Does COVID-19 Pandemic Matter for Economic Policy Uncertainty? Evidence from selected OECD Countries

The unending posture of the COVD 19 pandemic is given rise to the concern of policymakers around the globe, of which several studies have been conducted investigating the challenges of the pandemic. Meanwhile, studies suggested the need for more investigation on the implications of the COVID 19 pandemic on macroeconomic indicators which has not been exhaustively investigated. Thus, this study attempt to investigate the impact of COVID is pandemic and other variables on Economic Policy Uncertainty in some selected OECD countries using monthly data from January 2020 to August 2021 and employed GMM estimation techniques for the data analysis. The results revealed that the number of COVI 19 cases trigger the Economic Policy Uncertainty in the selected OECD countries, while inflation was found to have a negative influence on economic policy uncertainty during the pandemic period. Finally, the implications of the findings for policymakers in the selected countries and similar countries in nature were presented in the study.

Keywords: *Economic Policy Uncertainty; COVID 19 pandemic; Policy measures; OECD countries; Generalized Method of Moment (GMM).*
JEL: *C23, F18, O23, O40, Q01*

Introduction

The implication of COVID-19 is not only a concern for public health, but its devastating effect on the socio-economic situation around the world is apparent (Chakraborty & Maity, 2020; Habib et al. 2020; Raza et al. 2020). For instance, Sharma et al. (2020) observed that the emerging countries that are already bedeviled with slow growth rate, poor health infrastructure, and huge population where majority of them lives in extreme poverty are greatly dealt with by the pandemic. COVID-19 and other similar pandemic are known to severely impact the human capital of the nation invaded (Odugbesan & Rjoub, 2020; Odugbesan et al. 2020; Shahzad et al. 2020). Hence, the total expenditure on healthcare becomes increasing (Odugbesan & Rjoub, 2019; 2020). Differently from the impact on human life, Nakada & Urban (2020) and Shehzad et al. (2020) opined that COVID-19 pandemic also impacted economic and social life, which gives room for the increase in the uncertainty in daily life (Caggiano, Castelnuovo, and Kima, 2020). Meanwhile, in reference to Caggiano, Castelnuovo, & Kima (2020), there is an unanswered issues surround the increase uncertainty, like the uncertainty of the pandemic duration and other factors that could affect the policies uncertainty during this pandemic period. Al-Thaqeb, Algharabali, & Alabdulghafour (2020) observed that in the previous decades, economic policies have been increasingly uncertain owing to several other factors like anti-globalization, populist movement before the global financial crises.

The present pandemic (COVID-19) is identified as one of means through which uncertain economic policies distorted the vision for the economy, has impact on the market participants, and illustrate the global economy's interconnections (Al-Thaqeb, Algharabali, & Alabdulghafour, 2020). In addition, some studies opined that the pandemic has a significant influence on the world's supply and demand at both macro and micro levels (Ma et al. 2020; Shi et al. 2020), which resulted to business closures, government-imposed quarantines, ban on travels, curfews, that have put the world in a "Great Lockdown" with attendant effect on every sector. In addition, Coibon, Gorodnichenko, and Weber (2020) observed that labor market has drastically reduced and the effect is evident on the outputs of goods and services. In view of these, having a useful investigation on the economy level of uncertainty is important to ascertain how the COVID -19 pandemic and other variables like stock market and inflation can influence the policies uncertainty and the consequence on the entire economy.

