (TASI)?

III. Objective of the Study

The present study is undertaken to investigate the impact of the COVID–19on the Financial Markets from the period dated 1st April 2020 to 21th May2020 in Egypt and KSA.

IV. Literature Review

This section tries to present some of previous work, which has been conducted in the research topic. with illustration of Effect to COVID-19 on financial markets:

Literature evidence revealed **Sansa(2020)**indicatedthat the COVID-19 had a significant impact on the financial markets world wide. Indicators of the impact of the COVID-19to the financial markets have been witnessed in different financial markets in the world, In particularChina and USA, The study used the Shanghai Stock Exchange as a sample for China and the New York Dow Jones as a sample for the KSA. On the process of investigating the impact of the COVID-19 on the financial markets the study assumes the COVID-19 confirmed cases to be the independent variable while Shanghai Stock Exchange and New York Dow Jones to be an dependent variables of the study in China and USA. The study findings revealed that there is a positive significant relationship between the COVID-19confirmed cases and all the Financial markets (Shanghai stock exchange and New York Dow Jones) from 1st march 2020 to 25th march 2020 in China and USA. That means the COVID-19 had a significant impact on the financial market.**Sansa, (2020)**

In a study conducted by **Alber (2020)** indicated attempts to verify the effects of Coronavirus spread on stock markets. Coronavirus spread has been measured by cumulative cases, new cases, cumulative deaths and new deaths. This has been applied on the worst 6 countries (according to number of cumulative cases), on daily basis over the period from March 1, 2020 till April 10, 2020. Coronavirus spread has been measured by numbers per million of population, while stock market return is measured by Δ in stock market index. Results indicate that stock market return seems to be sensitive to Coronavirus cases more than deaths, and to Coronavirus cumulative indicators more than new ones. Besides, robustness check confirms the negative effect of Coronavirus spread on stock market return for China, France, Germany and Spain. However, these effects haven't been confirmed for Italy and United States.

According to **Abdullah & Mansour** (2020) Aimed to verify the effect of the spread of the COVID-19 on stock markets,This paper attempts to investigate the effects of COVID-19 spread on Indices Sectoral of The Egyptian Exchange .Coronavirus spread has been measured by "Coronavirus cases" and "Coronavirus deaths" on daily basis. Besides, it's measured by each of "new Coronavirus cases" and "new Coronavirus deaths", in terms of Egypt's population. The dependent variable reflects the response of the Egyptian sectoral indicators to the spread of the Corona virus and is measured by the returns of the daily sectoral indicators for the Egyptian stock market.this has been applied on daily basis over the period from March 1, 2020 till May 10, 2020. Results indicate that The return of the stock market sectors seems to be more sensitive to cumulative indicators of mortality than daily deaths from corona virus, and new cases more than cumulative cases of corona virus. The coefficient of determination between the independent variables and the variable belonging to 4 sectors is (IT, Media & Communication Services 0.393, Industrial Goods, Services and Automobiles 0.470, Health Care & Pharmaceuticals 0.327, Basic Resources 0.266).

The results of a study **Daily FT (2020)** indicated The recent COVID–19 has impacted all financial markets worldwide in particular share prices trend dropped significantly and continuously. Among the financial markets experienced this situation is The Dow and S&P from the United states from America. supported the fact stating that, "The Dow Jones, and S&P both of which take into account the share prices of a variety of companies in the US have dropped by over 20%".

In a study conducted by **Baker et al., (2020)** indicated Assessing the economic impact of the COVID-19 pandemic is essential for policymakers, but challenging because the crisis has unfolded with extreme speed. We identify three indicators – stock market volatility, newspaper-based economic uncertainty, and subjective uncertainty in business expectation surveys – that provide real-time forward-looking uncertainty measures. We use these indicators to document and quantify the enormous increase in economic uncertainty in the past several weeks. We also illustrate how these forward-looking measures can be used to assess the macroeconomic impact of the COVID-19 crisis. Specifically, we feed COVID-induced first-moment and uncertainty shocks into an estimated model of disaster effects developed by Baker, Bloom and Terry (2020). Our illustrative exercise implies a year-on-year contraction in U.S. real GDP of nearly 11 percent as of 2020 Q4, with a 90 percent

confidence interval extending to a nearly 20 percent contraction. The exercise says that about half of the forecasted output contraction reflects a negative effect of COVID-induced uncertainty.