The impact of COVID-19 on the "Economic Policy Uncertainty" (EPU) was investigated in this study. Eighteen (18) countries that comprises of both developed and emerging economies were considered owing to the availability of data on EPU indexes and other variables considered in this study. The countries namely: Belgium, Brazil, Canada, China, France, Germany, Hong Kong, India, Italy, Japan, Netherlands, Pakistan, Singapore, South Korea, Spain, Sweden, UK, and USA are countries that recorded the highest number of COVID-19 cases and deaths (WHO, 2021). Aside the prevalence of COVID-19 in these countries, some of the countries like China, South Korea and Singapore according to Iyke (2020a) and Iyke & Ho (2020) are becoming the global economic powerhouse, while country like India is expected to experience the next wave of industrialization coming after China (Iyke, 2020a). In addition, majority of manufacturing activities are domiciled in these countries, hence the possibility of increasing uncertainties in these countries would not only affect the economic activities in these countries, but the spill-over effect will be felt in the rest part of the world through the ever-interconnected global supply chains. For instance, Shih (2020) observed that the supply shock experienced in China in 2020 second month triggered a worldwide demand shock owing to the "shutdown policies" in response to the pandemic outbreak which underscored the frailties of the world global production and supply chains. Moreover, substantial decrease in trade interconnectedness around the world was experienced as a result of COVID-19 outbreak, and this clearly indicates a negative shock to global trade.

In response to these challenges, several policies were put in place across the globe (Iyke, 2020b; Sharma et al. 2021). Meanwhile, there is huge uncertainty surrounding these policy responses because both the policymakers and economic agents are not sure of the temporal or permanent status of the policies responses, and to what level will the interventions influence investment and consumption activities, and how long it will take the economy to recover, among other issue (Altig et al. 2020). The observation of the economic policies uncertainty across the countries in our panel reveals the

uneven pattern of the EPU. For instance, during the period under observation (2020M1 – 2021M1), while some of the countries in the panel maintains moderate level of EPU, others shows a significant upward and downward movement of their EPU.

The challenge of COVID-19 pandemic has given rise to the attention of scholars and policymakers to ascertain the devastating implications of the pandemic on several facets of economies. The review of extant literature shows that several studies have been conducted in this regards to determine the impact of COVID-19 on several facet of economies like liquidity and cash holdings, stock markets, oil markets, foreign exchange markets, global political, global trade and insurance market, among others (Apergis and Apergis, 2020; Devpura and Narayan, 2020; Fu and Shen, 2020; Haroon and Rizvi, 2020; Iyke, 2020b; Narayan, 2020; Salisu and Sikiru, 2020; Vidya and Prabheesh, 2020; Wang et al. 2020). However, our study is distinct from these studies, because we investigate the effect of COVID-19 using the number of cases on EPU and other variables like stock price and inflation to show the influence of the variables also on EPU during the pandemic period. Though, the studies of Altig et al. (2020) and Iyke (2020) are similar, but while the study of Altig et al. (2020) concentrate on UK and US, the study of Iyke (2020) focus on the effect of COVID-19 on EPU in Asian economies using regression analysis. Thus, the novelty of our study lies in the investigation of the COVID-19 pandemic, stock market and inflation on the EPU using data that covers the period of the pandemic (2020M1 – 2021M1) and includes both emerging and developed economies countries in the panel with the application of Generalized Method of Moment (GMM) approach for the analysis.

Literature Review

In reference to Gabor-Toth & Georgarakos (2019), the concept of uncertainty can be traced back to the study of Knight (1921) who theoretically developed a distinction between future events with a known risk over a set of uncertainty events. It is evident in some studies that uncertainty varies over time and thus opined that this variation can be perceived either as “exogenous” (Bloom, 2014; Ludvigson et al. 2015) or as a response to “business cycle fluctuations” (Gabor-Toth & Georgarakos, 2019; Jurado et al. 2015). There is evidence on the depressing short-run aggregates economic implications of an increase in uncertainty in these studies, and it was suggested that several mechanism could be at work. According to Gabor-Toth & Georgarakos (2019), uncertainty was found to depress real activity via the real options impact in some of these models. Through the option of increasing the waiting value options, uncertainty has impact on either the organization’s incentives which result to delaying their investment and hiring (Bloom, 2014), or according to Fernadez-Villaverde et al. (2011) triggers a cautious response from the public who are cautious of their savings and thus dampens their consumption. In order words, economic uncertainty reflects the economic fluctuations owing to the

unpredictability of fiscal, political, regulatory, and monetary policies. This is the true situation in the current pandemic era where several organizations and countries are currently taking longer time to make economic decisions owing to the unpredictability of COVID-19 pandemic.

The level of uncertainty in different aspect of daily life has been increased as a result of the COVID-19 pandemic (Caggiano et al. 2020), whereas, some aspect of the virus are yet to be known to medical experts and other researchers (Fauci et al. 2020). For instance, it is still uncertain up till this present time to know when the normalcy will return to the world, and it is also unclear if the vaccine will be effective and sufficient (Corey et al. 2020; Gates, 2020). Due to the current pandemic issue, lots of countries implemented several types of lockdowns and quarantine measures, which some studies opined to have leads to panic and stress (Qiu et al. 2020). It is evident in the study of Baker et al. (2020) that the current levels of uncertainty are much higher than what was recorded during the "Great Recession" of 2008-2009. The study claimed that most of the present economic slowdown is the outcome of the extremely high uncertainty which was as a result of pandemic outbreak. The significant impact of COVID-19 on the political and regulatory uncertainty was demonstrated in the study of Sharif, Aloui, & Yarovaya (2020). Similarly, the number of people infected and death were found to significantly influence EPU in the study of Albulescu (2020). Chu and Fang (2020) opined that increase uncertainty can complicate firms' activities, in that it can compel organizations to postpone their investment decisions and assume less debt (Dong et al. 2019) which has the potential of creating more devastating economic crisis, with the attendant implication to be that less cash to be injected into the economy. In the alternative, another study revealed that no disease has had such devastating effect on the stock markets as COVID-19 in the history (Baker et al. 2020).

The findings from these literatures are an indication that uncertainty caused by COVID-19 has caused lower economic growth, which is above-average bankruptcy rates, as well as the rate of unemployment that is on the increase. Al-Thaqeb et al. (2020) observed that these challenges are not actually caused by the pandemic, but the accompanied uncertainty which deterred the government officials, corporate executives, and individuals to make decision owing to the great extent of uncertainty from the pandemic. This is apparent in the complication of decision-making process by executives in all sectors, public, private, or non-profit. This assertion was supported in the literature and it is an indication that uncertainty results to higher economic impact in recessions and downturns, because of the delays in financial and consumption decisions.

Meanwhile, Al-Thaqeb et al. (2020) opined that while most studies are focusing on the impact of EPU on different economic variables, several variables can actually have impact on level of uncertainty with short or long-term effects, but when EPU increases, its impacts are expected to have long-term impacts on investment and economic growth (Sahinoz and Erdogan Cosar, 2018). Therefore, it becomes imperative to explore some variables that could influence level of EPU given that uncertainty severely impacts the entire

economy. For instance, the relationship between stock price (SP) and EPU in reference to the study of Pastor & Veronesi (2012; 2013) found a negative relationship between the two variables. Similar finding was demonstrated in the study of Bijsterbosch & Gueri (2013) who concluded that high uncertainty episodes are associated with a sharp decrease in SP. This position was corroborated in the recent study by Ko and Lee (2015) who found the nexus between EPU and SP both in time and frequency to generally negative, but opined that it changes over time exhibiting low to high frequency cycles.

From the extant literature reviewed, despite the extensive literature exploring the nexus between uncertainty and some macroeconomic variables (Aye et al. 2015; Baker, Bloom, and Davis, 2013), financial markets (Antonakis et al. 2013; Chang et al. 2015; Ko and Lee, 2015; Sum, 2013) and companies' behavior (Zhang et al.2015), it is evident that the studies that explore the impacts of these variables on the EPU are limited. Therefore, our paper uses the monthly data from 2020M1 to 2021M1 of COVID-19 cases and deaths, the stock prices, and consumer price index of selected eighteen countries that consists both emerging and developed economies to determine their impact on the level of EPU using panel studies. Our study will contribute to the growing literature on both the COVID-19 pandemic and economic policies uncertainty because of their significance to the overall economy growth in the long-run.