The results of a study**Zhang et al., (2020)** indicated The rapid spread of coronavirus COVID-19 has dramatic impacts on financial markets all over the world. It has created an unprecedented level of risk, causing investors to suffer significant loses in a very short period of time. This paper aims to map the general patterns of country-specific risks and systemic risks in the global financial markets. It also analyses the potential consequence of policy interventions, such as the US' decision to implement a zero-percent interest rate and unlimited quantitative easing (QE), and to what extent these policies may introduce further uncertainties into global financial markets.

Comparing with literature, it's important to pinpoint that:

1. The study differs in that it applies to two Arab countries, namely Egypt and KSA.
2. While the most of previous studies address the economic effects of COVID-19pandemic, the current study examines its financial effects.
3. Moreover, it considers not both of death indicators, and trading volume.
4. Also, the current study examines Two stock market Arab in the piriod from 1st April 2020 to 21th May 2020.
5. This is the first study in Egypt and KSA that examines the reaction of the Egyptian Stock exchange, and Ksa stock exchange, to the spread of COVID-19.

V. Developing Hypotheses

The present study is undertaken to investigate the impact of the COVID-19 on the Financial Markets from the period dated 1st April 2020 to 21th ' May 2020 in Egypt and KSA. The study applied a Simple regression model to investigate the impact of the COVID-19 on the Financial Markets during the period from dated 1st April 2020 to 21th May2020 in Egypt and KSA. Time series data from Egypt Covid - 19 Statistics Data from 1st April 2020 to 21th May 2020 for Egyptand KSA were employed by the study. The study used the Egyption Stock Exchange as a sample for Egypt and the KSA Stock Exchange as a sample for the KSA. On the process of investigating the impact of the COVID-19 on the financial markets.

The study assumes the COVID-19 Confirmed cases and death cases to be the independent variables, While trading volume Egyption Stock Exchange and KSA Stock Exchange to be an dependent variables of the study in Egyption and KSA .

The study applied the simple regression in double log and linear Models to investigate the impact of the COVID-19 on the Financial markets from 1st April2020 to 21th May 2020 in Egyption and KSA. The study design is descriptive and analytical using the quantitative method with the application of Excel (microsoft office excel 2013), (SPSS V.22).

To answer the research questions, the following hypotheses can be formulated:

1. There's no significant relationship between the Confirmed cases of Coronavirus COVID-19 and the trading volume of the Egyptian Stock Exchange (EGX-30).
2. There's no significant relationship between the death cases of COVID-19 and the trading volume of the Egyption Stock Exchange (EGX-30).
3. Ho_3:There's no significant relationship between the Confirmed cases of COVID-19and the trading volume of the KSA Stock Exchange (TASI).
4. There was no significant relationship between the deaths ofCOVID-19and the trading volume of the KSA Stock Exchange (TASI).

VI. Measuring Variables:

Ho_1: There's no significant relationship between the confirmed cases of coronavirus COVID-19 and the trading volume of the Egyptian Stock Exchange (EGX-30).

The study employed the following equation to analyse the impact of the confirmed cases of COVID-19 on the Egyption trading volume:

$$Vol\_EGX30_{it} = \beta_o + \beta_1 CCI\_EGX_{it} + \varepsilon$$

Where, ln (Vol_EGX30) is the natural log of Dependent Variable, (CCI_EGX) is COVID19 confirmed cases . The βo is constant, and β_1, is the coefficient parameter.

Ho_2:There's no significant relationship between the death cases of COVID-19 (DC_EGX) and the trading volume of the Egyption Stock Exchange (EGX).
The study employed the following equation to analyse the impact of the death cases of COVID- 19 on the Egyptiontrading volume:

$$Vol\_EGX30_{it} = \beta_o + \beta_1 DC\_EGX_{it} + \varepsilon$$

Where, ln (Vol_EGX30) is the natural log of dependent variable, (DC_EGX) is COVID-19 death cases . The βo is constant, and β_1, is the coefficient parameter.

Ho_3:There's no significant relationship between the confirmed cases of COVID-19 and the trading volume of the KSA Stock Exchange (TASI).

The study employed the following equation to analyse the impact of the confirmed cases of COVID-19on the KSA trading volume:

$$Vol\_TASI_{it} = \beta_o + \beta_1 CCI\_TASI_{it} + \varepsilon$$

Where, in (Vol_TASI) is the natural log of dependent variable,volume of the Egyptian Stock Exchange, (CCI_TASI) is COVID-19 confirmed cases. The βo is constant, and β1, is the coefficient parameter.