Materials and Methods

This study aim is to investigate the impact of COVID 19 pandemic and other variables on the Economic Policy Uncertainty during pandemic period in some selected OECD countries covered the period from January 2020 to January 2021. This study utilized COVID 19 number of cases as a proxy for COVID 19 pandemic which is in congruent with some studies (Albulescu, 2020; Iyke, 2020; Ma et al. 2020; Nakada & Urban, 2020). The volatility inflation variable was proxy using consumer price index (CPI) as suggested in the literature (Bacon, 1991; Curry & Weiss, 2000; Warr, 2008). Other variables employed are Economic Policy Uncertainty and stock price. The COVID cases data was sourced from (Our World in Data, 2021), CPI and exchange rate data were sourced from International Financial Statistics. The overall EPU index used is in reference to Baker et al. (2016), while it was sourced from "Economic Policy Uncertainty" database. All the variables used in the model are in logarithm. This study used the monthly data of 18 selected OECD countries[1] from January 2020 to January 2021.

In respect to the method of estimation, first, the tests that are necessary before estimating the model are explained, then the model and the estimation techniques were described. The first step in the empirical analysis is performing unit root tests. For this reason, we used test such as Maddala and

[1]Belgium, Brazil, Canada, China, France, Germany, Hong Kong, India, Italy, Japan, Netherlands, Pakistan, Singapore, South Korea, Spain, Sweden, United Kingdom and the United States.

Wu (1999) and Pesaran (2007) panel unit root tests (CIPS) for panel unit root test. The choice of these tests is based on the assumption of MW test that is based on a simple average of the individual "Augmented Dickey-Fuller (ADF) t-statistics" of individual cross-section, while CIPS test assumes cross-section dependence which is in form of a single unobserved common factor. For the data analysis, the generalized method of moment estimator (GMM) was employed for investigating the COVID-19 impact on Economic Policy Uncertainty. The GMM is used where the specific unobservable effects of every section and lags of the dependent variables as explanatory variables are the fundamental problems in estimating the models. It is based on dynamic panel models (Barro and Lee, 1996). Linear GMM estimator in the literature of economics was first introduced by Hansen and Singleton (1982). This estimator has quickly become one of the popular econometric techniques, both in the estimation of cross-sectional data and panel data because it is very flexible and requires only weak assumptions. It is necessary to specify the instrumental variables in this approach. The consistency of the GMM estimator is based on the validity of the assumption of no serial correlation between error terms and instruments. This can be performed by the tests that were presented by Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998). The first test that is necessary in this approach is Sargan test. It tests the validity of the instruments which are used in estimation.

The second test is the Arellano-Bond test. This test surveys serial autocorrelation in the error terms of first-order difference. In both tests, if the null hypothesis is not rejected, it provides evidence for assumptions such as the validity of instruments and no serial autocorrelation. It is very important to note that the number of sections (N) is greater than time period (T) in this method (N>T) (Baltaji, 2008; Bond, 2002). One method to estimate the GMM model is Arellano and Bond method (1991). Arellano and Bond suggested a first-order difference approach for stimulating the model. GMM Estimator makes it possible for researchers to eliminate the problems of serial correlation, heteroskedasticity, and endogeneity of some variables. In this method, the lags of dependent variables are used in the model to consider the dynamic effects. Dynamic relationships are modeled with inserting the lags of dependent variables as explanatory variables in the model. When the lag of dependent variables appears on the right side of equation, OLS estimators are not consistent (Hsiao et al. 1995). Thus, we should use the two-stage least squares method (2SLS) or the generalized method of moment (GMM) to estimate the model. Matyas and Sevestre (1992) believed that the 2SLS estimator may give high variances for coefficients because of the difficulty in selecting instruments, and it is possible that estimates not be statistically significant. Therefore, the GMM technique has been proposed by Arellano and Bond (1991) to solve this problem. This estimator increases the stability of estimation by reducing the sample bias.

Arellano and Bover (1995) suggested two-step GMM estimators using these conditions. As Blundell & Bond (1988) and Arellano & Bover (1995) explained, the asymptotic standard deviation for two-stage estimators has a

downward bias and the one-step estimators relative to two-step estimators are asymptotically inconsistent even if the variance of the error terms is equal. Windmeijer (2005) by using Monte Carlo analysis showed that the two-stage estimator has less bias and standard error than the one-step estimator. In this research, we use the two-step estimator because it is more efficient than the one-step estimator. According to theoretical and experimental studies such as Assenmacher and Gerlach (2008), Edwards (1989), and Jalili (2014), the empirical model is as follows:

$$EPU_{it} = \alpha + \beta EPU_{it-1} + \theta coidcase_{it} + \lambda X_{it} + \varepsilon_t + \delta_i \quad (1)$$

where :

$covase_{it}$: total covid cases for country i in period t
epu_{it}: Economic Policy Uncertainty for country i in period t
X_{it}:Vector of regressors and control variables, such stock price and volatility inflation.
ε_t: Errors terms Special effects for sections (random or fixed)
δ_i: Special effects for sections (random or fixed)
Dynamics in the model has been shown as the lag of dependent variable with EPU_{it-1}

Results

Before estimating the model, it is necessary to conduct stationary tests for the variables. If the variables are non-stationary, spurious regression might occur. For this reason, we used tests such as Fisher-ADF tests of Maddala and Wu (1999) and IPS test of Pesaran (2007). These unit root analyses indicate the null hypothesis to be the presence of a unit root against the alternative of mean reversion. Two modes are employed for the unit root tests in levels and first differences by specification with trend and without trend. The results as presented in Table 1 indicate that under the Maddala and Wu test with trend, all the variables except volatility consumer price index which becomes stationary after first difference are stationary at level, while the result under CIPS with trend and without trend shows that all the variables are stationary at level except stock price which is found not to be stationary at both level and first difference. In summary, all the variables in this study were integrated on I(0) and I(1), and none of them is I(2), which implies that they are good for further analysis.

Table 1. *The Results of Stationary Tests for Variables in Levels and First Difference*

	Specification without trend				Specification with trend			
Test	Maddala & Wu	Maddala & Wu	Pesaran	Pesaran	Maddala & Wu	Maddala & Wu	Pesaran	Pesaran
variables	Level	D(1)	Level	D(1)	Level	D(1)	Level	D(1)
lepu	107.061*	172.854*	-3.336*	1.321	59.038*	240.905*	-2.098**	0.630

lcovidcases	395.968*	547.846*	-6.675*	-0.721	175.342*	129.081*	-1.679**	4.417
lstockprice	34.204	35.543	-1.234	3.951	49.595**	35.318	-0.668	3.714
lscpi	73.517*	136.524*	-1.311***	1.247	43.534	203.038*	-2.317**	-1.564***

* significant at 1%, ** significant at 5%, *** significant at 10%

Descriptive Statistics and Correlation Matrix Tests

To regress the primary model, this study applied two statistical validations: statistical descriptive test and relationship matrix test. The findings of the descriptive statistical analysis are laid out in Table 2. According to Table 2, the definitive statistical test shows figures related to maximum values, minimum values, standard deviation values, mean values, and observations value, the sample overall, and between the sample countries. The findings suggest that there is an essential difference between countries and between countries. The results rationalize the implementation of the panel regression approach.

Table 2. *The Results of Descriptive statistics*

variable	Obs	Mean	Std.Dev.	Min	Max
lepu	259	5.376039	0.5818066	3.750915	6.840244
lcovidcases	259	10.67498	4.053387	0	17.08302
lstockprice	221	8.3645581	1.432465	5.535877	10.82734
lscpi	213	0.3994322	0.3329869	0.000833	1.797714

Table 3 presents the relation matrix among the used independent determinants in the current study. The findings suggest there is no evidence for a high relationship between volatility inflation and economic determinants. Therefore, this study can proceed with the estimation of other determinants; the scale of relationship is acceptable between and within the used variables. Overall, the analysis can be taken into consideration as a safe estimation from the multicollinearity issue.