Ho_4:There's no significant relationship between the deaths of Covid-19 (DC_TASI) and the trading volume of the KSA Stock Exchange (TASI).
The study employed the following equation to analyse the impact of the death cases of COVID-19 on the KSA trading volume:

$$Vol\_TASI_{it} = \beta_o + \beta_1 DC\_TASI_{it} + \varepsilon$$

Where, ln (Vol_TASI) is the natural log of dependent variable, (DC_TASI) is COVID-19 death cases. The βo is constant, and β_1, Is the coefficient parameter.

VII. Descriptive Statistics:

Tables (1) illustrates descriptive statistics of the study variables using a sample of 2 countries, over the period from the 1st April 2020 to 21th May 2020 in Egypt and KSA, as follows:

TABLE (1)
Descriptives of Sample, 1st April to 21th May

Descriptive Statistics						
Variables	**N**	**Range**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Vol_EGX30	**29**	**248344924.00**	**68386601.00**	**316731525.00**	**180335371.2759**	**63948445.71009**
CCI_EGX	**29**	**705**	**69**	**774**	**265.41**	**178.501**
DC_EGX	**29**	**644**	**52**	**696**	**323.59**	**202.664**
VOL_TASI	**35**	**273449808.00**	**27295278.00**	**300745086.00**	**200498532.2571**	**60275735.81862**
CCI_TASI	**35**	**2599.00**	**137.00**	**2736.00**	**1317.8857**	**802.51431**
DC_TASI	**35**	**335.00**	**16.00**	**351.00**	**164.1143**	**102.24560**
Valid N (listwise)	**30**					

Source: Outputs of data processing using SPSS. 22.

- Descriptive statistics of the independent variable COVID-19 in Egypt represented by confirmed cases (CCI_EGX) shows that the average is (265) cases,and the average of the deaths cases (DC_EGX) is (323) cases, from 1st March 2020 to 21th April 2020, The value of the average trading volume of the Egyptian Stock Exchange (EGX-30) during the period is (180335371).The descriptive statistics of the independent variable COVID-19 in the KSA of confirmed cases (CCI_TASI) shows that the average is (1318) cases, and it is clear

that the average deaths (DC_TASI) (164) cases from 1st March 2020 to 21th April 21 2020, the average trading volume of the Saudi Stock Exchange (TASI) during the period (200498532).

VIII. Empirical Results andDiscussion:

The present study applied the descriptive and analytical techniques to investigate the impact of the COVID-19 on the Financial Markets from 1st April 2020 to 21th May 2020 in Egypt and KSA.

the correlation between COVID-19 confirmed cases and Egyption stock exchange market:

The study regression results revealed that there is a significant negative correlation between the COVID-19 Confirmed cases and the trading volume in Egyption stock exchange market from 1st April 2020 to 21th May 2020 in Egypt. And that there is a negative correlation between the confirmed cases of COVID-19 and the volume of trading in the Egyptian financial market. Likewise, the independent variable, the confirmed cases of COVID-19, affects 22.4% in the dependent variable, trading volume in the Egyptian capital market.The result of the statistical significance of the regression model was significant, according to (F) test, where the value of the level of significance was less than (0.05), which indicates the significance of the model.

Ho_1: There's no significant relationship between the confirmed cases of Coronavirus (COVID-19) and the trading volume of the Egyptian Stock Exchange (EGX-30).

TABLE (2): Regression results between the number of confirmed cases of COVID-19 and the Trading Volume of the Egyptian Stock Exchange, from 1st March to May 21, 2020, dependent variable: Egyptian Stock Exchange:

Variables	B	Std. Error	T	Sig.
(Constant)	8.341	.049	171.723	0.000
CCI_EGX	-.0004	.0002	-2.789	0.010
F	**7.778**			
R	**.473**[a]			
R Square	**0.224**			
Adj. R Square	**0.195**			
P_Value	**.010**[b]			
Std. Error	**0.144**			
N	**29**			
Df	**(1-27)**			

Source: Outputs of data processing using SPSS. 22.

The correlation between COVID-19 death cases and Egyption stock exchange market:

The study regression results revealed that there is a significant negative correlation between the COVID-19 death cases and the trading volume in Egyption stock exchange markets from 1st April 2020 to 21th May 2020 in Egypt. And that there is a negative correlation between the death cases of COVID-19 and the volume of trading in the Egyptian financial market. Likewise, the independent variable, the death cases of COVID-19, affects 14.8% in the dependent variable, trading volume in the Egyptian stock exchange market.The result of the statistical significance of the regression model was significant, according to (F) test, where the value of the level of significance was less than (0.05), which indicates the significance of the model.