Table 3. *The Results of Correlation*

	lepu	lepu	lepu	Lepu
lepu	1.0000			
lcovidcases	0.2460	1.0000		
lstockprice	0.1505	0.1146	1.0000	
lscpi	0.0240	-0.3436	0.2606	1.0000

In reference to Equation (1), this study examines the effects of COVID cases on the Economic Policy Uncertainty for some selected OECD countries . In this model, inflation and stock price are used as control variables for the analysis. The lag of Economic Policy Uncertainty that reflects the dynamics of the model and is used in GMM method is inserted as an explanatory variable in the model. The results of the model's estimation using the generalized method of moments are presented in Table 4.

Table 4. *The Results of GMM Estimation*

EPU : Dependent variable				
Variable	**coefficients**	**Std. Error**	**t-Statistic**	**Probability**
Lepu(-1)	0.39535	0.11336	3.49	0.000
lcovidcases	0.03783	0.01505	2.51	0.012
lscpi	-0.32096	0.19328	-1.66	0.097
Lscpi(-1)	0.75691	0.27176	2.79	0.005
lstockprice	0.00812	0.20782	0.39	0.696
cons	2.57695	0.53663	4.80	0.000
Number of instruments 11				
Test		**Value**		**Probability**
Arellano- Band test for	AR(1)	-3.00		0.003
autocorrelation	AR(2)	-0.86		0.388
Saragan test		2.41		0.879
Hansen test		3.48		0.747

From the results presented in Table 4, we found *lcov* to have a positive and significant impact on the volatility of *EPU*. This is an indication that a percentage change in number of COVID-19 cases holding all other variables constant will significantly increase the volatility of *EPU* by 0.038% at less than 1% confidence level. This implies that COVID-19 changed Economic Policy Uncertainty patterns during the pandemic. Meanwhile, our analysis shows lscpi and first lag of lcpi have a consequently negative but less significant and positive and high significant impact on *EPU*. The result as presented in Table 4 indicate that a percentage increase in first lag of *CPI* increase *EPU* in the selected OECD countries holding all other variables constant by 0.76% at 1% confidence level. Moreover, *lstockprice* has positive effect but insignificant effect on EPU. Subsequent to the analysis, some tests were observed to ensure that estimates from the analysis are devoid of bias. As presented in Table 4, Sargan test shows that the assumption of the presence of any correlation between the instrumental variables and residuals is rejected. Based on this test, instrumental variables used in the model are valid. To ensure the absence of serial autocorrelation of first-order difference in residuals, the first and second order serial autocorrelation test proposed by Arellano and Bond (1991, 1995) is used. The null hypothesis of this test is the absence of serial autocorrelation which should be greater than 5% in the second order and less than 5% in the first order. Based on the AR tests results presented in Table 4, the null hypothesis, no second-order serial autocorrelation in residuals of first order difference, is not rejected. Therefore, the method of estimation is suitable for this model. Additionally, the first order autocorrelation probability is less than 5% and the null hypothesis of the test is rejected. The results of the observations are compatible with the research of Arellano and Bond (1991). According to the results in Table 4, as we expected, the lag of Economic Policy Uncertainty to have a positive and significant effect on the lag of Economic

Policy Uncertainty; this result implies the dynamics of the EPU over time, so volatility of Economic Policy Uncertainty in the current period will be extended to the next period. This means that increase of the Economic Policy Uncertainty in the previous period increases the Economic Policy Uncertainty in the current period.

To check the robustness of our results we used fixed OLS and random OLS estimation. The coefficient estimates in GMM seem to be fairly robust across different estimation techniques of fixed and random effect in terms of signs and statistical significance. This findings indicate the robustness of our estimates from GMM estimation technique.

Table 5a. *Random Effect Regression Result*

lcovidcases	lstockprice	lstockprice(-1)	lscpi	CONS
0.06470*	-0.37563**	0.80345**	-0.12491***	1.06921*
Table 5b, fixed effect regression result				
lcovidcases	lstockprice	lstockprice(-1)	lscpi	CONS
0.06187*	-0.54227**	0.61083*	-0.10935***	4.54178*
Hausman test Efficient estimator		FE-RE		
χ^2 (Prob > χ^2)		1.82(0.0032)		

However, in order to obtain a single voice in terms of price elasticity, the Hausman test is employed to ascertain the preferred estimator. Under the null hypothesis (H_0) of the Hausman test, there is no systematic difference between the designated efficient estimator and the designated consistent estimator. Non rejection of H_0 implies that the designated consistent estimator is consistent but the designated efficient estimator is both efficient and consistent and thus is the preferred estimator. Rejection of H_0 however implies that the designated efficient estimator is inconsistent which makes the consistent estimator the preferred estimator. From Table 5 it can be inferred that the RE-OLS estimator is preferred to the FE-OLS estimator.

Discussions and Policy Recommendations

The issue of COVID-19 pandemic remains an endemic global issue that attracts greater attention from every stakeholder owing to its impact on every sector of the economy. Given the challenges posed by the COVID-19 pandemic, various scholars have attempted to investigate both the antecedents and outcomes of the pandemic. Meanwhile, in the period of pandemic, there is possibility that the pandemic trigger the economic uncertainty owing to the various pandemic containment meausres that are being put in place to reduce

the impact of the pandemic on both the people, environment and economy. However, the implication of the pandemic on economic policy uncertainty has not been exaustively investigated, expecially in the context of OECD countries. Thus, the aim of this present study to fill the gap. This present study aimed at addressing the gaps in the literature by using the monthly data) January 2020 – January 2021) of 18 selected OECD countries based on the data availability. In order to ensure the robustness of our estimates, GMM technique was employed for the data analysis and complement it with fixed and random effect techniques for robustness check.

The results from the estimations revealed the significant influence of COVID-19 pandemic on the economic policy uncertainty. The result shows that a percentage in the COVID-19 number of cases, it will trigger a 0.04% increase in the EPU of the selected countries. This finding is consistent with the position of some previous studies who opined that some uncertainty events like COVID-19 pandemic has potential of trigger an economic policy uncertainty (Altig et al. 2020a; Bloom, 2014; Chu & Fang, 2020; Gabor-Toth & Georgarakos, 2019; Iyke, 2020; Jurado et al. 2015; Ludvigson et al. 2015). This result indicates that COVID-19 pandemic significantly increase the economic policy policy uncertainty in the selected countries during this period with the antendant effects on either organization's incentives which result to delaying their investment and hiring (Bloom, 2014), or according to Fernadez-Villaverde et al. (2011) triggers a cautious response from the public who are cautious of their savings and thus dampens their consumption. In order words, the COVID-19 pandemic would cause econimic fluctuations in these countries owing to several measures like fiscal, political, regulatory and monetary policies that being put in place to address the pandemic.

Moreover, the estimate from the analysis on the impact of inflation on economic policy uncertainty shows a negative and significant coefficient at 10% significance level. The result indicate that a percentage change in inflation will reduce the economic policy uncertainty by 0.32% during the pandemic period. Meanwhile, this study could not establih a significant relationship between stock price and EPU during the pandemic period. This finding is in contrast to some studies who conducted study before the pandemic and founc a negative relationship between the two variables (Pastor & Veronesi, 2012, 2013; Bijsterbosch & Gueri, 2013; Ko & Lee, 2015).

Based on the findings from this present study, it becomes imperative to point out that investigating economic uncertainty which is useful in explaining economic development is essential to guide the policy makers in addressing likely firm-level and household level risks that would accompany any economic fluctuations (Christiano et al. 2014), which could be liken to the present pandemic period. Hence, the level of uncertainty as a result of the pandemic is not bode well for the selected countries, especially in relation to the full and rapid economic recovery. This high economic uncertainty will makes some organizations and consumers cautious, retarding investment, hiring and expenditure on consumer durables.

Though, this present study address a significant gap in the literature and contributes significantly to the literature on COVID-19 pandemic, especially as demonstrated as one of the significant determinants of economic policy uncertainty, this study is not devoid of limitation. Specifically, the limitation lies in the non-availability of data on the variables employed for some OECD countries. In addition, it will be interesting to employ other proxies like COVID-19 number of cases, COVID-19 containment and health index, and so on for COVID-19 pandemic, and other determinants of economic policy uncertainty which this present study authors believes would address possible variable omitting error that could arise from this study.

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