Ho_2: There's no significant relationship between the death cases of COVID-19 and the trading volume of the Egyption Stock Exchange (EGX-30).

TABLE (3): Regression results between the number of death cases of COVID-19 and the Trading Volume of the Egyptian Stock Exchange, from 1st March to May 21, 2020, dependent variable: Egyptian Stock Exchange:

Variables	B	Std. Error	T	Sig.
(Constant)	8.326	.054	155.342	.000
DC_EGX	-.0003	.0001	-2.146	.041
F	**4.606**			
R	**.382**[a]			
R Square	**0.146**			
Adj. R Square	**0.114**			
Std. Error	**0.151**			
P_Value	**.041**[b]			
N	**29**			
Df	**(1-27)**			

Source: Outputs of data processing using SPSS. 22.

The correlation between COVID-19 confirmed cases and KSA stock exchange market:

The study regression results revealed that there is a significant negative correlation between the

COVID-19 confirmed cases and the trading volume in KSA stock exchange market from 1st April 2020 to 21th May 2020 in KSA. And that there is a negative correlation between the confirmed cases of COVID-19and the volume of trading in the KSA stock exchange market. Likewise, the independent variable, the confirmed cases of COVID-19, affects 13.5% in the dependent variable, trading volume in the KSA stock exchange market.The result of the statistical significance of the regression model was significant, according to (F) test, where the value of the level of significance was less than (0.05), which indicates the significance of the model.

Ho_3:There's no significant relationship between the confirmed cases of COVID-19 and the trading volume of the KSA Stock Exchange (TASI).

TABLE (4): Regression results between the number of confirmed cases of COVID-19 and the Trading Volume of the KSA Stock Exchange, from 1st March to May 21, 2020, dependent variable: KSA Stock Exchange:

Variables	B	Std. Error	T	Sig.
(Constant)	8.400	.069	121.464	.000
DC_EGX	-.0001	.0004	-2.271	.030
F	**5.156**			
R	**.368[a]**			
R Square	**0.135**			
Adj. R Square	**0.109**			
Std. Error	**0.211**			
P_Value	**.030[b]**			
N	**35**			
Df	**(1-33)**			

Source: Outputs of data processing using SPSS. 22.

The correlation between COVID-19 death cases and KSA stock exchange market:

The study regression results revealed that there is a significant negative correlation between the COVID-19 death cases and the trading volume in KSA Financial Stock Markets from 1st April 2020 to 21th May 2020 in KSA.And that there is a negative correlation between the death cases of COVID-19 and the volume of trading in the KSA financial market.Likewise, the independent variable the death cases of COVID-19, affects 14.6% in the dependent variable, trading volume in the KSAstock exchange market.The result of the statistical significance of the regression model was significant, according to (F) test, where the value of the level of significance was less than (0.05), which indicates the significance of the model.

Ho_4:There's no significant relationship between the deaths of COVID-19 and the trading volume of the KSA Stock Exchange (TASI).

TABLE (5): Regression results between the number of death cases of COVID-19 and the trading volume of the KSA stock exchange, from 1st March to May 21, 2020, dependent variable: KSA Stock Exchange:

Variables	B	Std. Error	T	Sig.
(Constant)	8.406	.067	124.971	.000
DC_TASI	-.001	.0003	-2.451	.020
F	**6.010**			
R	**.382[a]**			
R Square	**0.146**			
Adj. R Square	**0.114**			
Std. Error	**0.151**			
P_Value	**.020[b]**			
N	**35**			
Df	**(1-33)**			

Source: Outputs of data processing using SPSS. 22

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IX. Conclusion

This study is undertaken to investigate the impact of the COVID-19 on the Financial Markets from the period dated 1st April 2020 to 21th May 2020 in Egypt and KSA.

From the existing literature this study will generate new knowledge regarding the impact of the

COVID-19 on the financial market from 1st march to 25 march 2020 in Egypt and KSA. Most importantly the study will be very useful to the Financial applied major study and support investors and decision makers in the governments of Egypt and KSA.

The study findings revealed that there is a Negativesignificant relationship between the confirmed cases and death cases from COVID-19, the trading Volume on (Egyption stock exchange and KSA stock exchange) from 1st April 2020 to 21th May 2020 in Egypt and KSA. That means the COVID-19 had a significant impact on the financial markets from 1st April2020 to 21th May 2020 in Egypt and KSA.

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